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1988 ANTHROPOMETRIC SURVEY OF U.S. ARMY PERSONNEL: PILOT SUMMARY STATISTICS

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PREFACE

This publication is another in the series of reports issued in connection with the 1988 Anthropometric Survey of U.S. Army Personnel. The data presented are of male pilots measured in a special sampling at Fort Rucker and female subjects who were measured within the U.S. Army Forces Command (FORSCOM) during the general survey. Data comparing the general U.S. Army population with the U.S. Army pilot population are presented as well. The survey was among the most ambitious ever undertaken. It included a multifaceted sampling strategy and a number of newly devised data-gathering techniques and measuring devices, which were used for the first time. A measuring team of 22 persons spent nearly a year collecting data on almost 25,000 screened subjects from which 9,000 subjects were chosen to be fully measured at 11 Army bases. Clearly, a project of this scope could not have been completed without the help of numerous military and civilian personnel.

Within the U.S. Army Natick Research, Development and Engineering Center we gratefully acknowledge the guidance and support received from COL Clinton A. Hodder, COL A.D. Rodgers III, Dr. Robert Lewis, Mr. Edward Levell, Dr. Abner Salant, Dr. Herbert Meiselman, Dr. Lawrence Symington, Mr. Charles Williams, Dr. Carolyn Bensel, and SGM William Wright. These individuals were instrumental in the planning, funding and execution of the 1988 Anthropometric Survey.

Also at Natick, LTC Stanley Holgate served as Senior Liaison Officer for the 1988 Anthropometric Survey. LTC Holgate's planning and coordination of the acquisition of both subjects and facilities at each surveyed post were critical to the success of this project. Dr. Robert A. Walker, the 1988 Anthropometric Survey Field Supervisor, was instrumental throughout the entire project. Ms. Beth Ann Holloway, in the capacity of 1LT, served as the Officer in Charge (OIC) at each post and the primary Natick military liaison in LTC Holgate's absence. In her role as OIC, Ms. Holloway kept day-to-day operations functioning smoothly and efficiently.

Successful execution of a complex sampling strategy would have been impossible without the full and active support received from GEN Carl Vuono, Army Chief of Staff, GEN Joseph Palastra, Commander of the Army Forces Command, GEN Maxwell Thurman, Commander of the Army Training & Doctrine Command (TRADOC), GEN Louis Wagner, Commander of the Army Materiel Command, and CSM William B. Tapp, Jr., Army Materiel Command.

From the U.S. Army Troop Support Command, we thank MG John E. Long, MG Henry G. Skeen (retired), BG Charles E. St. Arnaud, BG Leo J. Pigaty, and CSM Henry L. Thornton for their personal encouragement and active support of this survey during its planning, coordination, and execution.

We also thank the command groups and staffs of the following organizations, which provided test subjects despite their heavy mission commitments: the U.S. Army Health Services Command, I Corps, III Corps, the XVIII Airborne Corps, the U.S. Army Chemical School, the U.S. Army

Military Police School, the U.S. Army Signal Center, the U.S. Army Aviation Center, the U.S. Army Training Center at Ft. Jackson, and the U.S. Army Training Center at Ft. Dix. Within each of these organizations were liaison officers and noncommissioned officers responsible for coordination of all the logistic details needed to actually execute the survey at each of the host installations. These liaison personnel made the successful execution of a difficult project possible: MAJ John Roper and CPT Raphael Deegan, Ft. McClellan; MAJ Lawrence Hall and SFC Norman Homan, Ft. Campbell; COL Robert Smoot and SGM Walter Taylor, Ft. Bragg; CPT Joel Weeks, Ft. Stewart; CPT Michael Robinson, Ft. Ord; LTC James Gildersleeve, MAJ Marguerite Campbell and CPT Joseph Dirac, Defense Language Institute; MAJ James Taylor, Ft. Lewis; MAJ James R. Sisson and MAJ Arne W. Owens, Ft. Hood; LTC Dees Stallings, Ft. Gordon; CPT Mark Becker, Ft. Jackson; COL James B. Sauer and CPT Anthony Shannon, Ft. Rucker; MAJ Dale E. Graham and CPT George Trotter, Ft. Dix.

Special thanks are owed to Mr. Ignatius Stefaniw, LTC David Kidroske, and CPT Betty M. Gieseke of the U.S. Army Training & Doctrine Command for their patient and persistent support in the selection and coordination of TRADOC installations for participation in the 1988 Anthropometric Survey.

The data reported in this manuscript were collected by a specially recruited and trained measuring team who were under supervision of Anthropology Research Project, Inc. Throughout a year of fieldwork, the team members maintained the highest of professional standards. Ms. Jeryl Neff, the team leader, was responsible for overseeing data collection quality and for the maintenance of crew morale and professionalism. Field crew members were: Donna Acton, Scott Anspach, Gary Ball, Karen Ball, Cindy Blackwell, Mary Bloom, Jeffery Bonner, John Crafts, Lee Gasaway, Lori Hedberg, Mike Herzing, Chuck Janini, Julie Janini, Anne Kaminski, Sara Kelly, Shirley Kristensen, Lisa Love, Jill Parks, Lisa Prenger, Amy Pulse, Lisa Richards, Robyn Tebbetts, Timi Trawick, and Phillip Walker.

Invaluable editorial comments were made on this manuscript by Ms. Marcia Lightbody, Natick Technical Editor, and Drs. Carolyn Benschel, Kenneth Parham and Robert Walker of the Materiel Systems Human Factors Branch, Behavioral Sciences Division, Soldier Science Directorate.

Finally, the authors would like to acknowledge Gary Ball and Alice McKinney for the drawings included in the manuscript. Photography credits go to Tebby Stanley and Denny Eagleson. Nancy Bell is greatly appreciated for her invaluable assistance.

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1988 ANTHROPOMETRIC SURVEY OF U.S. ARMY PERSONNEL:
PILOT SUMMARY STATISTICS

CHAPTER 1

INTRODUCTION

All U.S. military and many foreign services compile and maintain extensive collections of body-size information used primarily to guide the design and sizing of clothing, personal protective equipment, work stations, and computer-generated human models. In order to be effective, such a data base must be updated periodically to accurately reflect the body sizes and proportions of the military population it purports to represent.

It was apparent in the mid-eighties that the Army's anthropometric data base had serious deficiencies that limited its applicability for current and future sizing, design, and procurement.^{1,2,3} A comprehensive body-size study of U.S. Army men and women was undertaken in 1987-1988 to correct these deficiencies. The goal of the 1988 Anthropometric Survey was to acquire a large body of data from comparably measured males and females to serve the Army's current design and engineering needs, as well as those anticipated well into the future.

Several new and improved methodologies in the areas of sampling, instrumentation, and verification were used. These included: a complex sampling plan designed to produce a data base that can be adapted to changing population demographics; simultaneous collection and processing of male and female data for the creation of an integrated data base; the use of portable computers for data entry and first-level editing in the field;⁴ and the development and use of new measuring devices for the collection of head and hand data.^{5,6}

A year of planning preceded the survey. During this time, hundreds of candidate dimensions were examined to arrive at the final selection, which included 132 directly measured dimensions and three-dimensional coordinates of 26 points on the head and face.^{2,3} Over 8,000 hand photos were also taken as a permanent resource for future needs.

Because of demographic changes in the population of U.S. Army pilots, and changes in pilot requirements in the last several years, the distributions of anthropometric dimensions among Army pilots have changed as well. Therefore, as a part of the overall 1988 Anthropometric Survey sampling strategy, a subsample of U.S. Army pilots was chosen for complete body measurement. The last anthropometric survey of U.S. Army aviators was conducted in 1970,⁷ some 18 years or the equivalent of a military generation ago. Not only was the 1970 sample younger than today's aviators, but the 1970 sample also included machinists, door gunners and mechanics which are nonpilot aviators. As can be seen in Tables 1 and 2, the height and weight distributions of 1988 nonpilot aviator personnel do not significantly differ from those of the general U.S. Army population.⁹ Therefore, all equipment and clothing that is intended for

use by all aviators should be designed using the data that are presented in either the 1988 Anthropometric Survey of U.S. Army Personnel: Summary Statistics Interim Report or the 1988 Anthropometric Survey of U.S. Army Personnel: Methods and Summary Statistics^{10,11}.

TABLE 1. Comparison of Stature Between 1988 Nonpilot Aviators and 1988 General U.S. Army

Dimension	Mean Values Nonpilots N=872		Mean Values General Army N=1754		Difference Between Means	P-value for Difference
	\bar{X}	SD	\bar{X}	SD		
Stature (cm)	175.76	6.81	175.88	6.73	0.12	0.675

TABLE 2. Comparison of Weight Between 1988 Nonpilot Aviators and 1988 General U.S. Army

Dimension	Mean Values Nonpilots N=812		Mean Values General Army N=1627		Difference Between Means	P-value for Difference
	\bar{X}	SD	\bar{X}	SD		
Weight (kg)	78.01	11.09	78.75	11.01	0.74	0.120

On the other hand, because pilots must meet anthropometric criteria which are not required of other nonpilot aviators, the pilot sample is anthropometrically distinct from the general Army population (see Tables 3 and 4). These pilot data have been sampled and summarized separately so that those materiel systems to be used solely by pilots may take their specific anthropometric distributions into consideration.

In addition to anthropometric changes in Army pilots, there have also been shifts in the demographic composition of the U.S. Army pilot population. Between 1970 and 1980, the percentage of women in the Army increased nearly sevenfold from 1.46% to 9.85%. Today, women make up 11.06% of Army personnel,¹² and with each passing year, more jobs are filled by women. The number of female aviators and pilots has also increased during recent years. Consequently, clothing, protective equipment, and workspaces, originally designed to accommodate males only, must be modified and redesigned to accommodate the larger variations represented by an integrated male/female population. Because only a

TABLE 3. Comparison of Selected Anthropometric Dimensions Between 1988 Male Pilots (N=487) and 1988 General U.S. Army Males (N=1774)

DIMENSION	X	SD	1ST%	5TH%	95TH%	99TH%	p-value*
Stature							
1988 Pilots	177.10**	6.47	161.85	166.33	187.75	191.44	0.001 ⁺
1988 General Army	175.58	6.68	160.27	164.69	186.65	190.87	
Weight							
1988 Pilots	79.97	9.63	60.22	65.32	97.17	103.73	0.004
1988 General Army	78.49	11.10	55.27	61.59	98.07	107.71	
Crotch Height							
1988 Pilots	84.18	4.23	75.12	77.52	91.51	94.00	0.038
1988 General Army	83.72	4.62	73.16	76.44	91.64	94.64	
Sitting Height							
1988 Pilots	92.95	3.32	84.40	87.23	98.18	100.35	0.001 ⁺
1988 General Army	91.39	3.56	82.79	85.45	97.19	99.14	
Span							
1988 Pilots	182.79	7.74	166.32	170.21	195.61	200.13	0.227
1988 General Army	182.31	8.19	164.79	169.31	196.03	201.62	
Arm Length							
1988 Pilots	79.20	3.62	71.72	73.49	85.44	87.61	0.229
1988 General Army	78.97	3.86	70.43	72.85	85.58	88.23	
Bideltoid Breadth							
1988 Pilots	49.57	2.31	43.93	45.91	53.47	54.79	0.001 ⁺
1988 General Army	49.18	2.59	43.40	44.99	53.48	55.16	
Buttock-Knee Length							
1988 Pilots	61.86	2.65	56.09	57.79	66.52	68.16	0.114
1988 General Army	61.64	2.99	55.07	56.90	66.74	68.69	
Chest Depth							
1988 Pilots	25.02	1.95	20.99	21.86	28.25	29.43	0.001 ⁺
1988 General Army	24.32	2.15	19.67	20.96	28.04	29.60	
Eye Height Sitting							
1988 Pilots	80.99	3.27	72.10	75.46	86.22	88.19	0.001 ⁺
1988 General Army	79.20	3.42	71.18	73.50	84.80	86.93	
Forearm-Forearm Brdth							
1988 Pilots	55.49	3.91	47.22	49.10	61.99	66.65	0.001 ⁺
1988 General Army	54.61	4.36	45.12	47.74	62.06	65.27	
Functional Grip Reach							
1988 Pilots	75.12	3.50	68.16	69.29	80.79	84.45	0.747
1988 General Army	75.07	3.68	67.26	69.28	81.31	84.03	
Functional Leg Length							
1988 Pilots	108.30	10.55	97.06	100.62	117.56	119.75	0.033
1988 General Army	108.21	5.10	96.90	100.19	116.89	120.33	
Hip Breadth							
1988 Pilots	34.90	1.86	31.20	32.03	38.09	39.28	0.001 ⁺
1988 General Army	34.18	2.03	29.64	30.97	37.65	39.32	
Thigh Clearance							
1988 Pilots	16.79	1.10	14.31	14.99	18.61	19.35	0.548
1988 General Army	16.82	1.26	14.09	14.86	18.99	20.07	

* For t-test of differences between means

** All values in cm, except Weight in kg

+ Significant difference at $p < 0.05$ using Bonferroni's correction for multiple comparisons

TABLE 4. Comparison of Selected Anthropometric Dimensions Between 1988 Female Pilots (N=334) and 1988 General U.S. Army Females (N=2208)

DIMENSION	X	SD	1ST%	5TH%	95TH%	99TH%	p-value*
Stature							
1988 Pilots	168.02**	4.52	157.29	161.17	175.95	178.80	0.001 ⁺
1988 General Army	162.94	6.36	148.32	152.78	173.73	178.04	
Weight							
1988 Pilots	65.51	8.54	47.84	52.64	80.73	89.18	0.001 ⁺
1988 General Army	62.01	8.35	45.24	49.64	76.98	84.70	
Crotch Height							
1988 Pilots	79.17	2.71	75.06	75.54	83.91	87.15	0.001 ⁺
1988 General Army	77.14	4.41	67.00	70.02	84.58	88.14	
Sitting Height							
1988 Pilots	88.28	2.80	81.46	83.58	92.78	94.93	0.001 ⁺
1988 General Army	85.20	3.49	77.48	79.53	91.02	93.31	
Span							
1988 Pilots	170.76	4.83	163.91	164.55	180.08	183.58	0.001 ⁺
1988 General Army	167.19	8.13	148.81	154.21	180.86	186.45	
Arm Length							
1988 Pilots	73.98	2.45	69.71	70.57	78.39	80.59	0.001 ⁺
1988 General Army	72.37	3.84	63.74	66.18	78.79	81.59	
Bideltoid Breadth							
1988 Pilots	43.92	2.22	38.36	40.38	47.65	48.86	0.001 ⁺
1988 General Army	43.26	2.26	38.03	39.70	47.17	49.21	
Buttock-Knee Length							
1988 Pilots	60.02	2.08	55.90	56.80	63.57	64.32	0.001 ⁺
1988 General Army	58.89	2.96	52.18	54.21	63.98	66.02	
Chest Depth							
1988 Pilots	24.30	2.35	19.49	20.67	28.31	30.69	0.010
1988 General Army	23.94	2.11	19.71	20.86	27.78	29.54	
Eye Height Sitting							
1988 Pilots	76.85	2.70	70.56	72.28	81.18	83.16	0.001 ⁺
1988 General Army	73.87	3.32	66.40	68.46	79.43	81.59	
Forearm-Forearm Brdth							
1988 Pilots	48.03	3.59	38.92	42.42	54.28	57.21	0.001 ⁺
1988 General Army	46.85	3.47	39.42	41.47	52.84	55.95	
Functional Grip Reach							
1988 Pilots	70.08	2.42	65.25	66.38	74.32	76.35	0.001 ⁺
1988 General Army	68.61	3.39	61.51	63.19	74.36	76.97	
Functional Leg Length							
1988 Pilots	103.80	3.27	96.84	99.01	109.66	111.79	0.001 ⁺
1988 General Army	101.20	4.91	89.76	93.25	109.42	112.82	
Hip Breadth							
1988 Pilots	35.59	2.18	30.63	31.97	39.20	40.64	0.001 ⁺
1988 General Army	34.27	2.24	29.58	30.78	38.15	40.00	
Thigh Clearance							
1988 Pilots	15.95	1.26	13.47	14.05	18.16	19.45	0.459
1988 General Army	15.89	1.21	13.38	14.04	18.02	19.01	

* For t-test of differences between means

** All values in cm, except Weight in kg

+ Significant difference at $p \leq 0.05$ using Bonferroni's correction for multiple comparisons

handful of female pilots were available for measurement during the 1988 Anthropometric Survey, a female pilot theoretical working data base was created for use in materiel design. The theoretical data base consists of a subset of the 1988 Anthropometric Survey female data base that meets 1988 anthropometric criteria for entry into pilot training, and that matches the 1988 female pilot population in age and racial/ethnic distribution.

SELECTION OF SURVEY DIMENSIONS

The dimensions summarized in this report are identical to those summarized earlier for the general U.S. Army population.^{10,11} To develop the list of dimensions measured in this survey, a comprehensive list of candidate measurements was reviewed and assessed in several ways.^{2,3} First, a list of 298 dimensions measured in one or more of 32 anthropometric surveys of men and women, both military and civilian, was circulated among persons who represented many decades of experience in applying anthropometric data to the design of military systems, equipment, and clothing. Each was asked to choose from the list those dimensions considered essential or useful in his or her work and to supplement his or her choices with additional dimensions not found on the list. For some applications, such as the design of three-dimensional head, face, and body forms, individuals who had been responsible for their development were solicited to determine what specific dimensions had been incorporated in these forms and what other dimensional data would have been useful if they had been available. A second line of inquiry involved a questionnaire survey administered to 22 Army and Air Force clothing designers and patternmakers to learn what dimensions they required for their work.

These inquiries resulted in a candidate list which included variables measured in previous surveys as well as dimensions not previously measured but identified as being needed by users of anthropometric data for design purposes. From this list, 12 application categories (e.g., clothing design, work space design, human analogue design) were identified and 132 dimensions believed to be most useful for meeting these needs were selected to be measured directly on each subject. As noted, another 60 dimensions were derived from the direct measurements. The 26 three-dimensional coordinates obtained from an automated headboard device, which was developed for use during the 1988 Anthropometric Survey, were used to calculate an additional set of 48 head and face dimensions. The application categories and their corresponding dimensions appear in Appendix A.

THE PILOT SAMPLE

The pilot sample is composed of 821 subjects, 334 females and 487 males. These subjects were measured for 132 anthropometric dimensions, and filled out biographical questionnaires to provide information such as age, race, ethnicity and flight classification. All of the males included in this sample are U.S. Army pilots. Because so few female pilots were measured during the 1988 Anthropometric Survey, a female pilot working data base was created which is demographically matched to the female Army pilot population and which meets the 1988 anthropometric criteria for

entrance to flight school. The sampling strategies which were used for the pilots and for the creation of the female working data base are described in detail in Chapter III.

HOW TO USE THIS REPORT

The working data in this report are given in Chapters IV, V, and VI, which include summary statistics of the standard dimensions, the derived dimensions, and the headboard measurements, respectively. Each dimension is described and illustrated. Summary statistics are reported separately for males and females. Visual indices precede the statistical material in each chapter and are designed to help readers identify and locate dimensions by their anthropometric designations.

The landmarks used to define the origin and termination of the measurements made in this survey are listed and briefly described in Chapter II. This chapter also summarizes the operational aspects of the survey and includes descriptions, illustrations, and sources of the instruments used. A full explanation of the sampling strategy which appears in Chapter III includes a number of tables that describe the demographic character of the pilot working data base.

Appendix B contains a brief explanation of the summary statistics used to report the measurement data in Chapters IV, V and VI. An assessment of the comparability of measurements obtained in this survey with measurements from other major anthropometric surveys appears in tabular form in Appendix C. Finally, a glossary of terms (Appendix D) and an index are included to further help the reader understand the terminology used in this report and locate dimensions of interest. Sections of this chapter were taken from the 1988 Anthropometric Survey of U.S. Army Personnel: Methods and Summary Statistics.¹¹

CHAPTER II

THE SURVEY

SUBJECT PROCESSING AND MEASURER TRAINING

In order to measure almost 9,000 soldiers, including the male and female pilot working data base subjects, at 11 Army posts around the country in the 12 months allotted to the task, considerable advance planning took place both by the contractor, Anthropology Research Project, Inc., and the U.S. Army Natick Research, Development and Engineering Center (NATICK). In preparation for assembling a measuring team, project personnel prepared a training manual¹³ designed to serve as the primary instructional guide for members of the team. This handbook contained detailed written and illustrated instructions for marking and measuring subjects, and explained the operation and maintenance of the computer data-entry system, the automated headboard, and the hand photometric system.

A streamlined procedure was devised for measuring an average of 40 subjects a day. The measurements were divided into groups of approximately 22 each, based on principles of time/motion efficiency. Dimensions assigned to a given measuring station were those that could most easily be measured in sequence without excessive repositioning of subjects, and those that required a minimum of picking up and laying down of instruments. Dimensions were also grouped in such a way that the time required to measure all dimensions at each station was approximately equal. Two landmarking stations were similarly established, as were in- and out-processing stations. Figure 1 illustrates the subject flow plan.

In the meantime, all the necessary arrangements were made at Army posts where measuring teams were to work for periods ranging from ten days to eight weeks. Although the vast majority of the male pilots were measured at Fort Rucker, the female subjects who comprise the theoretical female pilot working data base were selected for measurement at the following 11 posts. The itinerary was as follows:

Fort McClellan, Alabama	Fort Hood, Texas
Fort Campbell, Kentucky	Fort Jackson, South Carolina
Fort Bragg, North Carolina	Fort Gordon, Georgia
Fort Stewart, Georgia	Fort Rucker, Alabama
Fort Ord, California	Fort Dix, New Jersey
Fort Lewis, Washington	

In July of 1987 a measuring team of 22 persons began an intensive four-week training period prior to their deployment in the field. Early in the training period, team members were assigned to the landmarking or measuring station at which they would work for the duration of the survey. Thus, each team member, under the instruction of professional anthropometrists, concentrated for about three weeks on learning to locate and draw the landmarks or measure the dimensions for which he or she would be permanently responsible.

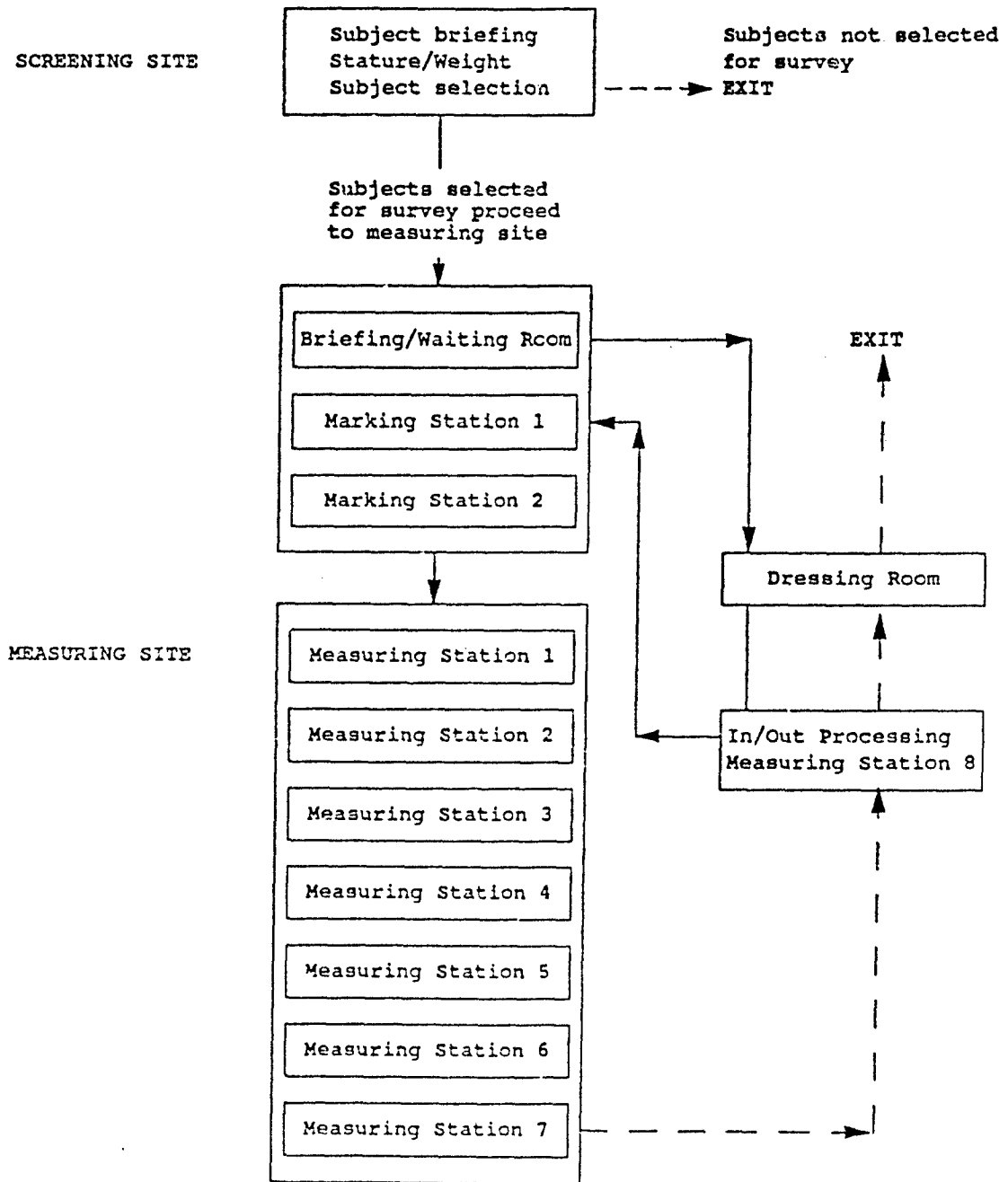


Figure 1. Flow chart for subject selection and processing.

Two people were assigned to each measuring station, one to serve as a measurer and one as a recorder; pairs of team members alternated these functions throughout each day. Two women were permanently assigned to five of the measuring stations. A male team alternated with a female team at the station where most dimensions between the waist and knees were measured, depending on whether subjects were men or women. These same teams alternated assignments to the headboard/hand photo station. Male and female marking personnel at the landmarking stations also changed from day to day, depending on whether subjects were men or women. They alternated as in- and out-processing clerks when members of the opposite sex were being marked.

Subjects were selected for measurement in accordance with procedures described in Chapter III. Essentially, they were selected either from unit rosters before the measuring team arrived at a particular post, or from units assembled at a subject-screening site. There, soldiers were briefed on the general purposes of the survey, and filled out forms giving demographic and biographical information about themselves; the data form is attached as Appendix E. At this site, soldiers were measured for Stature and Weight, and were selected or rejected for inclusion in the fully-measured sample by means of a computer program designed to meet the objectives of the sampling strategy.^{2,4}

Soldiers who had been put on the roster from their units for full measurement bypassed the screening formation. These subjects completed biographical forms at the measuring site where they joined screened subjects in a full briefing, which included a description of the measuring procedures to be carried out. After the briefing, all soldiers were given nylon running shorts in which they were measured. Men were measured bare-chested. Women were measured in their bras, and were issued T-shirts to wear while moving between measuring stations and at stations where upper body exposure was not required.

COMPUTER PROCEDURES

One of the features that distinguishes this survey from its predecessors is the use of portable computers for data entry in the field.⁴ Computers were used for three reasons:

-- Entering the data onto electronic media saved time by eliminating hand recording of data. Data were ready for analysis much more quickly than in the past. This also eliminated transferring handwritten data as a source of error.

-- The computers were equipped with custom-designed software that edited data values as they were entered.⁴ In this way, if a questionable value was identified by the software, the measurers could check it while the subject was still present. Thus, the data coming in

from the field contained far fewer errors of measurement or entry than in past surveys and a smaller number of questionable values about which the data editors had to make decisions.

— The floppy diskettes used in the computers could hold much more data than paper forms of the same size.

Portable personal computers were independently operated at each measuring station. Each subject's data were kept together on a single floppy diskette, which the subject carried from station to station as he/she moved through the measuring process. The subject received the diskette at an in-processing station, at which the subject's number, sex, and date were written onto the diskette. Each subject was measured and the recorder entered the data into the station's computer. The anthropometric data from that station were then written onto the subject's diskette and onto a station diskette, which kept a record of each person measured at that station. Each station's computer also printed the data from that station onto a paper form which the subject carried from station to station. Both the printed form and the station diskette served as backups in case of loss or damage to the subject's diskette. After the subject had been measured, all the data from the diskette were read at the out-processing station to verify that the subject had visited each station, and that the data from each station were recorded properly on the diskette. Data from the subject's biographical questionnaire were also added to the subject diskette at the out-processing station.

The editing routines in the computer software were based on procedures which had been used successfully for some time by the contractor, Anthropology Research Project, Inc., in a number of previous military surveys.¹⁴ The approach is essentially two-phased. A value is first checked against the highest value and the lowest value measured for that variable. If the measured value is higher than the highest value to date, or lower than the lowest value to date, an audible signal is given, which instructs the measurer to take the measurement again. This approach is very effective in screening out wildly aberrant values resulting from a misassembled instrument, misreading an instrument, transposing digits, or misentering a value by 100 or 1000. After each dimension at a station was measured, the second phase of data editing began. The computer software contained a series of multiple regression equations in which the value for each dimension was predicted from the values of two other dimensions measured at that station. The measured value for a given subject, for a given dimension, was compared to the predicted value. If the measured and the predicted value differed by more than a preset amount, the audible signal was given, and the measurer was asked to remeasure that dimension. In that way, values which were not aberrant for the population as a whole but were disproportionate for that individual were identified and checked.

The computer data entry and editing system, including program source code listings, is completely described in Churchill et al., 1988.⁴

ANTHROPOMETRIC INSTRUMENTS

Several standard anthropometric instruments as well as a few unique instruments were used in this survey. The standard instruments, all of which are available from Seritex, Inc., 450 Barell Avenue, Carlstadt, NJ 07072, included:

GFM anthropometer	Catalogue No. 101
base plate	Catalogue No. 101F
sliding caliper	Catalogue No. 104
sliding caliper (Poech type)	Catalogue No. 114
spreading caliper, rounded	Catalogue No. 106
Bicondylar Vernier caliper (Holtain caliper)	Catalogue No. 604
steel measuring tape (2-meter)	Catalogue No. 110

These instruments are illustrated in Figures 2 and 3. In Figure 2 the anthropometer is illustrated in the two modes in which it was used.

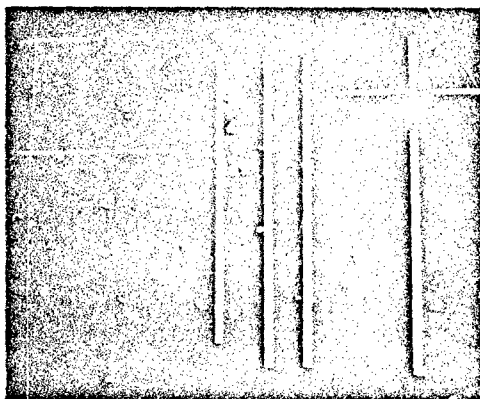


Figure 2. Anthropometer:
a. beam caliper;
b. four sections of the
basic anthropometer.

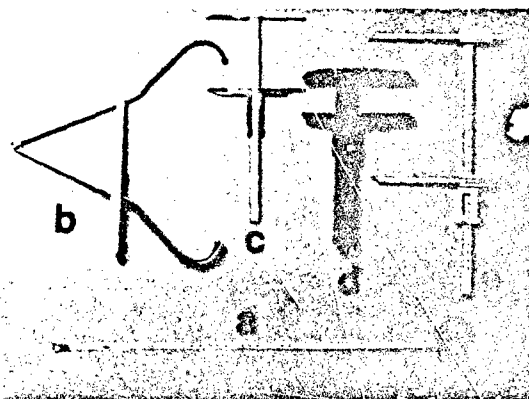


Figure 3. Calipers and tape:
a. steel tape;
b. spreading caliper;
c. sliding caliper;
d. Holtain caliper;
e. Poech caliper.

The pupillometer for measuring interpupillary breadth is shown in Figure 4. This commercial device can be obtained from: Multi-Optics Corporation, 1153 D. Triton Drive, Foster City, CA 94404.

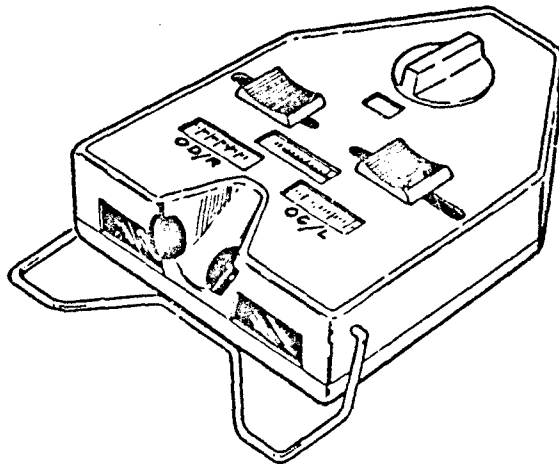


Figure 4. Pupillometer.

Measuring instruments that were modified or created for the survey include: a functional leg length anthropometer, wall scales, foot measuring boxes, a modified sliding caliper, and a modified tape. Several instruments for use in locating landmarks were also devised. These include a buttock plate, a smooth vertical board that is moved along a table to establish the posterior buttock point of a seated subject (see photograph on page 124).

Other devices were specially designed to help position subjects correctly. The leg leveller, for example, consists of two horizontal flat boards approximately 1 foot by 1.5 feet in size. Sandwiched between the boards are two scissor jacks situated at right angles to each other. When the jacks are raised in concert, the upper board is raised, parallel to the floor. The lower board rests on the floor. The purpose of the device is to raise or lower the legs of the seated subject so that the thighs are parallel to the floor (see photograph on page 124).

The functional leg length anthropometer is shown in Figure 5. This instrument consists of a standard GPM (early series) anthropometer mounted vertically on a sole plate.

Two wall graphs were used to measure arm reaches. Both wall graphs are of graph paper scaled in millimeters and sealed in mylar sheeting. The orientation of the graphs is shown in Figure 6 with reference to the corner near which it is mounted.

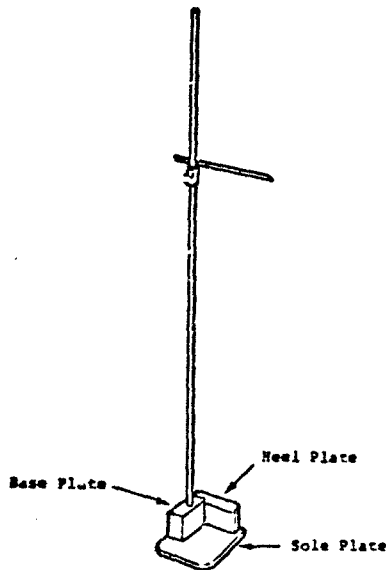


Figure 5. Functional leg length anthropometer.

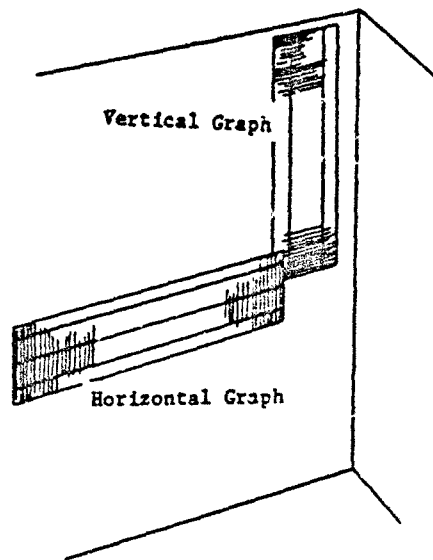


Figure 6. Orientation of wall-mounted graphs.

The foot measuring boxes are made of three-millimeter aluminum stock. Millimeter graph paper affixed to the standing surfaces is covered with Plexiglas[®]. Used in measuring linear dimensions of the foot, the two footboxes, a left and a right, are shown in Figure 7.

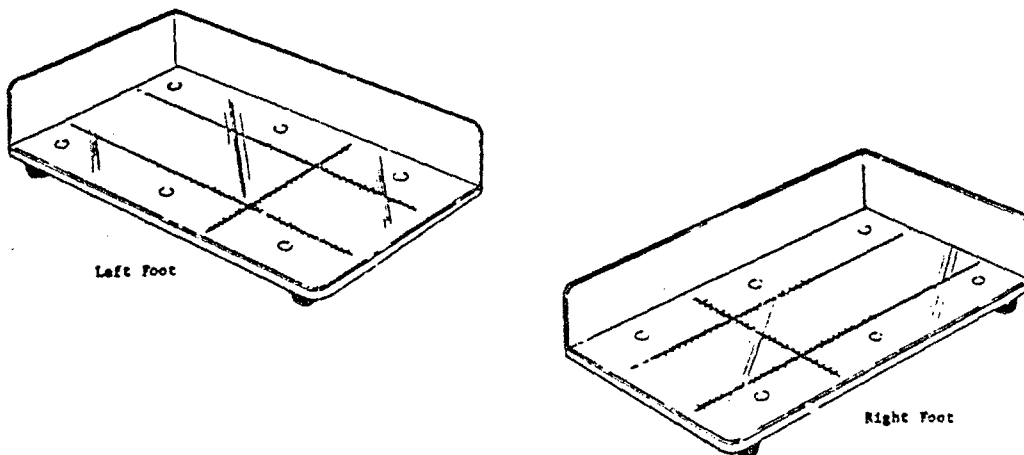


Figure 7. Foot measuring boxes.

*Citation of trade names in this report does not constitute endorsement or approval of use of a product or item.

A standard GFM (early series) sliding caliper was modified to use in measuring lateral malleolus height. The sliding caliper was modified by removing the fixed arm and substituting a 77-mm arm for the 51-mm arm. The modified instrument is shown in Figure 8.

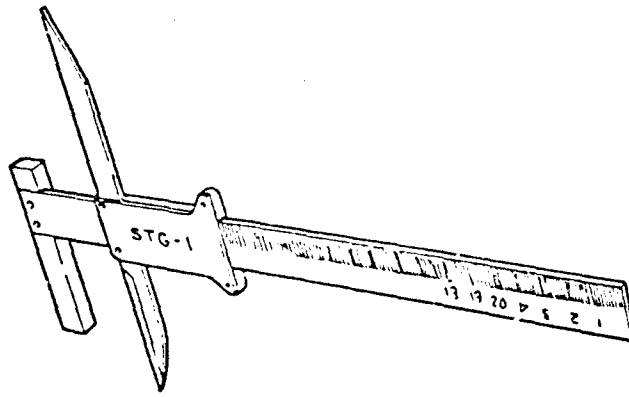


Figure 8. Modified sliding caliper.

The modified tape, used for two posterior crotch width measurements, is made by attaching a dowel to the zero end of a standard tape as a handhold. A triangular plastic pennant is affixed at the zero mark of the tape. The instrument is illustrated in Figure 9.



Figure 9. Modified tape.

Several measuring and marking aids were used in this study. They included a landmark transfer rod and scye marking aid, which were constructed for the purpose. The landmark transfer rod, approximately six feet high, is shown in Figure 10. It consists of a vertical rod mounted on a triangular base. The base has three casters on the bottom which permit the device to be easily rolled around the subject. A slide that can be moved up and down is mounted on the vertical rod. A dowel is mounted at right angles to the slide and rod; a thin horizontal plate is affixed to the end of the dowel. The device is used to transfer landmarks from one side of the body to the same level on another side.

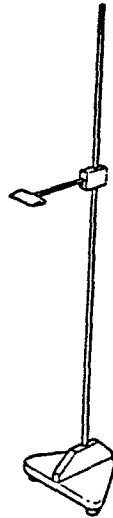


Figure 10. Landmark transfer rod.

The scye marking aid is a rigid Plexiglas straightedge with a line level epoxied to the lower left margin of the straightedge. This device, illustrated in Figure 11, was used to establish the anterior and posterior scye marks.

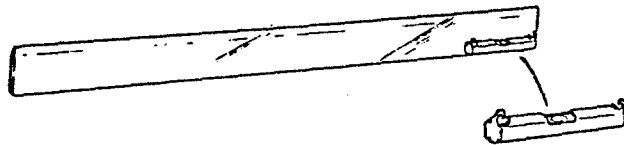


Figure 11. Scye marking aid.

Automated Headboard Device

The automated headboard device (AHD) was specifically designed and constructed for the measurement of three-dimensional (3-D) coordinates of the head and face. The coordinates are defined in terms of three mutually perpendicular axes (X, Y, and Z) referenced to the intersection of two plane surfaces (headboards) against which a subject's head is positioned for measurement, as shown in Figure 12.

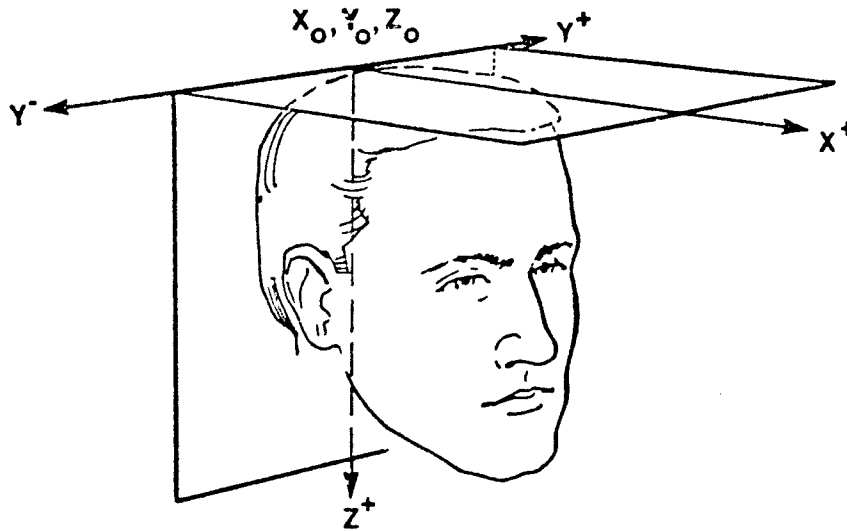


Figure 12. Axis system for headboard measurements.

The AHD is pictured in Figure 13; its basic elements are shown and labeled in Figure 14. The subject positioning system permits the seat to be raised or lowered to bring the subject's head into firm contact with the rear and top headboards (see Figure 15). A head clamp is incorporated to minimize head movement during the measuring process. A coordinate measuring system constitutes the measuring elements (see Figure 16). It consists of a movable arm which can be rotated through approximately 200 degrees (rotary bearing), moved in and out 200 mm (horizontal slide), and moved up and down 300 mm (vertical slide). In operation, the objective is to bring a small ruby bead (2-mm diameter) located on a probe on the horizontal slide into light contact with a landmark drawn on the face. The coordinate measuring system is calibrated so that the location of the center of the bead relative to the horizontal and vertical headboard surfaces is known to the nearest 0.1 mm. As the probe is moved around the face from landmark to landmark, their coordinates are entered automatically when the recorder hits a button upon word from the operator that the bead is on the landmark. Encoders attached to each of the movable slides act to convert the movements into electrical pulses that are equivalent to distance. To convert these analog signals into digital coordinate values for three axes, the system is designed to operate with a personal computer programmed to perform the analog-to-digital conversions, total the pulse counts, and perform the necessary trigonometric calculations. A full description of the development, validation, and operation of the AHD may be found in Annis and Gordon, 1988.⁹

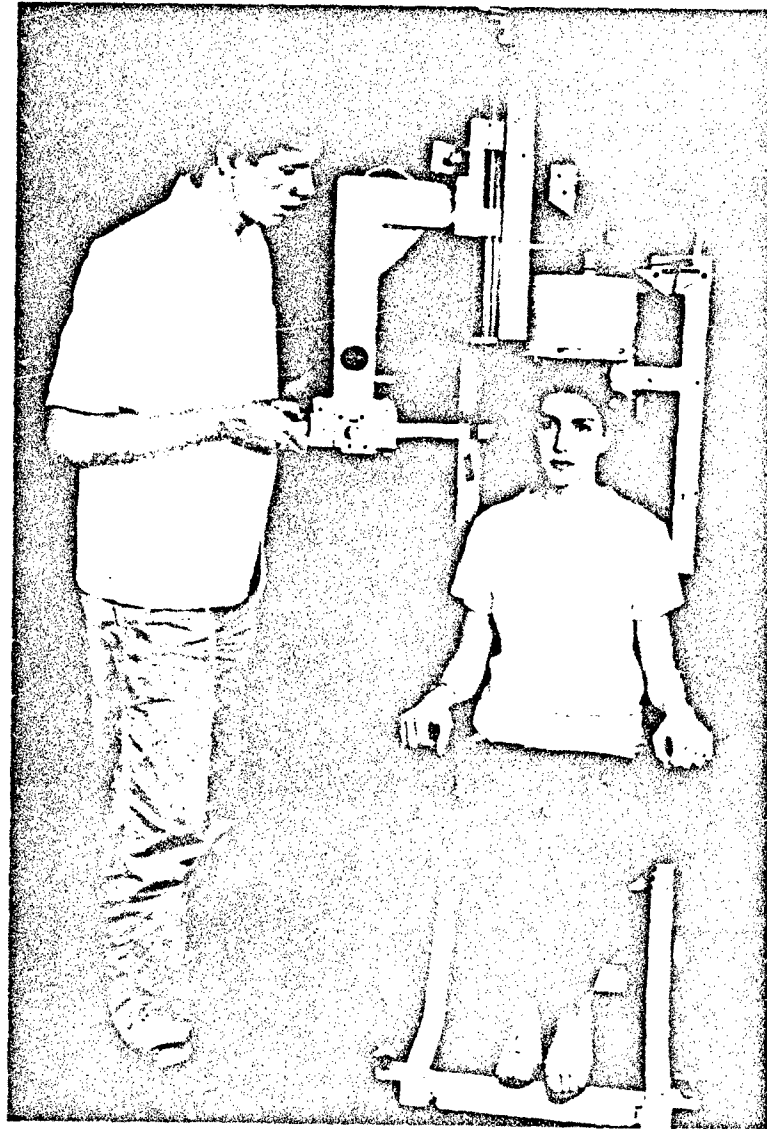


Figure 13. The Automated Headboard Device (AHD).

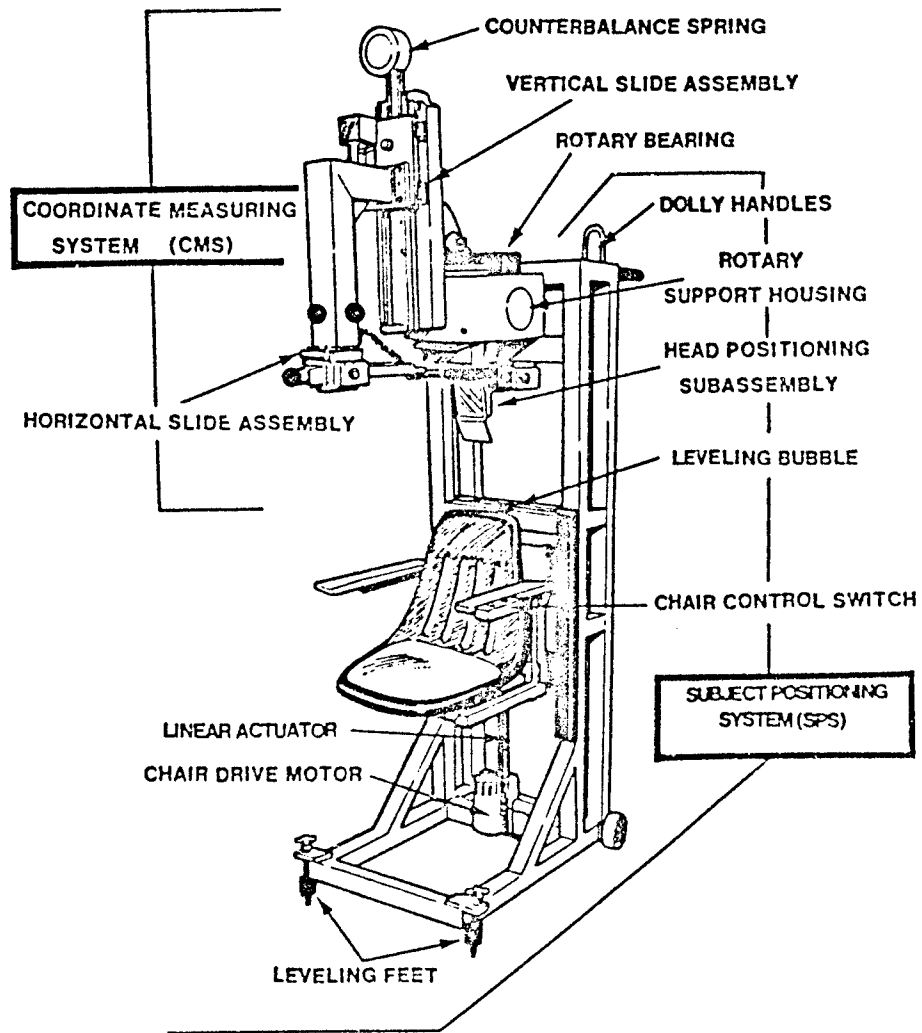


Figure 14. Principal components of the Automated Headboard Device.

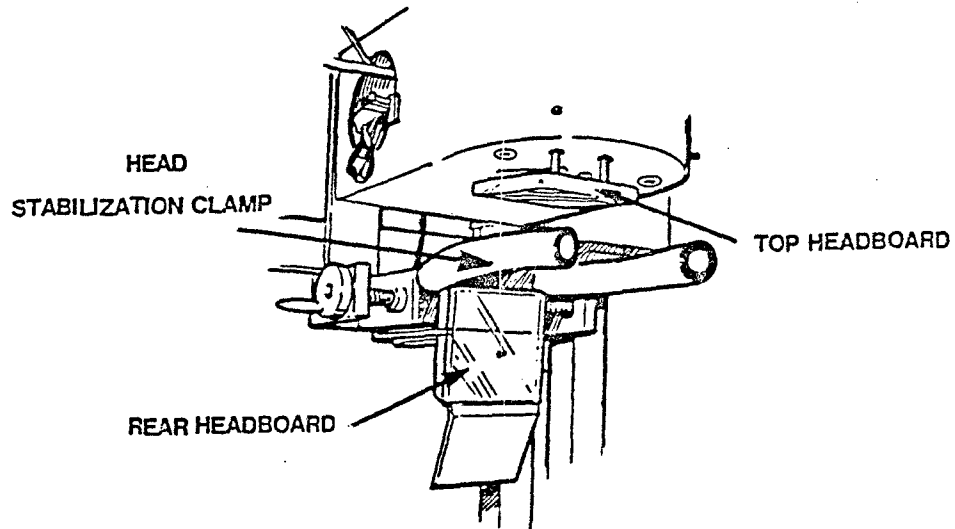


Figure 15. The reference planes (headboards) and head stabilization clamp.

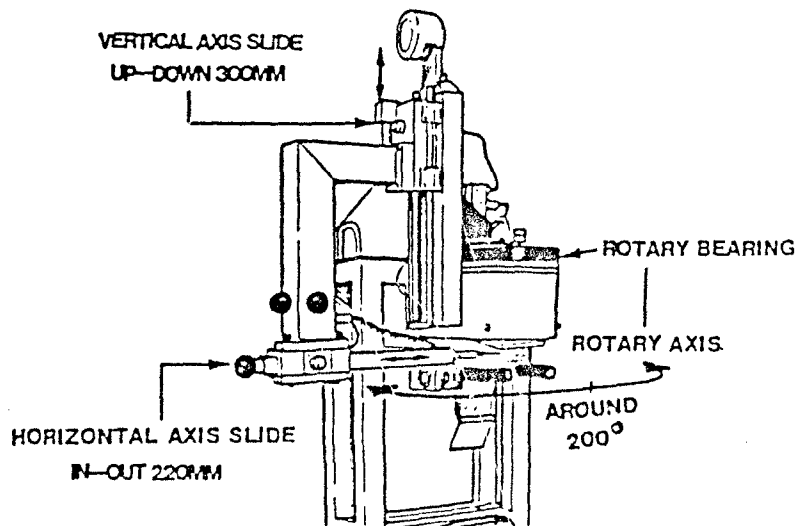


Figure 16. The axis assemblies of the coordinate measuring system and their range of movement.

Hand Photo Box

Numerous dimensions of the hand and fingers are required for the sizing and design of gloves. Because it was deemed too time-consuming to measure all these variables, a hand photometric system was designed to quickly and accurately capture hand images from which extensive data could be collected at a later time. The device is illustrated in Figure 17.

The system takes two sequential photographs: the first is a photo of the palm, using black-and-white film and flash photography; the second is a silhouette of the hand using a low-wattage bulb for back lighting and a series of lenses which cause the silhouette to be only minimally distorted. It is from the low-distortion silhouette that the measurements are made. The complete system and the optical principles on which it is based are described by Zehner and coworkers.⁶

To collect data from the pairs of photographs, a hand shadowgram data reduction device was developed. This device, specifically designed to accept the photographs from the hand photometric system, superimposes the two images on each other. In this way, the dimensions can be taken from the silhouette image, while using the ordinary palm-and-fingers photograph to identify soft-tissue landmarks. A personal computer and custom-designed software are integral components of the data reduction

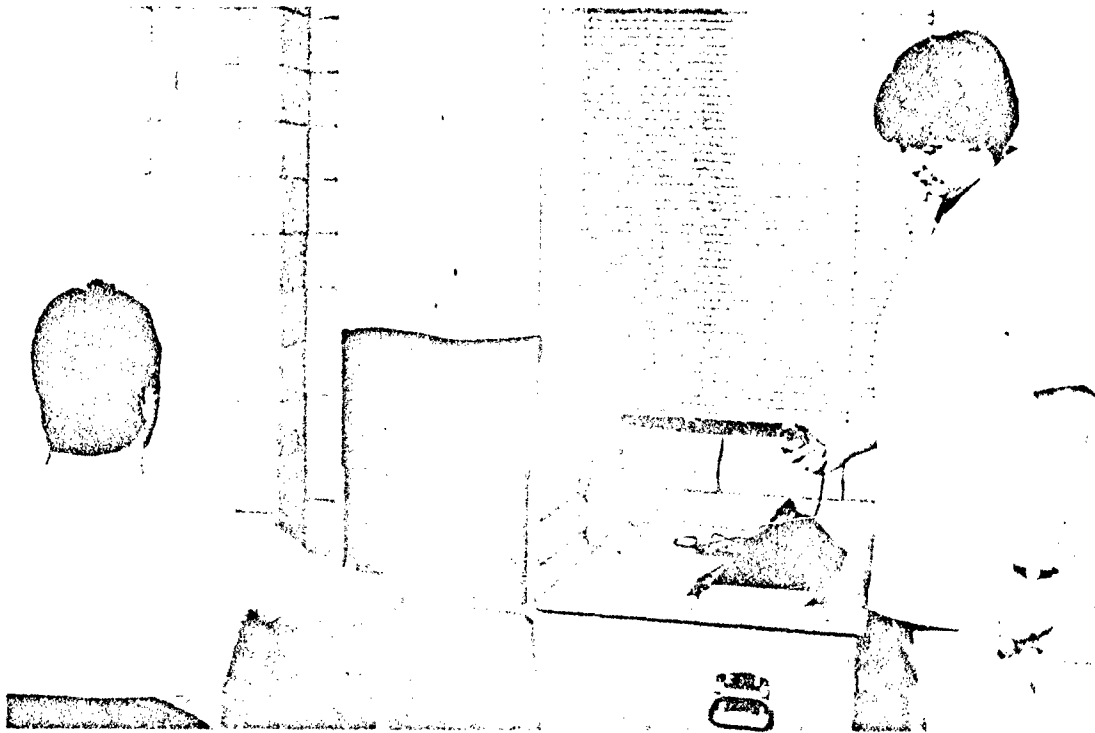


Figure 17. Subject seated at photobox.

device, so the operator can examine the superimposed photographs on the video screen and mark a number of landmarks on the hand using the computer's mouse. The coordinates of the points so identified are automatically read into the computer, which then computes the linear dimensions of the hand from the silhouette image.

Additional derived dimensional data on the hand will be available through regression equations. During the course of data collection, finger circumference data were directly measured on 1,190 subjects (620 males and 570 females) for whom hand photographs were also taken. The finger widths and corresponding finger circumferences from those individuals were used to calculate regression equations in which circumference is predicted by finger width. Using those regression equations, finger circumferences can be derived for the remainder of the subjects. Data collection using the hand shadowgram data reduction device is underway as of this writing.

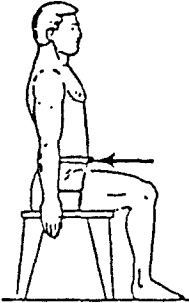
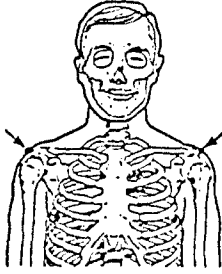

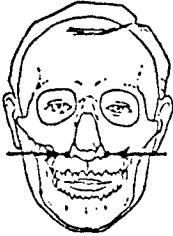
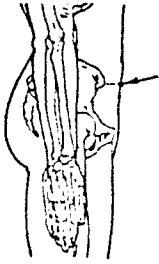
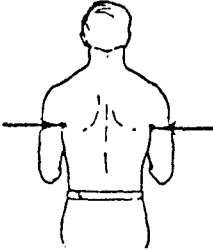
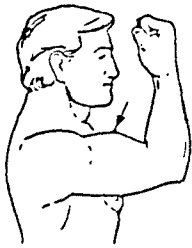
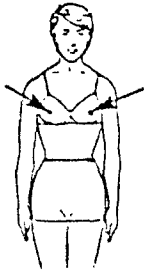
THE LANDMARKS

Dimensions are measured from one point on the body (or a fixed surface such as the floor) to another or, in the case of circumferences, around a part of the body at a specified level. To ensure that each dimension is measured accurately and consistently from subject to subject, dimensions are defined in terms of body landmarks, which serve as the origin, termination, or level of measurement of a dimension.

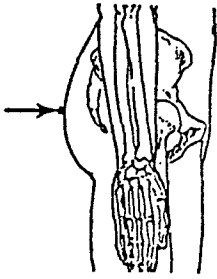
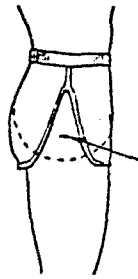


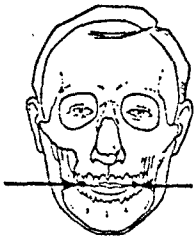
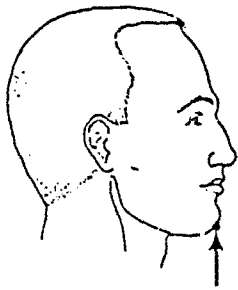
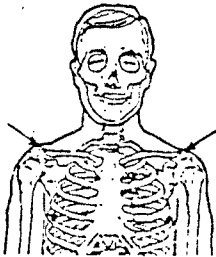
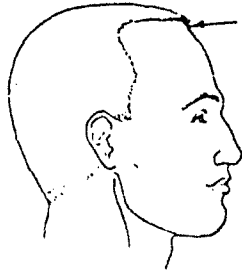
Two men and two women were trained in locating many of these points by palpation or by sight, and placing actual drawn marks on the bodies of all subjects in this survey. Measurers were also trained to recognize other easily located landmarks, such as Dactylion II, the tip of the index finger, for which marking was not necessary.

The landmarks used to define the measurements in the survey are listed and briefly described on the following pages. Detailed illustrated instructions for locating these landmarks can be found in the Measurer's Handbook.¹³ This chapter was taken from the 1938 Anthropometric Survey of U.S. Army Personnel: Methods and Summary Statistics.¹¹

LANDMARKS

<p>Abdominal point, anterior: The most protruding point of the relaxed abdomen of a seated subject.</p> 	<p>Acromion, right and left: The point of intersection of the lateral border of the acromial process and a line running down the middle of the shoulder from the neck to the tip of the shoulder.</p> 
<p>Acropodion: The tip of the first or second toe of the right foot, whichever is longer.</p> 	<p>Alare, right and left: The lateral point on the flare or wing of the nose.</p> 
<p>Anterior superior iliac spine, right and left: The anterior points of the right and left iliac crests.</p> 	<p>Axillary fold, posterior: right and left: The highest points of the right and left axillary folds on the back.</p> 
<p>Biceps point: The highest point of the right flexed biceps as viewed from the subject's right side.</p> 	<p>Bustpoint, right and left: The anterior points of the bra cups.</p> 

LANDMARKS (cont'd)

<p>Buttock point, posterior: Point of maximum protrusion of the right buttock of a standing subject.</p> 	<p>Buttock point, right lateral and left lateral: Points on the thigh or hip at the level of the maximum protrusion of the right buttock.</p> 
<p>Calf: A point on the side of the calf at the level of the maximum circumference of the right calf.</p> 	<p>Cervicale: The superior palpable point of the spine of the seventh cervical vertebra.</p> 
<p>Cheilion, right and left: The lateral point of the juncture of the fleshy tissue of the lips with the facial skin at the corner of the mouth.</p> 	<p>Chin: The most protruding point on the bottom edge of the chin, along the jawline.</p> 
<p>Clavicle point, right and left: The superior point of the lateral ends of the clavicle.</p> 	<p>Crinion: The lowest point of the hairline on the forehead in the midsagittal plane.</p> 

LANDMARKS (cont'd)

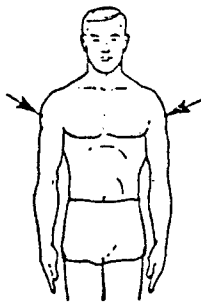
Dactylion II: The tip of the right index finger.



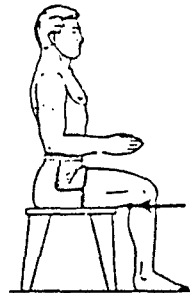
Dactylion III, right and left: The tip of the middle finger.



Deltoid point, right and left: The lateral point of the right deltoid muscle, and the margin of the left deltoid muscle at the level of the right deltoid point.



Dorsal juncture of the calf and thigh: The juncture between the right calf and thigh behind the knee of a subject sitting with the knee flexed 90 degrees.



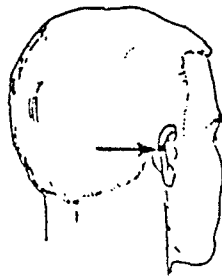
Dorsal juncture of the foot and leg: The top of a skin crease between the right foot and the front of the ankle when the knees and ankles are flexed about 30 degrees.



Ear, bottom: The lowest point of the right ear on its long axis.



Ear point: The lateral point (farthest from the head) of the right ear.

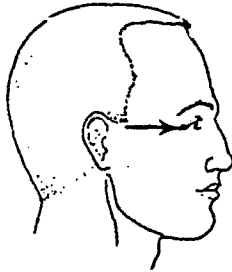


Ear, top: The highest point of the right ear on its long axis.

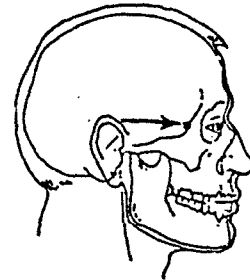


LANDMARKS (cont'd)

Ectocanthus: The outside corner of the right eye formed by the meeting of the upper and lower eyelids.



Ectoorbitale, right and left: The posterior point on the frontal process of the zygomatic bone at the level of the outer corner of the eye.



Elbow crease: The skin crease on the inside of the right elbow joint when the elbow is flexed 90 degrees.



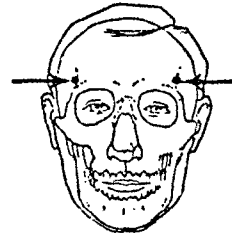
Fifth metatarsophalangeal protrusion: The lateral protrusion of the right foot in the region of the fifth metatarsophalangeal joint.



First metatarsophalangeal protrusion: The medial protrusion of the right foot in the region of the first metatarsophalangeal joint.



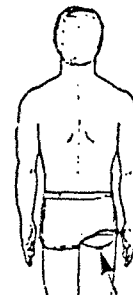
Frontotemporale, right and left: The point of deepest indentation of the temporal crest of the frontal bone above the browridges.



Glabella: The anterior point on the frontal bone midway between the bony browridges.

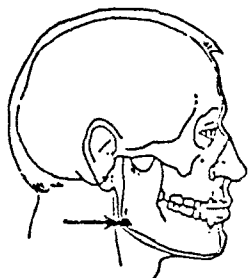


Gluteal furrow point: The lowest point of the lowest furrow or crease at the juncture of the right buttock and the thigh.

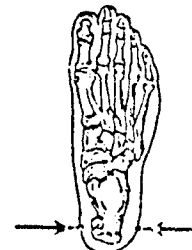


LANDMARKS (cont'd)

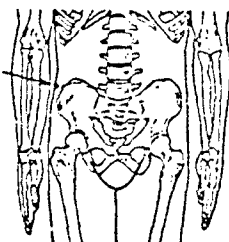
Gonion, right and left: The lateral point on the posterior angle of the mandible (jawbone).



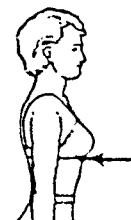
Heel point, lateral and medial: The lateral and medial points of the right heel located at or behind the most protruding point of the lateral malleolus (outside ankle bone).



Iliocristale: The highest palpable point of the right iliac crest of the pelvis, one half the distance between the anterior superior iliac and posterior superior iliac spines.



Inferior breast point: The inferior point of the juncture of the lower of the two breasts with the torso.



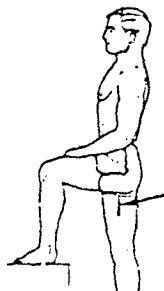
Infraorbitale, right and left: The lowest point on the anterior border of the bony eye socket.



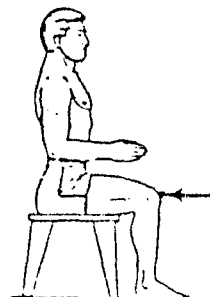
Infrathyroid: The inferior point in the midsagittal plane of the thyroid cartilage (Adam's apple).



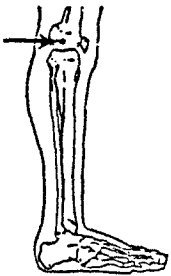
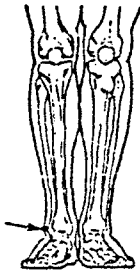
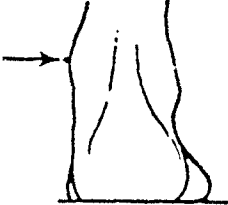


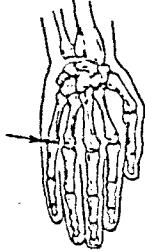
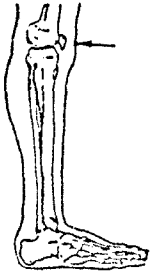
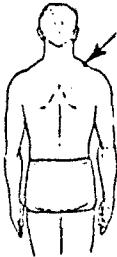
Inner thigh: A vertical line halfway between the front and back of the right inner thigh, and extending downward from the level of the gluteal furrow.



Knee point, anterior: The most protruding point of the right kneecap of a seated subject.



LANDMARKS (cont'd)

<p>Lateral femoral epicondyle, standing and sitting: Lateral point of the right femoral epicondyle (knee pivot point).</p> 	<p>Lateral malleolus: The lateral point of the right lateral malleolus (outside ankle bone).</p> 
<p>Medial malleolus: The medial point of the right medial malleolus (inside ankle bone).</p> 	<p>Menton: The inferior point of the mandible in the midsagittal plane (bottom of the chin).</p> 
<p>Metacarpale II: The lateral point of the right metacarpophalangeal joint II (at the base of the index finger on the outer edge of the hand).</p> 	<p>Metacarpale V: The medial point of the right metacarpophalangeal joint V (at the base of the little finger on the outer edge of the hand).</p> 
<p>Midpatella: The anterior point halfway between the top and bottom of the right patella (the kneecap).</p> 	<p>Midshoulder: The point on top of the right shoulder midway between the neck (right trapezius point) and the tip of the shoulder (acromion, right).</p> 

LANDMARKS (cont'd)

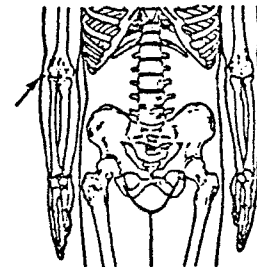
<p>Midspine: A line down the center of the back.</p>	<p>Neck: anterior, right lateral, and left lateral: Anterior and lateral points at the base of the neck.</p>
<p>Olecranon, bottom and rear: The lowest and rearmost points of the right elbow with the elbow flexed 90 degrees.</p>	<p>Olecranon, center: A point on the center of the curvature of the right olecranon process with the elbow flexed about 115 degrees.</p>
<p>Otopasion superior: The anterior superior point of the juncture between the right ear and the head.</p>	<p>Posterior superior iliac spine: The posterior point of the crest of the right ilium. A dimple normally overlies this point.</p>
<p>Promenton: The anterior projection of the soft tissue of the chin.</p>	<p>Pronasale: The point of the anterior projection of the tip of the nose.</p>

LANDMARKS (cont'd)

Pternion: The posterior point of the right heel.

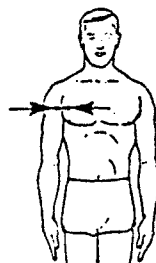


Radiale: The highest point on the outside edge of the right radius.



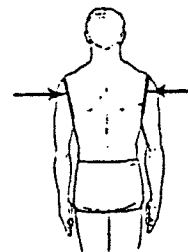
Scye: Points on the upper arm and torso associated with the armhole of a garment.

Anterior scye on the torso: A short horizontal line on the torso originating at the apex of the right anterior axillary fold.

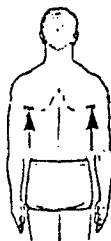


Anterior scye on the upper arm: A short horizontal line on the upper arm originating at the apex of the right anterior axillary fold.

Posterior diagonal scye, right and left: A diagonal line connecting the apex of the posterior axillary fold with the acromion landmark on the tip of the shoulder.



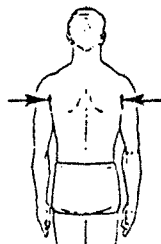
Posterior horizontal scye, right and left: A short horizontal line on the back originating at the apex of the posterior axillary fold.



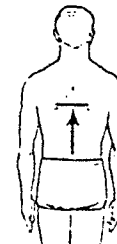
Midscye, right and left: A short horizontal line bisecting the Posterior diagonal scye landmark.



Posterior vertical scye, right and left: A short vertical line on the back originating at the apex of the posterior axillary fold.

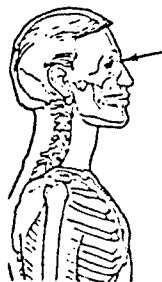


Scye level at midspine: A short horizontal line across the spine at the level of the Posterior horizontal scye landmarks.

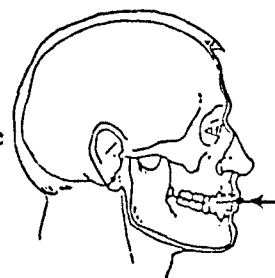


LANDMARKS (cont'd)

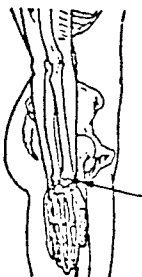
Sellion: The point of the deepest depression of the nasal bones at the top of the nose.



Stomion: The point of intersection of the upper and lower lip in the midsagittal plane when the mouth is closed.



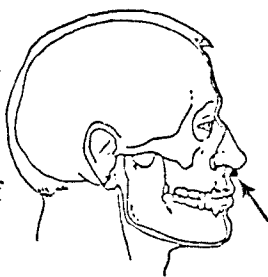
Stylin: The lowest point of the bottom of the right radius.



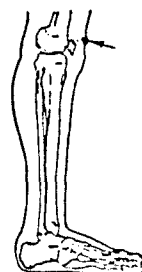
Submandibular: The juncture, in the midsagittal plane, of the lower jaw (mandible) and the neck.



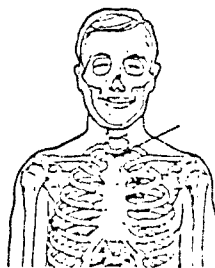
Subnasale: The point of intersection of the philtrum (groove of the upper lip) with the inferior surface of the nose, in the midsagittal plane.



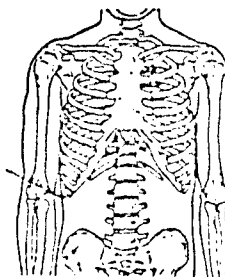
Suprapatella: The superior point of the right patella (kneecap).



Suprasternale: The inferior point of the jugular notch of the sternum (top of the breastbone).

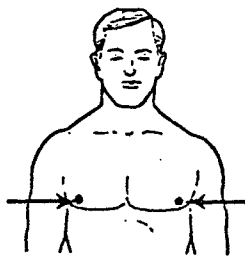


Tenth rib: The inferior point of the right tenth rib (bottom of the rib cage).

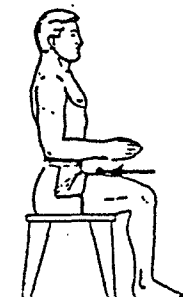


LANDMARKS (cont'd)

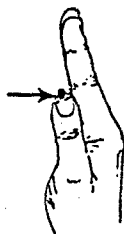
Thelion, right and left: Center of the nipple (on males).



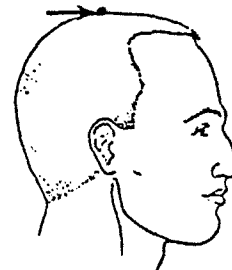
Thigh point, top: The highest point of the top of the right thigh of a seated subject.



Thumbtip: The tip of the right thumb.



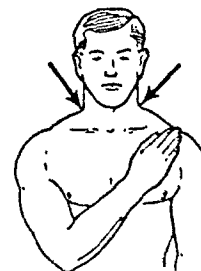
Top of head: The highest point on the head when the head is in the Frankfort plane.



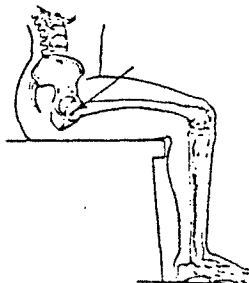
Tragion, right and left: The superior point on the juncture of the cartilaginous flap (tragus) of the ear with the head.



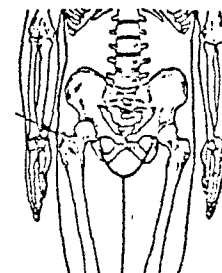
Trapezius point, right and left: The point at which the anterior border of the trapezius muscle crosses the lateral neck landmark.



Trochanter: A point at the center of the lateral surface of the greater trochanter of the right femur of a sitting subject.

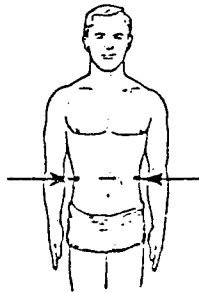


Trochanterion: The superior point of the greater trochanter of the right femur of a standing subject.

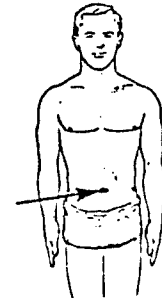


LANDMARKS (cont'd)

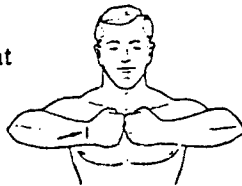
Waist (natural indentation): right and left; anterior and posterior: Level of the greatest indentation on the right side of the torso, or half the distance between 10th rib and Iliocristale if no single indentation is clear.



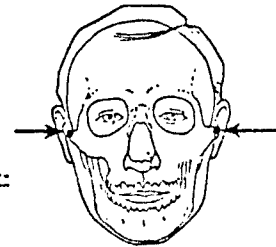
Waist (omphalion): right and left; anterior and posterior: Level of the center of the navel.



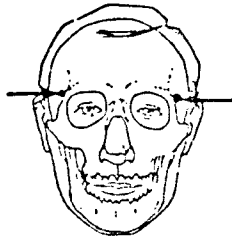
Wrist, dorsal: A line across the back of the right wrist originating at the stylium landmark and perpendicular to the long axis of the arm.



Zygion, right and left: The lateral point on the zygomatic arch.



Zygofrontale, right and left: The lateral point of the frontal bone on its zygomatic process.



CHAPTER III

THE SAMPLE

The April 1990 anthropometric qualifications which pilots must meet are: Span \geq 164 cm; Crotch Height \geq 75 cm; and Sitting Height \leq 102 cm⁸. In addition to these general anthropometric requirements for entrance to flight school, pilots must also meet specific anthropometric requirements in order to attain flight classification for operating specific types of aircraft (i.e., rotary wing versus fixed wing). Therefore, the sampling strategy for male pilots in the survey was based on flight classification to ensure that an appropriate range of anthropometric variability was represented in the sample. In 1988, some 93% of all U.S. Army aircraft were rotary wing and approximately 7% were fixed wing aircraft. Tables 5 and 6 present a breakdown of each flight classification within the rotary wing and fixed wing aircraft types. Tables 7 and 8 show the primary and secondary flight classification distribution for the male pilots in this report.

As indicated in Table 9, the majority of male pilots (79.3%) were measured at Ft. Rucker where they were randomly selected for measurement according to flight classification. The remaining 20.7% were screened and selected for measurement at Ft. Campbell, Ft. Stewart, Ft. Ord, Ft. Lewis, and Ft. Hood. Although a total of 493 male pilots were measured, only 487 were used for computing the summary statistics presented in this report. This is because six of the male pilots could not be completely measured, and thus are not a part of the pilot working data base.

Because there are only a small number of female pilots in the U.S. Army, only nine female pilots participated in the 1988 Anthropometric Survey. Therefore, a theoretical female pilot working data base was created using the 1988 Anthropometric Survey data pool. The initial step in creating the female pilot working data base was to identify all female subjects who met the June 1989 flight school criteria⁸. This pool of subjects was then demographically matched to the June 1989 U.S. Army female pilot population (see Table 8) using random selection. The female pilot working data base contains a total of 334 individuals who meet the current anthropometric criteria for flight school acceptance, and whose demographic characteristics match the June 1989 female pilot population.

CHARACTERISTICS OF THE WORKING DATA BASE

Tables 10 through 13 present the demographic distributions for age and race found among the June 1989 U.S. Army pilot population and the pilot working data base. The male pilot working data base has a slight excess in the 25-30 age group and among the White and Hispanic racial/ethnic groups. These slight differences are not unexpected since flight classification was used to select pilots for measurement, rather than age and race. The female pilot working data base demographically matches the actual female pilot population for all categories.

Table 14 presents the age distribution of the pilot working data base. The mean age of the female pilots (29.36 years) is three years younger than the mean age of the male pilots (32.68 years). The race distribution for both females and males is presented in Table 15. Because the female sample is only anthropometrically representative of the female pilot population, the remaining data relating to rank, ethnicity, years of service, duty location, vision, and handedness are summarized only for the male pilot working data base.

The ethnic distribution of male pilots is shown in Table 16. Over half of the male pilots view their ethnic group as American, which may be because almost all of the male pilots were born in the United States (see Table 17). Tables 18, 19, and 20 present information on Military Component, Rank, and Grade. Over 99% of the male pilots have completed more than two years of service as shown in Table 21. Vision correction, and the eye used for sighting a weapon are covered in Tables 22 and 23, respectively. Handedness, as determined by preferred hand for writing or firing a weapon, is shown in Tables 24 and 25.

TABLE 5. Distribution of U.S. Army Rotary Wing Aircraft

<u>Rotary Wing Type</u>	<u>Percent</u>
UH1	33.0
CH47	9.0
AH1	14.0
AH64	4.0
OH58	25.0
OH60	<u>15.0</u>
Totals	100.0

TABLE 6. Distribution of U.S. Army Fixed Wing Aircraft

<u>Fixed Wing Type</u>	<u>Percent</u>
C12/U21	40.0
OV1	33.0
FW Misc.	<u>27.0</u>
Totals	100.0

TABLE 7. Primary Flight Class Distribution of 1988 Male Pilots

Flight Class	Frequency	Percent	Cumulative
			Percent
AH-1	9	1.8	1.8
AH-1GEPS	1	.2	2.1
AH-1Q/S	2	.4	2.5
AH-15	5	1.0	3.5
AH-64	19	3.9	7.4
AH1G	1	.2	7.6
C-12	1	.2	7.8
CH-34	1	.2	8.0
CH-47	1	.2	8.2
CH-47ABC	1	.2	8.4
CH-47BCD	2	.4	8.8
CH-47CD	1	.2	9.0
HUGHES30	1	.2	9.2
O-1	1	.2	9.4
O-1AEG	1	.2	9.7
OH-1DHM	1	.2	9.9
OH-1HE	1	.2	10.1
OH-13	1	.2	10.3
OH-23	5	1.0	11.3
OH-23D	2	.4	11.7
OH-5AC	1	.2	11.9
OH-56	1	.2	12.1
OH-58	16	3.3	15.4
OH-58A	3	.6	16.0
OH-58AC	20	4.1	20.1
OH-58D	1	.2	20.3
OH-58SCT	2	.4	20.7
OH-6A	1	.2	20.9
OV-1	1	.2	21.1
O1/TO-1	1	.2	21.4
T-41	1	.2	21.6
T-42	1	.2	21.8
TH-11	1	.2	22.0
TH-13	2	.4	22.4
TH-13T	1	.2	22.6
TH-16	1	.2	22.8
TH-55	155	31.8	54.6
TH-55A	9	1.8	56.5
U-21	1	.2	56.7
UH-1	151	31.0	87.7
UH-1AED	1	.2	87.9
UH-1ALL	1	.2	88.1
UH-1H	50	10.3	98.4
UH-1HV	1	.2	98.6
UH-60	5	1.0	99.6
UH-60A	2	.4	100.0
TOTALS	487	100.0	100.0

TABLE 8. Secondary Flight Class Distribution of 1988 Male Pilots

<u>Flight Class</u>	<u>Frequency</u>	<u>Percent</u>	<u>Cumulative Percent</u>
None	47	9.7	9.7
AH-1	16	3.3	13.0
AH-1G	1	.2	13.1
AH-1MC	1	.2	13.3
AH-1Q/S	8	1.6	14.9
AH-1S	1	.2	15.1
AH-15	25	5.1	20.3
AH-15MC	1	.2	20.5
AH-64	7	1.4	22.0
AH-64A	1	.2	22.2
C-12	1	.2	22.4
C-45	1	.2	22.6
CH-47	7	1.4	24.0
OH-1	1	.2	24.2
OH-1H	1	.2	24.4
OH-13	8	1.6	26.1
OH-23	5	1.0	27.1
OH-55	1	.2	27.3
OH-58	58	11.3	38.6
OH-58A	15	3.1	41.7
OH-58AB	1	.2	41.9
OH-58AC	26	5.3	47.2
OH-58ACD	1	.2	47.4
OH-58C	3	.6	48.0
OH-58D	1	.2	48.3
OH-58SCT	4	.8	49.1
OH-6	8	1.6	50.7
OV-1	1	.2	50.9
T-41	3	.6	51.5
T-42	3	.6	52.2
TH-13	2	.4	52.6
TH-13ST	1	.2	52.8
TH-13T	2	.4	53.2
TH-55	21	4.3	57.5
TH-55A	3	.6	58.1
U-21	5	1.0	59.1
U-21ABCH	1	.2	59.3
UH-1	90	18.5	77.8
UH-1ABCD	2	.4	78.2
UH-1ABCH	1	.2	78.4
UH-1ALL	2	.4	78.9
UH-1BC	1	.2	79.1
UH-1BCH	1	.2	79.3
UH-1DH	2	.4	79.7
UH-1H	75	15.4	95.1
UH-1HV	1	.2	95.3

TABLE 8. Continued

<u>Flight Class</u>	<u>Frequency</u>	<u>Percent</u>	<u>Cumulative Percent</u>
UH-60	19	3.9	99.2
UH-6CA	3	.6	99.8
UH-60D	<u>1</u>	<u>.2</u>	<u>100.0</u>
TOTAL	487	100.0	100.0

TABLE 9. Distribution by Duty Location
1988 Male Pilots

	<u>Frequency</u>	<u>Percent</u>
Fort Campbell	22	4.5
Fort Stewart	6	1.2
Fort Ord	5	1.0
Fort Lewis	18	3.7
Fort Hood	50	10.3
Fort Rucker	<u>386</u>	<u>79.3</u>
TOTALS	487	100.0

TABLE 10. Demographic Distribution of the U.S. Army Pilots,
June 1989: Females

<u>Age (yrs)</u>		<u>White</u>	<u>Black</u>	<u>Hispanic</u>	<u>Asian/ Pacific Island</u>	<u>American Indian/ Alaskan Native</u>	<u>Mixed/ Other</u>	<u>Row Total</u>
≤ 20	Count	2	0	0	0	0	0	2
	%	0.7	0.0	0.0	0.0	0.0	0.0	0.7
21-24	Count	20	0	0	0	0	1	21
	%	7.4	0.0	0.0	0.0	0.0	0.4	7.7
25-30	Count	145	3	2	1	2	4	157
	%	53.3	1.1	0.7	0.4	0.7	1.5	57.7
≥ 31	Count	87	3	0	1	0	1	92
	%	32.0	1.1	0.0	0.4	0.0	0.4	33.8
TOTALS	Count	254	6	2	2	2	6	272
	%	93.4	2.2	0.7	0.7	0.7	2.2	99.9

TABLE 11. Demographic Distribution of Female Pilot Working Data Base

<u>Age (yrs)</u>		<u>White</u>	<u>Black</u>	<u>Hispanic</u>	<u>Asian/ Pacific Island</u>	<u>American Indian/ Alaskan Native</u>	<u>Mixed/ Other</u>	<u>Row Total</u>
≤ 20	Count	2	0	0	0	0	0	2
	%	0.6	0.0	0.0	0.0	0.0	0.0	0.6
21-24	Count	25	0	0	0	0	1	26
	%	7.5	0.0	0.0	0.0	0.0	0.3	7.8
25-30	Count	178	4	2	1	2	6	193
	%	53.3	1.2	0.6	0.3	0.6	1.8	57.8
≥ 31	Count	107	4	0	1	0	1	113
	%	32.0	1.2	0.0	0.3	0.0	0.3	33.8
TOTALS	Count	312	8	2	2	2	8	334
	%	93.4	2.4	0.6	0.6	0.6	2.4	100.0

TABLE 12. Demographic Distribution of the U.S. Army Pilots,
June 1989: Males

<u>Age (yrs)</u>		<u>White</u>	<u>Black</u>	<u>Hispanic</u>	<u>Asian/ Pacific Island</u>	<u>American Indian/ Alaskan Native</u>	<u>Mixed/ Other</u>	<u>Row Total</u>
≤ 20	Count	27	0	0	0	0	0	27
	%	0.2	0.0	0.0	0.0	0.0	0.0	0.2
21-24	Count	517	10	4	2	5	3	541
	%	4.2	0.1	0.0	0.0	0.1	0.0	4.4
25-30	Count	3420	130	22	11	2	51	3636
	%	27.9	1.1	0.2	0.1	0.0	0.4	29.7
≥ 31	Count	7479	315	107	29	18	94	8042
	%	61.1	2.6	0.9	0.2	0.1	0.8	65.7
TOTALS	Count	11443	455	133	42	25	148	12246
	%	93.4	3.7	1.1	0.3	0.2	1.2	100.0

TABLE 13. Demographic Distribution of Male Pilot Working Data Base

<u>Age (yrs)</u>		<u>White</u>	<u>Black</u>	<u>Hispanic</u>	<u>Asian/ Pacific Island</u>	<u>American Indian/ Alaskan Native</u>	<u>Mixed/ Other</u>	<u>Row Total</u>
≤ 20	Count	2	0	0	0	0	0	2
	%	0.4	0.0	0.0	0.0	0.0	0.0	0.4
21-24	Count	26	1	0	0	0	2	29
	%	5.3	0.2	0.0	0.0	0.0	0.4	6.0
25-30	Count	142	7	9	2	0	6	166
	%	29.2	1.4	1.9	0.4	0.0	1.2	34.1
≥ 31	Count	251	7	17	3	2	10	290
	%	51.5	1.4	3.5	0.6	0.4	2.1	59.5
TOTALS	Count	421	15	26	5	2	18	487
	%	86.4	3.1	5.4	1.0	0.4	3.7	100.0

TABLE 14. Age Distribution of 1988 Pilots

Females (Mean Age - 29.36)				Males (Mean Age - 32.68)			
Age	Frequency	Percent	Cumulative Percent	Age	Frequency	Percent	Cumulative Percent
20	2	.6	.6	20	2	.4	.4
21	8	2.4	3.0	21	3	.6	1.0
22	5	1.5	4.5	22	2	.4	1.4
23	7	2.1	6.6	23	3	.6	2.1
24	6	1.8	8.4	24	21	4.3	6.4
25	48	14.4	22.8	25	16	3.3	9.7
26	35	10.5	33.2	26	13	2.7	12.3
27	36	10.8	44.0	27	27	5.5	17.9
28	29	8.7	52.7	28	39	8.0	25.9
29	23	6.9	59.6	29	32	6.6	32.4
30	22	6.6	66.2	30	39	8.0	40.5
31	16	4.8	71.0	31	38	7.8	48.3
32	9	2.7	73.7	32	26	5.3	53.6
33	20	6.0	79.6	33	27	5.5	59.1
34	14	4.2	83.8	34	25	5.1	64.3
35	11	3.3	87.1	35	19	3.9	68.2
36	10	3.0	90.1	36	21	4.3	72.5
37	11	3.3	93.4	37	20	4.1	76.6
38	4	1.2	94.6	38	15	3.1	79.7
39	4	1.2	95.8	39	32	6.6	86.2
40	5	1.5	97.3	40	23	4.7	91.0
41	4	1.2	98.5	41	13	2.7	93.6
42	2	.6	99.1	42	12	2.5	96.1
43	0	.0	99.1	43	8	1.6	97.7
44	2	.6	99.7	44	5	1.0	98.8
45	<u>1</u>	<u>.3</u>	<u>100.0</u>	45	1	.2	99.0
TOTALS	334	100.0	100.0	46	1	.2	99.2
				47	1	.2	99.4
				48	1	.2	99.6
				50	1	.2	99.8
				51	<u>1</u>	<u>.2</u>	<u>100.0</u>
				TOTALS	487	100.0	100.0

TABLE 15. Distribution by Race of 1988 Pilots

Females			Males		
<u>Race</u>	<u>Frequency</u>	<u>Percent</u>	<u>Race</u>	<u>Frequency</u>	<u>Percent</u>
White	312	93.4	White	421	86.4
Black	8	2.4	Black	15	3.1
Hispanic	2	0.6	Hispanic	26	5.3
Asian/Pacific	2	0.6	Asian/Pacific	5	1.0
American Indian	2	0.6	American Indian	2	.4
Mixed/Other	<u>8</u>	<u>2.4</u>	Mixed/Other	<u>18</u>	<u>3.7</u>
TOTALS	334	100.0		487	100.0

TABLE 16. Distribution by Ethnicity
1988 Male Pilots

	<u>Frequency</u>	<u>Percent</u>
<u>ASIAN</u>		
Asian American	1	.2
Filipino	2	.4
<u>CARIBBEAN ISLANDERS</u>		
Cuban	1	.2
Puerto Rican	12	2.5
<u>CENTRAL AND SOUTH AMERICAN</u>		
Colombian	1	.2
Hispanic American	1	.2
Latin American	1	.2
Mexican	4	.8
Mexican American	3	.6
<u>EUROPEAN</u>		
Anglo-Saxon	1	.2
British	1	.2
Czech	1	.2
Danish	1	.2
Dutch	1	.2
English	25	5.1
European	3	.6
French	3	.6
German	41	8.4
Greek	1	.2
Hungarian	2	.4
Irish	21	4.3
Italian	7	1.4
Luxembourgian	1	.2
Norwegian	3	.6
Polish	4	.8
Scandinavian	2	.4
Scots	3	.6
Scots-Irish	5	1.0
Slovak	1	.2
Swedish	2	.4
Welsh	2	.4

TABLE 16. Continued

MIXED/OTHER

Irish Apache	1	.2
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NATIVE AMERICAN

American Indian	1	.2
Cherokee	2	.4
Hawaiian	1	.2
Lumbee	1	.2
Sioux	1	.2

NORTH AMERICAN, NOT NATIVE AMERICAN

American	312	64.1
Afro-American	1	.2
Black American	7	1.4
Canadian	1	.2
French Canadian	1	.2

PACIFIC ISLANDERS

Guamanian	<u>1</u>	<u>.2</u>
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TOTALS	487	100.0
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TABLE 17. Distribution by Birthplace
1988 Male Pilots

	<u>Frequency</u>	<u>Percent</u>
Alabama	14	2.9
Alaska	3	.6
Arizona	3	.6
Arkansas	3	.6
California	32	6.6
Colorado	4	.8
Connecticut	7	1.4
Delaware	2	.4
Florida	25	5.1
Georgia	17	3.5
Hawaii	1	.2
Idaho	3	.6
Illinois	16	3.3
Indiana	7	1.4
Iowa	5	1.0
Kansas	7	1.4
Kentucky	8	1.6
Louisiana	7	1.4
Maine	4	.8
Maryland	9	1.8
Massachusetts	11	2.3
Michigan	16	3.3
Minnesota	13	2.7
Mississippi	6	1.2
Missouri	16	3.3
Montana	4	.8
Nebraska	6	1.2
Nevada	2	.4
New Jersey	10	2.1
New Mexico	4	.8
New York	23	4.7
North Carolina	15	3.1
North Dakota	2	.4
Ohio	14	2.9
Oklahoma	7	1.4
Oregon	5	1.0
Pennsylvania	31	6.4
Rhode Island	1	.2
South Carolina	9	1.8
South Dakota	2	.4
Tennessee	10	2.1
Texas	28	5.7
Utah	1	.2

TABLE 17. Continued

Virginia	12	2.5
Washington	6	1.2
West Virginia	3	.6
Wisconsin	8	1.6
Wyoming	1	.2
Washington, DC	4	.8
Asia	3	.6
Canada	1	.2
Latin America	6	1.2
Europe	17	3.5
Pacific Islands	3	.6
West Indies	<u>10</u>	<u>2.1</u>
TOTALS	487	100.0

TABLE 18. Distribution by Military Component
1988 Male Pilots

	<u>Frequency</u>	<u>Percent</u>
Regular Army	440	90.3
Army Reserve	45	9.2
Missing Data	<u>2</u>	<u>.4</u>
TOTALS	487	100.0

TABLE 19. Distribution by Rank
1988 Male Pilots

	<u>Frequency</u>	<u>Percent</u>
Warrant Officer 1	15	3.1
Warrant Officer 2	140	28.7
Warrant Officer 3	78	16.0
Warrant Officer 4	60	12.3
First Lieutenant	29	6.0
Captain	133	27.3
Major	23	4.7
Lieutenant Colonel	<u>9</u>	<u>1.8</u>
TOTALS	487	100.0

TABLE 20. Distribution by Grade
1988 Male Pilots

	<u>Frequency</u>	<u>Percent</u>
WO1	15	3.1
WO2	140	28.7
WO3	78	16.0
WO4	60	12.3
O2	29	6.0
O3	133	27.3
O4	23	4.7
O5	<u>9</u>	<u>1.8</u>
TOTAL	487	100.0

TABLE 21. Distribution by Years of Service
1988 Male Pilots

<u>Years Completed</u>	<u>Frequency</u>	<u>Percent</u>
0	1	.2
1	2	.4
2	14	2.9
3	26	5.3
4	14	2.9
5	22	4.5
6	48	9.9
7	40	8.2
8	34	7.0
9	24	4.9
10	23	4.7
11	29	6.0
12	28	5.7
13	23	4.7
14	19	3.9
15	17	3.5
16	24	4.9
17	23	4.7
18	15	3.1
19	29	6.0
20	13	2.7
21	10	2.1
22	4	.8
24	1	.2
25	1	.2
26	1	.2
27	1	.2
32	<u>1</u>	<u>.2</u>
TOTALS	487	100.0

TABLE 22. Distribution by Vision Correction
1988 Male Pilots

	<u>Frequency</u>	<u>Percent</u>
Neither Glasses nor Contacts	401	82.3
Prescription Glasses	82	16.8
Prescription Contacts	0	0.0
Both	<u>4</u>	<u>.8</u>
TOTALS	487	100.0

TABLE 23. Distribution by Sighting - Weapon
1988 Male Pilots

	<u>Frequency</u>	<u>Percent</u>
Right	413	84.8
Left	48	9.9
Either	<u>26</u>	<u>5.3</u>
TOTALS	487	100.0

TABLE 24. Distribution by Handedness - Writing
1988 Male Pilots

	<u>Frequency</u>	<u>Percent</u>
Right	432	88.7
Left	<u>55</u>	<u>11.3</u>
TOTALS	487	100.0

TABLE 25. Distribution by Handedness - Weapon
1988 Male Pilots

	<u>Frequency</u>	<u>Percent</u>
Right	436	89.5
Left	38	7.8
Either	<u>13</u>	<u>2.7</u>
TOTALS	487	100.0

CHAPTER IV

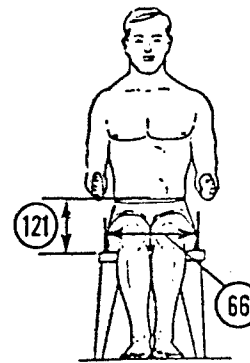
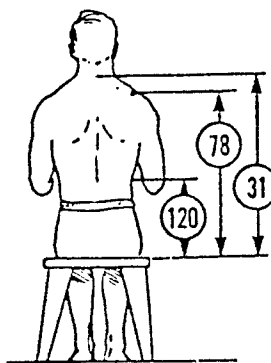
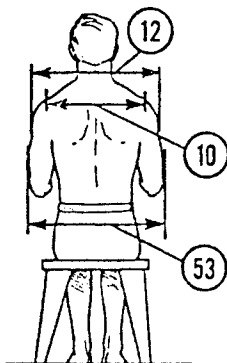
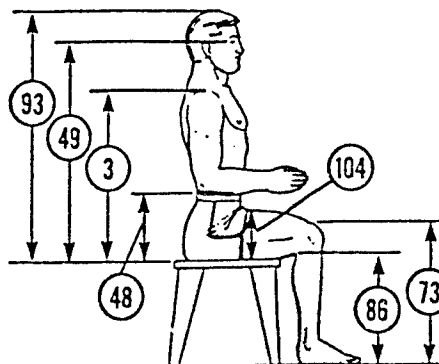
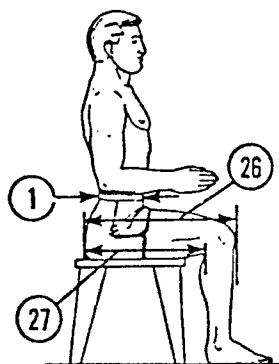
THE STANDARD MEASUREMENTS

One hundred thirty-two directly measured dimensions were obtained in this survey using traditional measuring instruments and methods. Where there was a choice of right or left, all measurements were taken on the right side unless otherwise specified or in the rare cases where an injury or anatomical abnormality made it necessary to measure on the left side. All measurements were made to the nearest millimeter. Weight was taken to the nearest 0.1 kilogram. Detailed illustrated instructions for making these measurements can be found in the *Measurer's Handbook*¹³.

Summary statistics, including means, standard deviations, and percentile values for male and female subjects, are tabulated on the ensuing pages. Users of these data will note .00 standard error (SE) values for some means and standard deviations. This SE occurs because values in these tables are not listed beyond two decimal places. It will also be noted that for crinion measurements the number of male pilots are slightly below 487. Crinion (the widow's peak) cannot be located on bald subjects or those with receding hairlines; thus measurements involving this landmark were not taken on some subjects.

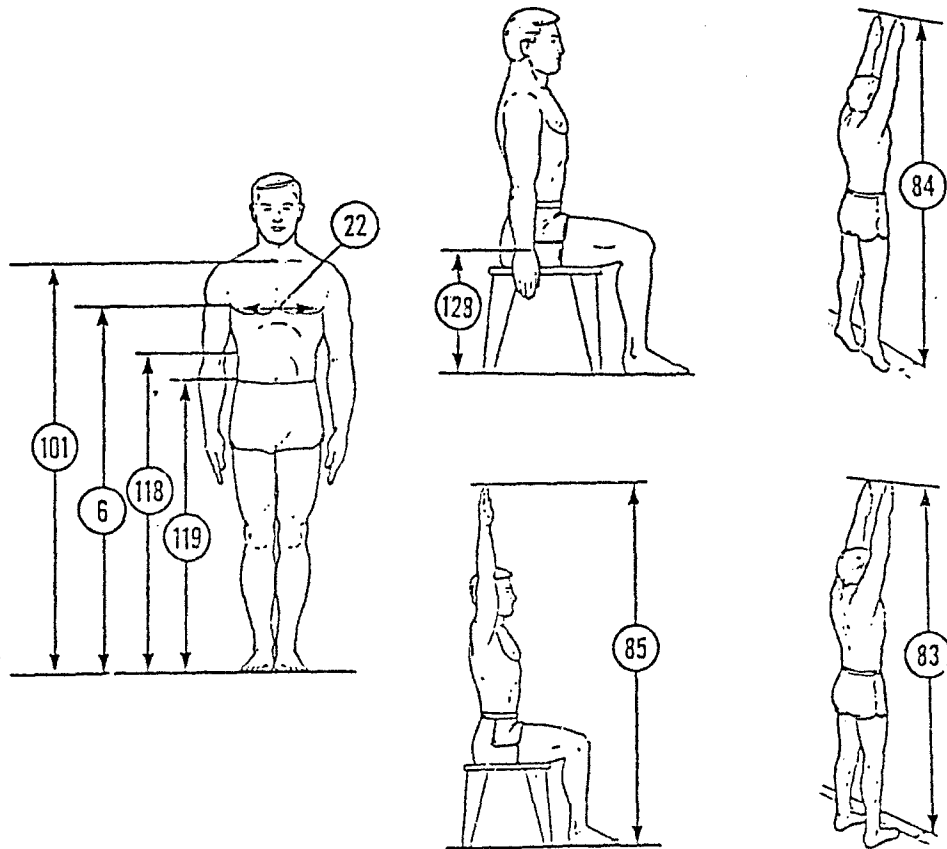
A visual index, designed to assist the reader in locating particular dimensions whose names may be unfamiliar, appears on the following pages. Completing this section are the data pages, which include brief measurement descriptions, percentile tables, summary statistics, and frequency tables.

VISUAL INDEX - THE STANDARD MEASUREMENTS



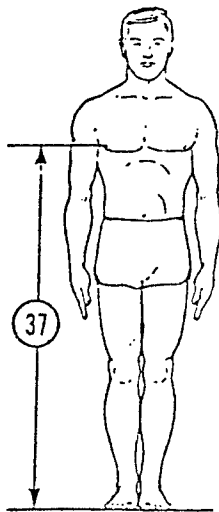
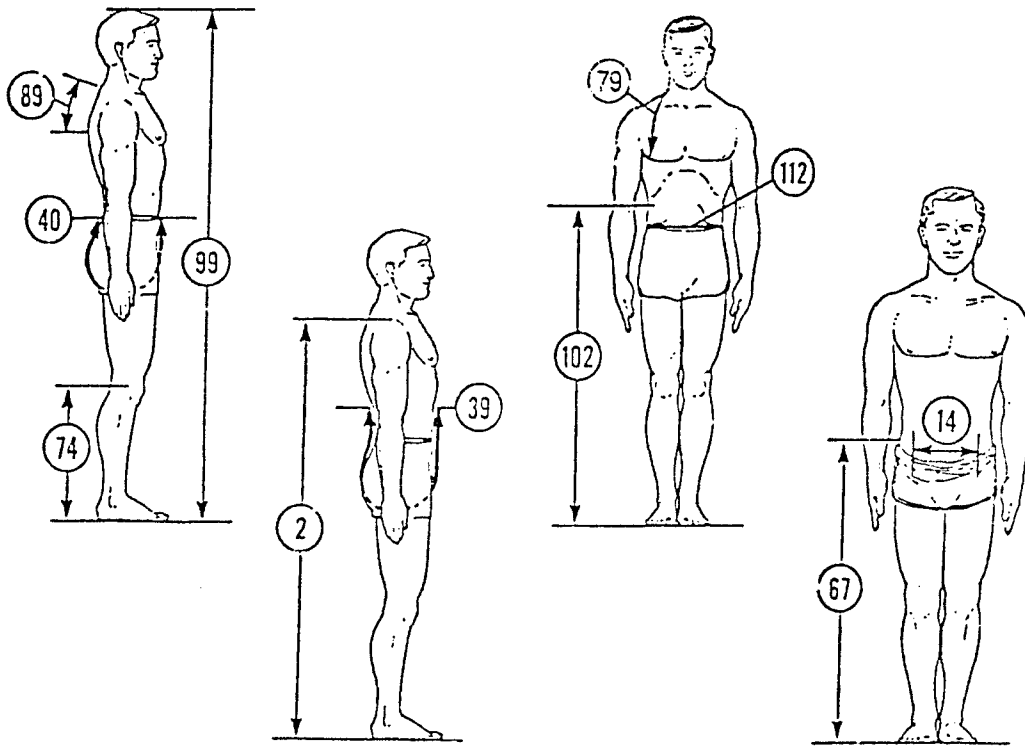
- | | |
|---|--|
| (1) ABDOMINAL EXTENSION DEPTH,
SITTING | (66) HIP BREADTH, SITTING |
| (3) ACROMIAL HEIGHT, SITTING | (73) KNEE HEIGHT, SITTING |
| (10) BIACROMIAL BREADTH | (78) MIDSHOULDER HEIGHT, SITTING |
| (12) BIDELOID BREADTH | (86) POPLITEAL HEIGHT |
| (26) BUTTOCK-KNEE LENGTH | (93) SITTING HEIGHT |
| (27) BUTTOCK-POPLITEAL LENGTH | (104) THIGH CLEARANCE |
| (31) CERVICALE HEIGHT, SITTING | (120) WAIST HEIGHT, SITTING
(NATURAL INDENTATION) |
| (48) ELBOW REST HEIGHT | (121) WAIST HEIGHT, SITTING
(OMPHALION) |
| (49) EYE HEIGHT, SITTING | |
| (53) FOREARM-FOREARM BREADTH | |

VISUAL INDEX - THE STANDARD MEASUREMENTS (Continued)



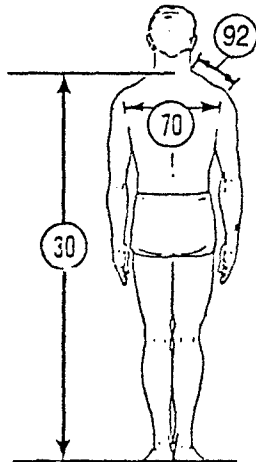
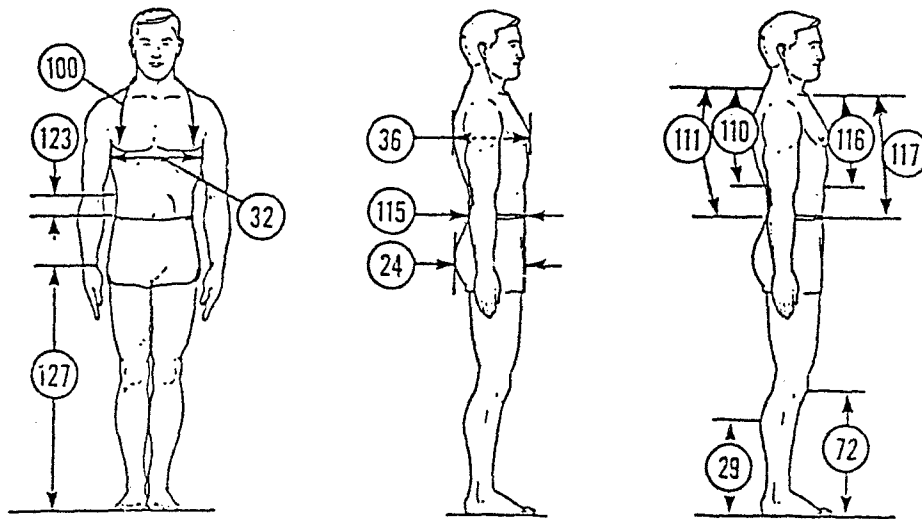
- (6) AXILLA HEIGHT
- (22) BUSTPOINT/THELION-BUSTPOINT/THELION BREADTH
- (83) OVERHEAD FINGERTIP REACH
- (84) OVERHEAD FINGERTIP REACH, EXTENDED
- (85) OVERHEAD FINGERTIP REACH, SITTING
- (101) SUPRASTERNALE HEIGHT
- (118) WAIST HEIGHT (NATURAL INDENTATION)
- (119) WAIST HEIGHT (OMPHALION)
- (128) WRIST HEIGHT, SITTING

VISUAL INDEX - THE STANDARD MEASUREMENTS (Continued)



- (2) ACROMIAL HEIGHT
- (14) BISPINOUS BREADTH
- (37) CHEST HEIGHT
- (39) CROTCH LENGTH (NATURAL INDENTATION)
- (40) CROTCH LENGTH (OMPHALION)
- (67) ILIOCRISTALE HEIGHT
- (74) LATERAL FEMORAL EPICONDYLE HEIGHT
- (79) NECK-BUSTPOINT/THELION LENGTH
- (89) SCYE DEPTH
- (99) STATURE
- (102) TENTH RIB HEIGHT
- (112) WAIST BREADTH

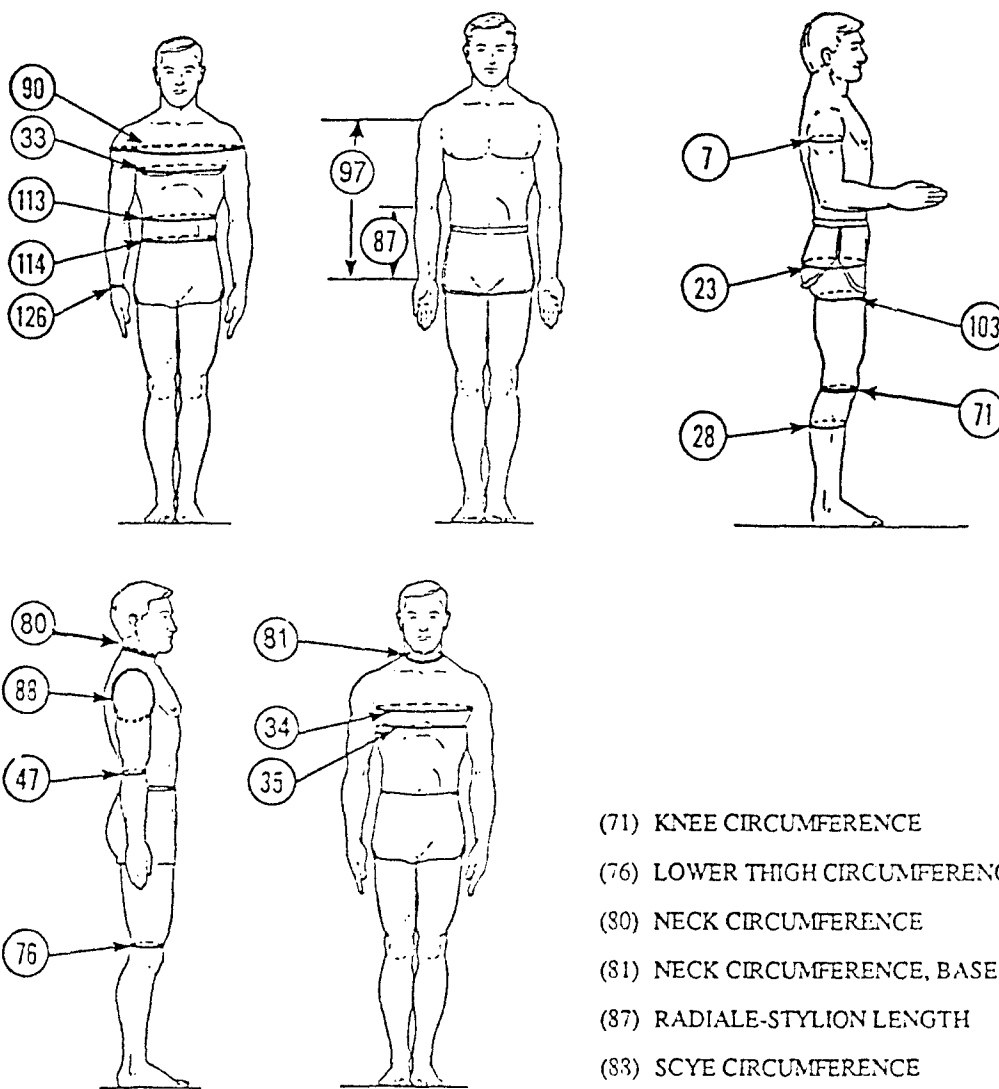
VISUAL INDEX - THE STANDARD MEASUREMENTS (Continued)



- (24) BUTTOCK DEPTH
- (29) CALF HEIGHT
- (30) CERVICALE HEIGHT
- (32) CHEST BREADTH

- (36) CHEST DEPTH
- (70) INTERSCYE II
- (72) KNEE HEIGHT, MIDPATELLA
- (92) SHOULDER LENGTH
- (100) STRAP LENGTH
- (110) WAIST BACK LENGTH (NATURAL INDENTATION)
- (111) WAIST BACK LENGTH (OMPHALION)
- (115) WAIST DEPTH
- (116) WAIST FRONT LENGTH (NATURAL INDENTATION)
- (117) WAIST FRONT LENGTH (OMPHALION)
- (123) WAIST (NATURAL INDENTATION) TO WAIST
(OMPHALION) LENGTH
- (127) WRIST HEIGHT

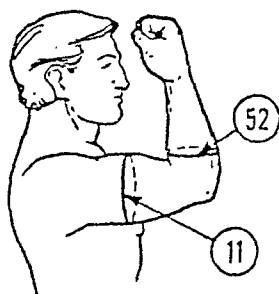
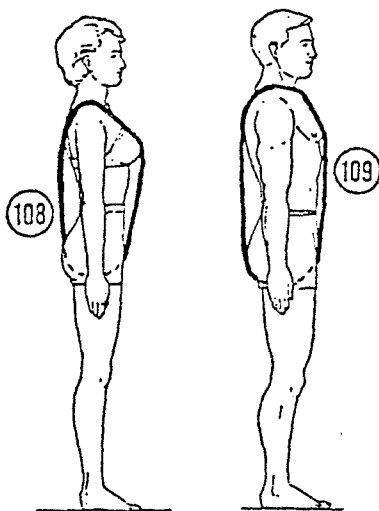
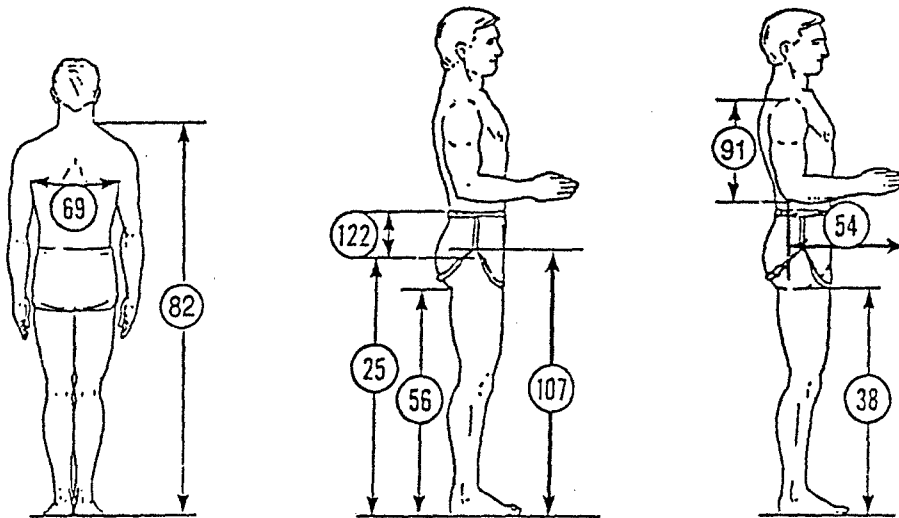
VISUAL INDEX - THE STANDARD MEASUREMENTS (Continued)



- (7) AXILLARY ARM CIRCUMFERENCE
- (23) BUTTOCK CIRCUMFERENCE
- (28) CALF CIRCUMFERENCE
- (33) CHEST CIRCUMFERENCE
- (34) CHEST CIRCUMFERENCE AT SCYE
- (35) CHEST CIRCUMFERENCE BELOW BREAST
- (47) ELBOW CIRCUMFERENCE

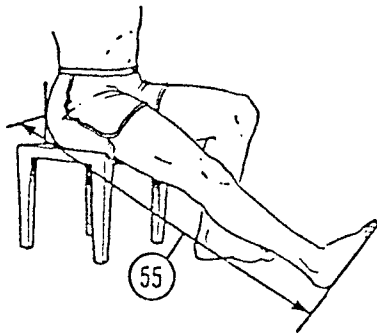
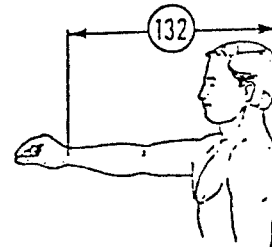
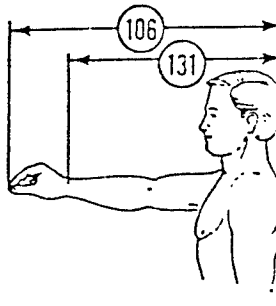
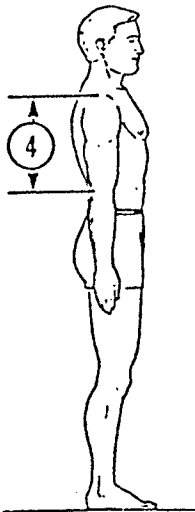
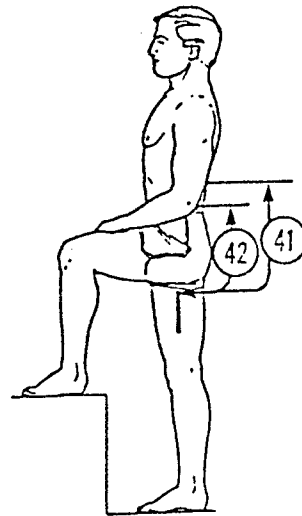
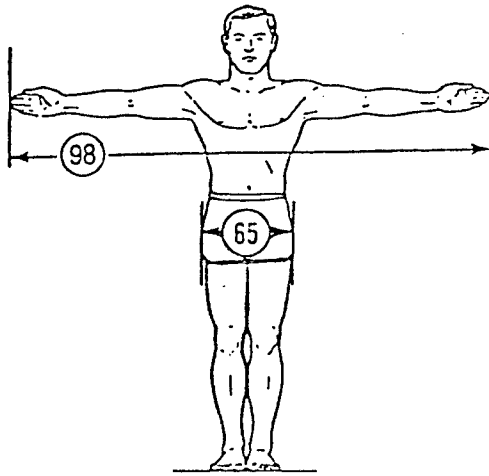
- (71) KNEE CIRCUMFERENCE
- (76) LOWER THIGH CIRCUMFERENCE
- (80) NECK CIRCUMFERENCE
- (81) NECK CIRCUMFERENCE, BASE
- (87) RADIALE-STYLION LENGTH
- (83) SCYE CIRCUMFERENCE
- (90) SHOULDER CIRCUMFERENCE
- (97) SLEEVE OUTSEAM
- (103) THIGH CIRCUMFERENCE
- (113) WAIST CIRCUMFERENCE
(NATURAL INDENTATION)
- (114) WAIST CIRCUMFERENCE
(OMPHALION)
- (126) WRIST CIRCUMFERENCE

VISUAL INDEX - THE STANDARD MEASUREMENTS (Continued)



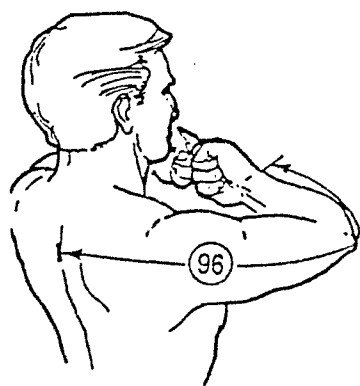
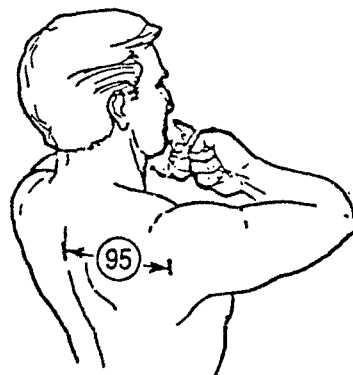
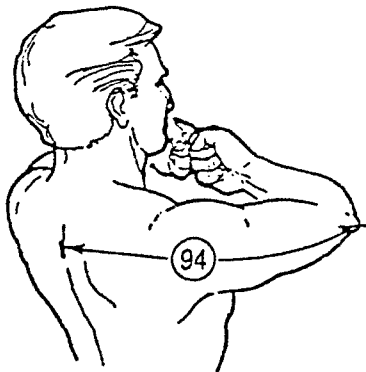
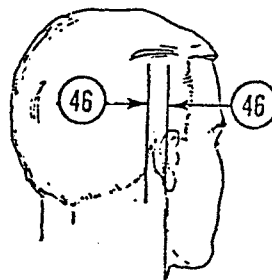
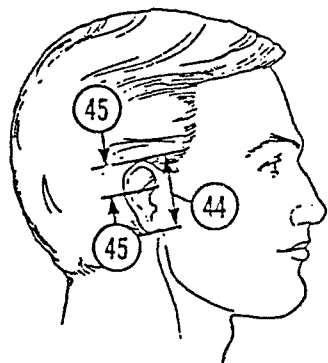
- (11) BICEPS CIRCUMFERENCE, FLEXED
- (25) BUTTOCK HEIGHT
- (38) CROTCH HEIGHT
- (52) FOREARM CIRCUMFERENCE, FLEXED
- (54) FOREARM-HAND LENGTH
- (56) GLUTEAL FURROW HEIGHT
- (69) INTERSCYE I
- (82) NECK HEIGHT, LATERAL
- (91) SHOULDER-ELBOW LENGTH
- (107) TROCHANTERION HEIGHT
- (108) VERTICAL TRUNK CIRCUMFERENCE (ASCC)
- (109) VERTICAL TRUNK CIRCUMFERENCE (USA)
- (122) WAIST-HIP LENGTH

VISUAL INDEX - THE STANDARD MEASUREMENTS (Continued)



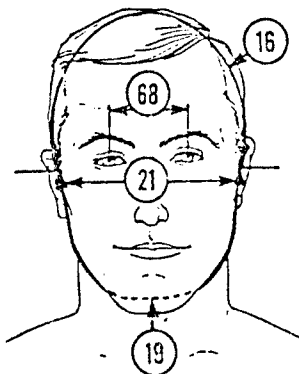
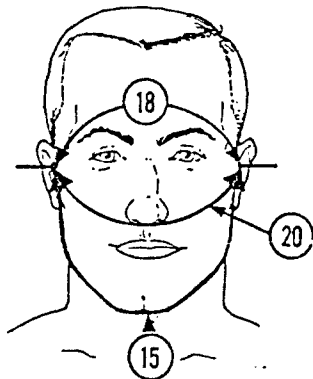
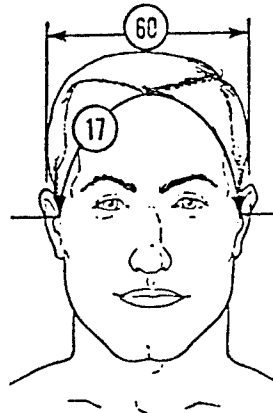
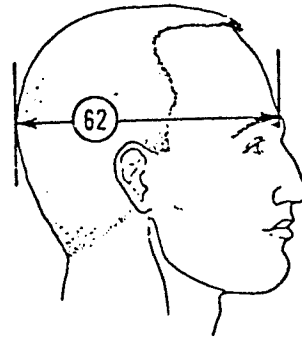
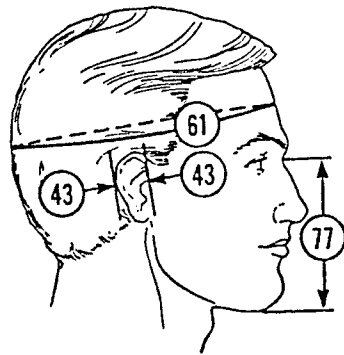
- (4) ACROMION-RADIALE LENGTH
- (41) CROTCH LENGTH, POSTERIOR
(NATURAL INDENTATION)
- (42) CROTCH LENGTH, POSTERIOR (OMPHALION)
- (55) FUNCTIONAL LEG LENGTH
- (65) HIP BREADTH
- (98) SPAN
- (106) THUMB TIP REACH
- (131) WRIST-WALL LENGTH
- (132) WRIST-WALL LENGTH, EXTENDED

VISUAL INDEX - THE STANDARD MEASUREMENTS (Continued)



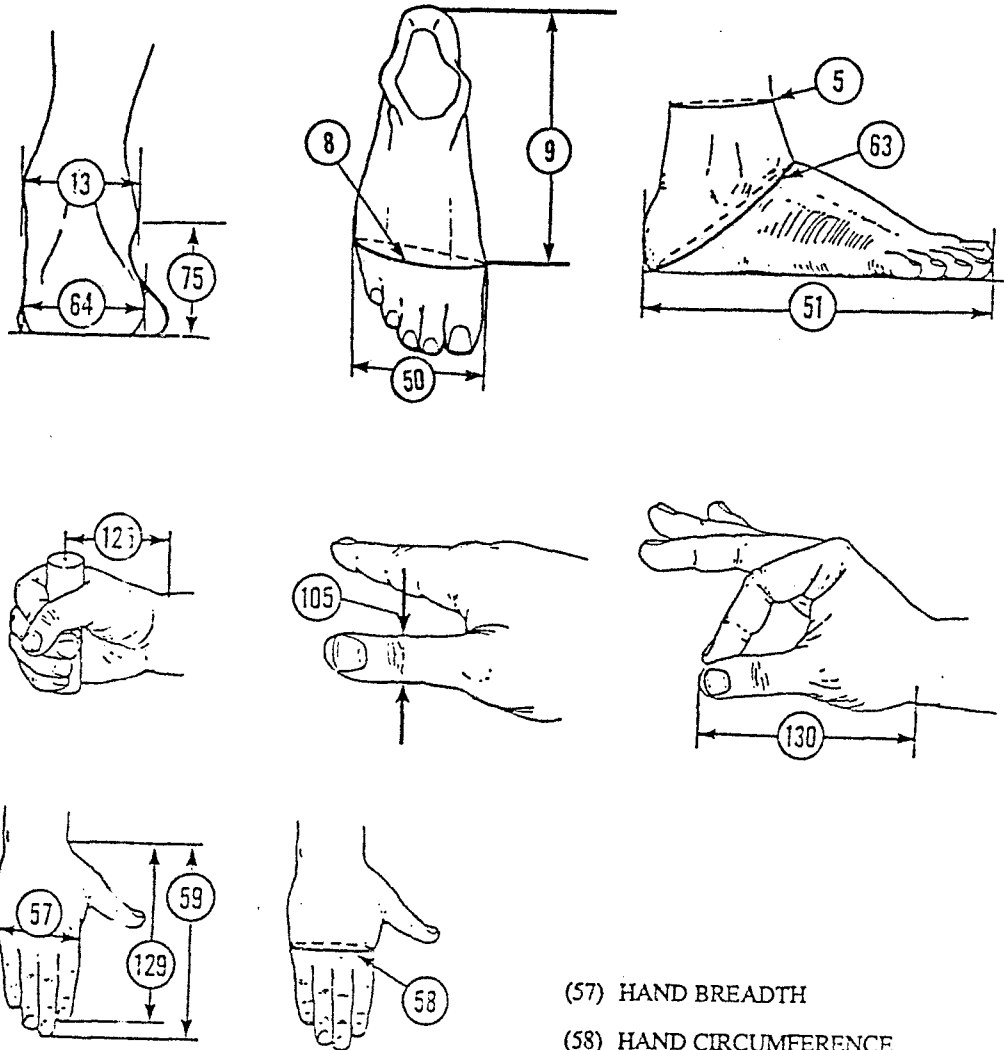
- (44) EAR LENGTH
- (45) EAR LENGTH ABOVE TRIGION
- (46) EAR PROTRUSION
- (94) SLEEVE LENGTH: SPINE-ELBOW
- (95) SLEEVE LENGTH: SPINE-SCYE
- (96) SLEEVE LENGTH: SPINE-WRIST

VISUAL INDEX - THE STANDARD MEASUREMENTS (Continued)



- (15) BITRAGON CHIN ARC
- (16) BITRAGON CORONAL ARC
- (17) BITRAGON CRINION ARC
- (18) BITRAGON FRONTAL ARC
- (19) BITRAGON SUBMANDIBULAR ARC
- (20) BITRAGON SUBNASALE ARC
- (21) BIZYGOMATIC BREADTH
- (43) EAR BREADTH
- (60) HEAD BREADTH
- (61) HEAD CIRCUMFERENCE
- (62) HEAD LENGTH
- (68) INTERPUPILLARY BREADTH
- (77) MENTON-SELLION LENGTH

VISUAL INDEX - THE STANDARD MEASUREMENTS (Continued)



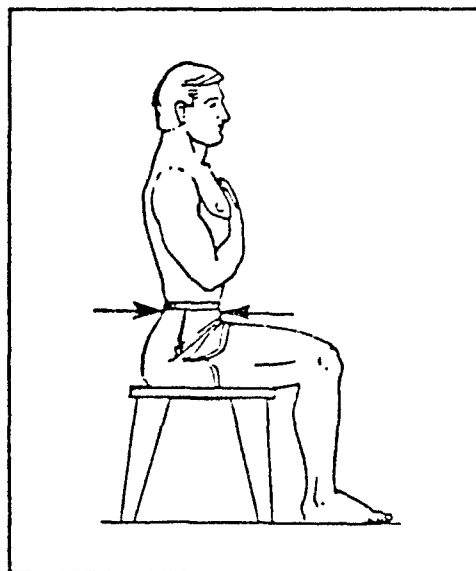
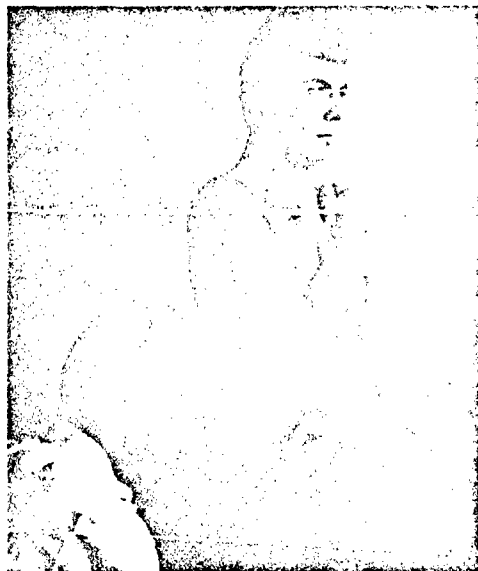
- (5) ANKLE CIRCUMFERENCE
- (8) BALL OF FOOT CIRCUMFERENCE
- (9) BALL OF FOOT LENGTH
- (13) BIMALLEOLAR BREADTH
- (50) FOOT BREADTH, HORIZONTAL
- (51) FOOT LENGTH

- (57) HAND BREADTH
- (58) HAND CIRCUMFERENCE
- (59) HAND LENGTH
- (63) HEEL ANKLE CIRCUMFERENCE
- (64) HEEL BREADTH
- (75) LATERAL MALLEOLUS HEIGHT
- (105) THUMB BREADTH
- (125) WRIST-CENTER OF GRIP LENGTH
- (129) WRIST-INDEX FINGER LENGTH
- (130) WRIST-THUMB TIP LENGTH

STANDARD MEASUREMENT DESCRIPTIONS AND PILOT SUMMARY STATISTICS

(1) ABDOMINAL EXTENSION DEPTH, SITTING

The horizontal distance between the anterior point of the abdomen and the back at the same level is measured with a beam caliper. The subject sits erect looking straight ahead. The measurement is made at the maximum point of quiet respiration.



VARIABLE NO. 1—ABDOMINAL EXTENSION DEPTH, SITTING

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
22.79	MEAN	8.97
0.16	SE (MEAN)	0.06
2.86	ST DEV	1.13
0.11	SE (SD)	0.04
16.10	MINIMUM	6.34
31.60	MAXIMUM	12.44
COEFF. OF VARIATION		12.6%
SYMMETRY—VETA I		0.51
KURTOSIS—VETA II		3.08
NUMBER OF SUBJECTS		334

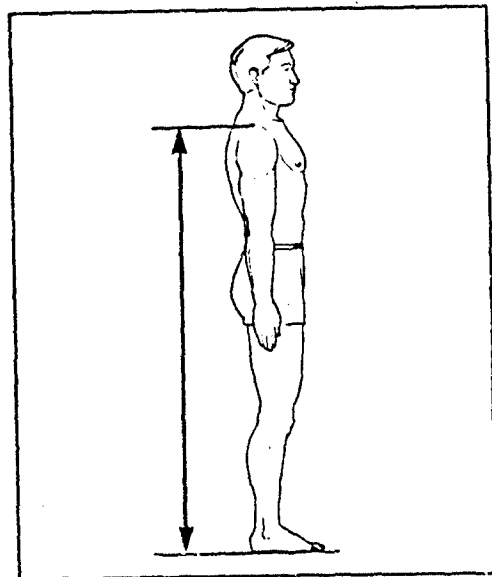
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
24.31	MEAN	9.57
0.12	SE (MEAN)	0.05
2.58	ST DEV	1.01
0.08	SE (SD)	0.03
17.50	MINIMUM	6.89
34.10	MAXIMUM	13.43
COEFF. OF VARIATION		10.6%
SYMMETRY—VETA I		0.26
KURTOSIS—VETA II		2.93
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
17.64	1ST	6.94
17.94	2ND	7.06
18.18	3RD	7.16
18.58	5TH	7.31
19.29	10TH	7.60
19.84	15TH	7.81
20.30	20TH	7.99
20.72	25TH	8.16
21.11	30TH	8.31
21.48	35TH	8.46
21.84	40TH	8.60
22.19	45TH	8.74
22.55	50TH	8.88
22.91	55TH	9.02
23.29	60TH	9.17
23.69	65TH	9.33
24.11	70TH	9.49
24.59	75TH	9.68
25.13	80TH	9.89
25.78	85TH	10.15
26.63	90TH	10.48
27.98	95TH	11.02
28.92	97TH	11.38
29.64	98TH	11.67
30.86	99TH	12.15

PERCENTILES		
CENTIMETERS		INCHES
18.95	1ST	7.46
19.49	2ND	7.67
19.83	3RD	7.81
20.31	5TH	8.00
21.07	10TH	8.30
21.61	15TH	8.51
22.06	20TH	8.69
22.46	25TH	8.84
22.82	30TH	8.99
23.17	35TH	9.12
23.51	40TH	9.26
23.84	45TH	9.39
24.17	50TH	9.52
24.52	55TH	9.65
24.86	60TH	9.79
25.23	65TH	9.93
25.62	70TH	10.09
26.05	75TH	10.26
26.53	80TH	10.44
27.09	85TH	10.66
27.79	90TH	10.94
28.80	95TH	11.34
29.43	97TH	11.59
29.87	98TH	11.76
30.50	99TH	12.01

(2) ACROMIAL HEIGHT

The vertical distance between a standing surface and the acromion landmark on the tip of the right shoulder is measured with an anthropometer. The subject stands erect looking straight ahead. The heels are together with the weight distributed equally on both feet. The shoulders and upper extremities are relaxed. The measurement is made at the maximum point of quiet respiration.



VARIABLE NO. 2—ACROMIAL HEIGHT

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
137.73	MEAN	54.22
0.22	SE (MEAN)	0.09
4.10	ST DEV	1.61
0.16	SE (SD)	0.06
126.70	MINIMUM	49.88
156.50	MAXIMUM	61.61
COEFF. OF VARIATION		3.0%
SYMMETRY—VETA I		0.44
KURTOSIS—VETA II		3.92
NUMBER OF SUBJECTS		334

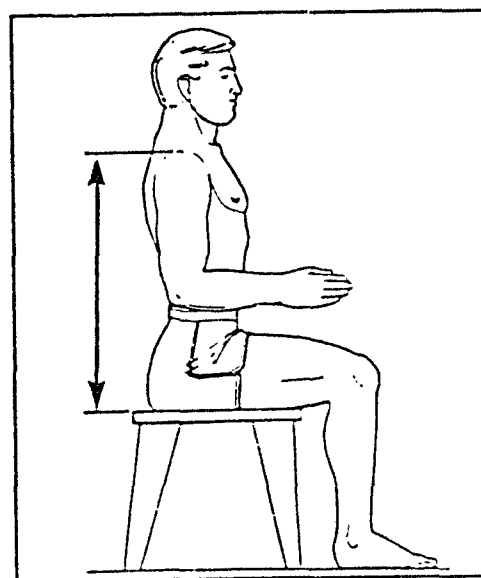
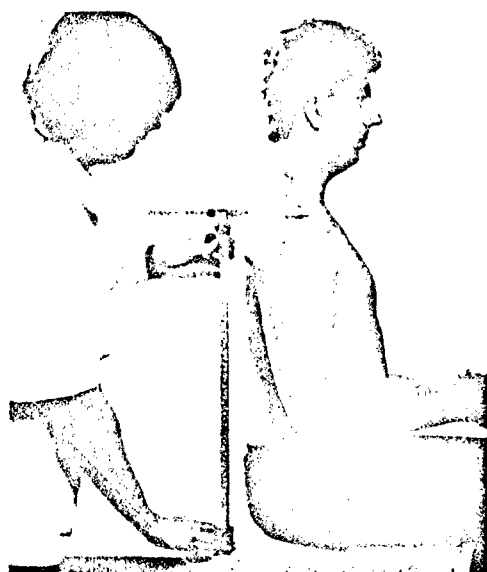
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
145.46	MEAN	57.27
0.27	SE (MEAN)	0.11
5.90	ST DEV	2.32
0.19	SE (SD)	0.07
127.80	MINIMUM	50.31
162.20	MAXIMUM	63.86
COEFF. OF VARIATION		4.1%
SYMMETRY—VETA I		0.01
KURTOSIS—VETA II		2.86
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
129.06	1ST	50.81
129.98	2ND	51.17
130.57	3RD	51.40
131.38	5TH	51.72
132.65	10TH	52.23
133.54	15TH	52.57
134.26	20TH	52.86
134.89	25TH	53.11
135.46	30TH	53.33
136.00	35TH	53.54
136.52	40TH	53.75
137.02	45TH	53.95
137.53	50TH	54.15
138.05	55TH	54.35
138.57	60TH	54.56
139.13	65TH	54.77
139.71	70TH	55.00
140.35	75TH	55.26
141.08	80TH	55.54
141.92	85TH	55.88
143.00	90TH	56.30
144.60	95TH	56.93
145.63	97TH	57.34
146.38	98TH	57.63
147.54	99TH	58.09

PERCENTILES		
CENTIMETERS		INCHES
131.69	1ST	51.85
133.42	2ND	52.53
134.48	3RD	52.94
135.87	5TH	53.49
137.95	10TH	54.31
139.35	15TH	54.86
140.45	20TH	55.30
141.41	25TH	55.67
142.28	30TH	56.02
143.09	35TH	56.33
143.86	40TH	56.64
144.62	45TH	56.94
145.37	50TH	57.23
146.13	55TH	57.53
146.90	60TH	57.84
147.71	65TH	58.15
148.56	70TH	58.49
149.48	75TH	58.85
150.52	80TH	59.26
151.71	85TH	59.73
153.20	90TH	60.32
155.32	95TH	61.15
156.61	97TH	61.66
157.51	98TH	62.01
158.77	99TH	62.51

(3) ACROMIAL HEIGHT, SITTING

The vertical distance between a sitting surface and the acromion landmark on the tip of the right shoulder is measured with an anthropometer. The subject sits erect looking straight ahead. The shoulders and upper arms are relaxed and the forearms and hands are extended forward horizontally with the palms facing each other. The measurement is made at the maximum point of quiet respiration.



VARIABLE NO. 3—ACROMIAL HEIGHT, SITTING

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
57.85	MEAN	22.77
0.13	SE (MEAN)	0.05
2.39	ST DEV	0.94
0.09	SE (SD)	0.04
50.90	MINIMUM	20.04
66.40	MAXIMUM	26.14
COEFF. OF VARIATION 4.1%		
SYMMETRY—VETA I 0.02		
KURTOSIS—VETA II 3.19		
NUMBER OF SUBJECTS		334

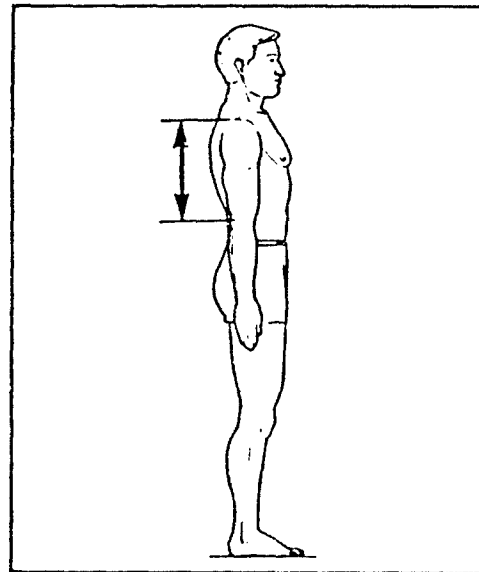
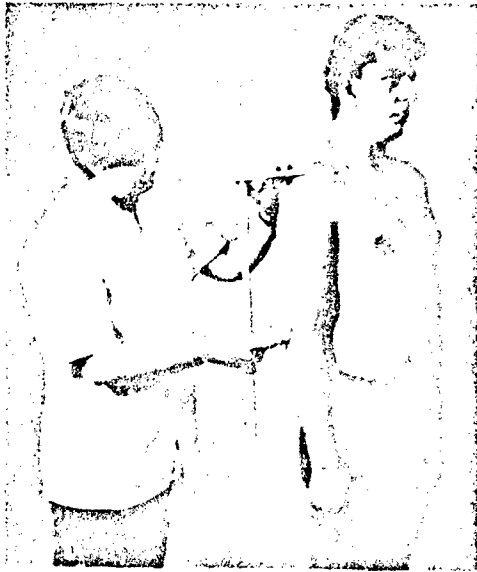
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
61.20	MEAN	24.09
0.13	SE (MEAN)	0.05
2.82	ST DEV	1.11
0.09	SE (SD)	0.04
52.30	MINIMUM	20.59
69.60	MAXIMUM	27.40
COEFF. OF VARIATION 4.6%		
SYMMETRY—VETA I -0.18		
KURTOSIS—VETA II 3.14		
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
51.94	1ST	20.45
52.83	2ND	20.80
53.34	3RD	21.00
53.97	5TH	21.25
54.87	10TH	21.60
55.44	15TH	21.83
55.88	20TH	22.00
56.26	25TH	22.15
56.60	30TH	22.28
56.92	35TH	22.41
57.22	40TH	22.53
57.52	45TH	22.64
57.81	50TH	22.76
58.11	55TH	22.88
58.42	60TH	23.00
58.74	65TH	23.13
59.08	70TH	23.26
59.45	75TH	23.41
59.87	80TH	23.57
60.35	85TH	23.76
60.96	90TH	24.00
61.82	95TH	24.34
62.33	97TH	24.54
62.67	98TH	24.67
63.14	99TH	24.86

PERCENTILES		
CENTIMETERS		INCHES
54.00	1ST	21.26
54.98	2ND	21.65
55.59	3RD	21.89
56.40	5TH	22.20
57.59	10TH	22.67
58.36	15TH	22.98
58.95	20TH	23.21
59.44	25TH	23.40
59.87	30TH	23.57
60.26	35TH	23.73
60.63	40TH	23.87
60.97	45TH	24.00
61.31	50TH	24.14
61.64	55TH	24.27
61.98	60TH	24.40
62.32	65TH	24.54
62.68	70TH	24.68
63.06	75TH	24.83
63.50	80TH	25.00
64.00	85TH	25.20
64.65	90TH	25.45
65.65	95TH	25.85
66.34	97TH	26.12
66.87	98TH	26.33
67.77	99TH	26.68

(4) ACROMION-RADIALE LENGTH

The distance between the acromion landmark on the tip of the right shoulder and the radiale landmark on the right elbow is measured with a beam caliper held parallel to the long axis of the arm. The subject stands erect. The shoulders and upper extremities are relaxed with the palms facing the thighs.



VARIABLE NO. 4—ACROMION-RADIALE LENGTH

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
32.15	MEAN	12.66
0.06	SE (MEAN)	0.03
1.18	ST DEV	0.47
0.05	SE (SD)	0.02
29.50	MINIMUM	11.61
36.40	MAXIMUM	14.33
COEFF. OF VARIATION		3.7%
SYMMETRY---VETA I		0.50
KURTOSIS---VETA II		3.06
NUMBER OF SUBJECTS		334

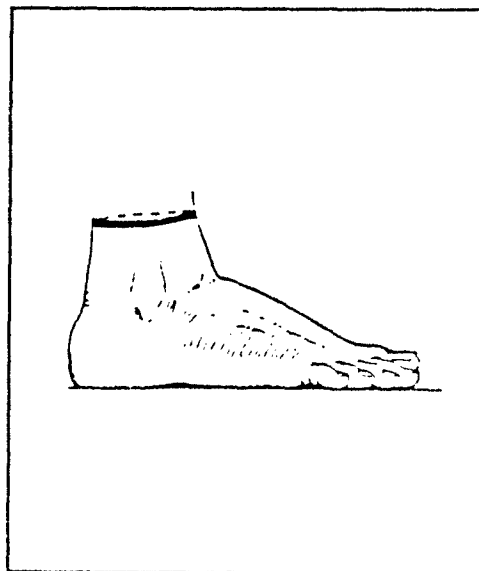
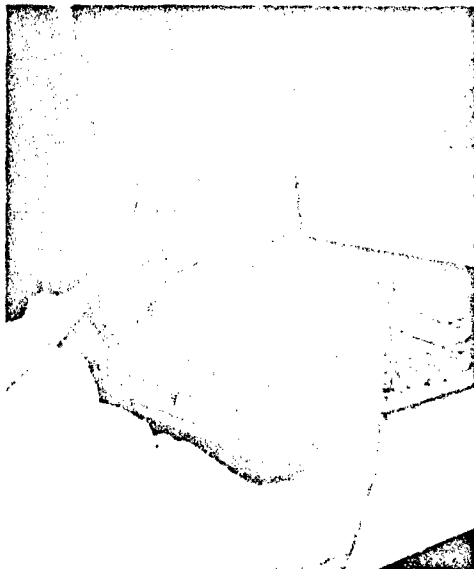
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
34.36	MEAN	13.53
0.08	SE (MEAN)	0.03
1.68	ST DEV	0.66
0.05	SE (SD)	0.02
30.20	MINIMUM	11.89
39.20	MAXIMUM	15.43
COEFF. OF VARIATION		4.9%
SYMMETRY---VETA I		0.11
KURTOSIS---VETA II		2.80
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
29.87	1ST	11.76
30.10	2ND	11.85
30.24	3RD	11.91
30.43	5TH	11.98
30.73	10TH	12.10
30.95	15TH	12.18
31.13	20TH	12.25
31.29	25TH	12.32
31.44	30TH	12.38
31.59	35TH	12.44
31.73	40TH	12.49
31.88	45TH	12.55
32.03	50TH	12.61
32.18	55TH	12.67
32.34	60TH	12.73
32.51	65TH	12.80
32.69	70TH	12.87
32.90	75TH	12.95
33.13	80TH	13.04
33.40	85TH	13.15
33.75	90TH	13.29
34.25	95TH	13.49
34.57	97TH	13.61
34.79	98TH	13.70
35.10	99TH	13.82

PERCENTILES		
CENTIMETERS		INCHES
30.49	1ST	12.00
30.98	2ND	12.20
31.28	3RD	12.31
31.66	5TH	12.47
32.24	10TH	12.69
32.63	15TH	12.85
32.93	20TH	12.97
33.20	25TH	13.07
33.45	30TH	13.17
33.67	35TH	13.26
33.89	40TH	13.34
34.11	45TH	13.43
34.32	50TH	13.51
34.54	55TH	13.60
34.76	60TH	13.69
34.99	65TH	13.78
35.24	70TH	13.87
35.51	75TH	13.98
35.81	80TH	14.10
36.16	85TH	14.24
36.60	90TH	14.41
37.22	95TH	14.65
37.60	97TH	14.80
37.85	98TH	14.90
38.22	99TH	15.05

(5) ANKLE CIRCUMFERENCE

The minimum horizontal circumference of the right ankle is measured with a tape. The subject stands with the feet about 10 cm apart and the weight distributed equally on both feet.



VARIABLE NO. 5—ANKLE CIRCUMFERENCE

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
20.93	MEAN	8.24
0.06	SE(MEAN)	0.02
1.12	ST DEV	0.44
0.04	SE(SD)	0.02
18.00	MINIMUM	7.09
24.30	MAXIMUM	9.57
COEFF. OF VARIATION		5.4%
SYMMETRY----VETA I		0.14
KURTOSIS----VETA II		2.95
NUMBER OF SUBJECTS		334

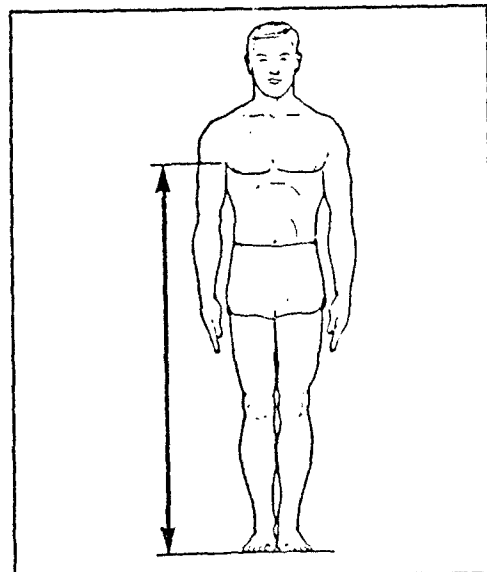
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
22.09	MEAN	8.70
0.06	SE(MEAN)	0.02
1.22	ST DEV	0.48
0.04	SE(SD)	0.02
18.80	MINIMUM	7.40
25.40	MAXIMUM	10.00
COEFF. OF VARIATION		5.5%
SYMMETRY----VETA I		0.20
KURTOSIS----VETA II		2.64
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
18.42	1ST	7.25
18.67	2ND	7.35
18.84	3RD	7.42
19.09	5TH	7.52
19.48	10TH	7.67
19.75	15TH	7.78
19.97	20TH	7.86
20.16	25TH	7.94
20.33	30TH	8.00
20.48	35TH	8.06
20.63	40TH	8.12
20.77	45TH	8.18
20.91	50TH	8.23
21.05	55TH	8.29
21.19	60TH	8.34
21.34	65TH	8.40
21.50	70TH	8.46
21.67	75TH	8.53
21.86	80TH	8.61
22.09	85TH	8.70
22.39	90TH	8.81
22.85	95TH	9.00
23.18	97TH	9.13
23.44	98TH	9.23
23.88	99TH	9.40

PERCENTILES		
CENTIMETERS		INCHES
19.58	1ST	7.71
19.83	2ND	7.81
19.98	3RD	7.87
20.20	5TH	7.95
20.56	10TH	8.09
20.81	15TH	8.19
21.02	20TH	8.28
21.21	25TH	8.35
21.38	30TH	8.42
21.55	35TH	8.48
21.71	40TH	8.55
21.87	45TH	8.61
22.03	50TH	8.67
22.19	55TH	8.74
22.36	60TH	8.80
22.53	65TH	8.87
22.72	70TH	8.94
22.92	75TH	9.03
23.15	80TH	9.12
23.42	85TH	9.22
23.75	90TH	9.35
24.23	95TH	9.54
24.52	97TH	9.65
24.72	98TH	9.73
25.00	99TH	9.84

(6) AXILLA HEIGHT

The vertical distance between a standing surface and the right axillary fold, as designated by the anterior-scapula-on-the-torso landmark, is measured with an anthropometer. The subject stands erect looking straight ahead. The heels are together with the weight distributed equally on both feet. The shoulders and upper extremities are relaxed with the palms facing the thighs. The measurement is taken at the maximum point of quiet respiration.



VARIABLE NO. 6--AXILLA HEIGHT

FEMALES

THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
127.32	MEAN	50.13	
0.21	SE(MEAN)	0.08	
3.82	ST DEV	1.50	
0.15	SE(SD)	0.06	
115.70	MINIMUM	45.55	
145.20	MAXIMUM	57.17	
COEFF. OF VARIATION		3.0%	
SYMMETRY----	VETA I	0.46	
KURTOSIS----	VETA II	4.12	
NUMBER OF SUBJECTS		334	

MALES

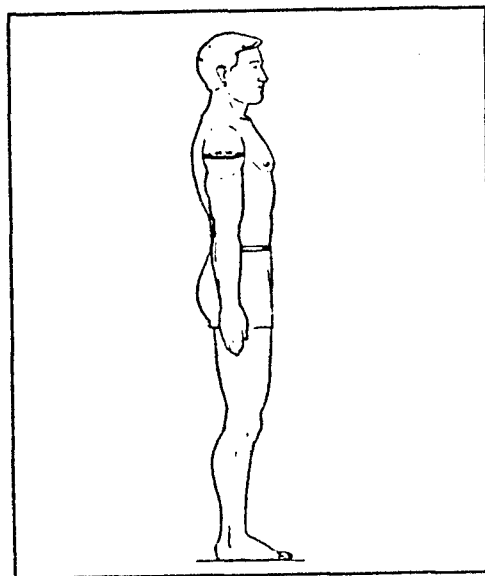
THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
133.22	MEAN	52.45	
0.25	SE(MEAN)	0.10	
5.53	ST DEV	2.18	
0.18	SE(SD)	0.07	
117.50	MINIMUM	46.26	
148.50	MAXIMUM	58.46	
COEFF. OF VARIATION		4.2%	
SYMMETRY----	VETA I	-0.04	
KURTOSIS----	VETA II	2.72	
NUMBER OF SUBJECTS		487	

PERCENTILES		
CENTIMETERS		INCHES
119.43	1ST	47.02
120.24	2ND	47.34
120.77	3RD	47.55
121.51	5TH	47.84
122.70	10TH	48.31
123.52	15TH	48.63
124.18	20TH	48.89
124.76	25TH	49.12
125.28	30TH	49.32
125.77	35TH	49.52
126.24	40TH	49.70
126.70	45TH	49.88
127.15	50TH	50.06
127.61	55TH	50.24
128.08	60TH	50.43
128.58	65TH	50.62
129.10	70TH	50.83
129.68	75TH	51.05
130.34	80TH	51.31
131.12	85TH	51.62
132.13	90TH	52.02
133.72	95TH	52.65
134.81	97TH	53.07
135.64	98TH	53.40
137.03	99TH	53.95

PERCENTILES		
CENTIMETERS		INCHES
120.28	1ST	47.35
121.84	2ND	47.97
122.81	3RD	48.35
124.10	5TH	48.86
126.07	10TH	49.64
127.41	15TH	50.16
128.47	20TH	50.58
129.39	25TH	50.94
130.23	30TH	51.27
131.01	35TH	51.58
131.75	40TH	51.87
132.47	45TH	52.15
133.19	50TH	52.44
133.92	55TH	52.72
134.65	60TH	53.01
135.42	65TH	53.31
136.22	70TH	53.63
137.08	75TH	53.97
138.05	80TH	54.35
139.15	85TH	54.78
140.50	90TH	55.32
142.40	95TH	56.06
143.52	97TH	56.50
144.27	98TH	56.80
145.31	99TH	57.21

(7) AXILLARY ARM CIRCUMFERENCE

The circumference of the right upper arm perpendicular to its long axis at the level of the anterior-scye-on-the-upper arm landmark is measured with a tape. The subject stands erect looking straight ahead with shoulders and upper extremities relaxed and the palms facing the sides.



VARIABLE NO. 7--AXILLARY ARM CIRCUMFERENCE

FEMALES

MALES

THE SUMMARY STATISTICS

CENTIMETERS		INCHES
29.46	MEAN	11.60
0.14	SE (MEAN)	0.06
2.63	ST DEV	1.04
0.10	SE (SD)	0.04
22.70	MINIMUM	8.94
37.70	MAXIMUM	14.84
COEFF. OF VARIATION		8.9%
SYMMETRY----VETA I		0.28
KURTOSIS----VETA II		2.94
NUMBER OF SUBJECTS		334

THE SUMMARY STATISTICS

CENTIMETERS		INCHES
33.70	MEAN	13.27
0.10	SE (MEAN)	0.04
2.22	ST DEV	0.87
0.07	SE (SD)	0.03
26.20	MINIMUM	10.31
39.20	MAXIMUM	15.43
COEFF. OF VARIATION		6.6%
SYMMETRY----VETA I		-0.15
KURTOSIS----VETA II		2.77
NUMBER OF SUBJECTS		487

PERCENTILES

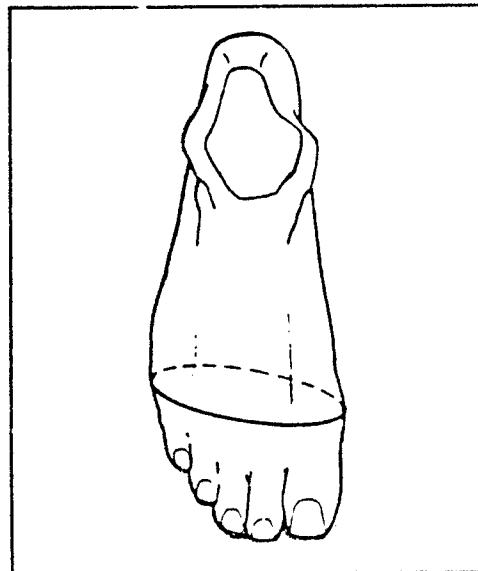
CENTIMETERS		INCHES
23.75	1ST	9.35
24.48	2ND	9.64
24.90	3RD	9.80
25.44	5TH	10.02
26.23	10TH	10.33
26.77	15TH	10.54
27.20	20TH	10.71
27.58	25TH	10.86
27.93	30TH	11.00
28.27	35TH	11.13
28.60	40TH	11.26
28.93	45TH	11.39
29.26	50TH	11.52
29.61	55TH	11.66
29.96	60TH	11.80
30.34	65TH	11.95
30.75	70TH	12.11
31.20	75TH	12.28
31.71	80TH	12.48
32.30	85TH	12.72
33.05	90TH	13.01
34.11	95TH	13.43
34.75	97TH	13.68
35.17	98TH	13.85
35.74	99TH	14.07

PERCENTILES

CENTIMETERS		INCHES
28.60	1ST	11.26
29.14	2ND	11.47
29.49	3RD	11.61
29.99	5TH	11.81
30.79	10TH	12.12
31.35	15TH	12.34
31.79	20TH	12.52
32.18	25TH	12.67
32.53	30TH	12.81
32.85	35TH	12.93
33.16	40TH	13.05
33.46	45TH	13.17
33.75	50TH	13.29
34.04	55TH	13.40
34.33	60TH	13.52
34.63	65TH	13.64
34.95	70TH	13.76
35.29	75TH	13.89
35.66	80TH	14.04
36.08	85TH	14.20
36.59	90TH	14.41
37.32	95TH	14.69
37.76	97TH	14.86
38.06	98TH	14.99
38.52	99TH	15.16

(8) BALL OF FOOT CIRCUMFERENCE

The circumference of the foot at the first and fifth metatarsophalangeal landmarks on the ball of the right foot is measured with a tape. The subject stands with the feet about 10 cm apart and the weight distributed equally on both feet.



VARIABLE NO. 8—BALL OF FOOT CIRCUMFERENCE

FEMALES

MALES

THE SUMMARY STATISTICS
CENTIMETERS INCHES

THE SUMMARY STATISTICS
CENTIMETERS INCHES

22.65	MEAN	8.92
0.06	SE (MEAN)	0.02
1.04	ST DEV	0.41
0.04	SE (SD)	0.02
20.10	MINIMUM	7.91
26.20	MAXIMUM	10.31
COEFF. OF VARIATION		4.6%
SYMMETRY—VETA I		0.16
KURTOSIS—VETA II		2.86
NUMBER OF SUBJECTS		334

24.84	MEAN	9.78
0.05	SE (MEAN)	0.02
1.14	ST DEV	0.45
0.04	SE (SD)	0.01
21.50	MINIMUM	8.46
28.00	MAXIMUM	11.02
COEFF. OF VARIATION		4.6%
SYMMETRY—VETA I		0.31
KURTOSIS—VETA II		2.99
NUMBER OF SUBJECTS		487

PERCENTILES
CENTIMETERS INCHES

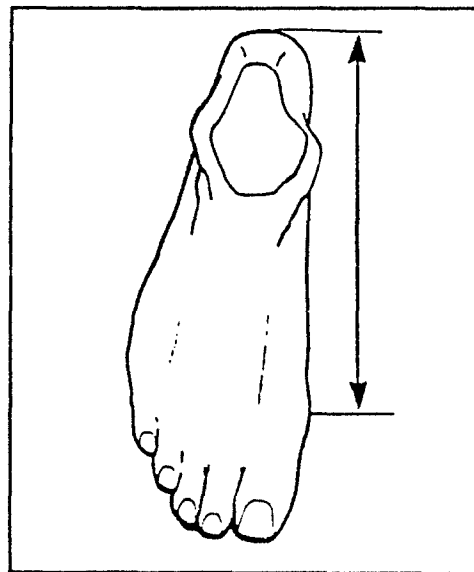
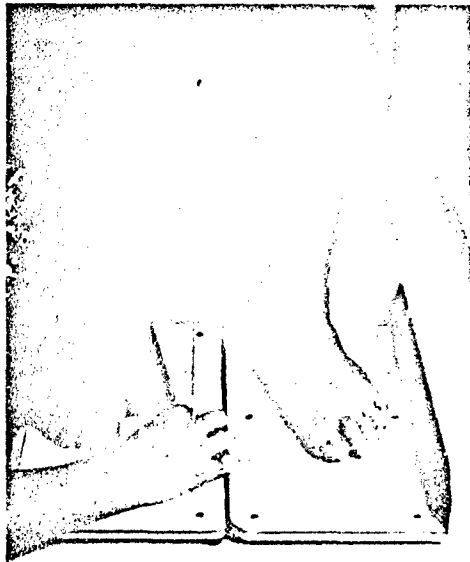
PERCENTILES
CENTIMETERS INCHES

20.33	1ST	8.00
20.60	2ND	8.11
20.78	3RD	8.18
21.00	5TH	8.27
21.34	10TH	8.40
21.58	15TH	8.49
21.76	20TH	8.57
21.93	25TH	8.63
22.07	30TH	8.69
22.21	35TH	8.75
22.35	40TH	8.80
22.48	45TH	8.85
22.61	50TH	8.90
22.75	55TH	8.96
22.89	60TH	9.01
23.03	65TH	9.07
23.18	70TH	9.13
23.35	75TH	9.19
23.54	80TH	9.27
23.76	85TH	9.35
24.04	90TH	9.46
24.44	95TH	9.62
24.68	97TH	9.72
24.85	98TH	9.78
25.10	99TH	9.88

22.39	1ST	8.81
22.68	2ND	8.93
22.86	3RD	9.00
23.09	5TH	9.09
23.44	10TH	9.23
23.67	15TH	9.32
23.86	20TH	9.40
24.03	25TH	9.46
24.19	30TH	9.52
24.33	35TH	9.58
24.47	40TH	9.64
24.61	45TH	9.69
24.76	50TH	9.75
24.90	55TH	9.80
25.05	60TH	9.86
25.21	65TH	9.93
25.39	70TH	9.99
25.58	75TH	10.07
25.80	80TH	10.16
26.05	85TH	10.26
26.39	90TH	10.39
26.89	95TH	10.59
27.22	97TH	10.72
27.46	98TH	10.81
27.82	99TH	10.95

(9) BALL OF FOOT LENGTH

The distance from the back of the heel to the landmark at the first metatarsophalangeal protrusion on the ball of the right foot is measured in a footbox. The subject stands erect with each foot in a footbox. The weight is distributed equally on both feet. The medial side of the right foot is parallel with the long axis of the box.



VARIABLE NO. 9—BALL OF FOOT LENGTH

FEMALES

MALES

THE SUMMARY STATISTICS
CENTIMETERS INCHES

THE SUMMARY STATISTICS
CENTIMETERS INCHES

18.20	MEAN	7.16
0.04	SE (MEAN)	0.02
0.77	ST DEV	0.30
0.03	SE (SD)	0.01
16.20	MINIMUM	6.38
20.50	MAXIMUM	8.07
COEFF. OF VARIATION		4.2%
SYMMETRY—VETA I		0.35
KURTOSIS—VETA II		3.09
NUMBER OF SUBJECTS		334

19.72	MEAN	7.76
0.04	SE (MEAN)	0.02
0.94	ST DEV	0.37
0.03	SE (SD)	0.01
17.30	MINIMUM	6.81
23.20	MAXIMUM	9.13
COEFF. OF VARIATION		4.8%
SYMMETRY—VETA I		0.15
KURTOSIS—VETA II		2.99
NUMBER OF SUBJECTS		487

PERCENTILES
CENTIMETERS INCHES

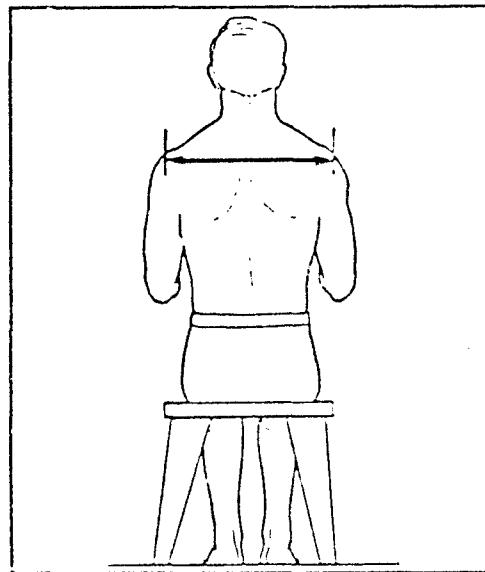
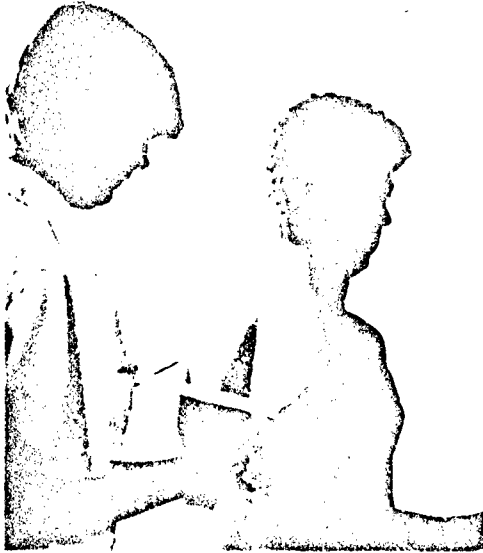
PERCENTILES
CENTIMETERS INCHES

16.61	1ST	6.54
16.77	2ND	6.50
16.88	3RD	6.64
17.02	5TH	6.70
17.25	10TH	6.79
17.41	15TH	6.85
17.54	20TH	6.91
17.65	25TH	6.95
17.76	30TH	6.99
17.86	35TH	7.03
17.95	40TH	7.07
18.05	45TH	7.11
18.14	50TH	7.14
18.24	55TH	7.18
18.34	60TH	7.22
18.45	65TH	7.26
18.56	70TH	7.31
18.69	75TH	7.36
18.83	80TH	7.41
19.00	85TH	7.48
19.22	90TH	7.57
19.55	95TH	7.70
19.77	97TH	7.78
19.93	98TH	7.85
20.19	99TH	7.95

17.56	1ST	6.91
17.82	2ND	7.01
17.98	3RD	7.08
18.19	5TH	7.16
18.52	10TH	7.29
18.74	15TH	7.38
18.91	20TH	7.45
19.06	25TH	7.51
19.20	30TH	7.56
19.33	35TH	7.61
19.45	40TH	7.66
19.57	45TH	7.71
19.69	50TH	7.75
19.81	55TH	7.80
19.93	60TH	7.85
20.06	65TH	7.90
20.20	70TH	7.95
20.34	75TH	8.01
20.51	80TH	8.08
20.70	85TH	8.15
20.95	90TH	8.25
21.31	95TH	8.39
21.54	97TH	8.48
21.71	98TH	8.55
21.97	99TH	8.65

(10) BIACROMIAL BREADTH

The distance between the right and left acromion landmarks at the tips of the shoulders is measured with a beam caliper. The subject sits erect. The shoulders and upper arms are relaxed and the forearms and hands are extended forward horizontally with the palms facing each other. The measurement is taken at the maximum point of quiet respiration.



VARIABLE NO. 10—BIACROMIAL BREADTH

FEMALES

THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
36.93	MEAN	14.54	
0.08	SE (MEAN)	0.03	
1.50	ST DEV	0.59	
0.06	SE (SD)	0.02	
32.50	MINIMUM	12.80	
41.20	MAXIMUM	16.22	
COEFF. OF VARIATION		4.1%	
SYMMETRY—VETA I		-0.13	
KURTOSIS—VETA II		2.65	
NUMBER OF SUBJECTS		334	

PERCENTILES		
CENTIMETERS		INCHES
33.72	1ST	13.27
33.95	2ND	13.37
34.14	3RD	13.44
34.42	5TH	13.55
34.93	10TH	13.75
35.30	15TH	13.90
35.61	20TH	14.02
35.88	25TH	14.13
36.13	30TH	14.22
36.36	35TH	14.31
36.57	40TH	14.40
36.78	45TH	14.48
36.99	50TH	14.56
37.19	55TH	14.64
37.39	60TH	14.72
37.59	65TH	14.80
37.81	70TH	14.88
38.03	75TH	14.97
38.27	80TH	15.07
38.54	85TH	15.17
38.87	90TH	15.30
39.32	95TH	15.48
39.58	97TH	15.58
39.77	98TH	15.66
40.05	99TH	15.77

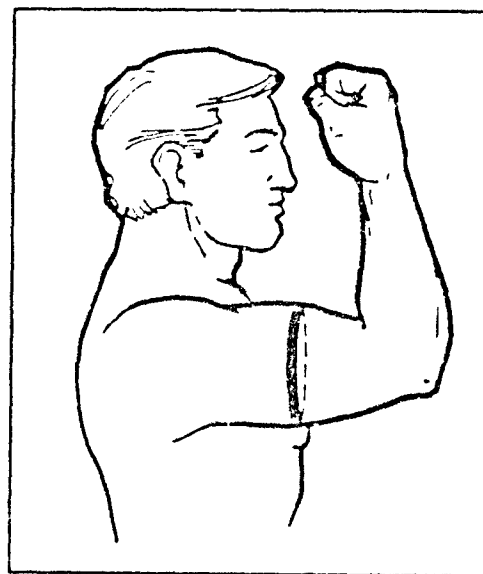
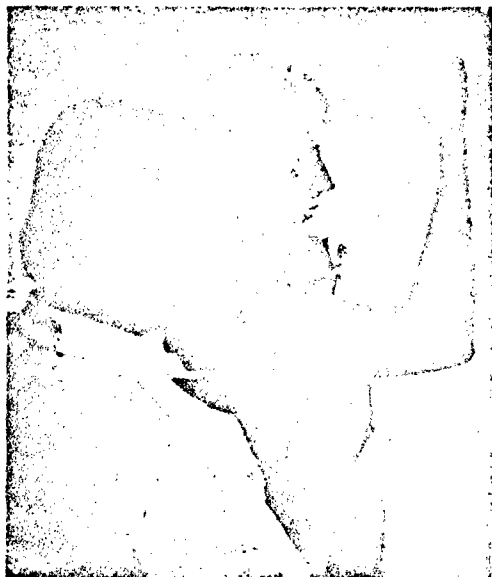
MALES

THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
40.06	MEAN	15.77	
0.08	SE (MEAN)	0.03	
1.74	ST DEV	0.69	
0.06	SE (SD)	0.02	
34.70	MINIMUM	13.66	
45.20	MAXIMUM	17.80	
COEFF. OF VARIATION		4.4%	
SYMMETRY—VETA I		-0.13	
KURTOSIS—VETA II		2.99	
NUMBER OF SUBJECTS		487	

PERCENTILES		
CENTIMETERS		INCHES
35.78	1ST	14.09
36.29	2ND	14.29
36.61	3RD	14.41
37.06	5TH	14.59
37.75	10TH	14.86
38.22	15TH	15.05
38.59	20TH	15.19
38.90	25TH	15.31
39.17	30TH	15.42
39.43	35TH	15.52
39.66	40TH	15.62
39.89	45TH	15.70
40.11	50TH	15.79
40.33	55TH	15.88
40.55	60TH	15.96
40.77	65TH	16.05
41.01	70TH	16.14
41.26	75TH	16.24
41.53	80TH	16.35
41.85	85TH	16.48
42.25	90TH	16.63
42.85	95TH	16.87
43.24	97TH	17.02
43.54	98TH	17.14
44.02	99TH	17.33

(11) BICEPS CIRCUMFERENCE, FLEXED

The circumference of the right upper arm around the flexed biceps muscle is measured with a tape held perpendicular to the long axis of the upper arm. The subject stands with the upper arm extended horizontally and the elbow flexed 90 degrees. The fist is clenched and held facing the head, and the subject exerts maximum effort in "making a muscle."



VARIABLE NO. 11—BICEPS CIRCUMFERENCE, FLEXED

FEMALES

MALES

THE SUMMARY STATISTICS
CENTIMETERS INCHES

28.30 MEAN 11.14
0.13 SE(MEAN) 0.05
2.38 ST DEV 0.94
0.09 SE(SD) 0.04

22.50 MINIMUM 8.86
37.10 MAXIMUM 14.61

COEFF. OF VARIATION 8.4%
SYMMETRY---VETA I 0.37
KURTOSIS---VETA II 3.10

NUMBER OF SUBJECTS 334

THE SUMMARY STATISTICS
CENTIMETERS INCHES

33.46 MEAN 13.17
0.11 SE(MEAN) 0.04
2.32 ST DEV 0.91
0.07 SE(SD) 0.03

26.50 MINIMUM 10.43
41.50 MAXIMUM 16.34

COEFF. OF VARIATION 6.9%
SYMMETRY---VETA I 0.09
KURTOSIS---VETA II 3.16

NUMBER OF SUBJECTS 487

PERCENTILES
CENTIMETERS INCHES

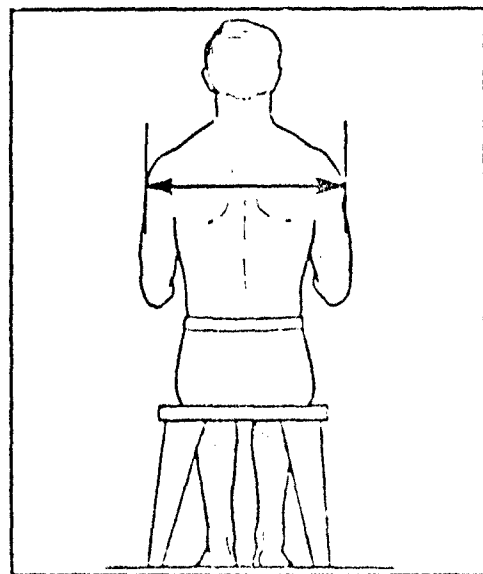
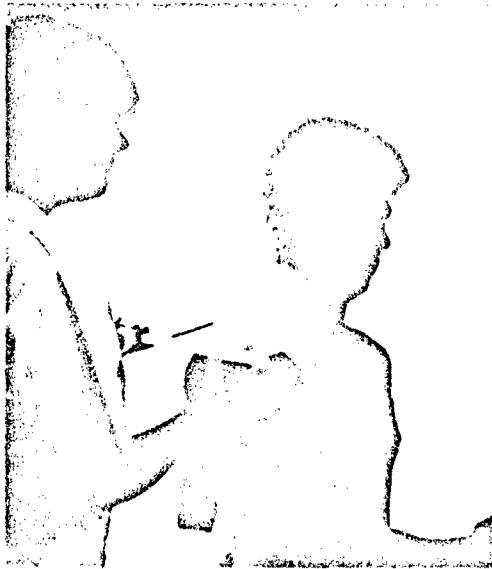
22.97 1ST 9.04
23.83 2ND 9.38
24.28 3RD 9.56
24.82 5TH 9.77
25.53 10TH 10.05
25.97 15TH 10.22
26.32 20TH 10.36
26.63 25TH 10.49
26.93 30TH 10.60
27.21 35TH 10.71
27.49 40TH 10.82
27.77 45TH 10.93
28.07 50TH 11.05
28.37 55TH 11.17
28.69 60TH 11.30
29.04 65TH 11.43
29.42 70TH 11.58
29.83 75TH 11.75
30.31 80TH 11.93
30.87 85TH 12.15
31.57 90TH 12.43
32.53 95TH 12.81
33.05 97TH 13.01
33.37 98TH 13.14
33.69 99TH 13.27

PERCENTILES
CENTIMETERS INCHES

28.01 1ST 11.03
28.73 2ND 11.31
29.17 3RD 11.48
29.72 5TH 11.70
30.55 10TH 12.03
31.09 15TH 12.24
31.51 20TH 12.41
31.88 25TH 12.55
32.21 30TH 12.68
32.51 35TH 12.80
32.81 40TH 12.92
33.09 45TH 13.03
33.38 50TH 13.14
33.67 55TH 13.26
33.97 60TH 13.37
34.28 65TH 13.49
34.61 70TH 13.62
34.97 75TH 13.77
35.38 80TH 13.93
35.86 85TH 14.12
36.47 90TH 14.36
37.37 95TH 14.71
37.95 97TH 14.94
38.36 98TH 15.10
38.99 99TH 15.35

(12) BIDEPTH OF SHOULDERS

The maximum horizontal distance between the lateral margins of the upper arms on the deltoid muscles is measured with a beam caliper. The subject sits erect looking straight ahead. The shoulders and upper arms are relaxed and the forearms and hands are extended forward horizontally with the palms facing each other. The measurement is made at the maximum point of quiet respiration.



VARIABLE NO. 12--BIDELTOID BREADTH

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
43.92	MEAN	17.29
0.12	SE (MEAN)	0.05
2.22	ST DEV	0.87
0.09	SE (SD)	0.03
37.50	MINIMUM	14.76
53.20	MAXIMUM	20.94
COEFF. OF VARIATION		5.0%
SYMMETRY----VETA I		0.14
KURTOSIS----VETA II		3.61
NUMBER OF SUBJECTS		334

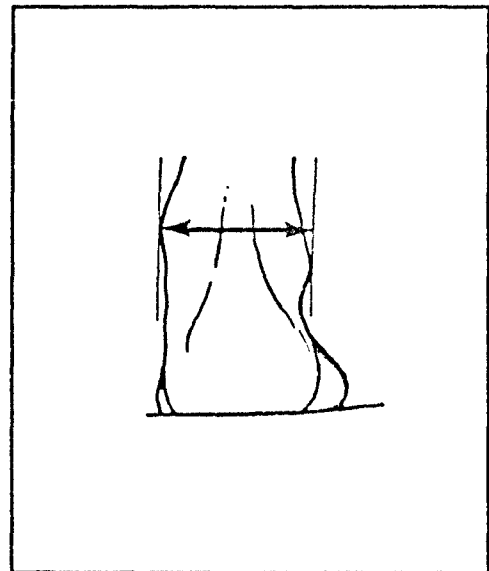
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
49.57	MEAN	19.52
0.10	SE (MEAN)	0.04
2.31	ST DEV	0.91
0.07	SE (SD)	0.03
42.80	MINIMUM	16.85
57.30	MAXIMUM	22.56
COEFF. OF VARIATION		4.7%
SYMMETRY----VETA I		0.12
KURTOSIS----VETA II		3.16
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
38.36	1ST	15.10
39.27	2ND	15.46
39.77	3RD	15.66
40.38	5TH	15.90
41.20	10TH	16.22
41.71	15TH	16.42
42.10	20TH	16.58
42.44	25TH	16.71
42.74	30TH	16.83
43.02	35TH	16.94
43.29	40TH	17.04
43.56	45TH	17.15
43.83	50TH	17.26
44.11	55TH	17.36
44.39	60TH	17.48
44.69	65TH	17.59
45.01	70TH	17.72
45.37	75TH	17.86
45.77	80TH	18.02
46.24	85TH	18.20
46.82	90TH	18.43
47.65	95TH	18.76
48.14	97TH	18.95
48.46	98TH	19.08
48.86	99TH	19.24

PERCENTILES		
CENTIMETERS		INCHES
43.93	1ST	17.29
44.81	2ND	17.64
45.30	3RD	17.84
45.91	5TH	18.07
46.75	10TH	18.41
47.28	15TH	18.61
47.68	20TH	18.77
48.04	25TH	18.91
48.35	30TH	19.04
48.65	35TH	19.15
48.93	40TH	19.26
49.21	45TH	19.37
49.49	50TH	19.48
49.78	55TH	19.60
50.07	60TH	19.71
50.39	65TH	19.84
50.72	70TH	19.97
51.09	75TH	20.11
51.50	80TH	20.28
51.99	85TH	20.47
52.60	90TH	20.71
53.47	95TH	21.05
53.99	97TH	21.25
54.33	98TH	21.39
54.79	99TH	21.57

(13) BIMALLEOLAR BREADTH

The horizontal distance between the maximum protrusions of the ankle bones (lateral and medial malleoli) of the right foot is measured with a Holtain caliper. The subject stands with the weight equally distributed on both feet.



VARIABLE NO. 13—BIMALLEOLAR BREADTH

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
6.56	MEAN	2.58
0.02	SE (MEAN)	0.01
0.29	ST DEV	0.11
0.01	SE (SD)	0.00
5.90	MINIMUM	2.32
7.40	MAXIMUM	2.91
COEFF. OF VARIATION		4.4%
SYMMETRY—VETA I		0.22
KURTOSIS—VETA II		2.67
NUMBER OF SUBJECTS		334

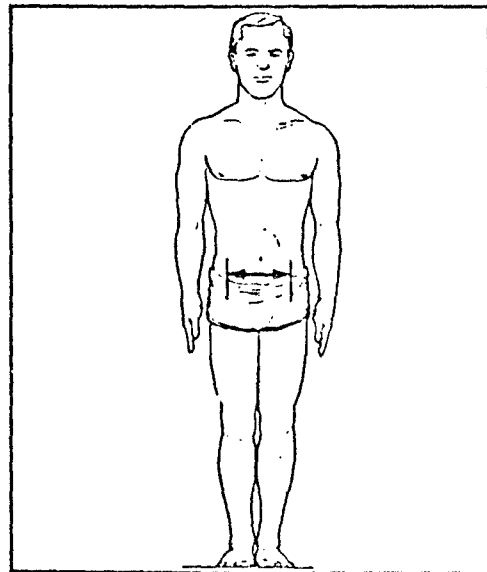
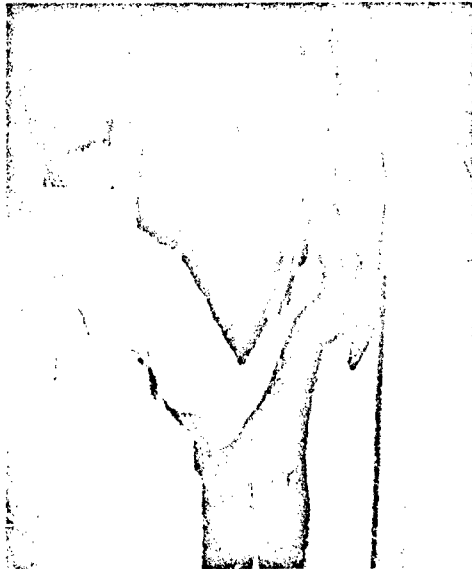
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
7.22	MEAN	2.84
0.02	SE (MEAN)	0.01
0.35	ST DEV	0.14
0.01	SE (SD)	0.00
6.30	MINIMUM	2.48
8.50	MAXIMUM	3.35
COEFF. OF VARIATION		4.9%
SYMMETRY—VETA I		0.18
KURTOSIS—VETA II		3.37
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
5.96	1ST	2.35
6.01	2ND	2.37
6.04	3RD	2.38
6.09	5TH	2.40
6.18	10TH	2.43
6.25	15TH	2.46
6.30	20TH	2.48
6.35	25TH	2.50
6.39	30TH	2.52
6.43	35TH	2.53
6.47	40TH	2.55
6.51	45TH	2.56
6.55	50TH	2.58
6.58	55TH	2.59
6.62	60TH	2.61
6.66	65TH	2.62
6.71	70TH	2.64
6.75	75TH	2.66
6.80	80TH	2.68
6.86	85TH	2.70
6.94	90TH	2.73
7.05	95TH	2.78
7.12	97TH	2.80
7.18	98TH	2.83
7.26	99TH	2.86

PERCENTILES		
CENTIMETERS		INCHES
6.36	1ST	2.50
6.47	2ND	2.55
6.54	3RD	2.58
6.63	5TH	2.61
6.77	10TH	2.66
6.86	15TH	2.70
6.93	20TH	2.73
6.98	25TH	2.75
7.04	30TH	2.77
7.08	35TH	2.79
7.13	40TH	2.81
7.17	45TH	2.82
7.21	50TH	2.84
7.25	55TH	2.86
7.29	60TH	2.87
7.34	65TH	2.89
7.39	70TH	2.91
7.44	75TH	2.93
7.50	80TH	2.95
7.57	85TH	2.98
7.66	90TH	3.02
7.81	95TH	3.08
7.92	97TH	3.12
8.00	98TH	3.15
8.15	99TH	3.21

(14) BISPINOUS BREATH

The straight-line distance between the right and left anterior superior iliac spine landmarks is measured with a beam caliper. The subject stands looking straight ahead with the heels together and the weight distributed equally on both feet.



VARIABLE NO. 14—BISPINOUS BREADTH

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
23.38	MEAN	9.21
0.10	SE (MEAN)	0.04
1.86	ST DEV	0.73
0.07	SE(SD)	0.03
19.00	MINIMUM	7.48
29.30	MAXIMUM	11.54
COEFF. OF VARIATION		8.0%
SYMMETRY—VETA I		0.16
KURTOSIS—VETA II		2.87
NUMBER OF SUBJECTS		334

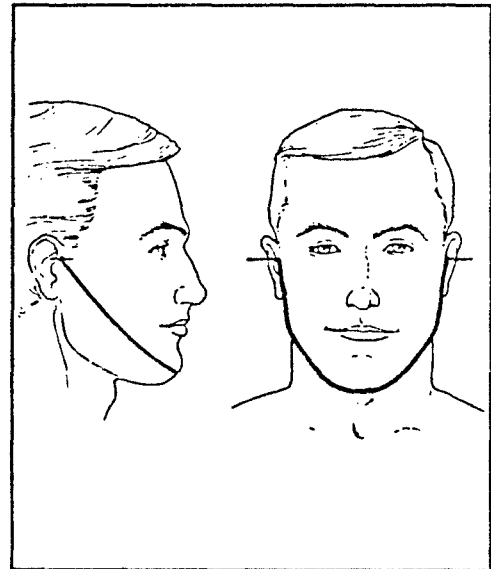
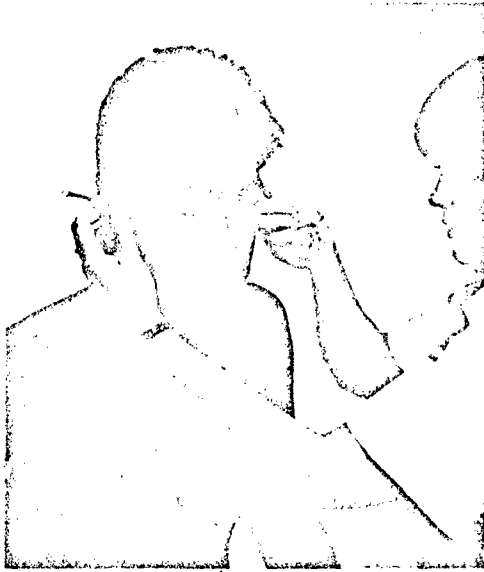
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
23.70	MEAN	9.33
0.08	SE (MEAN)	0.03
1.73	ST DEV	0.68
0.06	SE(SD)	0.02
19.60	MINIMUM	7.72
29.80	MAXIMUM	11.73
COEFF. OF VARIATION		7.3%
SYMMETRY—VETA I		0.26
KURTOSIS—VETA II		2.90
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
19.24	1ST	7.57
19.66	2ND	7.74
19.94	3RD	7.85
20.34	5TH	8.01
20.93	10TH	8.26
21.42	15TH	8.43
21.78	20TH	8.57
22.09	25TH	8.70
22.37	30TH	8.81
22.62	35TH	8.91
22.87	40TH	9.00
23.11	45TH	9.10
23.35	50TH	9.19
23.58	55TH	9.28
23.82	60TH	9.38
24.07	65TH	9.48
24.33	70TH	9.58
24.62	75TH	9.69
24.94	80TH	9.82
25.31	85TH	9.96
25.78	90TH	10.15
26.51	95TH	10.44
26.99	97TH	10.62
27.35	98TH	10.77
27.94	99TH	11.00

PERCENTILES		
CENTIMETERS		INCHES
20.15	1ST	7.93
20.43	2ND	8.05
20.64	3RD	8.13
20.95	5TH	8.25
21.48	10TH	8.46
21.86	15TH	8.61
22.18	20TH	8.73
22.46	25TH	8.84
22.72	30TH	8.94
22.96	35TH	9.04
23.19	40TH	9.13
23.41	45TH	9.22
23.64	50TH	9.31
23.87	55TH	9.40
24.10	60TH	9.49
24.34	65TH	9.58
24.59	70TH	9.68
24.87	75TH	9.79
25.18	80TH	9.91
25.54	85TH	10.05
25.99	90TH	10.23
26.67	95TH	10.50
27.11	97TH	10.67
27.44	98TH	10.80
27.95	99TH	11.00

(15) BITRAGON CHIN ARC

The surface distance between the right and left tragon landmarks across the chin landmark at the tip of the chin is measured with a tape. The teeth are slightly occluded.



VARIABLE NO. 15—BITRAGION CHIN ARC

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
30.08	MEAN	11.84
0.06	SE(MEAN)	0.02
1.12	ST DEV	0.44
0.04	SE(SD)	0.02
27.20	MINIMUM	10.71
33.30	MAXIMUM	13.11
COEFF. OF VARIATION		3.7%
SYMMETRY—VETA I		0.20
KURTOSIS—VETA II		2.85
NUMBER OF SUBJECTS		334

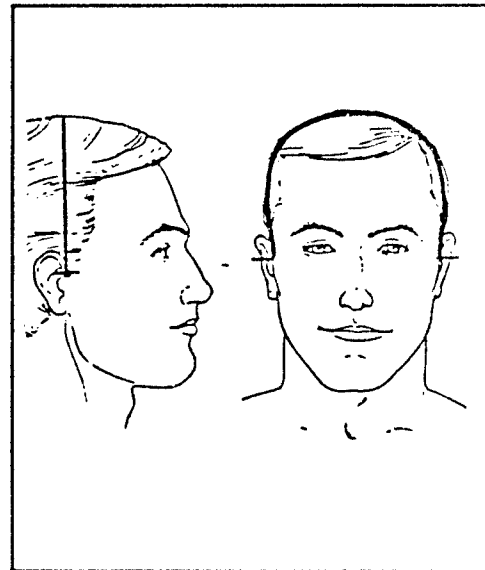
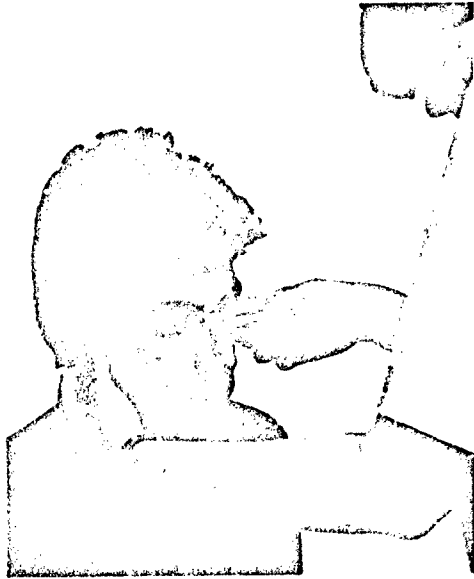
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
32.88	MEAN	12.94
0.05	SE(MEAN)	0.02
1.19	ST DEV	0.47
0.04	SE(SD)	0.02
28.70	MINIMUM	11.30
36.80	MAXIMUM	14.49
COEFF. OF VARIATION		3.6%
SYMMETRY—VETA I		0.18
KURTOSIS—VETA II		3.37
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
27.67	1ST	10.89
27.92	2ND	10.99
28.08	3RD	11.06
28.30	5TH	11.14
28.66	10TH	11.28
28.91	15TH	11.38
29.11	20TH	11.46
29.29	25TH	11.53
29.46	30TH	11.50
29.61	35TH	11.66
29.75	40TH	11.71
29.90	45TH	11.77
30.04	50TH	11.83
30.18	55TH	11.88
30.33	60TH	11.94
30.48	65TH	12.00
30.65	70TH	12.07
30.83	75TH	12.14
31.03	80TH	12.22
31.27	85TH	12.31
31.57	90TH	12.43
32.02	95TH	12.61
32.32	97TH	12.73
32.54	98TH	12.81
32.89	99TH	12.95

PERCENTILES		
CENTIMETERS		INCHES
30.16	1ST	11.87
30.51	2ND	12.01
30.73	3RD	12.10
31.01	5TH	12.21
31.43	10TH	12.37
31.70	15TH	12.48
31.91	20TH	12.56
32.09	25TH	12.64
32.26	30TH	12.70
32.41	35TH	12.76
32.55	40TH	12.82
32.69	45TH	12.87
32.83	50TH	12.93
32.98	55TH	12.98
33.12	60TH	13.04
33.28	65TH	13.10
33.44	70TH	13.17
33.62	75TH	13.24
33.83	80TH	13.32
34.09	85TH	13.42
34.42	90TH	13.55
34.94	95TH	13.76
35.30	97TH	13.90
35.58	98TH	14.01
36.03	99TH	14.19

(16) BITRAGION CORONAL ARC

The surface distance between the right and left tragion landmarks across the top of the head is measured with a tape. The head is in the Frankfort plane.



VARIABLE NO. 16--BIPRAGON CORONAL ARC

FEMALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
33.77	MEAN	13.29
0.07	SE (MEAN)	0.03
1.24	ST DEV	0.49
0.05	SE (SD)	0.02
30.60	MINIMUM	12.05
38.00	MAXIMUM	14.96
COEFF. OF VARIATION		3.7%
SYMMETRY---VETA I		0.27
KURTOSIS---VETA II		3.39
NUMBER OF SUBJECTS		334

PERCENTILES		
CENTIMETERS		INCHES
30.85	1ST	12.15
31.23	2ND	12.29
31.46	3RD	12.39
31.76	5TH	12.50
32.21	10TH	12.68
32.50	15TH	12.80
32.73	20TH	12.89
32.93	25TH	12.97
33.11	30TH	13.03
33.27	35TH	13.10
33.42	40TH	13.16
33.58	45TH	13.22
33.72	50TH	13.28
33.88	55TH	13.34
34.03	60TH	13.40
34.19	65TH	13.46
34.36	70TH	13.53
34.55	75TH	13.60
34.77	80TH	13.69
35.03	85TH	13.79
35.37	90TH	13.92
35.90	95TH	14.13
36.26	97TH	14.28
36.54	98TH	14.38
36.99	99TH	14.56

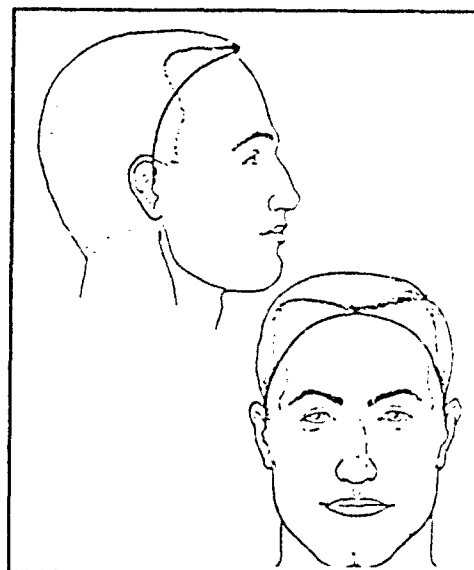
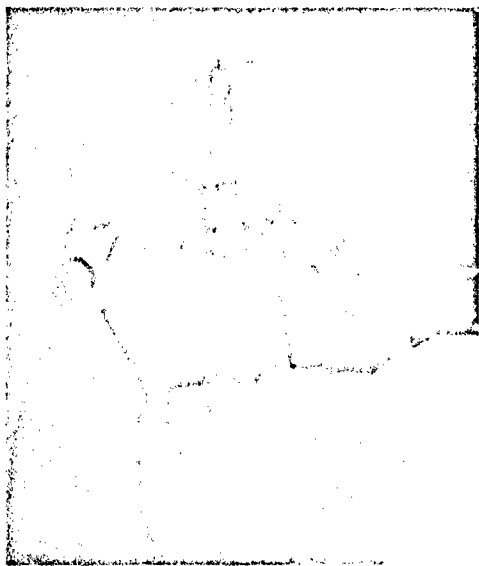
MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
35.30	MEAN	13.90
0.06	SE (MEAN)	0.02
1.25	ST DEV	0.49
0.04	SE (SD)	0.02
31.90	MINIMUM	12.56
39.80	MAXIMUM	15.67
COEFF. OF VARIATION		3.5%
SYMMETRY---VETA I		0.18
KURTOSIS---VETA II		3.10
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
32.50	1ST	12.79
32.80	2ND	12.91
33.00	3RD	12.99
33.27	5TH	13.10
33.70	10TH	13.27
34.00	15TH	13.39
34.24	20TH	13.48
34.44	25TH	13.56
34.63	30TH	13.63
34.80	35TH	13.70
34.96	40TH	13.77
35.12	45TH	13.83
35.28	50TH	13.89
35.44	55TH	13.95
35.60	60TH	14.01
35.76	65TH	14.08
35.94	70TH	14.15
36.13	75TH	14.22
36.34	80TH	14.31
36.59	85TH	14.40
36.90	90TH	14.53
37.37	95TH	14.71
37.67	97TH	14.83
37.90	98TH	14.92
38.26	99TH	15.06

(17) BITRAGION CRINIUM ARC

The surface distance between the right and left tragon landmarks across the top of the forehead at the lowest point of the hairline (crinion) is measured with a tape.



VARIABLE NO. 17—BITRAGON CRINION ARC

FEMALES

MALES

THE SUMMARY STATISTICS

CENTIMETERS		INCHES
31.04	MEAN	12.22
0.06	SE (MEAN)	0.02
1.05	ST DEV	0.41
0.04	SE (SD)	0.02
26.70	MINIMUM	10.51
34.70	MAXIMUM	13.66
COEFF. OF VARIATION		3.4%
SYMMETRY—VETA I		-0.01
KURTOSIS—VETA II		3.97
NUMBER OF SUBJECTS		334

THE SUMMARY STATISTICS

CENTIMETERS		INCHES
32.78	MEAN	12.90
0.05	SE (MEAN)	0.02
1.12	ST DEV	0.44
0.04	SE (SD)	0.01
29.80	MINIMUM	11.73
36.30	MAXIMUM	14.29
COEFF. OF VARIATION		3.4%
SYMMETRY—VETA I		0.11
KURTOSIS—VETA II		2.78
NUMBER OF SUBJECTS		473

PERCENTILES

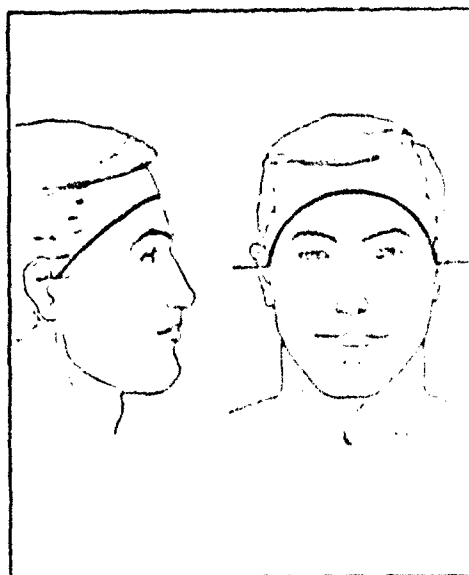
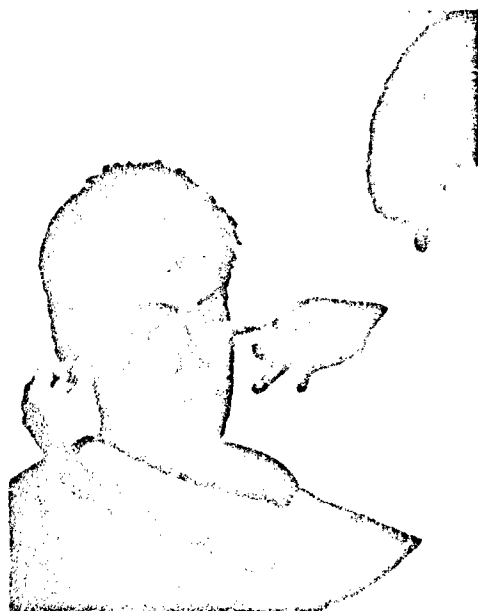
CENTIMETERS		INCHES
28.57	1ST	11.25
28.89	2ND	11.37
29.09	3RD	11.45
29.36	5TH	11.56
29.76	10TH	11.72
30.02	15TH	11.82
30.22	20TH	11.90
30.39	25TH	11.96
30.53	30TH	12.02
30.67	35TH	12.07
30.80	40TH	12.12
30.92	45TH	12.17
31.04	50TH	12.22
31.16	55TH	12.27
31.28	60TH	12.32
31.41	65TH	12.37
31.54	70TH	12.42
31.69	75TH	12.48
31.85	80TH	12.54
32.05	85TH	12.62
32.31	90TH	12.72
32.71	95TH	12.88
33.00	97TH	12.99
33.23	98TH	13.08
33.61	99TH	13.23

PERCENTILES

CENTIMETERS		INCHES
30.41	1ST	11.97
30.60	2ND	12.05
30.74	3RD	12.10
30.95	5TH	12.19
31.32	10TH	12.33
31.59	15TH	12.44
31.81	20TH	12.52
32.00	25TH	12.60
32.17	30TH	12.67
32.33	35TH	12.73
32.48	40TH	12.79
32.63	45TH	12.85
32.77	50TH	12.90
32.92	55TH	12.96
33.06	60TH	13.02
33.21	65TH	13.08
33.37	70TH	13.14
33.54	75TH	13.20
33.72	80TH	13.28
33.94	85TH	13.36
34.22	90TH	13.47
34.63	95TH	13.64
34.92	97TH	13.75
35.13	98TH	13.83
35.49	99TH	13.97

(18) BITRACION FRONTAL ARC

The surface distance between the right and left tracion landmarks across the forehead just above the ridges of the eyebrow is measured with a tape.



VARIABLE NO. 18—BITRAGON FRONTAL ARC

FEMALES

MALES

THE SUMMARY STATISTICS

CENTIMETERS		INCHES
28.85	MEAN	11.36
0.05	SE(MEAN)	0.02
0.97	ST DEV	0.38
0.04	SE(SD)	0.01
25.80	MINIMUM	10.16
31.50	MAXIMUM	12.40
COEFF. OF VARIATION		3.4%
SYMMETRY----VETA I		0.03
KURTOSIS----VETA II		2.95
NUMBER OF SUBJECTS		334

THE SUMMARY STATISTICS

CENTIMETERS		INCHES
30.63	MEAN	12.06
0.05	SE(MEAN)	0.02
1.01	ST DEV	0.40
0.03	SE(SD)	0.01
28.00	MINIMUM	11.02
33.70	MAXIMUM	13.27
COEFF. OF VARIATION		3.3%
SYMMETRY----VETA I		0.18
KURTOSIS----VETA II		2.79
NUMBER OF SUBJECTS		487

PERCENTILES

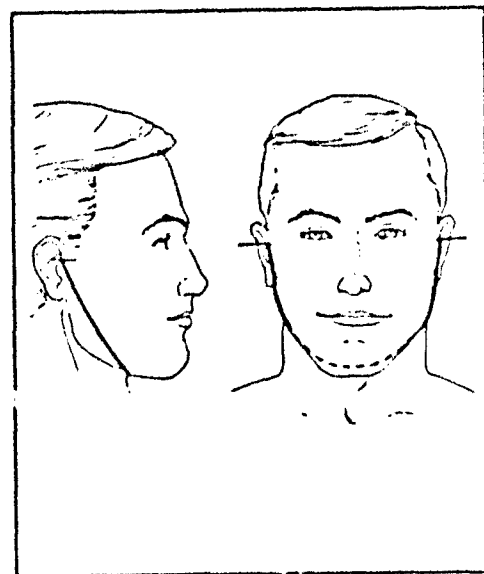
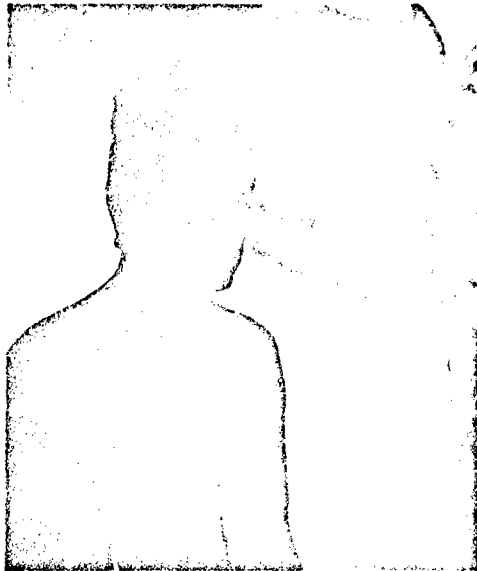
CENTIMETERS		INCHES
26.56	1ST	10.46
26.87	2ND	10.58
27.05	3RD	10.65
27.29	5TH	10.74
27.63	10TH	10.88
27.85	15TH	10.97
28.03	20TH	11.04
28.18	25TH	11.10
28.32	30TH	11.15
28.45	35TH	11.20
28.58	40TH	11.25
28.70	45TH	11.30
28.83	50TH	11.35
28.95	55TH	11.40
29.08	60TH	11.45
29.22	65TH	11.50
29.36	70TH	11.56
29.52	75TH	11.62
29.69	80TH	11.69
29.90	85TH	11.77
30.15	90TH	11.87
30.51	95TH	12.01
30.72	97TH	12.10
30.87	98TH	12.15
31.06	99TH	12.23

PERCENTILES

CENTIMETERS		INCHES
28.54	1ST	11.24
28.72	2ND	11.31
28.84	3RD	11.36
29.03	5TH	11.43
29.34	10TH	11.55
29.56	15TH	11.64
29.75	20TH	11.71
29.91	25TH	11.78
30.06	30TH	11.83
30.20	35TH	11.89
30.33	40TH	11.94
30.46	45TH	11.99
30.59	50TH	12.05
30.73	55TH	12.10
30.86	60TH	12.15
31.00	65TH	12.20
31.14	70TH	12.26
31.30	75TH	12.32
31.48	80TH	12.39
31.69	85TH	12.48
31.95	90TH	12.58
32.34	95TH	12.73
32.60	97TH	12.83
32.79	98TH	12.91
33.09	99TH	13.03

(19) BIPRAGION SUBMANDIBULAR ARC

The surface distance between the right and left tragon landmarks across the submandibular landmark at the juncture of the jaw and the neck is measured with a tape. The head is in the Frankfort plane and the teeth are slightly occluded.



VARIABLE NO. 19—BUTRAGION SUBMANDIBULAR ARC

FEMALES

MALES

THE SUMMARY STATISTICS

CENTIMETERS		INCHES
27.80	MEAN	10.94
0.07	SE(MEAN)	0.03
1.28	ST DEV	0.50
0.05	SE(SD)	0.02
24.00	MINIMUM	9.45
32.90	MAXIMUM	12.95
COEFF. OF VARIATION		4.6%
SYMMETRY—VETA I		0.27
KURTOSIS—VETA II		3.39
NUMBER OF SUBJECTS		334

THE SUMMARY STATISTICS

CENTIMETERS		INCHES
30.89	MEAN	12.16
0.06	SE(MEAN)	0.02
1.30	ST DEV	0.51
0.04	SE(SD)	0.02
27.80	MINIMUM	10.94
35.00	MAXIMUM	13.78
COEFF. OF VARIATION		4.2%
SYMMETRY—VETA I		0.23
KURTOSIS—VETA II		3.03
NUMBER OF SUBJECTS		487

PERCENTILES

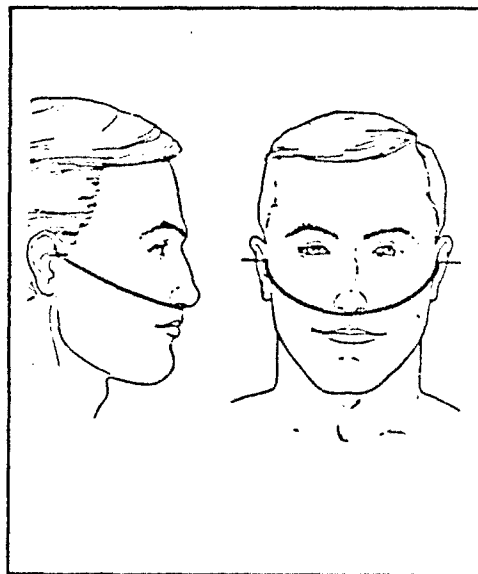
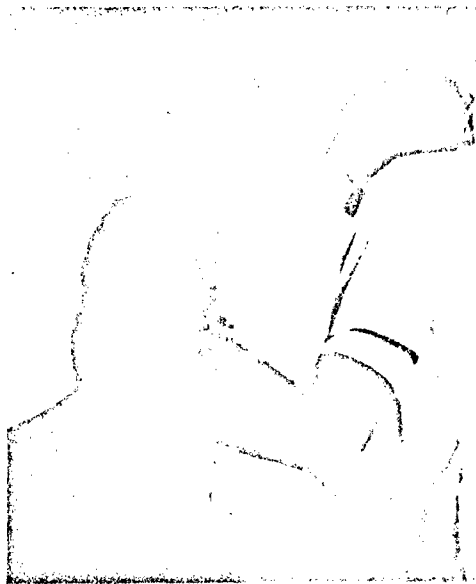
CENTIMETERS		INCHES
25.21	1ST	9.93
25.43	2ND	10.01
25.58	3RD	10.07
25.81	5TH	10.16
26.19	10TH	10.31
26.48	15TH	10.42
26.71	20TH	10.51
26.91	25TH	10.59
27.09	30TH	10.67
27.27	35TH	10.74
27.44	40TH	10.80
27.60	45TH	10.87
27.76	50TH	10.93
27.92	55TH	10.99
28.09	60TH	11.06
28.26	65TH	11.13
28.44	70TH	11.20
28.64	75TH	11.28
28.87	80TH	11.36
29.13	85TH	11.47
29.46	90TH	11.60
29.97	95TH	11.80
30.31	97TH	11.93
30.56	98TH	12.03
30.97	99TH	12.19

PERCENTILES

CENTIMETERS		INCHES
27.88	1ST	10.98
28.29	2ND	11.14
28.53	3RD	11.23
28.84	5TH	11.35
29.28	10TH	11.53
29.58	15TH	11.64
29.81	20TH	11.73
30.00	25TH	11.81
30.18	30TH	11.88
30.35	35TH	11.95
30.51	40TH	12.01
30.67	45TH	12.08
30.83	50TH	12.14
30.99	55TH	12.20
31.16	60TH	12.27
31.34	65TH	12.34
31.53	70TH	12.41
31.73	75TH	12.49
31.97	80TH	12.59
32.25	85TH	12.70
32.61	90TH	12.84
33.14	95TH	13.05
33.48	97TH	13.18
33.73	98TH	13.28
34.10	99TH	13.43

(20) BITRAGION SUBNASALE ARC

The surface distance between the right and left tragion landmarks across the subnasale landmark just under the nose is measured with a tape.



VARIABLE NO. 20—BIPRACION SUBNASALE ARC

FEMALES

MALES

THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
27.30	MEAN	10.75	
0.05	SE (MEAN)	0.02	
0.99	ST DEV	0.39	
0.04	SE (SD)	0.02	
24.70	MINIMUM	9.72	
30.00	MAXIMUM	11.81	
COEFF. OF VARIATION		3.6%	
SYMMETRY—VETA I		0.11	
KURTOSIS—VETA II		2.78	
NUMBER OF SUBJECTS		334	

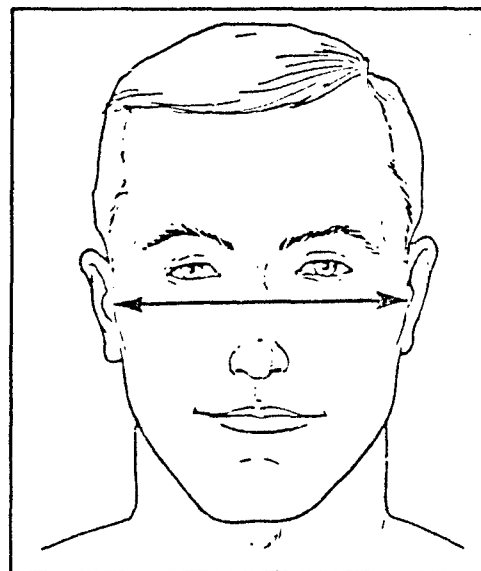
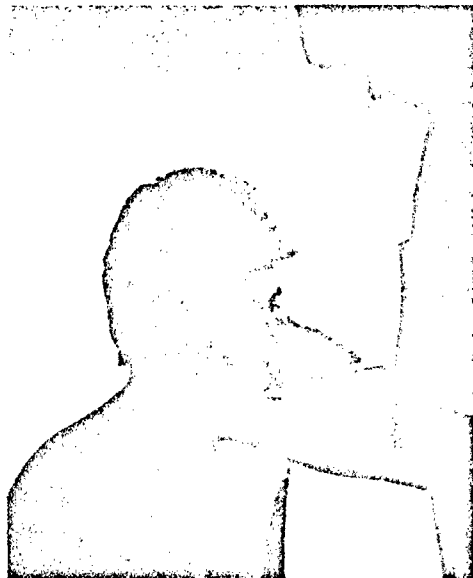
THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
29.34	MEAN	11.55	
0.04	SE (MEAN)	0.02	
0.94	ST DEV	0.37	
0.03	SE (SD)	0.01	
26.50	MINIMUM	10.43	
31.90	MAXIMUM	12.56	
COEFF. OF VARIATION		3.2%	
SYMMETRY—VETA I		0.18	
KURTOSIS—VETA II		2.66	
NUMBER OF SUBJECTS		487	

PERCENTILES		
CENTIMETERS		INCHES
25.16	1ST	9.90
25.36	2ND	9.99
25.50	3RD	10.04
25.70	5TH	10.12
26.03	10TH	10.25
26.26	15TH	10.34
26.44	20TH	10.41
26.60	25TH	10.47
26.75	30TH	10.53
26.89	35TH	10.59
27.02	40TH	10.64
27.15	45TH	10.69
27.28	50TH	10.74
27.41	55TH	10.79
27.54	60TH	10.84
27.67	65TH	10.89
27.82	70TH	10.95
27.97	75TH	11.01
28.15	80TH	11.08
28.35	85TH	11.16
28.61	90TH	11.26
28.99	95TH	11.41
29.24	97TH	11.51
29.42	98TH	11.58
29.72	99TH	11.70

PERCENTILES		
CENTIMETERS		INCHES
27.34	1ST	10.76
27.57	2ND	10.86
27.71	3RD	10.91
27.90	5TH	10.98
28.17	10TH	11.09
28.37	15TH	11.17
28.52	20TH	11.23
28.66	25TH	11.29
28.80	30TH	11.34
28.92	35TH	11.39
29.04	40TH	11.43
29.16	45TH	11.48
29.29	50TH	11.53
29.41	55TH	11.58
29.54	60TH	11.63
29.68	65TH	11.69
29.83	70TH	11.74
29.99	75TH	11.81
30.17	80TH	11.88
30.38	85TH	11.96
30.63	90TH	12.06
30.99	95TH	12.20
31.19	97TH	12.28
31.32	98TH	12.33
31.47	99TH	12.39

(21) BI-ZYGOMATIC BREADTH

The maximum horizontal breadth of the face (between the zygomatic arches) is measured with a spreading caliper.



VARIABLE NO. 21—BIZYGOMATIC BREADTH

FEMALES

MALES

THE SUMMARY STATISTICS

CENTIMETERS		INCHES
13.14	MEAN	5.17
0.03	SE (MEAN)	0.01
0.50	ST DEV	0.20
0.02	SE (SD)	0.01
11.70	MINIMUM	4.61
14.80	MAXIMUM	5.83
COEFF. OF VARIATION		3.8%
SYMMETRY—VETA I		0.24
KURTOSIS—VETA II		3.36
NUMBER OF SUBJECTS		334

THE SUMMARY STATISTICS

CENTIMETERS		INCHES
14.18	MEAN	5.58
0.02	SE (MEAN)	0.01
0.52	ST DEV	0.21
0.02	SE (SD)	0.01
12.50	MINIMUM	4.92
15.80	MAXIMUM	6.22
COEFF. OF VARIATION		3.7%
SYMMETRY—VETA I		0.10
KURTOSIS—VETA II		2.99
NUMBER OF SUBJECTS		487

PERCENTILES

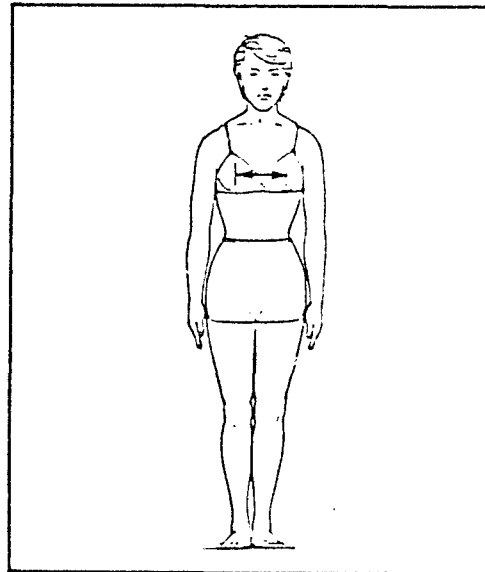
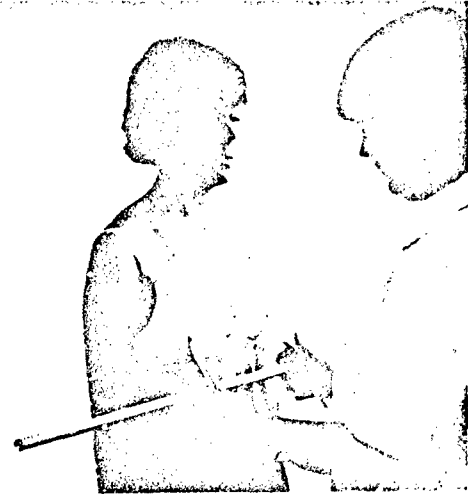
CENTIMETERS		INCHES
12.05	1ST	4.74
12.17	2ND	4.79
12.25	3RD	4.82
12.36	5TH	4.86
12.52	10TH	4.93
12.64	15TH	4.98
12.73	20TH	5.01
12.81	25TH	5.04
12.88	30TH	5.07
12.94	35TH	5.10
13.00	40TH	5.12
13.06	45TH	5.14
13.12	50TH	5.17
13.19	55TH	5.19
13.25	60TH	5.22
13.31	65TH	5.24
13.38	70TH	5.27
13.46	75TH	5.30
13.55	80TH	5.33
13.65	85TH	5.37
13.79	90TH	5.43
14.01	95TH	5.52
14.17	97TH	5.58
14.29	98TH	5.63
14.50	99TH	5.71

PERCENTILES

CENTIMETERS		INCHES
12.97	1ST	5.11
13.13	2ND	5.17
13.23	3RD	5.21
13.35	5TH	5.26
13.53	10TH	5.33
13.65	15TH	5.37
13.74	20TH	5.41
13.82	25TH	5.44
13.89	30TH	5.47
13.96	35TH	5.50
14.03	40TH	5.52
14.09	45TH	5.55
14.16	50TH	5.57
14.22	55TH	5.60
14.29	60TH	5.63
14.36	65TH	5.65
14.44	70TH	5.69
14.52	75TH	5.72
14.62	80TH	5.76
14.73	85TH	5.80
14.87	90TH	5.86
15.08	95TH	5.94
15.20	97TH	5.98
15.29	98TH	6.02
15.41	99TH	6.07

(22) BUSTPOINT/THELION-BUSTPOINT/THELION BREAST

The distance between the right and left bustpoint landmarks on women and the center of the nipples (thelion) on men is measured with a beam caliper. The subject stands erect looking straight ahead. The shoulders and upper extremities are relaxed. The measurement is made at the maximum point of quiet respiration.



VARIABLE NO. 22—BUSTPOINT/THELION—BUSTPOINT/THELION BREADTH

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
18.70	MEAN	7.36
0.09	SE(MEAN)	0.04
1.66	ST DEV	0.65
0.06	SE(SD)	0.03
14.50	MINIMUM	5.71
24.10	MAXIMUM	9.49
COEFF. OF VARIATION		8.9%
SYMMETRY—VETA I		0.09
KURTOSIS—VETA II		2.81
NUMBER OF SUBJECTS		334

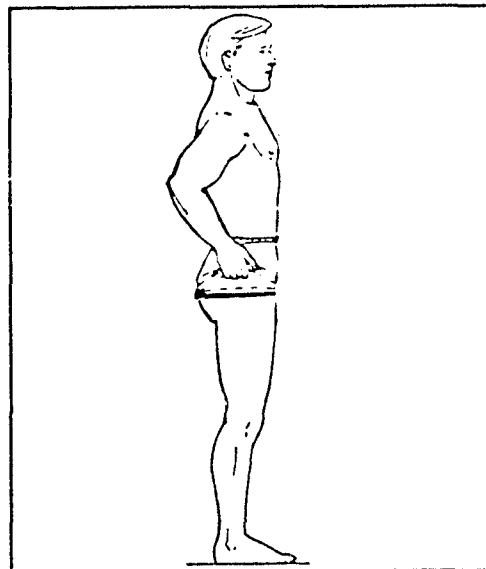
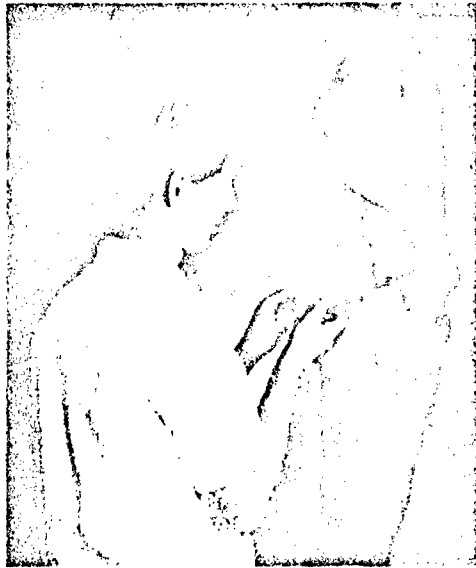
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
21.87	MEAN	8.61
0.08	SE(MEAN)	0.03
1.72	ST DEV	0.68
0.05	SE(SD)	0.02
17.70	MINIMUM	6.97
27.20	MAXIMUM	10.71
COEFF. OF VARIATION		7.8%
SYMMETRY—VETA I		0.18
KURTOSIS—VETA II		2.93
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
15.18	1ST	5.98
15.47	2ND	6.09
15.69	3RD	6.18
16.00	5TH	6.30
16.54	10TH	6.51
16.93	15TH	6.67
17.25	20TH	6.79
17.53	25TH	6.90
17.79	30TH	7.00
18.03	35TH	7.10
18.26	40TH	7.19
18.48	45TH	7.28
18.70	50TH	7.36
18.92	55TH	7.45
19.14	60TH	7.54
19.37	65TH	7.62
19.60	70TH	7.72
19.86	75TH	7.82
20.14	80TH	7.93
20.46	85TH	8.06
20.86	90TH	8.21
21.44	95TH	8.44
21.79	97TH	8.58
22.05	98TH	8.68
22.45	99TH	8.84

PERCENTILES		
CENTIMETERS		INCHES
18.10	1ST	7.12
18.46	2ND	7.27
18.71	3RD	7.37
19.07	5TH	7.51
19.67	10TH	7.74
20.08	15TH	7.91
20.41	20TH	8.04
20.70	25TH	8.15
20.96	30TH	8.25
21.19	35TH	8.34
21.42	40TH	8.43
21.63	45TH	8.52
21.85	50TH	8.60
22.06	55TH	8.68
22.27	60TH	8.77
22.50	65TH	8.86
22.73	70TH	8.95
22.99	75TH	9.05
23.28	80TH	9.16
23.61	85TH	9.30
24.06	90TH	9.47
24.75	95TH	9.74
25.24	97TH	9.94
25.62	98TH	10.09
26.27	99TH	10.34

(23) BUTTOCK CIRCUMFERENCE

The horizontal circumference of the trunk at the level of the maximum protrusion of the right buttock is measured with a tape. The subject stands erect with the heels together and the weight equally distributed on both feet.



VARIABLE NO. 23—BUTTOCK CIRCUMFERENCE

FEMALES

MALES

THE SUMMARY STATISTICS
CENTIMETERS INCHES

98.90	MEAN	38.94
0.34	SE(MEAN)	0.13
6.17	ST DEV	2.43
0.24	SE(SD)	0.09
83.50	MINIMUM	32.87
115.10	MAXIMUM	45.31
COEFF. OF VARIATION		6.2%
SYMMETRY—VETA I		0.09
KURTOSIS—VETA II		2.73
NUMBER OF SUBJECTS		334

THE SUMMARY STATISTICS
CENTIMETERS INCHES

99.15	MEAN	39.03
0.25	SE(MEAN)	0.10
5.49	ST DEV	2.16
0.18	SE(SD)	0.07
84.90	MINIMUM	33.43
120.00	MAXIMUM	47.24
COEFF. OF VARIATION		5.5%
SYMMETRY—VETA I		0.28
KURTOSIS—VETA II		2.96
NUMBER OF SUBJECTS		487

PERCENTILES
CENTIMETERS INCHES

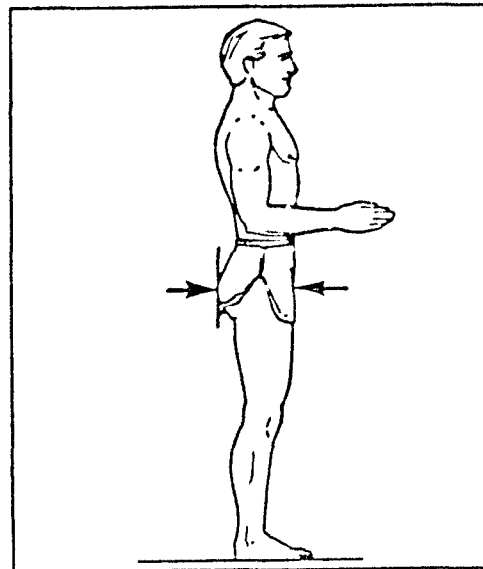
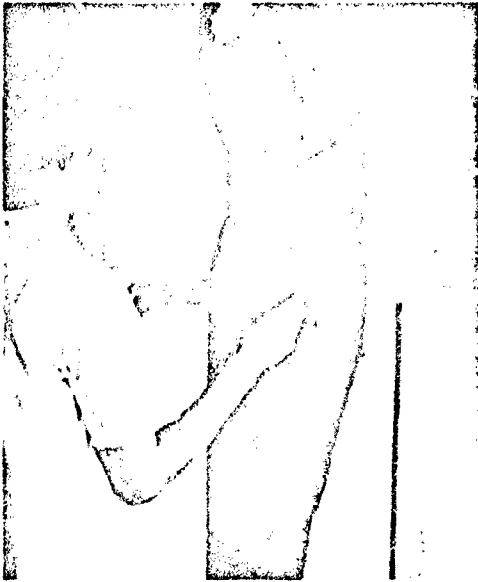
85.03	1ST	33.48
86.67	2ND	34.12
87.68	3RD	34.52
89.02	5TH	35.05
91.08	10TH	35.86
92.48	15TH	36.41
93.61	20TH	36.85
94.59	25TH	37.24
95.49	30TH	37.60
96.33	35TH	37.93
97.14	40TH	38.25
97.94	45TH	38.56
98.73	50TH	38.87
99.54	55TH	39.19
100.36	60TH	39.51
101.22	65TH	39.85
102.14	70TH	40.21
103.14	75TH	40.61
104.26	80TH	41.05
105.56	85TH	41.56
107.20	90TH	42.21
109.56	95TH	43.13
111.02	97TH	43.71
112.04	98TH	44.11
113.52	99TH	44.69

PFRCENTILES
CENTIMETERS INCHES

87.13	1ST	34.30
88.75	2ND	34.94
89.66	3RD	35.30
90.80	5TH	35.75
92.43	10TH	36.39
93.53	15TH	36.82
94.41	20TH	37.17
95.20	25TH	37.48
95.94	30TH	37.77
96.64	35TH	38.05
97.34	40TH	38.32
98.03	45TH	38.59
98.74	50TH	38.87
99.47	55TH	39.16
100.23	60TH	39.46
101.04	65TH	39.78
101.90	70TH	40.12
102.85	75TH	40.49
103.93	80TH	40.92
105.17	85TH	41.41
106.70	90TH	42.01
108.79	95TH	42.83
109.94	97TH	43.28
110.63	98TH	43.56
111.39	99TH	43.86

(24) BUTTOCK DEPTH

The horizontal depth of the torso at the level of the maximum protrusion of the right buttock is measured using a beam caliper with a fixed paddle blade. The subject stands erect with the heels together and the weight distributed equally on both feet.



VARIABLE NO. 24—BUTTOCK DEPTH

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
22.83	MEAN	8.99
0.13	SE (MEAN)	0.05
2.32	ST DEV	0.92
0.09	SE (SD)	0.04
17.00	MINIMUM	6.69
30.40	MAXIMUM	11.97
COEFF. OF VARIATION		10.2%
SYMMETRY----VETA I		0.83
KURTOSIS----VETA II		4.20
NUMBER OF SUBJECTS		334

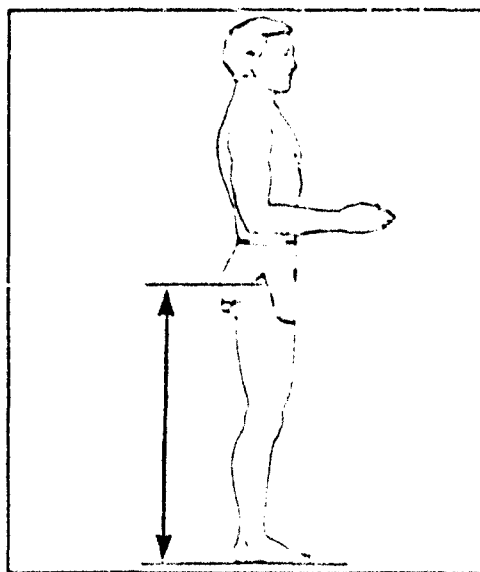
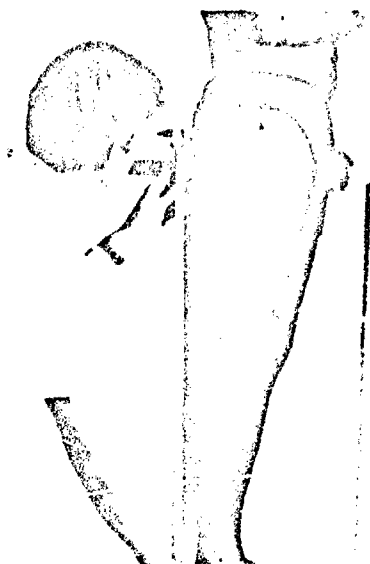
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
24.73	MEAN	9.74
0.08	SE (MEAN)	0.03
1.84	ST DEV	0.72
0.06	SE (SD)	0.02
19.80	MINIMUM	7.80
32.00	MAXIMUM	12.60
COEFF. OF VARIATION		7.4%
SYMMETRY----VETA I		0.09
KURTOSIS----VETA II		3.24
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
18.14	1ST	7.14
18.76	2ND	7.39
19.13	3RD	7.53
19.58	5TH	7.71
20.23	10TH	7.96
20.64	15TH	8.13
20.97	20TH	8.26
21.25	25TH	8.37
21.51	30TH	8.47
21.76	35TH	8.57
22.00	40TH	8.66
22.25	45TH	8.76
22.50	50TH	8.86
22.76	55TH	8.96
23.04	60TH	9.07
23.35	65TH	9.19
23.69	70TH	9.33
24.08	75TH	9.48
24.55	80TH	9.66
25.13	85TH	9.89
25.94	90TH	10.21
27.32	95TH	10.75
28.32	97TH	11.15
29.12	98TH	11.47
30.49	99TH	12.00

PERCENTILES		
CENTIMETERS		INCHES
20.34	1ST	8.01
20.93	2ND	8.24
21.29	3RD	8.38
21.75	5TH	8.56
22.42	10TH	8.83
22.86	15TH	9.00
23.20	20TH	9.14
23.50	25TH	9.25
23.76	30TH	9.36
24.01	35TH	9.45
24.24	40TH	9.54
24.47	45TH	9.63
24.69	50TH	9.72
24.92	55TH	9.81
25.15	60TH	9.90
25.40	65TH	10.00
25.66	70TH	10.10
25.94	75TH	10.21
26.26	80TH	10.34
26.62	85TH	10.48
27.11	90TH	10.67
27.82	95TH	10.95
28.27	97TH	11.13
28.60	98TH	11.26
29.10	99TH	11.46

(25) BUTTOCK HEIGHT

The vertical distance between a standing surface and the level of the maximum protrusion of the right buttock is measured with an anthropometer at the right side of the thigh. The subject stands erect with the heels together and the weight distributed equally on both feet.



VARIABLE NO. 25--BUTTOCK HEIGHT

FEMALES

MALES

THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
85.71	MEAN	33.74	
0.16	SE(MEAN)	0.06	
2.95	ST DEV	1.16	
0.11	SE(SD)	0.04	
79.30	MINIMUM	31.22	
89.00	MAXIMUM	38.19	
COEFF. OF VARIATION		3.4%	
SYMMETRY----VETA I		0.63	
KURTOSIS----VETA II		3.63	
NUMBER OF SUBJECTS		334	

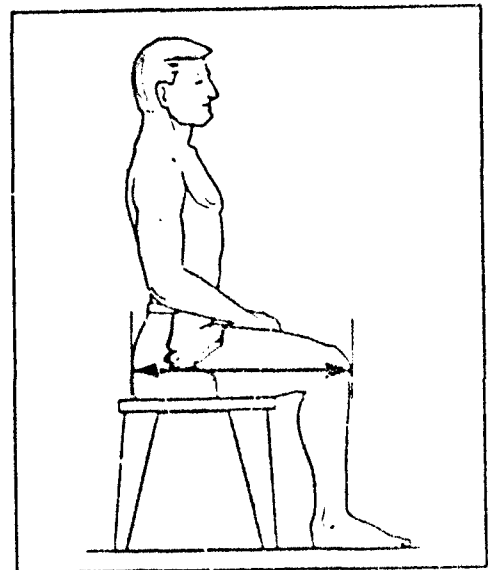
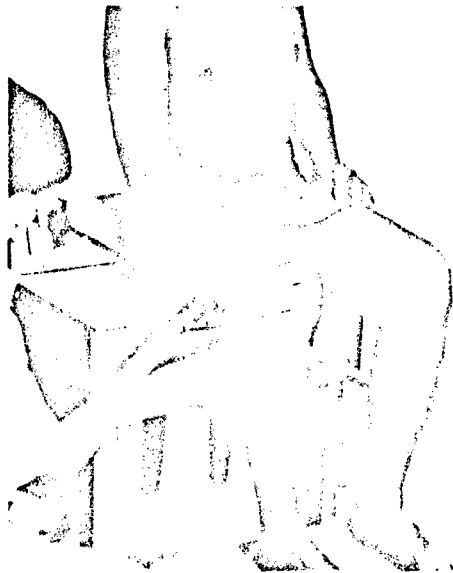
THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
88.51	MEAN	34.85	
0.19	SE(MEAN)	0.07	
4.19	ST DEV	1.65	
0.13	SE(SD)	0.05	
78.60	MINIMUM	30.94	
100.90	MAXIMUM	39.72	
COEFF. OF VARIATION		4.7%	
SYMMETRY----VETA I		0.37	
KURTOSIS----VETA II		2.86	
NUMBER OF SUBJECTS		487	

PERCENTILES		
CENTIMETERS		INCHES
80.67	1ST	31.52
80.60	2ND	31.73
80.94	3RD	31.86
81.41	5TH	32.05
82.18	10TH	32.35
82.73	15TH	32.57
83.19	20TH	32.75
83.60	25TH	32.91
83.98	30TH	33.06
84.34	35TH	33.21
84.70	40TH	33.35
85.05	45TH	33.49
85.41	50TH	33.63
85.78	55TH	33.77
86.17	60TH	33.92
86.57	65TH	34.08
87.01	70TH	34.26
87.50	75TH	34.45
88.07	80TH	34.67
88.74	85TH	34.94
89.61	90TH	35.28
90.96	95TH	35.81
91.85	97TH	36.16
92.52	98TH	36.43
93.58	99TH	36.84

PERCENTILES		
CENTIMETERS		INCHES
79.88	1ST	31.45
80.90	2ND	31.85
81.49	3RD	32.08
82.26	5TH	32.38
83.41	10TH	32.84
84.21	15TH	33.15
84.86	20TH	33.41
85.46	25TH	33.64
86.01	30TH	33.86
86.54	35TH	34.07
87.06	40TH	34.28
87.59	45TH	34.48
88.13	50TH	34.70
88.68	55TH	34.91
89.26	60TH	35.14
89.87	65TH	35.38
90.54	70TH	35.64
91.27	75TH	35.93
92.11	80TH	36.26
93.09	85TH	36.65
94.33	90TH	37.14
96.12	95TH	37.84
97.19	97TH	38.26
97.91	98TH	38.55
98.90	99TH	38.94

(26) BUTTOCK-KNEE LENGTH

The horizontal distance between a buttock plate placed at the most posterior point on either buttock and the anterior point to the right knee is measured with an anthropometer. The subject sits erect. The thighs are parallel and the knees flexed 90 degrees with the feet in line with the thighs.



VARIABLE NO. 26—BUTTOCK-KNEE LENGTH

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
60.02	MEAN	23.63
0.11	SE (MEAN)	0.04
2.08	ST DEV	0.82
0.08	SE (SD)	0.03
54.60	MINIMUM	21.50
67.90	MAXIMUM	26.73
COEFF. OF VARIATION		3.5%
SYMMETRY—VETA I		0.22
KURTOSIS—VETA II		2.75
NUMBER OF SUBJECTS		334

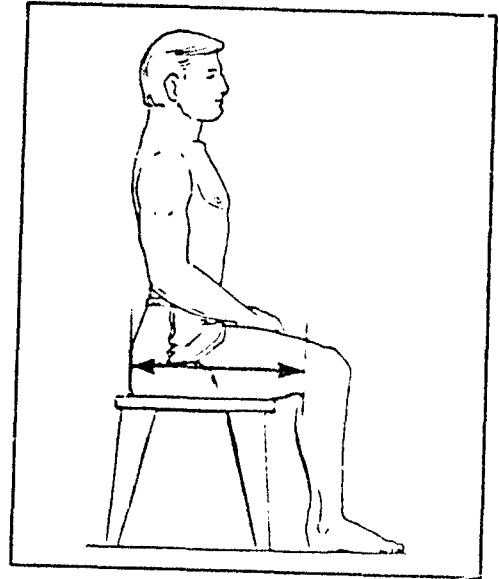
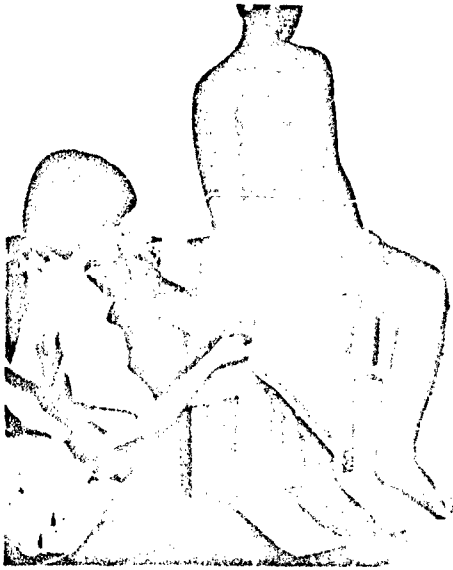
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
61.86	MEAN	24.36
0.12	SE (MEAN)	0.05
2.65	ST DEV	1.04
0.08	SE (SD)	0.03
55.70	MINIMUM	21.93
70.60	MAXIMUM	27.80
COEFF. OF VARIATION		4.3%
SYMMETRY—VETA I		0.28
KURTOSIS—VETA II		2.88
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
55.90	1ST	22.01
56.24	2ND	22.14
56.47	3RD	22.23
56.80	5TH	22.36
57.36	10TH	22.58
57.77	15TH	22.75
58.13	20TH	22.89
58.46	25TH	23.01
58.76	30TH	23.13
59.06	35TH	23.25
59.34	40TH	23.36
59.63	45TH	23.48
59.91	50TH	23.59
60.21	55TH	23.70
60.51	60TH	23.82
60.82	65TH	23.95
61.15	70TH	24.08
61.51	75TH	24.22
61.91	80TH	24.37
62.35	85TH	24.55
62.88	90TH	24.76
63.57	95TH	25.03
63.92	97TH	25.17
64.13	98TH	25.25
64.32	99TH	25.32

PERCENTILES		
CENTIMETERS		INCHES
56.09	1ST	22.08
56.82	2ND	22.37
57.24	3RD	22.54
57.79	5TH	22.75
58.60	10TH	23.07
59.15	15TH	23.29
59.59	20TH	23.46
59.98	25TH	23.61
60.34	30TH	23.76
60.68	35TH	23.89
61.02	40TH	24.02
61.35	45TH	24.15
61.69	50TH	24.29
62.03	55TH	24.42
62.39	60TH	24.56
62.77	65TH	24.71
63.17	70TH	24.87
63.62	75TH	25.05
64.13	80TH	25.25
64.72	85TH	25.48
65.46	90TH	25.77
66.52	95TH	26.19
67.15	97TH	26.44
67.58	98TH	26.61
68.16	99TH	26.84

(27) BUTTOCK-POPLITEAL LENGTH

The horizontal distance between a buttock plate placed at the most posterior point of either buttock and the back of the right knee (the popliteal fossa at the dorsal juncture of the calf and thigh) is measured with an anthropometer. The subject sits erect. The thighs are parallel and the knee flexed 90 degrees with the feet in line with the thighs.



VARIABLE NO. 27—BUTTOCK-POPLITEAL LENGTH

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
49.22	MEAN	19.38
0.10	SE(MEAN)	0.04
1.84	ST DEV	0.73
0.07	SE(SD)	0.03
44.50	MINIMUM	17.52
55.50	MAXIMUM	21.85
COEFF. OF VARIATION		3.7%
SYMMETRY—VETA I		0.13
KURTOSIS—VETA II		2.67
NUMBER OF SUBJECTS		334

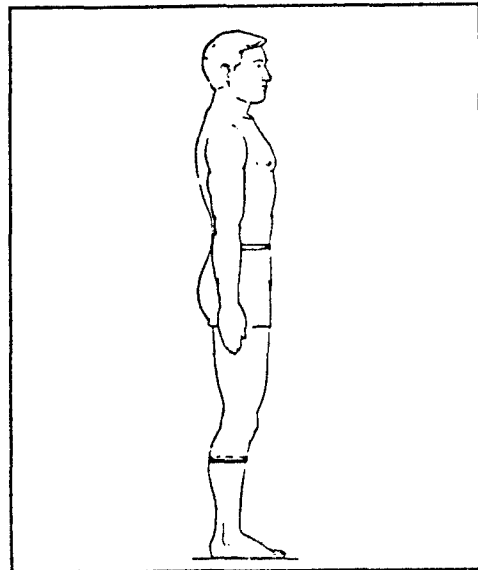
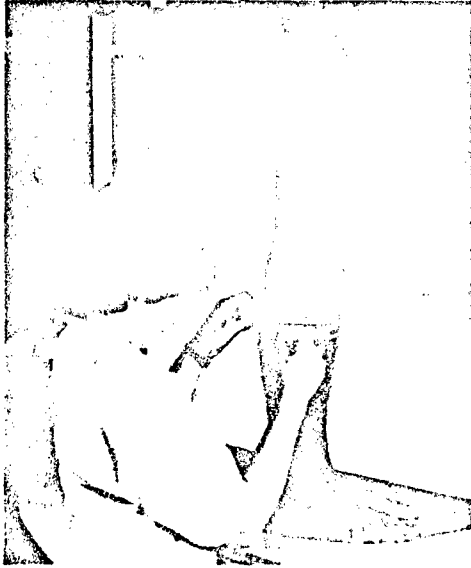
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
50.26	MEAN	19.79
0.11	SE(MEAN)	0.04
2.47	ST DEV	0.97
0.08	SE(SD)	0.03
44.40	MINIMUM	17.48
57.70	MAXIMUM	22.72
COEFF. OF VARIATION		4.9%
SYMMETRY—VETA I		0.37
KURTOSIS—VETA II		2.91
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
45.15	1ST	17.77
45.63	2ND	17.97
45.92	3RD	18.08
46.30	5TH	18.23
46.88	10TH	18.46
47.28	15TH	18.61
47.60	20TH	18.74
47.89	25TH	18.85
48.15	30TH	18.96
48.41	35TH	19.06
48.65	40TH	19.15
48.89	45TH	19.25
49.14	50TH	19.35
49.39	55TH	19.44
49.65	60TH	19.55
49.91	65TH	19.65
50.20	70TH	19.76
50.51	75TH	19.88
50.85	80TH	20.02
51.25	85TH	20.18
51.72	90TH	20.36
52.36	95TH	20.62
52.71	97TH	20.75
52.92	98TH	20.83
53.15	99TH	20.93

PERCENTILES		
CENTIMETERS		INCHES
45.25	1ST	17.81
45.78	2ND	18.02
46.10	3RD	18.15
46.53	5TH	18.32
47.21	10TH	18.59
47.70	15TH	18.78
48.09	20TH	18.93
48.45	25TH	19.08
48.79	30TH	19.21
49.11	35TH	19.33
49.42	40TH	19.46
49.73	45TH	19.58
50.05	50TH	19.71
50.38	55TH	19.83
50.72	60TH	19.97
51.08	65TH	20.11
51.46	70TH	20.26
51.89	75TH	20.43
52.37	80TH	20.62
52.93	85TH	20.84
53.65	90TH	21.12
54.69	95TH	21.53
55.33	97TH	21.78
55.77	98TH	21.96
56.39	99TH	22.20

(28) CALF CIRCUMFERENCE

The maximum horizontal circumference of the right calf is measured with a tape. The subject stands erect with the heels approximately 10 cm apart and the weight distributed equally on both feet.



VARIABLE NO. 28—CALF CIRCUMFERENCE

FEMALES

THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
35.88	MEAN	14.13	
0.13	SE (MEAN)	0.05	
2.39	ST DEV	0.94	
0.09	SE (SD)	0.04	
29.80	MINIMUM	11.73	
45.90	MAXIMUM	18.07	
COEFF. OF VARIATION		6.6%	
SYMMETRY—VETA I		0.14	
KURIOSIS—VETA II		3.30	
NUMBER OF SUBJECTS		334	

MALES

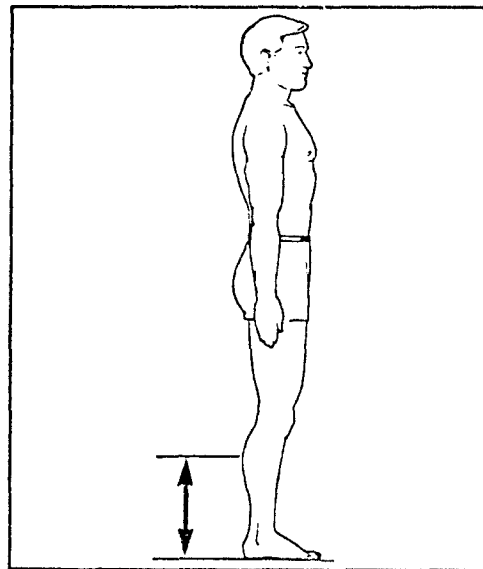
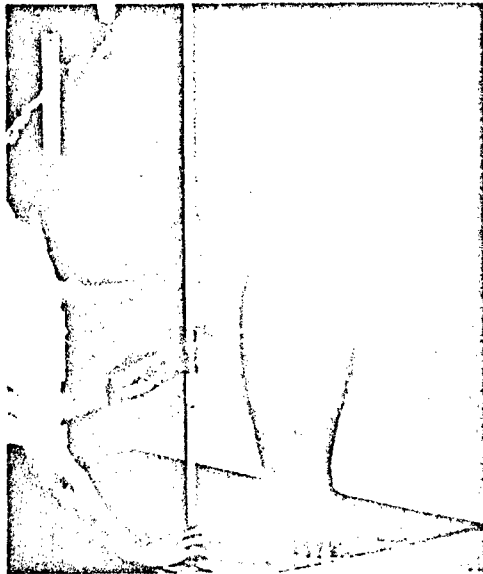
THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
37.77	MEAN	14.87	
0.10	SE (MEAN)	0.04	
2.26	ST DEV	0.89	
0.07	SE (SD)	0.03	
30.00	MINIMUM	11.81	
44.80	MAXIMUM	17.64	
COEFF. OF VARIATION		6.0%	
SYMMETRY—VETA I		0.16	
KURIOSIS—VETA II		2.94	
NUMBER OF SUBJECTS		487	

PERCENTILES		
CENTIMETERS		INCHES
30.72	1ST	12.09
31.15	2ND	12.27
31.47	3RD	12.39
31.95	5TH	12.58
32.77	10TH	12.90
33.35	15TH	13.13
33.83	20TH	13.32
34.24	25TH	13.48
34.62	30TH	13.63
34.96	35TH	13.77
35.29	40TH	13.90
35.61	45TH	14.02
35.92	50TH	14.14
36.23	55TH	14.26
36.54	60TH	14.39
36.85	65TH	14.51
37.18	70TH	14.64
37.53	75TH	14.78
37.92	80TH	14.93
38.35	85TH	15.10
38.89	90TH	15.31
39.66	95TH	15.61
40.15	97TH	15.81
40.50	98TH	15.95
41.06	99TH	16.17

PERCENTILES		
CENTIMETERS		INCHES
32.96	1ST	12.98
33.48	2ND	13.18
33.81	3RD	13.31
34.25	5TH	13.48
34.95	10TH	13.76
35.43	15TH	13.95
35.82	20TH	14.10
36.17	25TH	14.24
36.49	30TH	14.37
36.79	35TH	14.48
37.08	40TH	14.60
37.37	45TH	14.71
37.66	50TH	14.83
37.96	55TH	14.94
38.26	60TH	15.06
38.58	65TH	15.19
38.91	70TH	15.32
39.28	75TH	15.47
39.70	80TH	15.63
40.18	85TH	15.82
40.79	90TH	16.06
41.67	95TH	16.41
42.21	97TH	16.62
42.59	98TH	16.77
43.14	99TH	16.98

(29) CALF HEIGHT

The vertical distance between a standing surface and the level of the maximum circumference of the right calf is measured with an anthropometer. The subject stands erect with the heels together and the weight distributed equally on both feet.



VARIABLE NO. 29—CALF HEIGHT

FEMALES

MALES

THE SUMMARY STATISTICS
CENTIMETERS INCHES

THE SUMMARY STATISTICS
CENTIMETERS INCHES

31.99	MEAN	12.59
0.10	SE(MEAN)	0.04
1.78	ST DEV	0.70
0.07	SE(SD)	0.03
27.60	MINIMUM	10.87
38.90	MAXIMUM	15.31
COEFF. OF VARIATION		5.6%
SYMMETRY—VETA I		0.52
KURTOSIS—VETA II		3.54
NUMBER OF SUBJECTS		334

35.15	MEAN	13.84
0.09	SE(MEAN)	0.03
1.93	ST DEV	0.76
0.06	SE(SD)	0.02
30.80	MINIMUM	12.13
40.80	MAXIMUM	16.06
COEFF. OF VARIATION		5.5%
SYMMETRY—VETA I		0.17
KURTOSIS—VETA II		2.77
NUMBER OF SUBJECTS		487

PERCENTILES
CENTIMETERS INCHES

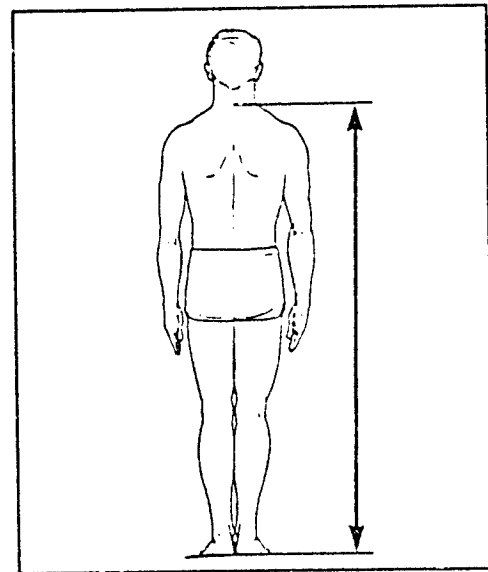
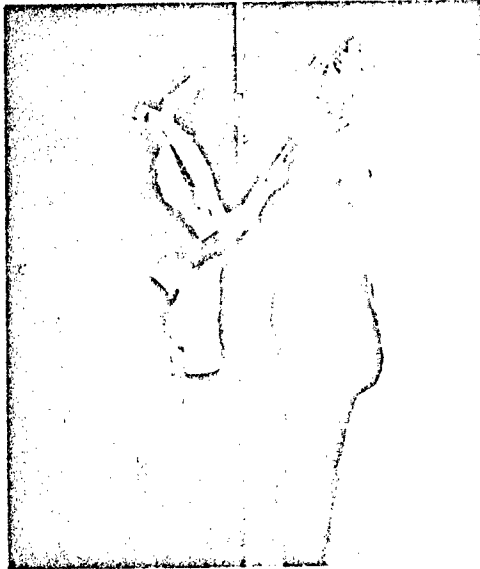
PERCENTILES
CENTIMETERS INCHES

28.36	1ST	11.16
28.76	2ND	11.32
29.01	3RD	11.42
29.34	5TH	11.55
29.85	10TH	11.75
30.20	15TH	11.89
30.48	20TH	12.00
30.73	25TH	12.10
30.96	30TH	12.19
31.18	35TH	12.28
31.39	40TH	12.36
31.60	45TH	12.44
31.82	50TH	12.53
32.04	55TH	12.61
32.26	60TH	12.70
32.50	65TH	12.80
32.77	70TH	12.90
33.06	75TH	13.01
33.39	80TH	13.15
33.79	85TH	13.30
34.31	90TH	13.51
35.11	95TH	13.82
35.64	97TH	14.03
36.03	98TH	14.19
36.65	99TH	14.43

30.90	1ST	12.17
31.33	2ND	12.33
31.61	3RD	12.45
32.01	5TH	12.60
32.65	10TH	12.86
33.10	15TH	13.03
33.46	20TH	13.17
33.78	25TH	13.30
34.07	30TH	13.41
34.34	35TH	13.52
34.60	40TH	13.62
34.85	45TH	13.72
35.10	50TH	13.82
35.35	55TH	13.92
35.61	60TH	14.02
35.87	65TH	14.12
36.15	70TH	14.23
36.46	75TH	14.35
36.80	80TH	14.49
37.20	85TH	14.64
37.70	90TH	14.84
38.43	95TH	15.13
38.90	97TH	15.32
39.24	98TH	15.45
39.77	99TH	15.66

(30) CERVICALE HEIGHT

The vertical distance between a standing surface and the cervicale landmark on the spine at the base of the neck is measured with an anthropometer. The heels are together with the weight distributed equally on both feet. The shoulders and upper extremities are relaxed. The measurement is taken at the maximum point of quiet respiration.



VARIABLE NO. 30—CERVICALE HEIGHT

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
145.33	MEAN	57.22
0.23	SE (MEAN)	0.09
4.19	ST DEV	1.65
0.16	SE (SD)	0.06
135.50	MINIMUM	53.35
164.30	MAXIMUM	64.69
COEFF. OF VARIATION		2.9%
SYMMETRY—VETA I		0.53
KURTOSIS—VETA II		3.86
NUMBER OF SUBJECTS		334

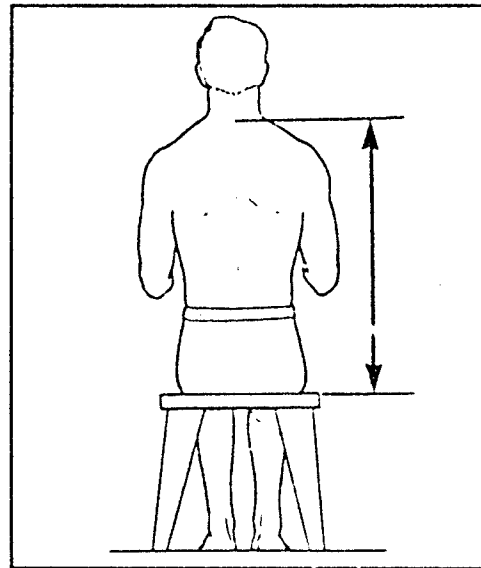
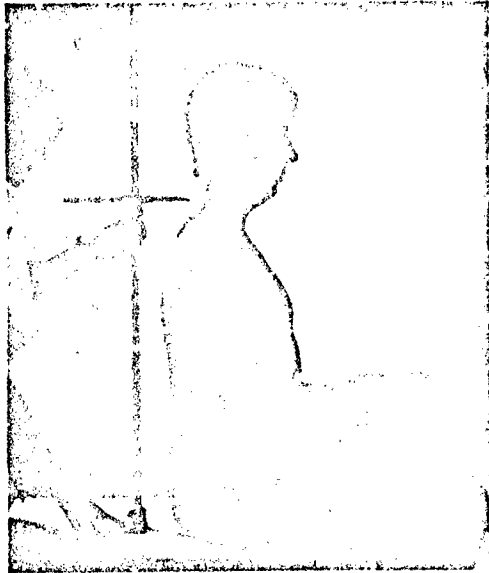
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
153.13	MEAN	60.31
0.27	SE (MEAN)	0.11
6.00	ST DEV	2.36
0.19	SE (SD)	0.08
135.30	MINIMUM	53.27
169.40	MAXIMUM	66.69
COEFF. OF VARIATION		3.9%
SYMMETRY—VETA I		-0.01
KURTOSIS—VETA II		2.79
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
136.29	1ST	53.66
137.43	2ND	54.11
138.10	3RD	54.37
138.98	5TH	54.72
140.27	10TH	55.23
141.14	15TH	55.57
141.83	20TH	55.84
142.43	25TH	56.08
142.99	30TH	56.29
143.51	35TH	56.50
144.01	40TH	56.70
144.51	45TH	56.89
145.02	50TH	57.09
145.54	55TH	57.30
146.07	60TH	57.51
146.64	65TH	57.73
147.25	70TH	57.97
147.92	75TH	58.24
148.70	80TH	58.54
149.61	85TH	58.90
150.79	90TH	59.37
152.57	95TH	60.07
153.72	97TH	60.52
154.55	98TH	60.85
155.82	99TH	61.34

PERCENTILES		
CENTIMETERS		INCHES
139.37	1ST	54.87
141.02	2ND	55.52
142.04	3RD	55.92
143.42	5TH	56.46
145.51	10TH	57.29
146.93	15TH	57.85
148.06	20TH	58.29
149.05	25TH	58.68
149.94	30TH	59.03
150.77	35TH	59.36
151.57	40TH	59.67
152.34	45TH	59.98
153.12	50TH	60.28
153.89	55TH	60.59
154.68	60TH	60.90
155.51	65TH	61.22
156.37	70TH	61.56
157.32	75TH	61.94
158.37	80TH	62.35
159.57	85TH	62.82
161.07	90TH	63.41
163.20	95TH	64.25
164.50	97TH	64.76
165.39	98TH	65.11
166.67	99TH	65.62

(31) CERVICALE HEIGHT, SITTING

The vertical distance between a sitting surface and the cervicale landmark on the spine at the base of the neck is measured with an anthropometer. The subject sits erect looking straight ahead. The shoulders and upper arms are relaxed and the forearms and hands are extended forward horizontally with the palms facing each other. The thighs are parallel and the knees are flexed 90 degrees. The measurement is taken at the maximum point of quiet respiration.



VARIABLE NO. 31—CERVICAL HEIGHT, SITTING

FEMALES

MALES

THE SUMMARY STATISTICS
CENTIMETERS INCHES

THE SUMMARY STATISTICS
CENTIMETERS INCHES

65.45	MEAN	25.77
0.13	SE(MEAN)	0.05
2.46	ST DEV	0.97
0.10	SE(SD)	0.04
58.60	MINIMUM	23.07
74.10	MAXIMUM	29.17
COEFF. OF VARIATION		3.8%
SYMMETRY—VETA I		0.04
KURTOSIS—VETA II		2.99
NUMBER OF SUBJECTS		334

68.89	MEAN	27.12
0.13	SE(MEAN)	0.05
2.80	ST DEV	1.10
0.09	SE(SD)	0.04
59.00	MINIMUM	23.23
76.50	MAXIMUM	30.12
COEFF. OF VARIATION		4.1%
SYMMETRY—VETA I		-0.23
KURTOSIS—VETA II		3.34
NUMBER OF SUBJECTS		487

PERCENTILES
CENTIMETERS INCHES

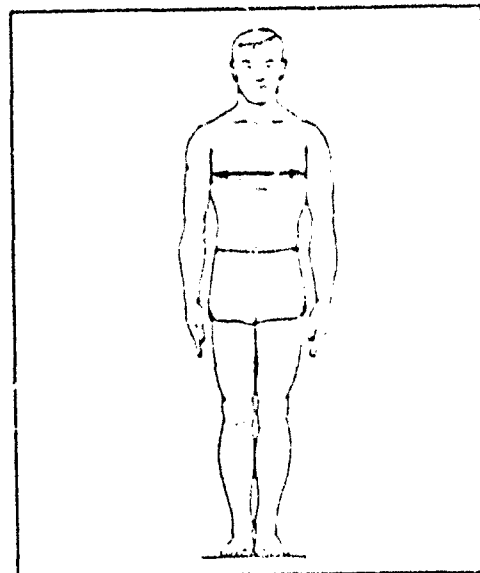
PERCENTILES
CENTIMETERS INCHES

59.70	1ST	23.50
60.42	2ND	23.79
60.86	3RD	23.96
61.44	5TH	24.19
62.31	10TH	24.53
62.90	15TH	24.76
63.36	20TH	24.95
63.77	25TH	25.11
64.13	30TH	25.25
64.47	35TH	25.38
64.80	40TH	25.51
65.11	45TH	25.64
65.43	50TH	25.76
65.75	55TH	25.89
66.07	60TH	26.01
66.41	65TH	26.14
66.76	70TH	26.28
67.15	75TH	26.44
67.57	80TH	26.60
68.06	85TH	26.79
68.66	90TH	27.03
69.49	95TH	27.36
69.98	97TH	27.55
70.31	98TH	27.68
70.75	99TH	27.85

62.15	1ST	24.47
63.02	2ND	24.81
63.56	3RD	25.02
64.28	5TH	25.31
65.36	10TH	25.73
66.07	15TH	26.01
66.62	20TH	26.23
67.09	25TH	26.41
67.51	30TH	26.58
67.90	35TH	26.73
68.26	40TH	26.87
68.61	45TH	27.01
68.95	50TH	27.15
69.29	55TH	27.28
69.53	60TH	27.41
69.79	65TH	27.55
70.36	70TH	27.70
70.76	75TH	27.86
71.20	80TH	28.03
71.72	85TH	28.23
72.36	90TH	28.49
73.32	95TH	28.87
73.93	97TH	29.11
74.39	98TH	29.29
75.10	99TH	29.57

(32) CHEST BREADTH

The maximum horizontal breadth of the chest at the level of the right bustpoint on women or the nipple on men is measured with a beam caliper. The subject stands erect looking straight ahead with the heels together, the weight distributed equally on both feet. The measurement is taken at the maximum point of quiet respiration. Note: Breast tissue and latissimus dorsi muscle tissue are not included in this measurement if they extend beyond the rib cage.



VARIABLE NO. 32—CHEST BREADTH

FEMALES

MALES

THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
28.82	MEAN	11.35	
0.11	SE(MEAN)	0.04	
2.01	ST DEV	0.79	
0.08	SE(SD)	0.03	
22.50	MINIMUM	8.86	
37.50	MAXIMUM	14.76	
COEFF. OF VARIATION		7.0%	
SYMMETRY—VETA I		0.48	
KURTOSIS—VETA II		4.07	
NUMBER OF SUBJECTS		334	

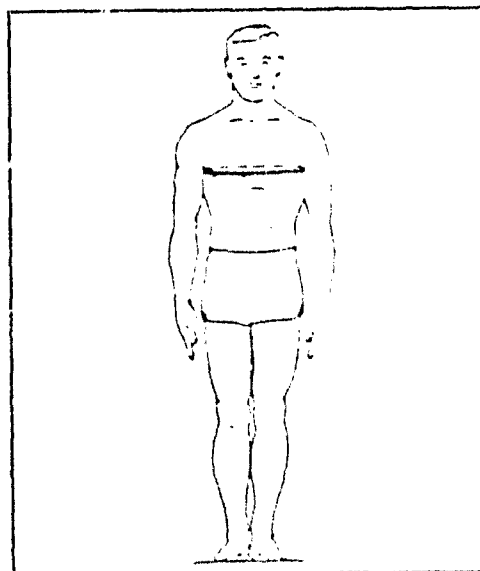
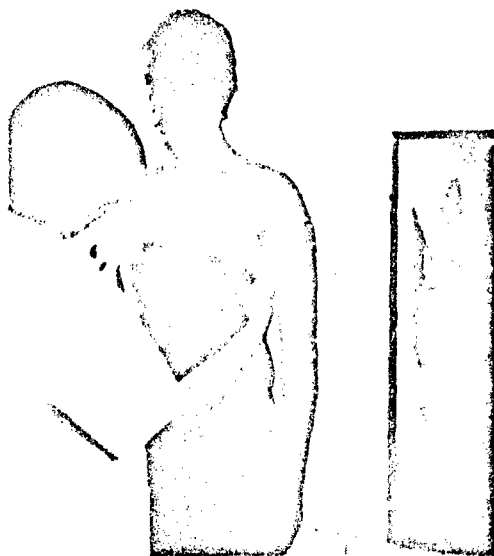
THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
33.19	MEAN	13.07	
0.10	SE(MEAN)	0.04	
2.19	ST DEV	0.86	
0.07	SE(SD)	0.03	
26.00	MINIMUM	10.24	
39.80	MAXIMUM	15.67	
COEFF. OF VARIATION		6.6%	
SYMMETRY—VETA I		0.16	
KURTOSIS—VETA II		2.83	
NUMBER OF SUBJECTS		487	

PERCENTILES		
CENTIMETERS		INCHES
24.78	1ST	9.75
25.13	2ND	9.89
25.38	3RD	9.99
25.74	5TH	10.13
26.34	10TH	10.37
26.76	15TH	10.54
27.11	20TH	10.67
27.42	25TH	10.80
27.71	30TH	10.91
27.97	35TH	11.01
28.22	40TH	11.11
28.47	45TH	11.21
28.72	50TH	11.31
28.97	55TH	11.40
29.22	60TH	11.50
29.49	65TH	11.61
29.77	70TH	11.72
30.08	75TH	11.84
30.42	80TH	11.98
30.83	85TH	12.14
31.36	90TH	12.35
32.17	95TH	12.67
32.72	97TH	12.88
33.13	98TH	13.04
33.81	99TH	13.31

PERCENTILES		
CENTIMETERS		INCHES
28.53	1ST	11.23
28.99	2ND	11.41
29.29	3RD	11.53
29.72	5TH	11.70
30.41	10TH	11.97
30.90	15TH	12.17
31.30	20TH	12.32
31.65	25TH	12.46
31.96	30TH	12.58
32.26	35TH	12.70
32.55	40TH	12.81
32.83	45TH	12.92
33.11	50TH	13.03
33.39	55TH	13.15
33.68	60TH	13.26
33.98	65TH	13.38
34.29	70TH	13.50
34.64	75TH	13.64
35.03	80TH	13.79
35.48	85TH	13.97
36.06	90TH	14.20
36.92	95TH	14.54
37.48	97TH	14.75
37.89	98TH	14.92
38.53	99TH	15.17

(33) CHEST CIRCUMFERENCE

The maximum horizontal circumference of the chest at the fullest part of the breast is measured with a tape. The subject stands erect looking straight ahead. The shoulders and upper extremities are relaxed. The measurement is taken at the maximum point of quiet respiration.



VARIABLE NO. 33—CHEST CIRCUMFERENCE

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
92.48	MEAN	36.41
0.37	SE(MEAN)	0.15
6.84	ST DEV	2.69
0.26	SE(SD)	0.10
75.20	MINIMUM	29.61
117.60	MAXIMUM	46.30
COEFF. OF VARIATION		7.4%
SYMMETRY—VETA I		0.48
KURTOSIS—VETA II		3.77
NUMBER OF SUBJECTS		334

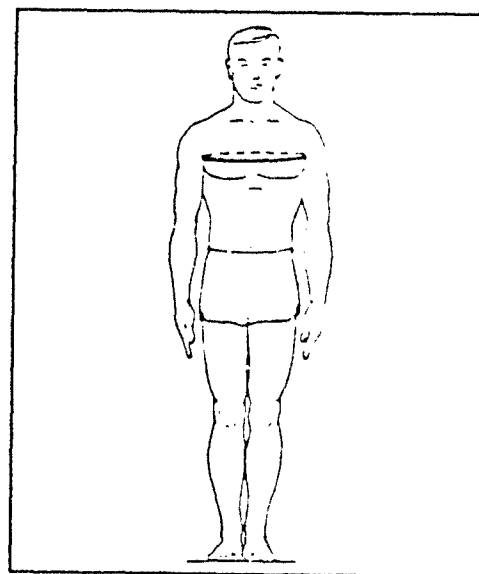
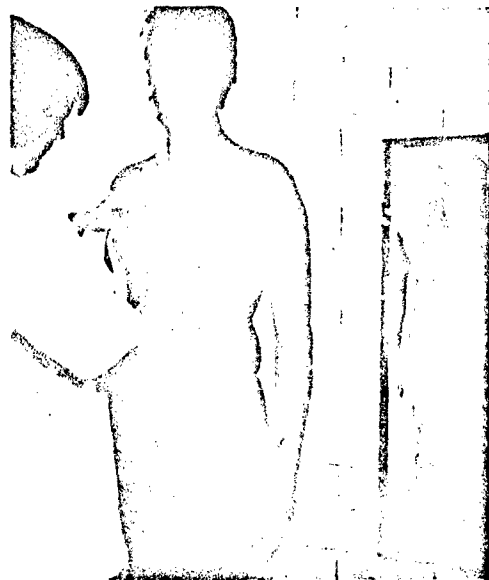
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
100.92	MEAN	39.73
0.27	SE(MEAN)	0.11
5.95	ST DEV	2.34
0.19	SE(SD)	0.08
85.00	MINIMUM	33.46
119.40	MAXIMUM	47.01
COEFF. OF VARIATION		5.9%
SYMMETRY—VETA I		0.11
KURTOSIS—VETA II		2.86
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
77.41	1ST	30.48
79.15	2ND	31.16
80.28	3RD	31.61
81.84	5TH	32.22
84.22	10TH	33.16
85.80	15TH	33.78
87.03	20TH	34.26
88.07	25TH	34.67
88.99	30TH	35.03
89.83	35TH	35.37
90.62	40TH	35.68
91.38	45TH	35.98
92.14	50TH	36.28
92.90	55TH	36.58
93.68	60TH	36.88
94.49	65TH	37.20
95.37	70TH	37.55
96.36	75TH	37.94
97.51	80TH	38.39
98.93	85TH	38.95
100.90	90TH	39.73
104.30	95TH	41.06
106.90	97TH	42.09
109.06	98TH	42.94
112.94	99TH	44.46

PERCENTILES		
CENTIMETERS		INCHES
87.42	1ST	34.42
88.93	2ND	35.01
89.90	3RD	35.40
91.23	5TH	35.92
93.31	10TH	36.74
94.73	15TH	37.30
95.86	20TH	37.74
96.84	25TH	38.13
97.72	30TH	38.47
98.54	35TH	38.80
99.32	40TH	39.10
100.08	45TH	39.40
100.83	50TH	39.70
101.59	55TH	39.99
102.35	60TH	40.30
103.15	65TH	40.61
103.99	70TH	40.94
104.90	75TH	41.30
105.93	80TH	41.71
107.13	85TH	42.18
108.66	90TH	42.78
110.94	95TH	43.68
112.44	97TH	44.27
113.56	98TH	44.71
115.32	99TH	45.40

(34) CHEST CIRCUMFERENCE AT SCYE

The horizontal circumference of the chest at the level of the scye-at-midspine landmark is measured with a tape. The subject stands erect looking straight ahead. The shoulders and upper extremities are relaxed. The measurement is taken at the maximum point of quiet respiration.



VARIABLE NO. 34—CHEST CIRCUMFERENCE AT SCYE

FEMALES

THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
90.07	MEAN	35.46	
0.31	SE (MEAN)	0.12	
5.66	ST DEV	2.23	
0.22	SE (SD)	0.09	
75.50	MINIMUM	29.72	
112.10	MAXIMUM	44.13	
COEFF. OF VARIATION		6.3%	
SYMMETRY—VETA I		0.59	
KURTOSIS—VETA II		4.08	
NUMBER OF SUBJECTS		334	

MALES

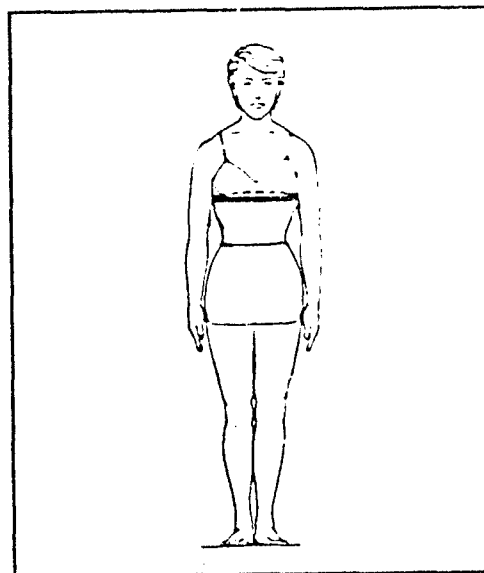
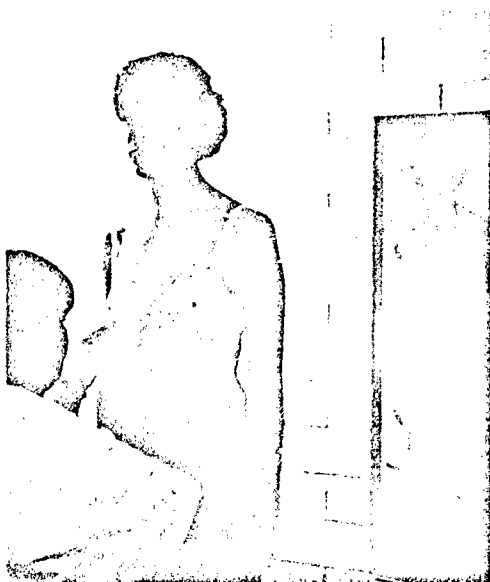
THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
103.58	MEAN	40.78	
0.25	SE (MEAN)	0.10	
5.53	ST DEV	2.18	
0.18	SE (SD)	0.07	
89.40	MINIMUM	35.20	
120.30	MAXIMUM	47.36	
COEFF. OF VARIATION		5.3%	
SYMMETRY—VETA I		0.09	
KURTOSIS—VETA II		2.82	
NUMBER OF SUBJECTS		487	

PERCENTILES		
CENTIMETERS		INCHES
78.09	1ST	30.74
79.65	2ND	31.36
80.56	3RD	31.72
81.74	5TH	32.18
83.45	10TH	32.85
84.57	15TH	33.30
85.46	20TH	33.65
86.24	25TH	33.95
86.94	30TH	34.23
87.61	35TH	34.49
88.25	40TH	34.75
88.89	45TH	35.00
89.54	50TH	35.25
90.21	55TH	35.52
90.91	60TH	35.79
91.65	65TH	36.08
92.46	70TH	36.40
93.37	75TH	36.76
94.42	80TH	37.17
95.69	85TH	37.68
97.39	90TH	38.34
100.06	95TH	39.39
101.90	97TH	40.12
103.29	98TH	40.67
105.55	99TH	41.55

PERCENTILES		
CENTIMETERS		INCHES
91.12	1ST	35.87
92.57	2ND	36.44
93.48	3RD	36.80
94.70	5TH	37.28
96.58	10TH	38.02
97.85	15TH	38.52
98.87	20TH	38.93
99.77	25TH	39.28
100.57	30TH	39.59
101.32	35TH	39.89
102.04	40TH	40.18
102.75	45TH	40.45
103.45	50TH	40.73
104.16	55TH	41.01
104.88	60TH	41.29
105.63	65TH	41.59
106.43	70TH	41.90
107.30	75TH	42.24
108.28	80TH	42.63
109.41	85TH	43.07
110.83	90TH	43.63
112.91	95TH	44.45
114.22	97TH	44.97
115.15	98TH	45.34
116.55	99TH	45.89

(35) CHEST CIRCUMFERENCE BELOW BREAST

The horizontal circumference of the chest at the level of the inferior juncture of the lowest breast with the rib cage is measured with a tape. On women, the tape may lie on the bra. The subject stands erect looking straight ahead. The shoulders and upper extremities are relaxed. The measurement is taken at the maximum point of quiet respiration.



VARIABLE NO. 35—CHEST CIRCUMFERENCE BELOW BREAST

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
79.01	MEAN	31.11
0.30	SE (MEAN)	0.12
5.42	ST DEV	2.13
0.21	SE (SD)	0.08
66.30	MINIMUM	26.10
98.80	MAXIMUM	38.90
COEFF. OF VARIATION		6.9%
SYMMETRY—VETA I		0.72
KURTOSIS—VETA II		4.24
NUMBER OF SUBJECTS		334

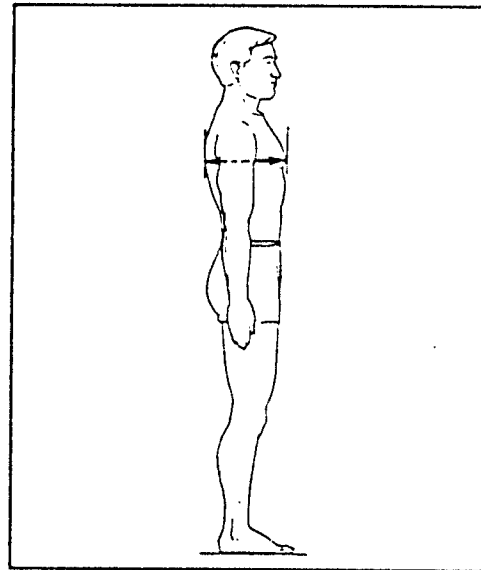
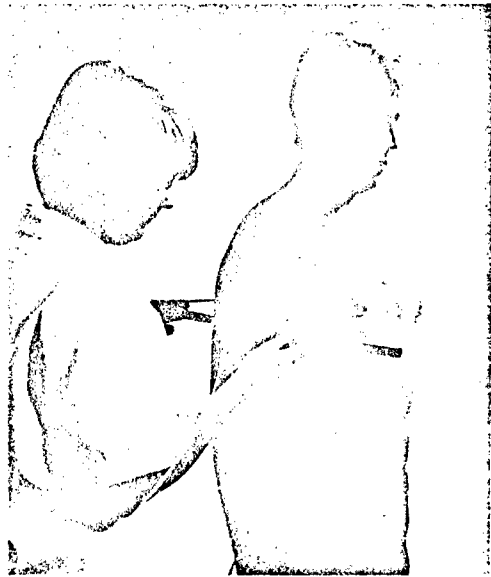
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
94.50	MEAN	37.20
0.26	SE (MEAN)	0.10
5.76	ST DEV	2.27
0.18	SE (SD)	0.07
80.20	MINIMUM	31.57
111.90	MAXIMUM	44.06
COEFF. OF VARIATION		6.1%
SYMMETRY—VETA I		0.14
KURTOSIS—VETA II		2.76
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
68.20	1ST	26.85
69.13	2ND	27.22
69.83	3RD	27.49
70.86	5TH	27.90
72.57	10TH	28.57
73.76	15TH	29.04
74.69	20TH	29.41
75.49	25TH	29.72
76.19	30TH	30.00
76.84	35TH	30.25
77.45	40TH	30.49
78.03	45TH	30.72
78.61	50TH	30.95
79.19	55TH	31.18
79.79	60TH	31.41
80.42	65TH	31.66
81.10	70TH	31.93
81.87	75TH	32.23
82.79	80TH	32.60
83.95	85TH	33.05
85.61	90TH	33.70
88.61	95TH	34.89
91.03	97TH	35.84
93.09	98TH	36.65
96.95	99TH	38.17

PERCENTILES		
CENTIMETERS		INCHES
81.68	1ST	32.16
83.13	2ND	32.73
84.04	3RD	33.09
85.27	5TH	33.57
87.18	10TH	34.32
88.49	15TH	34.84
89.55	20TH	35.25
90.47	25TH	35.62
91.31	30TH	35.95
92.10	35TH	36.26
92.85	40TH	36.56
93.59	45TH	36.85
94.33	50TH	37.14
95.08	55TH	37.43
95.84	60TH	37.73
96.63	65TH	38.05
97.48	70TH	38.38
98.40	75TH	38.74
99.44	80TH	39.15
100.64	85TH	39.62
102.16	90TH	40.22
104.38	95TH	41.09
105.78	97TH	41.64
106.78	98TH	42.04
108.28	99TH	42.63

(36) CHEST DEPTH

The horizontal distance between the chest, at the level of the right bustpoint on women or the nipple on men, and the back at the same level is measured with a beam caliper. The subject stands erect looking straight ahead. The shoulders and upper extremities are relaxed. The measurement is taken at the maximum point of quiet respiration.



VARIABLE NO. 36—CHEST DEPTH

FEMALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
24.30	MEAN	9.57
0.13	SE (MEAN)	0.05
2.35	ST DEV	0.92
0.09	SE(SD)	0.04
17.40	MINIMUM	6.85
32.50	MAXIMUM	12.80
COEFF. OF VARIATION		9.7%
SYMMETRY—VETA I		0.40
KURTOSIS—VETA II		3.46
NUMBER OF SUBJECTS		334

MALES

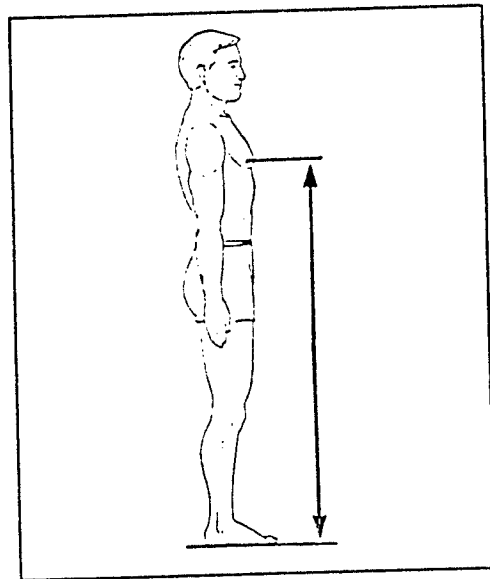
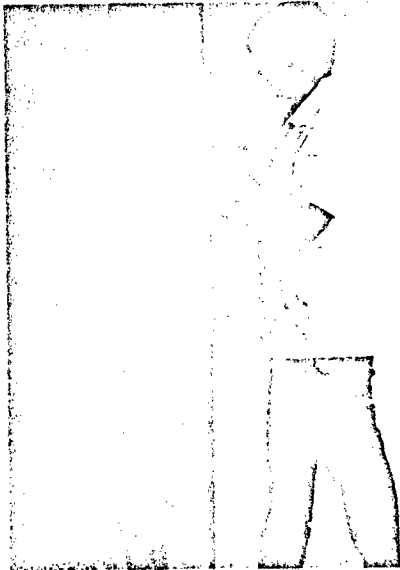
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
25.02	MEAN	9.85
0.09	SE (MEAN)	0.03
1.95	ST DEV	0.77
0.06	SE(SD)	0.02
18.80	MINIMUM	7.40
31.90	MAXIMUM	12.56
COEFF. OF VARIATION		7.8%
SYMMETRY—VETA I		0.06
KURTOSIS—VETA II		2.87
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
19.49	1ST	7.67
19.92	2ND	7.84
20.23	3RD	7.96
20.67	5TH	8.14
21.40	10TH	8.42
21.91	15TH	8.63
22.32	20TH	8.79
22.69	25TH	8.93
23.02	30TH	9.06
23.32	35TH	9.18
23.61	40TH	9.30
23.89	45TH	9.41
24.17	50TH	9.52
24.46	55TH	9.63
24.75	60TH	9.74
25.05	65TH	9.86
25.37	70TH	9.99
25.73	75TH	10.13
26.13	80TH	10.29
26.62	85TH	10.48
27.27	90TH	10.74
28.31	95TH	11.15
29.06	97TH	11.44
29.66	98TH	11.68
30.69	99TH	12.08

PERCENTILES		
CENTIMETERS		INCHES
20.99	1ST	8.26
21.28	2ND	8.38
21.51	3RD	8.47
21.86	5TH	8.61
22.47	10TH	8.85
22.92	15TH	9.02
23.29	20TH	9.17
23.63	25TH	9.30
23.93	30TH	9.42
24.21	35TH	9.53
24.48	40TH	9.64
24.75	45TH	9.74
25.01	50TH	9.85
25.27	55TH	9.95
25.53	60TH	10.05
25.80	65TH	10.16
26.08	70TH	10.27
26.39	75TH	10.39
26.72	80TH	10.52
27.10	85TH	10.67
27.57	90TH	10.86
28.25	95TH	11.12
28.67	97TH	11.29
28.97	98TH	11.41
29.43	99TH	11.59

(37) CHEST HEIGHT

The vertical distance between a standing surface and the right bustpoint on women or the nipple on men is measured with an anthropometer. The subject stands erect looking straight ahead. The heels are together with the weight distributed equally on both feet. The shoulders and upper extremities are relaxed. The measurement is taken at the maximum point of quiet respiration.



VARIABLE NO. 37—CHEST HEIGHT

FEMALES

MALES

THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
121.09	MEAN	47.67	
0.23	SE (MEAN)	0.09	
4.17	ST DEV	1.64	
0.16	SE (SD)	0.06	
109.40	MINIMUM	43.07	
140.20	MAXIMUM	55.20	
COEFF. OF VARIATION		3.4%	
SYMMETRY—VETA I		0.53	
KURTOSIS—VETA II		3.91	
NUMBER OF SUBJECTS		334	

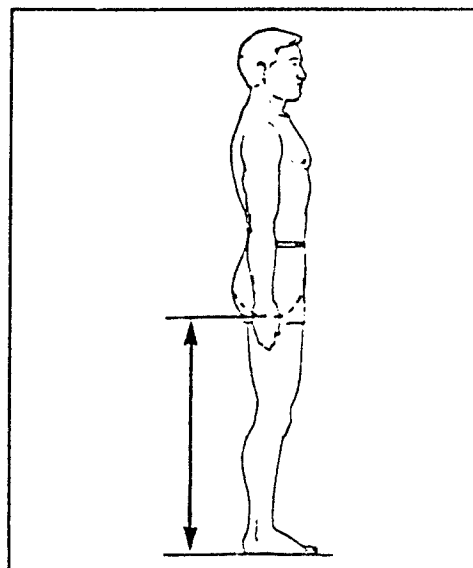
THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
128.23	MEAN	50.49	
0.24	SE (MEAN)	0.09	
5.24	ST DEV	2.06	
0.17	SE (SD)	0.07	
112.80	MINIMUM	44.41	
141.80	MAXIMUM	55.83	
COEFF. OF VARIATION		4.1%	
SYMMETRY—VETA I		-0.09	
KURTOSIS—VETA II		2.81	
NUMBER OF SUBJECTS		487	

PERCENTILES		
CENTIMETERS		INCHES
112.36	1ST	44.24
113.51	2ND	44.69
114.17	3RD	44.95
115.00	5TH	45.28
116.21	10TH	45.75
117.01	15TH	46.07
117.66	20TH	46.32
118.23	25TH	46.55
118.76	30TH	46.76
119.26	35TH	46.95
119.76	40TH	47.15
120.25	45TH	47.34
120.75	50TH	47.54
121.27	55TH	47.74
121.81	60TH	47.96
122.38	65TH	48.18
123.01	70TH	48.43
123.69	75TH	48.70
124.48	80TH	49.01
125.41	85TH	49.37
126.60	90TH	49.84
128.33	95TH	50.52
129.40	97TH	50.94
130.14	98TH	51.24
131.18	99TH	51.65

PERCENTILES		
CENTIMETERS		INCHES
115.57	1ST	45.50
117.21	2ND	46.14
118.20	3RD	46.53
119.50	5TH	47.05
121.45	10TH	47.82
122.75	15TH	48.33
123.77	20TH	48.73
124.65	25TH	49.08
125.45	30TH	49.39
126.18	35TH	49.68
126.88	40TH	49.95
127.56	45TH	50.22
128.24	50TH	50.49
128.92	55TH	50.76
129.61	60TH	51.03
130.32	65TH	51.31
131.07	70TH	51.60
131.88	75TH	51.92
132.78	80TH	52.27
133.80	85TH	52.68
135.07	90TH	53.18
136.85	95TH	53.88
137.91	97TH	54.29
138.62	98TH	54.58
139.61	99TH	54.97

(38) CROTCH HEIGHT

The vertical distance between the standing surface and the crotch is measured with an anthropometer. The subject stands erect looking straight ahead. The heels are together and the weight is distributed equally on both feet.



VARIABLE NO. 38—CROTCH HEIGHT

FEMALES

MALES

THE SUMMARY STATISTICS
CENTIMETERS INCHES

79.17 MEAN 31.17
0.15 SE(MEAN) 0.06
2.71 ST DEV 1.07
0.10 SE(SD) 0.04

75.00 MINIMUM 29.53
89.80 MAXIMUM 35.35

COEFF. OF VARIATION 3.4%
SYMMETRY—VETA I 0.81
KURTOSIS—VETA II 3.60

NUMBER OF SUBJECTS 334

THE SUMMARY STATISTICS
CENTIMETERS INCHES

84.18 MEAN 33.14
0.19 SE(MEAN) 0.08
4.23 ST DEV 1.66
0.14 SE(SD) 0.05

73.00 MINIMUM 28.74
95.50 MAXIMUM 37.60

COEFF. OF VARIATION 5.0%
SYMMETRY—VETA I 0.17
KURTOSIS—VETA II 2.69

NUMBER OF SUBJECTS 487

PERCENTILES
CENTIMETERS INCHES

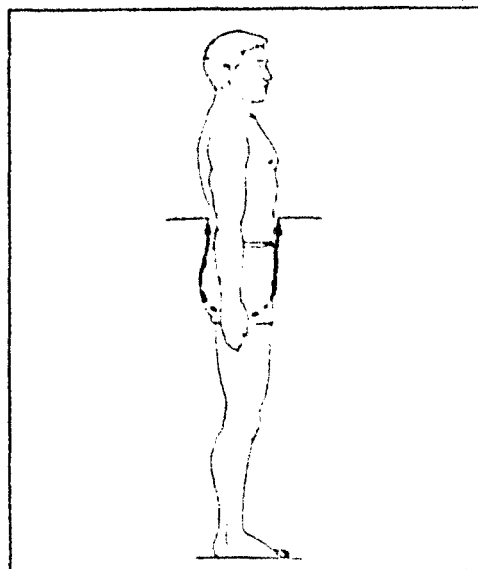
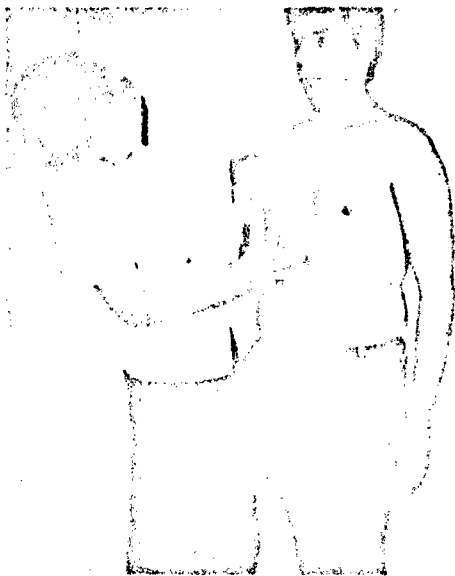
75.06 1ST 29.55
75.17 2ND 29.60
75.29 3RD 29.64
75.54 5TH 29.74
76.04 10TH 29.94
76.45 15TH 30.10
76.70 20TH 30.20
77.11 25TH 30.36
77.44 30TH 30.49
77.69 35TH 30.58
78.01 40TH 30.71
78.33 45TH 30.84
78.60 50TH 30.94
79.14 55TH 31.16
79.42 60TH 31.27
79.87 65TH 31.44
80.42 70TH 31.66
80.88 75TH 31.84
81.48 80TH 32.08
82.20 85TH 32.36
82.98 90TH 32.67
83.91 95TH 33.03
84.70 97TH 33.35
85.50 98TH 33.66
87.15 99TH 34.31

PERCENTILES
CENTIMETERS INCHES

75.12 1ST 29.57
76.09 2ND 29.96
76.69 3RD 30.19
77.52 5TH 30.52
78.81 10TH 31.03
79.72 15TH 31.38
80.46 20TH 31.68
81.12 25TH 31.94
81.73 30TH 32.18
82.30 35TH 32.40
82.86 40TH 32.62
83.41 45TH 32.84
83.97 50TH 33.06
84.53 55TH 33.28
85.11 60TH 33.51
85.72 65TH 33.75
86.36 70TH 34.00
87.07 75TH 34.28
87.86 80TH 34.59
88.77 85TH 34.95
89.91 90TH 35.40
91.51 95TH 36.03
92.47 97TH 36.40
93.11 98TH 36.66
94.00 99TH 37.01

(39) CROTCH LENGTH (NATURAL INDENTATION)

The distance between the abdomen at the level of the natural indentation of the waist to the same level on the back is measured with a tape passing through the crotch to the right of the genitalia. The tape is held vertically both in front and in back. The subject stands erect looking straight ahead. The heels are together with the weight distributed equally on both feet. The measurement is taken at the maximum point of quiet respiration.



VARIABLE NO. 39—CROTCH LENGTH (NATURAL INDENTATION)

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
62.65	MEAN	24.66
0.21	SE (MEAN)	0.08
3.79	ST DEV	1.49
0.15	SE (SD)	0.06
52.00	MINIMUM	20.47
73.30	MAXIMUM	28.86
COEFF. OF VARIATION		6.0%
SYMMETRY—VETA I		0.00
KURTOSIS—VETA II		2.85
NUMBER OF SUBJECTS		334

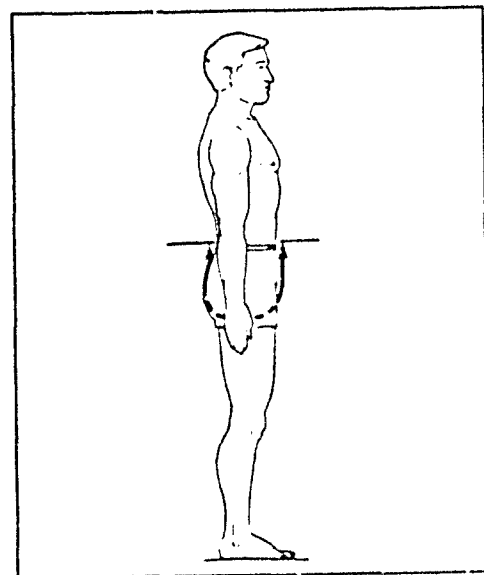
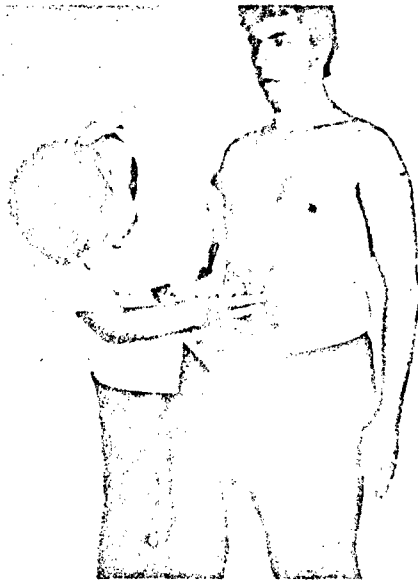
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
64.34	MEAN	25.33
0.17	SE (MEAN)	0.07
3.86	ST DEV	1.52
0.12	SE (SD)	0.05
51.10	MINIMUM	20.12
75.90	MAXIMUM	29.83
COEFF. OF VARIATION		6.0%
SYMMETRY—VETA I		0.07
KURTOSIS—VETA II		3.22
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
53.61	1ST	21.11
54.78	2ND	21.57
55.50	3RD	21.85
56.44	5TH	22.22
57.83	10TH	22.77
58.75	15TH	23.13
59.48	20TH	23.42
60.11	25TH	23.66
60.67	30TH	23.88
61.19	35TH	24.09
61.68	40TH	24.28
62.16	45TH	24.47
62.64	50TH	24.66
63.12	55TH	24.85
63.61	60TH	25.04
64.12	65TH	25.24
64.65	70TH	25.45
65.23	75TH	25.68
65.89	80TH	25.94
66.64	85TH	26.24
67.58	90TH	26.61
68.94	95TH	27.14
69.79	97TH	27.48
70.39	98TH	27.71
71.26	99TH	28.06

PERCENTILES		
CENTIMETERS		INCHES
55.03	1ST	21.67
56.32	2ND	22.17
57.08	3RD	22.47
58.06	5TH	22.86
59.48	10TH	23.42
60.41	15TH	23.78
61.13	20TH	24.07
61.75	25TH	24.31
62.30	30TH	24.53
62.82	35TH	24.73
63.31	40TH	24.92
63.79	45TH	25.11
64.27	50TH	25.30
64.75	55TH	25.49
65.25	60TH	25.69
65.76	65TH	25.89
66.32	70TH	26.11
66.92	75TH	26.35
67.61	80TH	26.62
68.42	85TH	26.94
69.45	90TH	27.34
70.99	95TH	27.95
71.99	97TH	28.34
72.71	98TH	28.63
73.82	99TH	29.06

(40) CROTCH LENGTH (OMPHALION)

The distance between the abdomen at the level of the center of the navel (omphalion) to the same level on the back is measured with a tape passing through the crotch to the right of the genitalia. The tape is held vertically both in front and in back. The subject stands erect looking straight ahead. The heels are together with the weight distributed equally on both feet. The measurement is taken at the maximum point of quiet respiration.



VARIABLE NO. 40—CROTCH LENGTH (CMPHALION)

FEMALES

MALES

THE SUMMARY STATISTICS

CENTIMETERS		INCHES
77.49	MEAN	30.51
0.31	SE(MEAN)	0.12
5.65	ST DEV	2.23
0.22	SE(SD)	0.09
63.00	MINIMUM	24.80
94.20	MAXIMUM	37.09
COEFF. OF VARIATION		7.3%
SYMMETRY—VETA I		0.20
KURTOSIS—VETA II		2.88
NUMBER OF SUBJECTS		334

THE SUMMARY STATISTICS

CENTIMETERS		INCHES
77.20	MEAN	30.39
0.21	SE(MEAN)	0.08
4.72	ST DEV	1.86
0.15	SE(SD)	0.06
60.10	MINIMUM	23.66
94.00	MAXIMUM	37.01
COEFF. OF VARIATION		6.1%
SYMMETRY—VETA I		0.01
KURTOSIS—VETA II		3.35
NUMBER OF SUBJECTS		487

PERCENTILES

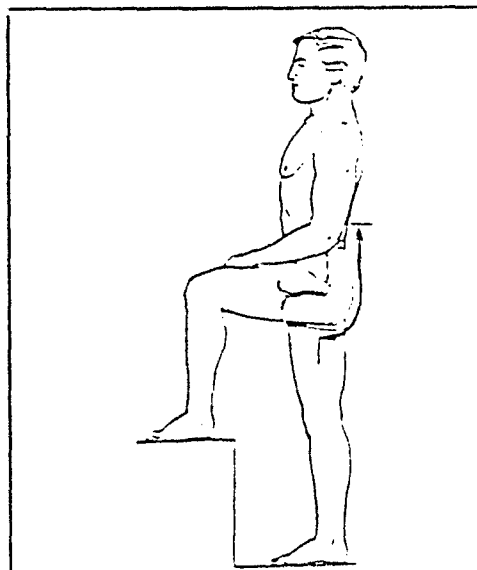
CENTIMETERS		INCHES
64.59	1ST	25.43
66.30	2ND	26.10
67.30	3RD	26.50
68.59	5TH	27.00
70.46	10TH	27.74
71.70	15TH	28.23
72.68	20TH	28.61
73.54	25TH	28.95
74.33	30TH	29.26
75.07	35TH	29.55
75.78	40TH	29.84
76.49	45TH	30.11
77.20	50TH	30.39
77.93	55TH	30.68
78.68	60TH	30.98
79.47	65TH	31.29
80.32	70TH	31.62
81.25	75TH	31.99
82.31	80TH	32.41
83.55	85TH	32.89
85.12	90TH	33.51
87.40	95TH	34.41
88.81	97TH	34.97
89.79	98TH	35.35
91.19	99TH	35.90

PERCENTILES

CENTIMETERS		INCHES
65.73	1ST	25.68
67.24	2ND	26.47
68.18	3RD	26.84
69.41	5TH	27.33
71.24	10TH	28.05
72.43	15TH	28.52
73.36	20TH	28.88
74.14	25TH	29.19
74.83	30TH	29.46
75.47	35TH	29.71
76.06	40TH	29.95
76.64	45TH	30.17
77.20	50TH	30.39
77.77	55TH	30.62
78.34	60TH	30.84
78.93	65TH	31.07
79.55	70TH	31.32
80.23	75TH	31.59
81.00	80TH	31.89
81.90	85TH	32.24
83.06	90TH	32.70
84.85	95TH	33.41
86.07	97TH	33.88
87.00	98TH	34.25
88.52	99TH	34.85

(41) CROTCH LENGTH, POSTERIOR (NATURAL INDENTATION)

The surface distance from the crotch at the inner thigh landmark to the back of the waist. The subject stands with the left foot on a platform so that the knee is flexed.



VARIABLE NO. 41—CROTCH LENGTH, POSTERIOR (NATURAL INDENTATION)

FEMALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
39.43	MEAN	15.52
0.17	SE(MEAN)	0.07
3.14	ST DEV	1.23
0.12	SE(SD)	0.05
31.80	MINIMUM	12.52
49.50	MAXIMUM	19.49
COEFF. OF VARIATION		8.0%
SYMMETRY—VETA I		0.19
KURTOSIS—VETA II		2.75
NUMBER OF SUBJECTS		334

MALES

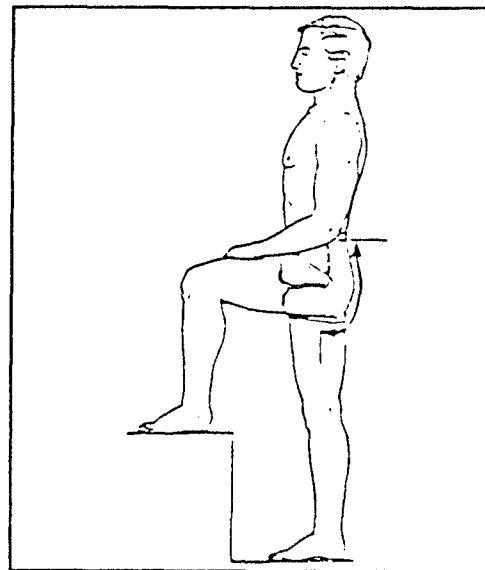
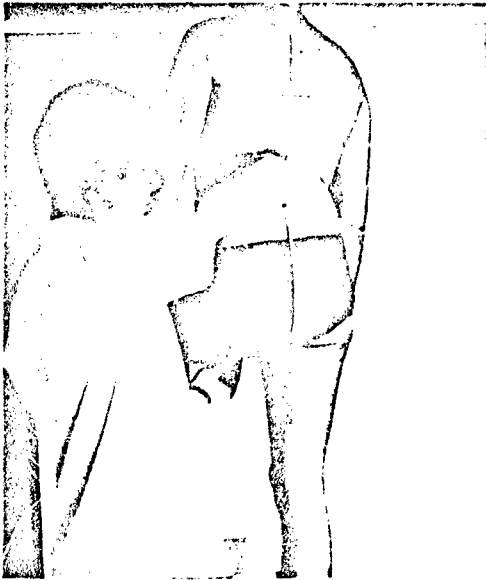
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
38.61	MEAN	15.20
0.11	SE(MEAN)	0.04
2.45	ST DEV	0.96
0.08	SE(SD)	0.03
31.40	MINIMUM	12.36
46.70	MAXIMUM	18.39
COEFF. OF VARIATION		6.3%
SYMMETRY—VETA I		0.26
KURTOSIS—VETA II		3.31
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
32.89	1ST	12.95
33.48	2ND	13.18
33.88	3RD	13.34
34.46	5TH	13.57
35.43	10TH	13.95
36.12	15TH	14.22
36.69	20TH	14.44
37.20	25TH	14.64
37.66	30TH	14.83
38.09	35TH	15.00
38.51	40TH	15.16
38.92	45TH	15.32
39.33	50TH	15.48
39.74	55TH	15.65
40.16	60TH	15.81
40.60	65TH	15.98
41.06	70TH	16.16
41.55	75TH	16.36
42.11	80TH	16.58
42.75	85TH	16.83
43.56	90TH	17.15
44.72	95TH	17.60
45.44	97TH	17.89
45.96	98TH	18.09
46.73	99TH	18.40

PERCENTILES		
CENTIMETERS		INCHES
33.03	1ST	13.00
33.77	2ND	13.29
34.20	3RD	13.47
34.77	5TH	13.69
35.59	10TH	14.01
36.13	15TH	14.23
36.56	20TH	14.39
36.93	25TH	14.54
37.26	30TH	14.67
37.58	35TH	14.79
37.88	40TH	14.91
38.17	45TH	15.03
38.47	50TH	15.15
38.78	55TH	15.27
39.09	60TH	15.39
39.42	65TH	15.52
39.77	70TH	15.66
40.16	75TH	15.81
40.61	80TH	15.99
41.14	85TH	16.20
41.33	90TH	16.47
42.87	95TH	16.88
43.55	97TH	17.15
44.05	98TH	17.34
44.83	99TH	17.65

(42) CROTCH LENGTH, POSTERIOR (OMPHALION)

The surface distance from the crotch at the inner thigh landmark to the back of the waist at the level of the center of the navel (omphalion) is measured with a tape. The tape passes between the buttocks to the back of the waist. The subject stands with the left foot on a platform so that the knee is flexed.



VARIABLE NO. 42—CROTCH LENGTH, POSTERIOR (OMPHALION)

FEMALES

MALES

THE SUMMARY STATISTICS
CENTIMETERS INCHES

THE SUMMARY STATISTICS
CENTIMETERS INCHES

31.63	MEAN	12.45
0.13	SE(MEAN)	0.05
2.46	ST DEV	0.97
0.10	SE(SD)	0.04
24.00	MINIMUM	9.45
38.30	MAXIMUM	15.08
COEFF. OF VARIATION		7.8%
SYMMETRY—VETA I		-0.06
KURTOSIS—VETA II		2.83
NUMBER OF SUBJECTS		334

31.63	MEAN	12.45
0.10	SE(MEAN)	0.04
2.29	ST DEV	0.90
0.07	SE(SD)	0.03
25.00	MINIMUM	9.84
39.20	MAXIMUM	15.43
COEFF. OF VARIATION		7.2%
SYMMETRY—VETA I		0.07
KURTOSIS—VETA II		3.30
NUMBER OF SUBJECTS		487

PERCENTILES
CENTIMETERS INCHES

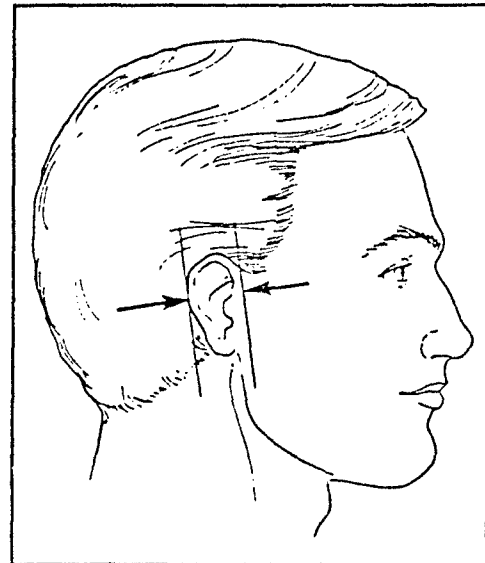
PERCENTILES
CENTIMETERS INCHES

25.80	1ST	10.16
26.54	2ND	10.45
26.98	3RD	10.62
27.57	5TH	10.86
28.46	10TH	11.21
29.06	15TH	11.44
29.53	20TH	11.62
29.94	25TH	11.79
30.31	30TH	11.93
30.65	35TH	12.07
30.98	40TH	12.20
31.30	45TH	12.32
31.62	50TH	12.45
31.94	55TH	12.58
32.27	60TH	12.70
32.61	65TH	12.84
32.97	70TH	12.98
33.36	75TH	13.13
33.79	80TH	13.30
34.28	85TH	13.50
34.90	90TH	13.74
35.75	95TH	14.07
36.26	97TH	14.27
36.59	98TH	14.41
37.06	99TH	14.59

25.84	1ST	10.17
26.70	2ND	10.51
27.21	3RD	10.71
27.85	5TH	10.97
28.77	10TH	11.33
29.34	15TH	11.55
29.78	20TH	11.72
30.15	25TH	11.87
30.48	30TH	12.00
30.78	35TH	12.12
31.06	40TH	12.23
31.33	45TH	12.34
31.61	50TH	12.44
31.88	55TH	12.55
32.16	60TH	12.66
32.45	65TH	12.77
32.76	70TH	12.90
33.10	75TH	13.03
33.48	80TH	13.18
33.94	85TH	13.36
34.53	90TH	13.59
35.43	95TH	13.95
36.03	97TH	14.18
36.48	98TH	14.36
37.19	99TH	14.64

(43) EAR BREADTH

The maximum breadth of the right ear perpendicular to its long axis is measured with a sliding caliper.



VARIABLE NO. 43--EAR BREADTH

FEMALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
3.50	MEAN	1.38
0.01	SE (MEAN)	0.01
0.24	ST DEV	0.10
0.01	SE (SD)	0.00
2.70	MINIMUM	1.06
4.10	MAXIMUM	1.61
COEFF. OF VARIATION		6.9%
SYMMETRY---VETA I		0.09
KURTOSIS---VETA II		3.07
NUMBER OF SUBJECTS		334

MALES

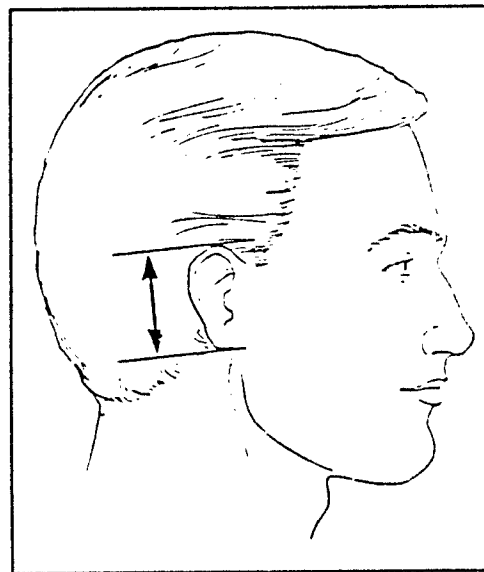
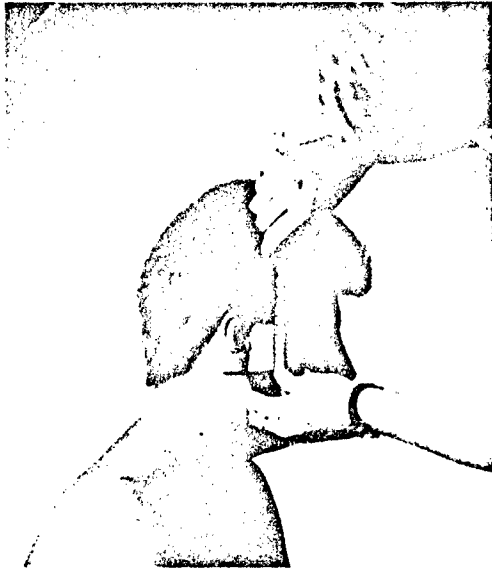
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
3.80	MEAN	1.50
0.01	SE (MEAN)	0.00
0.27	ST DEV	0.11
0.01	SE (SD)	0.00
3.10	MINIMUM	1.22
4.70	MAXIMUM	1.85
COEFF. OF VARIATION		7.1%
SYMMETRY---VETA I		0.09
KURTOSIS---VETA II		2.92
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
2.95	1ST	1.16
3.02	2ND	1.19
3.06	3RD	1.21
3.12	5TH	1.23
3.20	10TH	1.26
3.25	15TH	1.28
3.30	20TH	1.30
3.33	25TH	1.31
3.37	30TH	1.33
3.40	35TH	1.34
3.43	40TH	1.35
3.46	45TH	1.36
3.49	50TH	1.37
3.52	55TH	1.39
3.55	60TH	1.40
3.59	65TH	1.41
3.62	70TH	1.43
3.66	75TH	1.44
3.70	80TH	1.46
3.75	85TH	1.48
3.82	90TH	1.50
3.92	95TH	1.54
3.98	97TH	1.57
4.03	98TH	1.59
4.10	99TH	1.61

PERCENTILES		
CENTIMETERS		INCHES
3.22	1ST	1.27
3.27	2ND	1.29
3.31	3RD	1.30
3.36	5TH	1.32
3.46	10TH	1.36
3.52	15TH	1.39
3.57	20TH	1.41
3.62	25TH	1.42
3.66	30TH	1.44
3.70	35TH	1.46
3.73	40TH	1.47
3.77	45TH	1.48
3.80	50TH	1.50
3.84	55TH	1.51
3.87	60TH	1.52
3.91	65TH	1.54
3.95	70TH	1.55
3.99	75TH	1.57
4.03	80TH	1.59
4.08	85TH	1.61
4.15	90TH	1.63
4.24	95TH	1.67
4.31	97TH	1.70
4.36	98TH	1.72
4.44	99TH	1.75

(44) EAR LENGTH

The length of the right ear from its highest to lowest points on a line parallel to the long axis of the ear is measured with a sliding caliper.



VARIABLE NO. 44—EAR LENGTH

FEMALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
6.14	MEAN	2.42
0.02	SE(MEAN)	0.01
0.36	ST DEV	0.14
0.01	SE(SD)	0.01
5.10	MINIMUM	2.01
7.10	MAXIMUM	2.80
COEFF. OF VARIATION		5.8%
SYMMETRY—VETA I		-0.07
KURTOSIS—VETA II		2.92
NUMBER OF SUBJECTS		334

PERCENTILES		
CENTIMETERS		INCHES
5.25	1ST	2.07
5.37	2ND	2.12
5.45	3RD	2.14
5.54	5TH	2.18
5.68	10TH	2.24
5.77	15TH	2.27
5.84	20TH	2.30
5.90	25TH	2.32
5.95	30TH	2.34
6.00	35TH	2.36
6.05	40TH	2.33
6.09	45TH	2.40
6.14	50TH	2.42
6.18	55TH	2.43
6.23	60TH	2.45
6.27	65TH	2.47
6.32	70TH	2.49
6.38	75TH	2.51
6.44	80TH	2.53
6.51	85TH	2.56
6.59	90TH	2.60
6.72	95TH	2.65
6.80	97TH	2.68
6.86	98TH	2.70
6.95	99TH	2.73

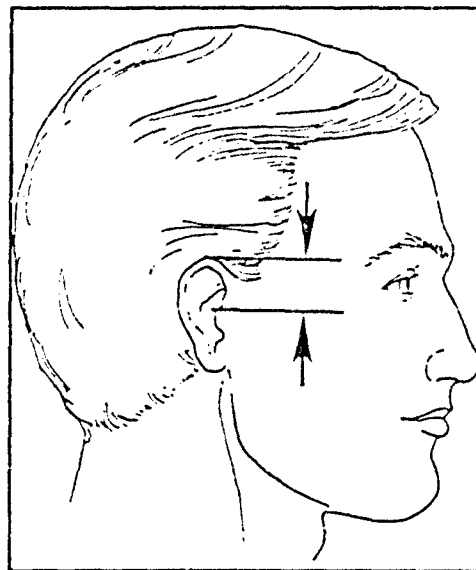
MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
6.62	MEAN	2.61
0.02	SE(MEAN)	0.01
0.40	ST DEV	0.16
0.01	SE(SD)	0.01
5.40	MINIMUM	2.13
7.90	MAXIMUM	3.11
COEFF. OF VARIATION		6.1%
SYMMETRY—VETA I		0.24
KURTOSIS—VETA II		3.03
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
5.80	1ST	2.28
5.86	2ND	2.31
5.91	3RD	2.33
5.98	5TH	2.36
6.11	10TH	2.41
6.20	15TH	2.44
6.28	20TH	2.47
6.34	25TH	2.50
6.40	30TH	2.52
6.45	35TH	2.54
6.51	40TH	2.56
6.56	45TH	2.58
6.61	50TH	2.60
6.66	55TH	2.62
6.71	60TH	2.64
6.76	65TH	2.66
6.81	70TH	2.68
6.87	75TH	2.71
6.94	80TH	2.73
7.02	85TH	2.76
7.13	90TH	2.81
7.30	95TH	2.87
7.42	97TH	2.92
7.52	98TH	2.96
7.68	99TH	3.03

(45) EAR LENGTH ABOVE TRAGION

The distance from the right trignon landmark to the top of the right ear on a line parallel to the long axis of the ear is measured with a sliding caliper.



VARIABLE NO. 45—EAR LENGTH ABOVE TRAGION

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
2.95	MEAN	1.16
0.01	SF (MEAN)	0.00
0.23	ST DEV	0.09
0.01	SE (SD)	0.00
2.40	MINIMUM	0.94
3.80	MAXIMUM	1.50
COEFF. OF VARIATION		7.8%
SYMMETRY—VETA I		0.29
KURTOSIS—VETA II		3.50
NUMBER OF SUBJECTS		334

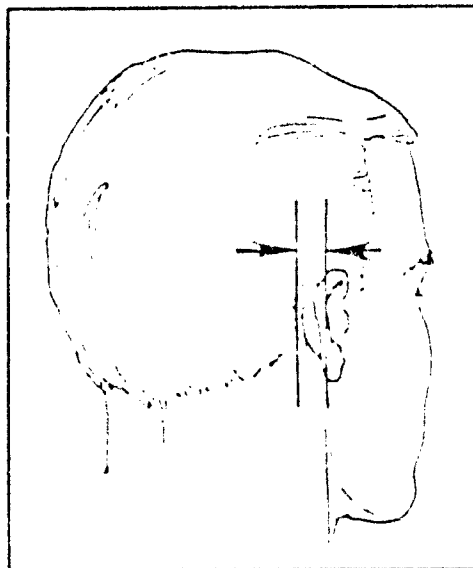
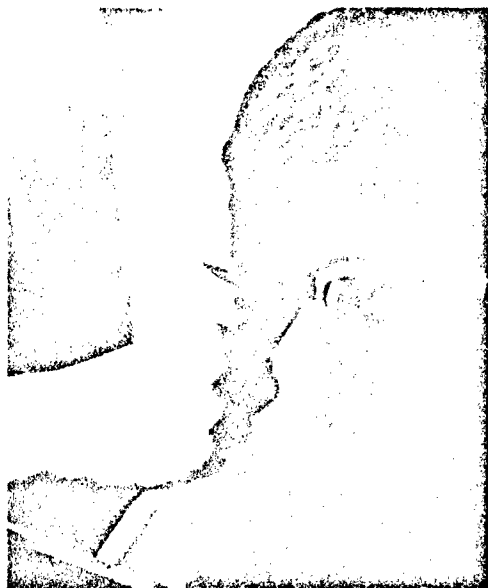
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
3.23	MEAN	1.27
0.01	SE (MEAN)	0.00
0.23	ST DEV	0.09
0.01	SE (SD)	0.00
2.50	MINIMUM	0.98
4.00	MAXIMUM	1.57
COEFF. OF VARIATION		7.2%
SYMMETRY—VETA I		0.14
KURTOSIS—VETA II		3.20
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
2.42	1ST	0.95
2.49	2ND	0.98
2.53	3RD	0.99
2.58	5TH	1.02
2.67	10TH	1.05
2.72	15TH	1.07
2.76	20TH	1.09
2.80	25TH	1.10
2.83	30TH	1.12
2.86	35TH	1.13
2.89	40TH	1.14
2.92	45TH	1.15
2.95	50TH	1.16
2.97	55TH	1.17
3.00	60TH	1.18
3.03	65TH	1.19
3.06	70TH	1.21
3.10	75TH	1.22
3.14	80TH	1.24
3.18	85TH	1.25
3.24	90TH	1.28
3.34	95TH	1.31
3.40	97TH	1.34
3.45	98TH	1.36
3.54	99TH	1.39

PERCENTILES		
CENTIMETERS		INCHES
2.71	1ST	1.07
2.76	2ND	1.09
2.80	3RD	1.10
2.85	5TH	1.12
2.93	10TH	1.15
2.98	15TH	1.18
3.03	20TH	1.19
3.07	25TH	1.21
3.10	30TH	1.22
3.13	35TH	1.23
3.16	40TH	1.25
3.19	45TH	1.26
3.22	50TH	1.27
3.25	55TH	1.28
3.28	60TH	1.29
3.31	65TH	1.30
3.34	70TH	1.32
3.38	75TH	1.33
3.41	80TH	1.34
3.46	85TH	1.36
3.52	90TH	1.39
3.61	95TH	1.42
3.68	97TH	1.45
3.73	98TH	1.47
3.82	99TH	1.51

(46) EAR PROTRUSION

The horizontal distance between the mastoid process (the bony area behind the bottom of the ear) and the outside of the right ear at its most lateral point is measured using a sliding caliper with its slide reversed.



VARIABLE NO. 46—EAR PROTRUSION

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
2.22	MEAN	0.87
0.02	SE(MEAN)	0.01
0.32	ST DEV	0.13
0.01	SE(SD)	0.00
1.50	MINIMUM	0.59
3.50	MAXIMUM	1.38
COEFF. OF VARIATION		14.4%
SYMMETRY—VETA I		0.59
KURTOSIS—VETA II		3.89
NUMBER OF SUBJECTS		334

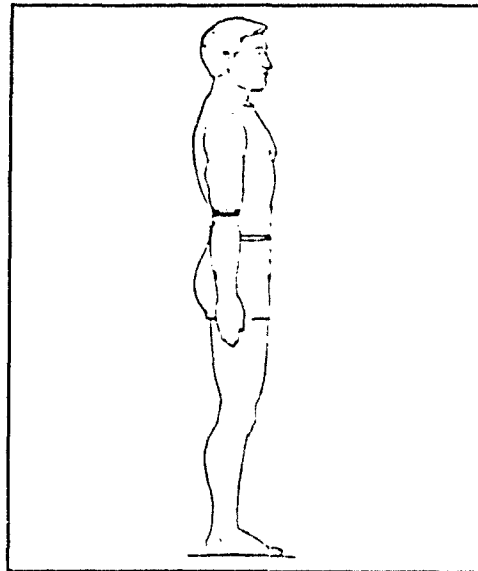
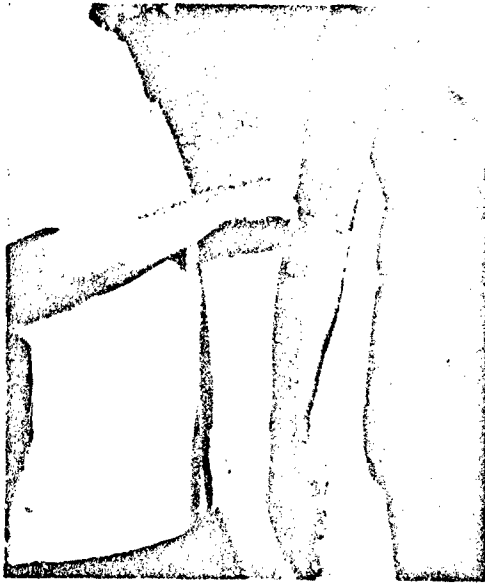
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
2.49	MEAN	0.98
0.01	SE(MEAN)	0.01
0.33	ST DEV	0.13
0.01	SE(SD)	0.00
1.70	MINIMUM	0.67
3.60	MAXIMUM	1.42
COEFF. OF VARIATION		13.3%
SYMMETRY—VETA I		0.26
KURTOSIS—VETA II		2.90
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
1.56	1ST	0.61
1.63	2ND	0.64
1.68	3RD	0.66
1.74	5TH	0.69
1.84	10TH	0.72
1.91	15TH	0.75
1.96	20TH	0.77
2.00	25TH	0.79
2.05	30TH	0.81
2.08	35TH	0.82
2.12	40TH	0.84
2.16	45TH	0.85
2.20	50TH	0.86
2.23	55TH	0.88
2.27	60TH	0.89
2.31	65TH	0.91
2.36	70TH	0.93
2.41	75TH	0.95
2.47	80TH	0.97
2.54	85TH	1.00
2.64	90TH	1.04
2.80	95TH	1.10
2.92	97TH	1.15
3.01	98TH	1.18
3.16	99TH	1.25

PERCENTILES		
CENTIMETERS		INCHES
1.81	1ST	0.71
1.87	2ND	0.74
1.91	3RD	0.75
1.97	5TH	0.77
2.07	10TH	0.81
2.14	15TH	0.84
2.21	20TH	0.87
2.26	25TH	0.89
2.31	30TH	0.91
2.36	35TH	0.93
2.40	40TH	0.94
2.44	45TH	0.96
2.48	50TH	0.98
2.53	55TH	0.99
2.57	60TH	1.01
2.61	65TH	1.03
2.66	70TH	1.05
2.71	75TH	1.07
2.77	80TH	1.09
2.84	85TH	1.12
2.92	90TH	1.15
3.06	95TH	1.20
3.15	97TH	1.24
3.22	98TH	1.27
3.33	99TH	1.31

(47) ELBOW CIRCUMFERENCE

The circumference of the right elbow in a plane perpendicular to the long axis of the arm is measured with a tape passing around the elbow at the level of the olecranon-center landmark. The subject stands with the arm straight and slightly away from the side.



VARIABLE NO. 47—ELBOW CIRCUMFERENCE

FEMALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
24.20	MEAN	9.53
0.07	SE (MEAN)	0.03
1.30	ST DEV	0.51
0.05	SE (SD)	0.02
20.80	MINIMUM	8.19
29.20	MAXIMUM	11.50
COEFF. OF VARIATION		5.4%
SYMMETRY—VETA I		0.45
KURTOSIS—VETA II		3.73
NUMBER OF SUBJECTS		334

MALES

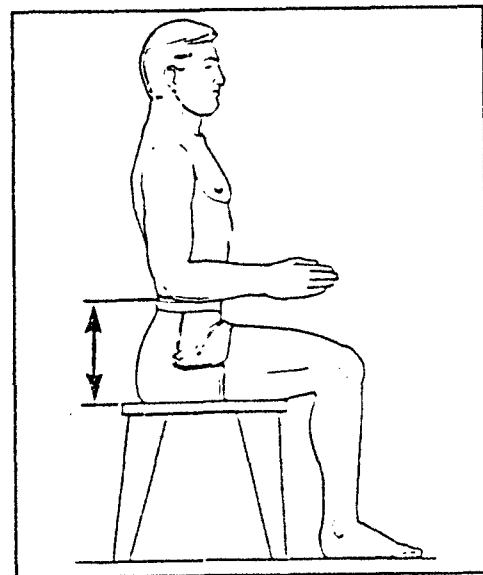
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
27.62	MEAN	10.87
0.06	SE (MEAN)	0.02
1.37	ST DEV	0.54
0.04	SE (SD)	0.02
24.00	MINIMUM	9.45
31.70	MAXIMUM	12.48
COEFF. OF VARIATION		5.0%
SYMMETRY—VETA I		0.22
KURTOSIS—VETA II		2.91
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
21.23	1ST	8.36
21.64	2ND	8.52
21.88	3RD	8.61
22.18	5TH	8.73
22.61	10TH	8.90
22.89	15TH	9.01
23.11	20TH	9.10
23.31	25TH	9.18
23.48	30TH	9.24
23.64	35TH	9.31
23.80	40TH	9.37
23.95	45TH	9.43
24.11	50TH	9.49
24.27	55TH	9.55
24.43	60TH	9.62
24.61	65TH	9.69
24.80	70TH	9.76
25.01	75TH	9.84
25.25	80TH	9.94
25.54	85TH	10.05
25.91	90TH	10.20
26.48	95TH	10.43
26.86	97TH	10.58
27.14	98TH	10.68
27.57	99TH	10.85

PERCENTILES		
CENTIMETERS		INCHES
24.62	1ST	9.69
24.98	2ND	9.83
25.19	3RD	9.92
25.48	5TH	10.03
25.92	10TH	10.21
26.22	15TH	10.32
26.46	20TH	10.42
26.67	25TH	10.50
26.86	30TH	10.57
27.04	35TH	10.65
27.21	40TH	10.71
27.38	45TH	10.78
27.56	50TH	10.85
27.73	55TH	10.92
27.91	60TH	10.99
28.10	65TH	11.06
28.31	70TH	11.14
28.53	75TH	11.23
28.79	80TH	11.33
29.09	85TH	11.45
29.47	90TH	11.60
30.05	95TH	11.83
30.42	97TH	11.98
30.69	98TH	12.08
31.11	99TH	12.25

(48) ELBOW REST HEIGHT

The vertical distance between a sitting surface and the olecranon landmark on the bottom of the flexed right elbow is measured with an anthropometer. The subject sits erect looking straight ahead. The shoulders and upper arms are relaxed and the forearms and hands are extended forward horizontally with the palms facing each other. The measurement is taken at the maximum point of quiet respiration.



VARIABLE NO. 48—ELBOW REST HEIGHT

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
23.26	MEAN	9.16
0.12	SE (MEAN)	0.05
2.25	ST DEV	0.88
0.09	SE (SD)	0.03
14.40	MINIMUM	5.67
30.00	MAXIMUM	11.81
COEFF. OF VARIATION		9.7%
SYMMETRY—VETA I		-0.13
KURTOSIS—VETA II		3.64
NUMBER OF SUBJECTS		334

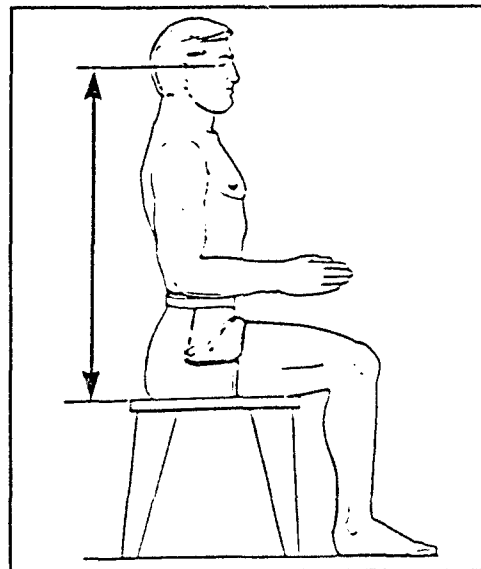
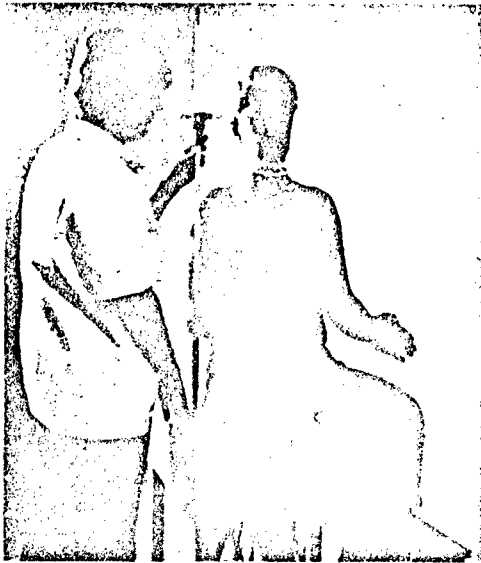
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
24.20	MEAN	9.53
0.11	SE (MEAN)	0.04
2.46	ST DEV	0.97
0.08	SE (SD)	0.03
15.60	MINIMUM	6.14
31.10	MAXIMUM	12.24
COEFF. OF VARIATION		10.2%
SYMMETRY—VETA I		-0.15
KURTOSIS—VETA II		3.43
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
17.50	1ST	6.89
18.32	2ND	7.21
18.82	3RD	7.41
19.48	5TH	7.67
20.43	10TH	8.04
21.03	15TH	8.28
21.49	20TH	8.46
21.87	25TH	8.61
22.20	30TH	8.74
22.50	35TH	8.86
22.78	40TH	8.97
23.05	45TH	9.07
23.31	50TH	9.18
23.57	55TH	9.28
23.83	60TH	9.38
24.10	65TH	9.49
24.38	70TH	9.60
24.69	75TH	9.72
25.05	80TH	9.86
25.47	85TH	10.03
26.03	90TH	10.25
26.93	95TH	10.60
27.57	97TH	10.86
28.09	98TH	11.06
28.98	99TH	11.41

PERCENTILES		
CENTIMETERS		INCHES
18.16	1ST	7.15
18.94	2ND	7.46
19.44	3RD	7.65
20.10	5TH	7.91
21.09	10TH	8.30
21.74	15TH	8.56
22.23	20TH	8.75
22.66	25TH	8.92
23.02	30TH	9.06
23.36	35TH	9.20
23.67	40TH	9.32
23.97	45TH	9.44
24.27	50TH	9.55
24.56	55TH	9.67
24.85	60TH	9.78
25.15	65TH	9.90
25.46	70TH	10.02
25.81	75TH	10.16
26.19	80TH	10.31
26.65	85TH	10.49
27.25	90TH	10.73
28.20	95TH	11.10
28.87	97TH	11.37
29.40	98TH	11.57
30.31	99TH	11.93

(49) EYE HEIGHT, SITTING

The vertical distance between a sitting surface and the ectocanthus landmark on the outer corner of the right eye is measured with an anthropometer. The subject sits erect with the head in the Frankfort plane. The shoulders and upper arms are relaxed and the forearms and hands are extended forward horizontally with the palms facing each other. The thighs are parallel and the knees are flexed 90 degrees with the feet in line with the thighs. The measurement is taken at the maximum point of quiet respiration.



VARIABLE NO. 49—EYE HEIGHT, SITTING

FEMALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
76.85	MEAN	30.26
0.15	SE (MEAN)	0.06
2.70	ST DEV	1.06
0.10	SE(SD)	0.04
69.10	MINIMUM	27.20
85.40	MAXIMUM	33.62
COEFF. OF VARIATION		3.5%
SYMMETRY—VETA I		-0.04
KURTOSIS—VETA II		3.00
NUMBER OF SUBJECTS		334

MALES

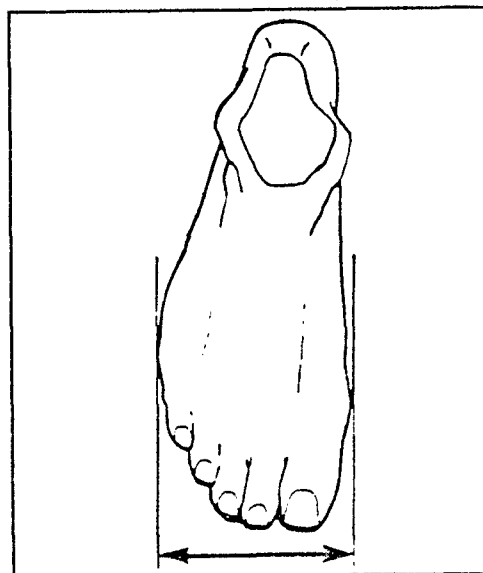
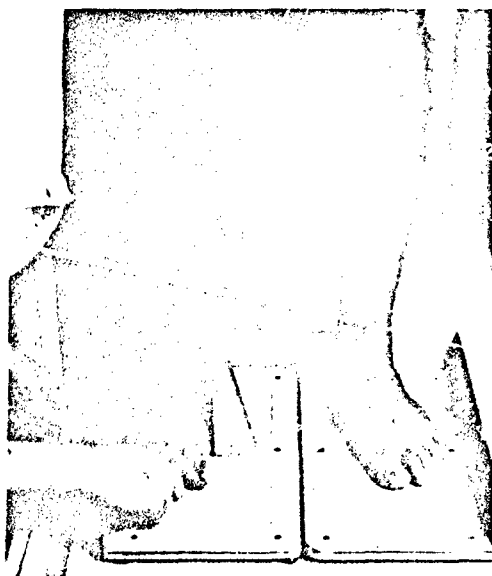
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
80.99	MEAN	31.82
0.15	SE (MEAN)	0.06
3.27	ST DEV	1.29
0.10	SE(SD)	0.04
70.70	MINIMUM	27.83
90.30	MAXIMUM	35.55
COEFF. OF VARIATION		4.0%
SYMMETRY—VETA I		-0.22
KURTOSIS—VETA II		3.23
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
70.56	1ST	27.78
71.20	2ND	28.03
71.64	3RD	28.21
72.28	5TH	28.46
73.30	10TH	28.86
74.01	15TH	29.14
74.57	20TH	29.36
75.05	25TH	29.55
75.48	30TH	29.72
75.87	35TH	29.87
76.23	40TH	30.01
76.58	45TH	30.15
76.93	50TH	30.29
77.27	55TH	30.42
77.60	60TH	30.55
77.95	65TH	30.69
78.31	70TH	30.83
78.69	75TH	30.98
79.12	80TH	31.15
79.61	85TH	31.34
80.23	90TH	31.59
81.18	95TH	31.96
81.82	97TH	32.21
82.32	98TH	32.41
83.16	99TH	32.74

PERCENTILES		
CENTIMETERS		INCHES
72.10	1ST	28.38
73.57	2ND	28.97
74.41	3RD	29.30
75.46	5TH	29.71
76.89	10TH	30.27
77.76	15TH	30.62
78.42	20TH	30.87
78.97	25TH	31.09
79.44	30TH	31.28
79.88	35TH	31.45
80.29	40TH	31.61
80.68	45TH	31.76
81.07	50TH	31.92
81.46	55TH	32.07
81.85	60TH	32.23
82.26	65TH	32.39
82.69	70TH	32.56
83.16	75TH	32.74
83.69	80TH	32.95
84.31	85TH	33.19
85.08	90TH	33.50
86.22	95TH	33.95
86.94	97TH	34.23
87.44	98TH	34.43
88.19	99TH	34.72

(50) FOOT BREADTH, HORIZONTAL

The maximum breadth of the right foot is measured on a footbox scale. The subject stands with each foot in a footbox and the weight distributed equally on both feet. The heel of the right foot lightly touches the back of the box, and the side of the foot at the fifth metatarsophalangeal protrusion landmark lightly touches the side of the box. The medial side of the foot is parallel to the long axis of the box. A block is placed against the landmark at the first metatarsophalangeal protrusion to establish the measurement on the scale.



VARIABLE NO. 50—FOOT BREADTH, HORIZONTAL

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
9.04	MEAN	3.55
0.02	SE (MEAN)	0.01
0.45	ST DEV	0.18
0.02	SE (SD)	0.01
7.60	MINIMUM	2.99
10.40	MAXIMUM	4.09
COEFF. OF VARIATION		4.9%
SYMMETRY—VETA I		0.19
KURTOSIS—VETA II		3.01
NUMBER OF SUBJECTS		334

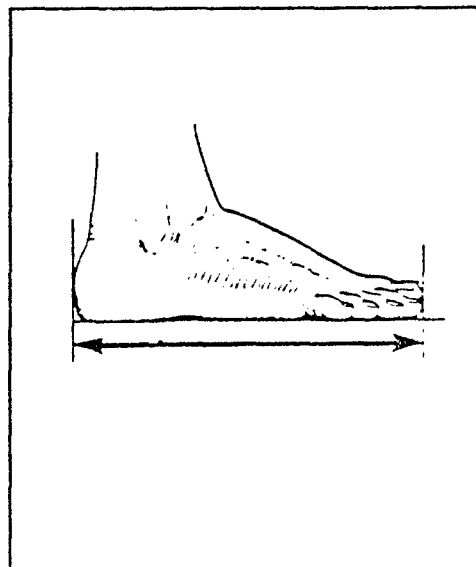
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
10.01	MEAN	3.94
0.02	SE (MEAN)	0.01
0.48	ST DEV	0.19
0.02	SE (SD)	0.01
8.50	MINIMUM	3.35
11.40	MAXIMUM	4.49
COEFF. OF VARIATION		4.8%
SYMMETRY—VETA I		0.08
KURTOSIS—VETA II		2.71
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
8.06	1ST	3.17
8.18	2ND	3.22
8.25	3RD	3.25
8.34	5TH	3.29
8.49	10TH	3.34
8.59	15TH	3.38
8.67	20TH	3.41
8.74	25TH	3.44
8.80	30TH	3.47
8.86	35TH	3.49
8.92	40TH	3.51
8.97	45TH	3.53
9.02	50TH	3.55
9.08	55TH	3.57
9.14	60TH	3.60
9.20	65TH	3.62
9.26	70TH	3.65
9.33	75TH	3.67
9.41	80TH	3.70
9.50	85TH	3.74
9.62	90TH	3.79
9.81	95TH	3.86
9.93	97TH	3.91
10.02	98TH	3.95
10.17	99TH	4.00

PERCENTILES		
CENTIMETERS		INCHES
9.03	1ST	3.56
9.11	2ND	3.59
9.17	3RD	3.61
9.25	5TH	3.64
9.39	10TH	3.70
9.50	15TH	3.74
9.58	20TH	3.77
9.66	25TH	3.80
9.73	30TH	3.83
9.80	35TH	3.86
9.87	40TH	3.88
9.93	45TH	3.91
10.00	50TH	3.94
10.06	55TH	3.96
10.13	60TH	3.99
10.19	65TH	4.01
10.27	70TH	4.04
10.34	75TH	4.07
10.43	80TH	4.11
10.53	85TH	4.14
10.65	90TH	4.19
10.81	95TH	4.26
10.91	97TH	4.29
10.97	98TH	4.32
11.07	99TH	4.36

(51) FOOT LENGTH

The maximum length of the right foot is measured on a footbox scale. The subject stands with each foot in a footbox and the weight distributed equally on both feet. The heel of the right foot lightly touches the back of the box, and the side of the foot at the fifth-metatarsophalangeal-protrusion landmark lightly touches the side of the box. The medial side of the foot is parallel to the long axis of the box. A block is placed against the tip of the longest toe to establish the measurement on the scale.



VARIABLE NO. 51—FOOT LENGTH

FEMALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
24.76	MEAN	9.76
0.65	SE(MEAN)	0.02
0.94	ST DEV	0.37
0.04	SE(SD)	0.01
22.60	MINIMUM	8.90
27.40	MAXIMUM	10.79
COEFF. OF VARIATION		3.8%
SYMMETRY—VETA I		0.27
KURTOSIS—VETA II		2.75
NUMBER OF SUBJECTS		334

MALES

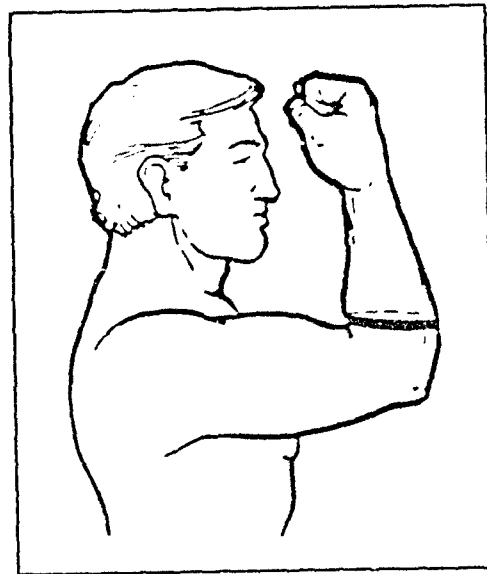
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
26.85	MEAN	10.57
0.05	SE(MEAN)	0.02
1.18	ST DEV	0.46
0.04	SE(SD)	0.01
23.50	MINIMUM	9.25
31.10	MAXIMUM	12.24
COEFF. OF VARIATION		4.4%
SYMMETRY—VETA I		0.16
KURTOSIS—VETA II		3.09
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
22.80	1ST	8.98
23.02	2ND	9.06
23.15	3RD	9.11
23.33	5TH	9.18
23.60	10TH	9.29
23.80	15TH	9.37
23.95	20TH	9.43
24.10	25TH	9.49
24.23	30TH	9.54
24.35	35TH	9.59
24.47	40TH	9.64
24.59	45TH	9.68
24.72	50TH	9.73
24.84	55TH	9.78
24.97	60TH	9.83
25.10	65TH	9.88
25.25	70TH	9.94
25.41	75TH	10.00
25.59	80TH	10.07
25.80	85TH	10.16
26.06	90TH	10.26
26.44	95TH	10.41
26.67	97TH	10.50
26.83	98TH	10.56
27.05	99TH	10.65

PERCENTILES		
CENTIMETERS		INCHES
24.15	1ST	9.51
24.47	2ND	9.63
24.67	3RD	9.71
24.94	5TH	9.82
25.35	10TH	9.98
25.63	15TH	10.09
25.85	20TH	10.18
26.04	25TH	10.25
26.22	30TH	10.32
26.37	35TH	10.38
26.53	40TH	10.44
26.67	45TH	10.50
26.82	50TH	10.56
26.97	55TH	10.62
27.12	60TH	10.68
27.27	65TH	10.74
27.44	70TH	10.80
27.62	75TH	10.87
27.82	80TH	10.95
28.06	85TH	11.05
28.37	90TH	11.17
28.84	95TH	11.35
29.15	97TH	11.48
29.39	98TH	11.57
29.77	99TH	11.72

(52) FOREARM CIRCUMFERENCE, FLEXED

The circumference of the flexed right forearm is measured with a tape passing across the crease at the juncture between the upper arm and the forearm. The measurement is made in a plane perpendicular to the long axis of the forearm. The subject stands with the upper arm extended forward horizontally, the elbow flexed 90 degrees, and the fist tightly clenched and held facing the head.



VARIABLE NO. 52—FCREARM CIRCUMFERENCE, FLEXED

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
25.46	MEAN	10.02
0.08	SE(MEAN)	0.03
1.50	ST DEV	0.59
0.06	SE(SD)	0.02
21.50	MINIMUM	8.46
32.50	MAXIMUM	12.80
COEFF. OF VARIATION		5.9%
SYMMETRY----VETA I		0.42
KURTOSIS----VETA II		4.14
NUMBER OF SUBJECTS		334

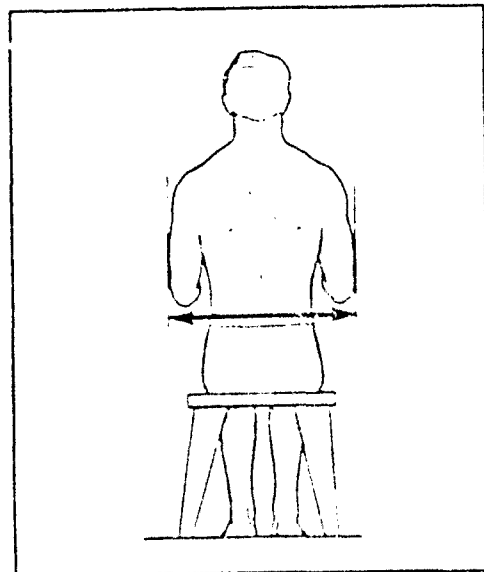
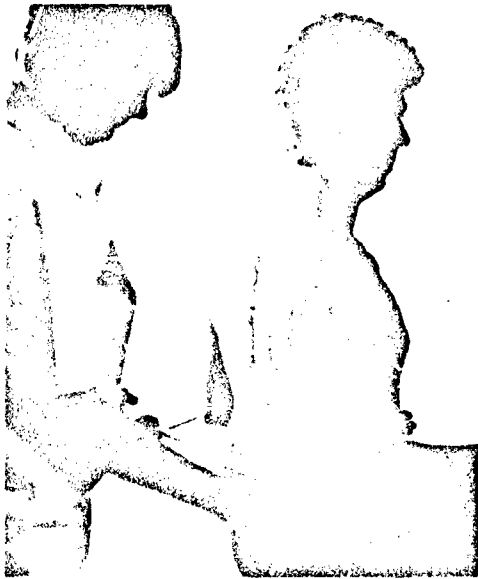
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
30.00	MEAN	11.81
0.08	SE(MEAN)	0.03
1.67	ST DEV	0.66
0.05	SE(SD)	0.02
25.10	MINIMUM	9.88
36.00	MAXIMUM	14.17
COEFF. OF VARIATION		5.6%
SYMMETRY----VETA I		0.20
KURTOSIS----VETA II		3.14
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
22.03	1ST	8.67
22.47	2ND	8.85
22.74	3RD	8.95
23.10	5TH	9.09
23.62	10TH	9.30
23.96	15TH	9.43
24.23	20TH	9.54
24.46	25TH	9.63
24.67	30TH	9.71
24.86	35TH	9.79
25.04	40TH	9.86
25.22	45TH	9.93
25.40	50TH	10.00
25.57	55TH	10.07
25.76	60TH	10.14
25.95	65TH	10.22
26.15	70TH	10.30
26.38	75TH	10.38
26.63	80TH	10.49
26.94	85TH	10.61
27.34	90TH	10.76
27.97	95TH	11.01
28.40	97TH	11.18
28.74	98TH	11.31
29.28	99TH	11.53

PERCENTILES		
CENTIMETERS		INCHES
26.07	1ST	10.26
26.53	2ND	10.48
26.95	3RD	10.61
27.36	5TH	10.77
27.95	10TH	11.00
28.33	15TH	11.15
28.62	20TH	11.27
28.88	25TH	11.37
29.11	30TH	11.46
29.32	35TH	11.54
29.52	40TH	11.62
29.72	45TH	11.70
29.93	50TH	11.78
30.13	55TH	11.86
30.34	60TH	11.95
30.56	65TH	12.03
30.80	70TH	12.13
31.06	75TH	12.23
31.36	80TH	12.35
31.72	85TH	12.49
32.17	90TH	12.67
32.86	95TH	12.94
33.31	97TH	13.11
33.63	98TH	13.24
34.13	99TH	13.44

(53) FOREARM-FOREARM BREADTH

The maximum horizontal distance across the upper body between the outer sides of the forearms is measured with a beam caliper. The subject sits erect looking straight ahead. The shoulders and upper arms are relaxed and the forearms and hands are extended forward horizontally with the palms facing each other. The measurement is taken at the maximum point of quiet respiration.



VARIABLE NO. 53—FOREARM—FOREARM BREADTH

FEMALES

MALES

THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
48.03	MEAN	18.91	
0.20	SE (MEAN)	0.08	
3.59	ST DEV	1.42	
0.14	SE (SD)	0.05	
37.30	MINIMUM	14.69	
60.70	MAXIMUM	23.90	
COEFF. OF VARIATION		7.5%	
SYMMETRY—VETA I		0.22	
KURTOSIS—VETA II		3.58	
NUMBER OF SUBJECTS		334	

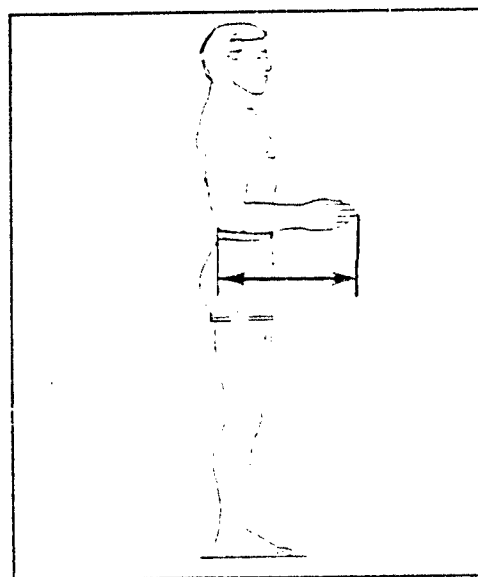
THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
55.49	MEAN	21.85	
0.18	SE (MEAN)	0.07	
3.91	ST DEV	1.54	
0.13	SE (SD)	0.05	
44.60	MINIMUM	17.56	
71.10	MAXIMUM	27.99	
COEFF. OF VARIATION		7.0%	
SYMMETRY—VETA I		0.29	
KURTOSIS—VETA II		3.52	
NUMBER OF SUBJECTS		487	

PERCENTILES		
CENTIMETERS		INCHES
38.92	1ST	15.32
40.51	2ND	15.95
41.38	3RD	16.29
42.42	5TH	16.70
43.78	10TH	17.24
44.60	15TH	17.56
45.20	20TH	17.80
45.72	25TH	18.00
46.18	30TH	18.18
46.60	35TH	18.35
47.01	40TH	18.51
47.41	45TH	18.67
47.82	50TH	18.83
48.24	55TH	18.99
48.67	60TH	19.16
49.14	65TH	19.35
49.64	70TH	19.54
50.21	75TH	19.77
50.87	80TH	20.03
51.66	85TH	20.34
52.70	90TH	20.75
54.28	95TH	21.37
55.32	97TH	21.78
56.07	98TH	22.08
57.21	99TH	22.52

PERCENTILES		
CENTIMETERS		INCHES
47.22	1ST	18.59
47.81	2ND	18.82
48.31	3RD	19.02
49.10	5TH	19.33
50.47	10TH	19.87
51.45	15TH	20.26
52.24	20TH	20.57
52.91	25TH	20.83
53.50	30TH	21.06
54.04	35TH	21.28
54.55	40TH	21.48
55.03	45TH	21.66
55.49	50TH	21.85
55.95	55TH	22.03
56.41	60TH	22.21
56.88	65TH	22.39
57.37	70TH	22.59
57.91	75TH	22.80
58.52	80TH	23.04
59.25	85TH	23.33
60.26	90TH	23.72
61.99	95TH	24.41
63.35	97TH	24.94
64.50	98TH	25.39
66.65	99TH	26.24

(54) FOREARM-HAND LENGTH

The horizontal distance between the back of the tip of the right elbow to the tip of the right middle finger is measured with a beam caliper. The subject stands erect with the upper arms hanging at the sides and the right elbow flexed 90 degrees. The hand is held out straight with the palm facing inward.



VARIABLE NO. 54—FOREARM-HAND LENGTH

FEMALES

MALES

THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
44.91	MEAN	17.68	
0.08	SE (MEAN)	0.03	
1.41	ST DEV	0.56	
0.05	SE (SD)	0.02	
41.90	MINIMUM	16.50	
51.20	MAXIMUM	20.16	
COEFF. OF VARIATION		3.1%	
SYMMETRY—VETA I		0.78	
KURTOSIS—VETA II		3.79	
NUMBER OF SUBJECTS		334	

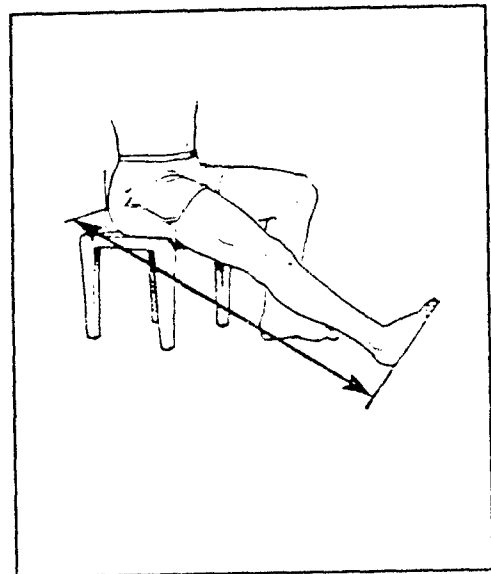
THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
48.40	MEAN	19.05	
0.09	SE (MEAN)	0.04	
2.01	ST DEV	0.79	
0.06	SE (SD)	0.03	
42.50	MINIMUM	16.73	
54.50	MAXIMUM	21.46	
COEFF. OF VARIATION		4.2%	
SYMMETRY—VETA I		0.12	
KURTOSIS—VETA II		2.78	
NUMBER OF SUBJECTS		487	

PERCENTILES		
CENTIMETERS		INCHES
42.34	1ST	16.67
42.68	2ND	16.80
42.86	3RD	16.87
43.07	5TH	16.96
43.36	10TH	17.07
43.56	15TH	17.15
43.73	20TH	17.22
43.89	25TH	17.28
44.05	30TH	17.34
44.20	35TH	17.40
44.35	40TH	17.46
44.52	45TH	17.53
44.68	50TH	17.59
44.85	55TH	17.66
45.05	60TH	17.74
45.26	65TH	17.82
45.49	70TH	17.91
45.75	75TH	18.01
46.05	80TH	18.13
46.40	85TH	18.27
46.87	90TH	18.45
47.53	95TH	18.71
47.94	97TH	18.87
48.21	98TH	18.98
48.56	99TH	19.12

PERCENTILES		
CENTIMETERS		INCHES
44.19	1ST	17.40
44.53	2ND	17.53
44.78	3RD	17.63
45.16	5TH	17.78
45.80	10TH	18.03
46.26	15TH	18.21
46.64	20TH	18.36
46.97	25TH	18.49
47.28	30TH	18.61
47.56	35TH	18.72
47.83	40TH	18.83
48.10	45TH	18.94
48.36	50TH	19.04
48.62	55TH	19.14
48.87	60TH	19.25
49.16	65TH	19.35
49.45	70TH	19.47
49.76	75TH	19.59
50.11	80TH	19.73
50.51	85TH	19.89
51.02	90TH	20.09
51.77	95TH	20.38
52.25	97TH	20.57
52.62	98TH	20.72
53.20	99TH	20.94

(55) FUNCTIONAL LEG LENGTH

The straight-line distance between the plane of the bottom of the right foot with the leg extended and the back of the body of a seated subject is measured with an anthropometer passing over the trochanter landmark on the side of the hip. The subject sits erect on a stool 40.8 cm high. The right leg is extended and the foot is on the base plate of the anthropometer, which rests on the floor. The measurement is made from the footrest surface of the base plate.



VARIABLE NO. 55—FUNCTIONAL LEG LENGTH

FEMALES

MALES

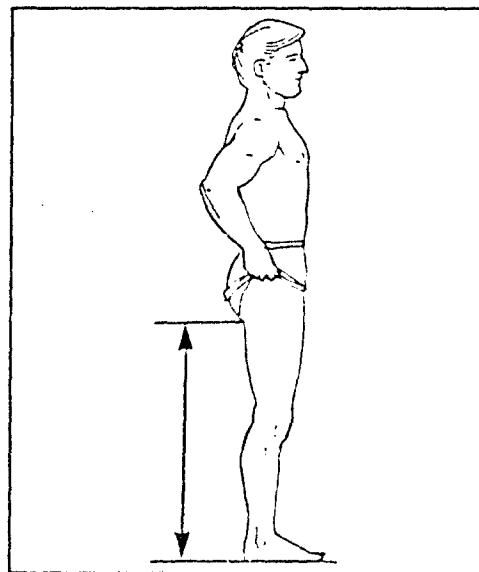
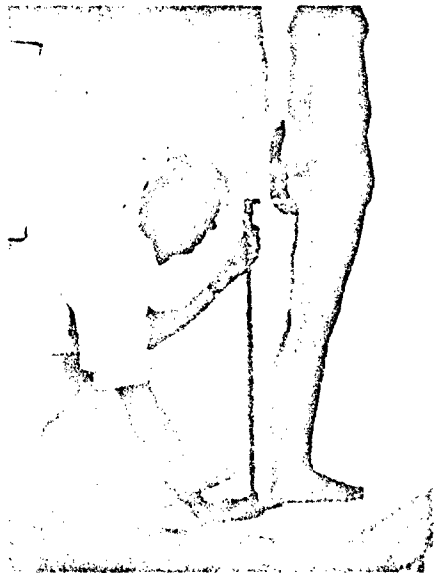
THE SUMMARY STATISTICS			THE SUMMARY STATISTICS		
CENTIMETERS		INCHES	CENTIMETERS		INCHES
103.80	MEAN	40.87	108.73	MEAN	42.81
0.18	SE (MEAN)	0.07	0.21	SE (MEAN)	0.08
3.27	ST DEV	1.29	4.71	ST DEV	1.85
0.13	SE (SD)	0.05	0.15	SE (SD)	0.06
96.00	MINIMUM	37.80	98.10	MINIMUM	38.62
115.20	MAXIMUM	45.35	122.50	MAXIMUM	48.23
COEFF. OF VARIATION		3.2%	COEFF. OF VARIATION		9.7%
SYMMETRY—VETA I		0.48	SYMMETRY—VETA I		0.00
KURTOSIS—VETA II		3.14	KURTOSIS—VETA II		3.00
NUMBER OF SUBJECTS		334	NUMBER OF SUBJECTS		486

PERCENTILES		
CENTIMETERS		INCHES
96.84	1ST	38.12
97.82	2ND	38.51
98.36	3RD	38.72
99.01	5TH	38.98
99.93	10TH	39.34
100.52	15TH	39.58
101.00	20TH	39.77
101.44	25TH	39.94
101.84	30TH	40.09
102.23	35TH	40.25
102.61	40TH	40.40
103.00	45TH	40.55
103.40	50TH	40.71
103.82	55TH	40.87
104.26	60TH	41.05
104.73	65TH	41.23
105.25	70TH	41.44
105.82	75TH	41.66
106.48	80TH	41.92
107.25	85TH	42.22
108.24	90TH	42.61
109.66	95TH	43.17
110.50	97TH	43.50
111.06	98TH	43.72
111.79	99TH	44.01

PERCENTILES		
CENTIMETERS		INCHES
98.97	1ST	38.96
99.77	2ND	39.28
100.35	3RD	39.51
101.19	5TH	39.84
102.62	10TH	40.40
103.67	15TH	40.82
104.54	20TH	41.16
105.32	25TH	41.46
106.03	30TH	41.75
106.70	35TH	42.01
107.35	40TH	42.26
107.98	45TH	42.51
108.61	50TH	42.76
109.25	55TH	43.01
109.90	60TH	43.27
110.57	65TH	43.53
111.27	70TH	43.81
112.04	75TH	44.11
112.89	80TH	44.44
113.86	85TH	44.83
115.06	90TH	45.30
116.77	95TH	45.97
117.82	97TH	46.39
118.55	98TH	46.67
119.62	99TH	47.10

(56) GLUTEAL FURROW HEIGHT

The vertical distance between a standing surface and the lowest point of the gluteal furrow(s) under the right buttock is measured with an anthropometer. The subject stands erect with the heels together and the weight distributed equally on both feet.



VARIABLE NO. 56—GLUTEAL FURROW HEIGHT

FEMALES

MALES

THE SUMMARY STATISTICS
CENTIMETERS INCHES

THE SUMMARY STATISTICS
CENTIMETERS INCHES

76.35	MEAN	30.06
0.16	SE(MEAN)	0.06
2.85	ST DEV	1.12
0.11	SE(SD)	0.04
69.90	MINIMUM	27.52
87.50	MAXIMUM	34.45
COEFF. OF VARIATION		3.7%
SYMMETRY—VETA I		0.68
KURTOSIS—VETA II		3.52
NUMBER OF SUBJECTS		334

81.37	MEAN	32.03
0.19	SE(MEAN)	0.07
4.12	ST DEV	1.62
0.13	SE(SD)	0.05
71.50	MINIMUM	28.15
92.30	MAXIMUM	36.34
COEFF. OF VARIATION		5.1%
SYMMETRY—VETA I		0.23
KURTOSIS—VETA II		2.70
NUMBER OF SUBJECTS		487

PERCENTILES
CENTIMETERS INCHES

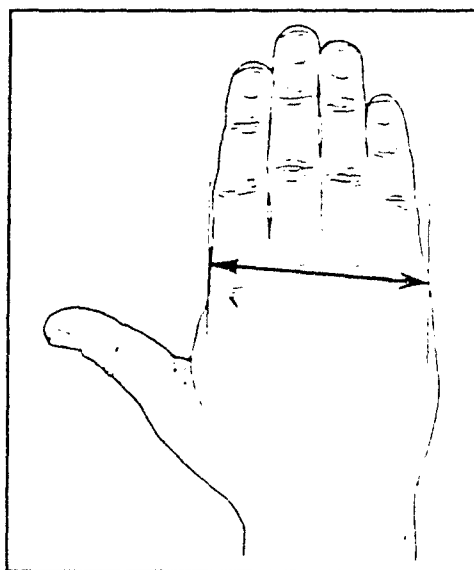
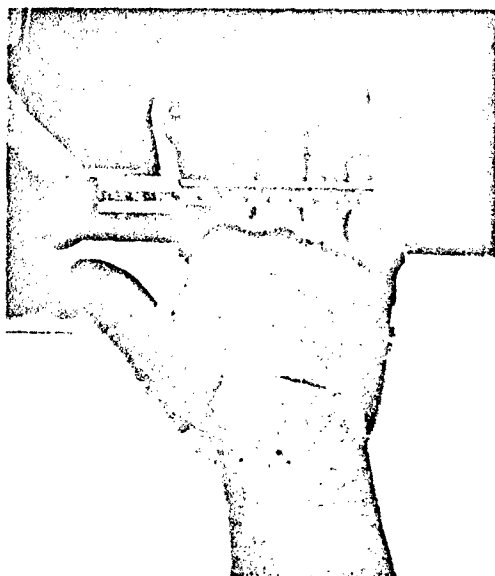
PERCENTILES
CENTIMETERS INCHES

71.22	1ST	28.04
71.69	2ND	28.23
71.99	3RD	28.34
72.40	5TH	28.50
73.07	10TH	28.77
73.55	15TH	28.96
73.95	20TH	29.11
74.32	25TH	29.26
74.66	30TH	29.39
75.00	35TH	29.53
75.32	40TH	29.66
75.66	45TH	29.79
76.00	50TH	29.92
76.35	55TH	30.06
76.72	60TH	30.21
77.12	65TH	30.36
77.56	70TH	30.54
78.05	75TH	30.73
78.62	80TH	30.95
79.32	85TH	31.23
80.24	90TH	31.59
81.69	95TH	32.16
82.67	97TH	32.55
83.42	98TH	32.84
84.63	99TH	33.32

73.15	1ST	28.80
73.72	2ND	29.02
74.17	3RD	29.20
74.85	5TH	29.47
76.06	10TH	29.94
76.96	15TH	30.30
77.71	20TH	30.59
78.37	25TH	30.86
78.98	30TH	31.10
79.56	35TH	31.32
80.11	40TH	31.54
80.65	45TH	31.75
81.19	50TH	31.96
81.73	55TH	32.18
82.28	60TH	32.39
82.85	65TH	32.62
83.46	70TH	32.86
84.12	75TH	33.12
84.86	80TH	33.41
85.72	85TH	33.75
86.82	90TH	34.18
88.46	95TH	34.83
89.56	97TH	35.26
90.38	98TH	35.58
91.70	99TH	36.10

(57) HAND BREADTH

The breadth of the right hand between the landmarks at metacarpale II and metacarpale V is measured with a sliding caliper. The subject places the palm on a table, the fingers together and the thumb abducted. The middle finger is parallel to the long axis of the forearm. The two distal phalanges of the fingers lie on a flat surface 8 mm higher than the table.



VARIABLE NO. 57—HAND BREADTH

FEMALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
8.04	MEAN	3.16
0.02	SE (MEAN)	0.01
0.35	ST DEV	0.14
0.01	SE (SD)	0.01
7.20	MINIMUM	2.83
9.60	MAXIMUM	3.78
COEFF. OF VARIATION		4.4%
SYMMETRY—VETA I		0.45
KURTOSIS—VETA II		3.64
NUMBER OF SUBJECTS		334

MALES

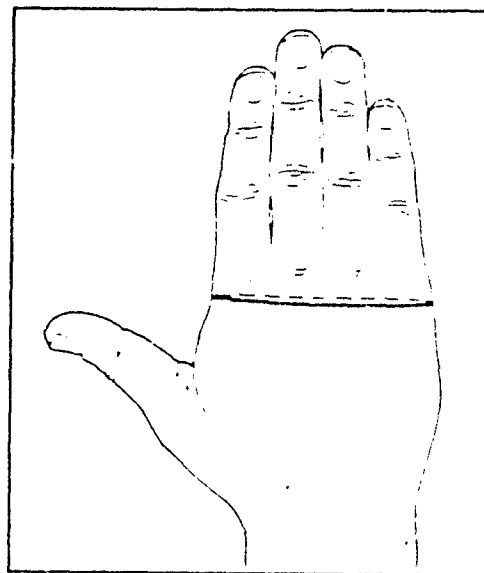
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
9.02	MEAN	3.55
0.02	SE (MEAN)	0.01
0.39	ST DEV	0.15
0.01	SE (SD)	0.00
8.00	MINIMUM	3.15
10.20	MAXIMUM	4.02
COEFF. OF VARIATION		4.3%
SYMMETRY—VETA I		0.09
KURTOSIS—VETA II		2.94
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
7.36	1ST	2.90
7.39	2ND	2.91
7.42	3RD	2.92
7.47	5TH	2.94
7.58	10TH	2.98
7.66	15TH	3.02
7.73	20TH	3.04
7.79	25TH	3.07
7.84	30TH	3.09
7.89	35TH	3.11
7.94	40TH	3.13
7.98	45TH	3.14
8.03	50TH	3.16
8.07	55TH	3.18
8.12	60TH	3.20
8.16	65TH	3.21
8.21	70TH	3.23
8.26	75TH	3.25
8.32	80TH	3.28
8.39	85TH	3.30
8.48	90TH	3.34
8.62	95TH	3.39
8.73	97TH	3.44
8.81	98TH	3.47
8.96	99TH	3.53

PERCENTILES		
CENTIMETERS		INCHES
8.17	1ST	3.22
8.23	2ND	3.24
8.28	3RD	3.26
8.36	5TH	3.29
8.50	10TH	3.35
8.60	15TH	3.39
8.68	20TH	3.42
8.75	25TH	3.45
8.81	30TH	3.47
8.87	35TH	3.49
8.92	40TH	3.51
8.98	45TH	3.53
9.03	50TH	3.55
9.07	55TH	3.57
9.12	60TH	3.59
9.17	65TH	3.61
9.23	70TH	3.63
9.28	75TH	3.66
9.35	80TH	3.68
9.42	85TH	3.71
9.52	90TH	3.75
9.67	95TH	3.81
9.79	97TH	3.85
9.88	98TH	3.89
10.05	99TH	3.96

(58) HAND CIRCUMFERENCE

The circumference of the right hand is measured with a tape passing over the landmarks at metacarpale II and metacarpale V. The subject places the palm on a table, the fingers together, and the thumb abducted. The middle finger is parallel to the long axis of the forearm. The two distal phalanges of the fingers lie on a flat surface 8 mm higher than the table.



VARIABLE NO. 58—HAND CIRCUMFERENCE

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
18.82	MEAN	7.41
0.04	SE(MEAN)	0.02
0.78	ST DEV	0.31
0.03	SE(SD)	0.01
17.20	MINIMUM	6.77
21.90	MAXIMUM	8.62
COEFF. OF VARIATION		4.1%
SYMMETRY—VETA I		0.43
KURTOSIS—VETA II		3.40
NUMBER OF SUBJECTS		334

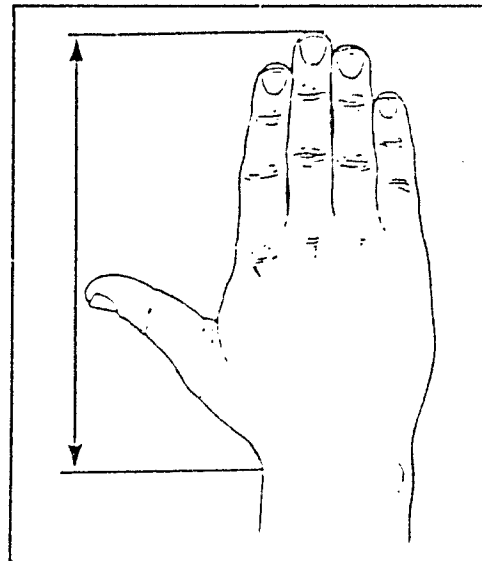
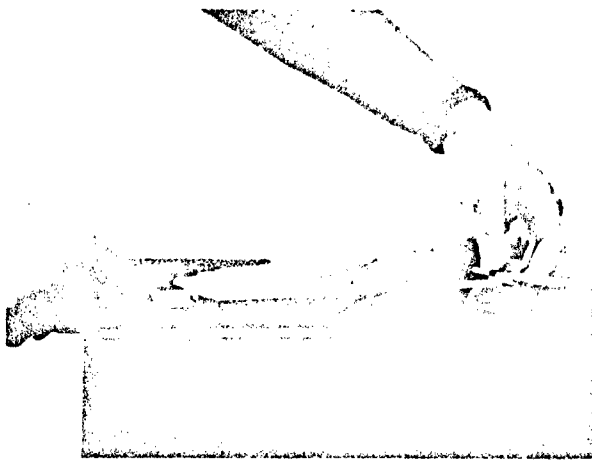
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
21.42	MEAN	8.43
0.04	SE(MEAN)	0.02
0.89	ST DEV	0.35
0.03	SE(SD)	0.01
19.20	MINIMUM	7.56
24.10	MAXIMUM	9.49
COEFF. OF VARIATION		4.1%
SYMMETRY—VETA I		0.15
KURTOSIS—VETA II		3.07
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
17.28	1ST	6.80
17.39	2ND	6.85
17.47	3RD	6.88
17.60	5TH	6.93
17.84	10TH	7.02
18.01	15TH	7.09
18.15	20TH	7.14
18.27	25TH	7.19
18.39	30TH	7.24
18.49	35TH	7.28
18.59	40TH	7.32
18.69	45TH	7.36
18.79	50TH	7.40
18.89	55TH	7.44
18.99	60TH	7.48
19.09	65TH	7.52
19.20	70TH	7.56
19.32	75TH	7.61
19.46	80TH	7.66
19.61	85TH	7.72
19.82	90TH	7.80
20.13	95TH	7.92
20.34	97TH	8.01
20.51	98TH	8.07
20.78	99TH	8.18

PERCENTILES		
CENTIMETERS		INCHES
19.40	1ST	7.64
19.61	2ND	7.72
19.75	3RD	7.78
19.95	5TH	7.86
20.28	10TH	7.98
20.50	15TH	8.07
20.67	20TH	8.14
20.82	25TH	8.20
20.96	30TH	8.25
21.08	35TH	8.30
21.19	40TH	8.34
21.30	45TH	8.39
21.41	50TH	8.43
21.52	55TH	8.47
21.63	60TH	8.51
21.74	65TH	8.56
21.86	70TH	8.61
21.99	75TH	8.66
22.13	80TH	8.71
22.31	85TH	8.78
22.54	90TH	8.87
22.91	95TH	9.02
23.18	97TH	9.13
23.40	98TH	9.21
23.78	99TH	9.36

(59) HAND LENGTH

The length of the right hand between the stylium landmark on the wrist and the tip of the middle finger is measured with a Fœch sliding caliper. The subject places the palm on a table, the fingers together, and the thumb abducted. The middle finger is parallel to the long axis of the forearm. The two distal phalanges of the fingers lie on a flat surface 8 mm higher than the table.



VARIABLE NO. 59—HAND LENGTH

FEMALES

MALES

THE SUMMARY STATISTICS

CENTIMETERS		INCHES
18.25	MEAN	7.18
0.04	SE (MEAN)	0.02
0.71	ST DEV	0.28
0.03	SE (SD)	0.01
16.30	MINIMUM	6.42
21.50	MAXIMUM	8.46
COEFF. OF VARIATION		3.9%
SYMMETRY—VETA I		0.55
KURTOSIS—VETA II		4.01
NUMBER OF SUBJECTS		334

THE SUMMARY STATISTICS

CENTIMETERS		INCHES
19.45	MEAN	7.66
0.04	SE (MEAN)	0.02
0.85	ST DEV	0.33
0.03	SE (SD)	0.01
16.80	MINIMUM	6.61
21.80	MAXIMUM	8.58
COEFF. OF VARIATION		4.4%
SYMMETRY—VETA I		0.03
KURTOSIS—VETA II		2.84
NUMBER OF SUBJECTS		487

PERCENTILES

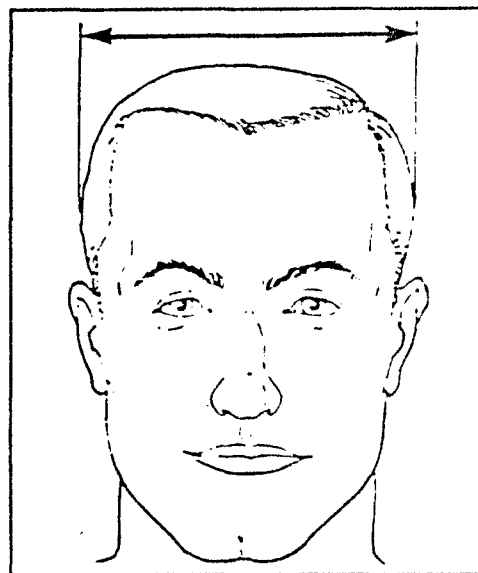
CENTIMETERS		INCHES
16.74	1ST	6.59
16.92	2ND	6.66
17.03	3RD	6.70
17.17	5TH	6.76
17.38	10TH	6.84
17.53	15TH	6.90
17.65	20TH	6.95
17.75	25TH	6.99
17.84	30TH	7.03
17.93	35TH	7.06
18.02	40TH	7.09
18.10	45TH	7.13
18.19	50TH	7.16
18.28	55TH	7.20
18.37	60TH	7.23
18.46	65TH	7.27
18.57	70TH	7.31
18.68	75TH	7.36
18.82	80TH	7.41
18.97	85TH	7.47
19.18	90TH	7.55
19.49	95TH	7.67
19.71	97TH	7.76
19.86	98TH	7.82
20.11	99TH	7.92

PERCENTILES

CENTIMETERS		INCHES
17.61	1ST	6.93
17.80	2ND	7.01
17.93	3RD	7.06
18.10	5TH	7.13
18.37	10TH	7.23
18.56	15TH	7.31
18.72	20TH	7.37
18.86	25TH	7.42
18.98	30TH	7.47
19.10	35TH	7.52
19.21	40TH	7.56
19.32	45TH	7.61
19.43	50TH	7.65
19.54	55TH	7.69
19.66	60TH	7.74
19.77	65TH	7.79
19.90	70TH	7.83
20.04	75TH	7.89
20.19	80TH	7.95
20.36	85TH	8.02
20.58	90TH	8.10
20.89	95TH	8.22
21.08	97TH	8.30
21.21	98TH	8.35
21.40	99TH	8.42

(60) HEAD BREADTH

The maximum horizontal breadth of the head above the attachment of the ears is measured with a spreading caliper.



VARIABLE NO. 60—HEAD BREADTH

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
14.51	MEAN	5.71
0.03	SE (MEAN)	0.01
0.48	ST DEV	0.19
0.02	SE (SD)	0.01
12.90	MINIMUM	5.08
16.70	MAXIMUM	6.57
COEFF. OF VARIATION		3.3%
SYMMETRY—VETA I		0.28
KURTOSIS—VETA II		4.48
NUMBER OF SUBJECTS		334

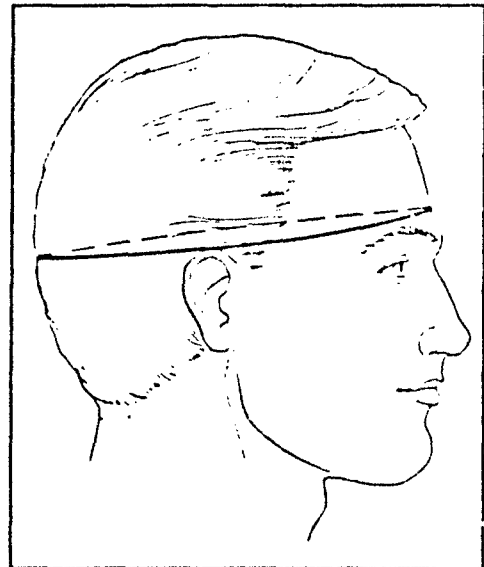
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
15.33	MEAN	6.04
0.02	SE (MEAN)	0.01
0.53	ST DEV	0.21
0.02	SE (SD)	0.01
14.00	MINIMUM	5.51
17.10	MAXIMUM	6.73
COEFF. OF VARIATION		3.5%
SYMMETRY—VETA I		0.35
KURTOSIS—VETA II		3.15
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
13.32	1ST	5.25
13.53	2ND	5.33
13.65	3RD	5.37
13.78	5TH	5.43
13.96	10TH	5.50
14.07	15TH	5.54
14.15	20TH	5.57
14.21	25TH	5.60
14.27	30TH	5.62
14.33	35TH	5.64
14.38	40TH	5.66
14.44	45TH	5.68
14.49	50TH	5.70
14.54	55TH	5.73
14.60	60TH	5.75
14.66	65TH	5.77
14.73	70TH	5.80
14.80	75TH	5.83
14.88	80TH	5.86
14.93	85TH	5.90
15.11	90TH	5.95
15.30	95TH	6.03
15.42	97TH	6.07
15.51	98TH	6.11
15.63	99TH	6.15

PERCENTILES		
CENTIMETERS		INCHES
14.19	1ST	5.59
14.33	2ND	5.64
14.41	3RD	5.67
14.52	5TH	5.72
14.69	10TH	5.78
14.80	15TH	5.83
14.89	20TH	5.86
14.97	25TH	5.89
15.04	30TH	5.92
15.11	35TH	5.95
15.17	40TH	5.97
15.23	45TH	6.00
15.30	50TH	6.02
15.36	55TH	6.05
15.43	60TH	6.07
15.50	65TH	6.10
15.58	70TH	6.13
15.66	75TH	6.17
15.76	80TH	6.20
15.87	85TH	6.25
16.03	90TH	6.31
16.27	95TH	6.40
16.43	97TH	6.47
16.55	98TH	6.51
16.74	99TH	6.59

(61) HEAD CIRCUMFERENCE

The maximum circumference of the head above the attachment of the ears to the head is measured with a tape passing just above the ridges of the eyebrows and around the back of the head.



VARIABLE NO. 61—HEAD CIRCUMFERENCE

FEMALES

MALES

THE SUMMARY STATISTICS

CENTIMETERS		INCHES	
54.79	MEAN	21.57	
0.07	SE (MEAN)	0.03	
1.33	ST DEV	0.52	
0.05	SE (SD)	0.02	
50.50	MINIMUM	19.88	
58.70	MAXIMUM	23.11	
COEFF. OF VARIATION		2.4%	
SYMMETRY—VETA I		-0.22	
KURTOSIS—VETA II		3.37	
NUMBER OF SUBJECTS		334	

THE SUMMARY STATISTICS

CENTIMETERS		INCHES	
57.06	MEAN	22.47	
0.06	SE (MEAN)	0.02	
1.36	ST DEV	0.53	
0.04	SE (SD)	0.02	
53.60	MINIMUM	21.10	
60.60	MAXIMUM	23.86	
COEFF. OF VARIATION		2.4%	
SYMMETRY—VETA I		-0.01	
KURTOSIS—VETA II		2.61	
NUMBER OF SUBJECTS		487	

PERCENTILES

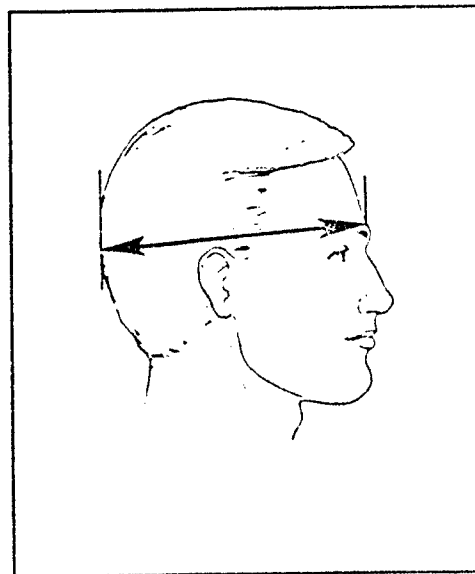
CENTIMETERS		INCHES	
51.15	1ST	20.14	
51.75	2ND	20.37	
52.09	3RD	20.51	
52.51	5TH	20.67	
53.09	10TH	20.90	
53.45	15TH	21.04	
53.72	20TH	21.15	
53.95	25TH	21.24	
54.15	30TH	21.32	
54.33	35TH	21.39	
54.50	40TH	21.46	
54.67	45TH	21.52	
54.83	50TH	21.59	
54.99	55TH	21.65	
55.15	60TH	21.71	
55.32	65TH	21.78	
55.50	70TH	21.85	
55.69	75TH	21.92	
55.90	80TH	22.01	
56.14	85TH	22.10	
56.43	90TH	22.22	
56.84	95TH	22.38	
57.08	97TH	22.47	
57.24	98TH	22.54	
57.45	99TH	22.62	

PERCENTILES

CENTIMETERS		INCHES	
54.10	1ST	21.30	
54.35	2ND	21.40	
54.54	3RD	21.47	
54.81	5TH	21.58	
55.28	10TH	21.76	
55.61	15TH	21.89	
55.88	20TH	22.00	
56.12	25TH	22.10	
56.34	30TH	22.18	
56.53	35TH	22.26	
56.72	40TH	22.33	
56.90	45TH	22.40	
57.08	50TH	22.47	
57.26	55TH	22.54	
57.44	60TH	22.61	
57.62	65TH	22.68	
57.81	70TH	22.76	
58.01	75TH	22.84	
58.24	80TH	22.93	
58.50	85TH	23.03	
58.82	90TH	23.16	
59.30	95TH	23.35	
59.62	97TH	23.47	
59.85	98TH	23.56	
60.24	99TH	23.72	

(62) HEAD LENGTH

The distance from the glabella landmark between the browridges to the most posterior point on the back of the head is measured with a spreading caliper.



VARIABLE NO. 62—HEAD LENGTH

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
18.82	MEAN	7.41
0.04	SE (MEAN)	0.01
0.64	ST DEV	0.25
0.02	SE (SD)	0.01
16.50	MINIMUM	6.50
20.50	MAXIMUM	8.07
COEFF. OF VARIATION		3.4%
SYMMETRY—VETA I		-0.34
KURTOSIS—VETA II		3.27
NUMBER OF SUBJECTS		334

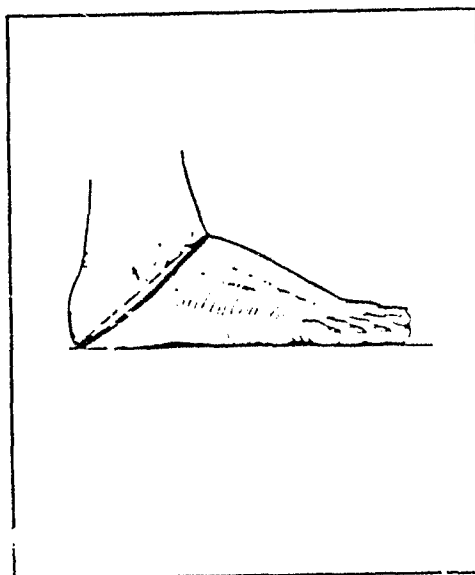
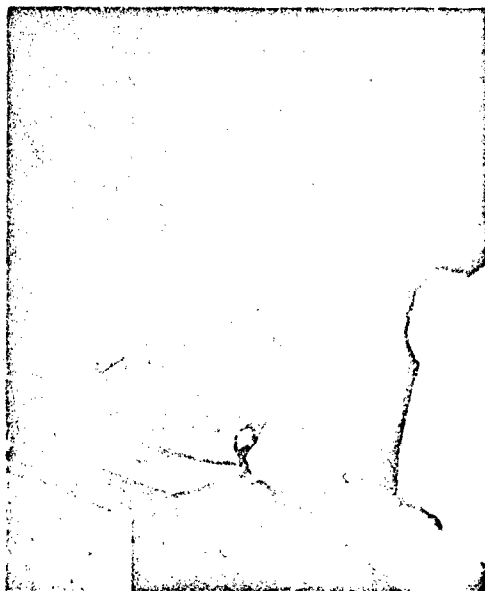
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
19.89	MEAN	7.83
0.03	SE (MEAN)	0.01
0.64	ST DEV	0.25
0.02	SE (SD)	0.01
17.70	MINIMUM	6.97
21.90	MAXIMUM	8.62
COEFF. OF VARIATION		3.2%
SYMMETRY—VETA I		-0.15
KURTOSIS—VETA II		3.24
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
17.15	1ST	6.75
17.36	2ND	6.83
17.49	3RD	6.89
17.68	5TH	6.96
17.96	10TH	7.07
18.15	15TH	7.14
18.29	20TH	7.20
18.41	25TH	7.25
18.51	30TH	7.29
18.61	35TH	7.33
18.70	40TH	7.36
18.78	45TH	7.39
18.86	50TH	7.42
18.94	55TH	7.46
19.01	60TH	7.49
19.09	65TH	7.52
19.17	70TH	7.55
19.26	75TH	7.58
19.35	80TH	7.62
19.46	85TH	7.66
19.59	90TH	7.71
19.79	95TH	7.79
19.93	97TH	7.85
20.04	98TH	7.89
20.22	99TH	7.96

PERCENTILES		
CENTIMETERS		INCHES
18.27	1ST	7.19
18.51	2ND	7.29
18.65	3RD	7.34
18.83	5TH	7.41
19.08	10TH	7.51
19.25	15TH	7.58
19.37	20TH	7.63
19.48	25TH	7.67
19.57	30TH	7.71
19.66	35TH	7.74
19.74	40TH	7.77
19.82	45TH	7.80
19.90	50TH	7.83
19.97	55TH	7.86
20.05	60TH	7.90
20.14	65TH	7.93
20.22	70TH	7.96
20.32	75TH	8.00
20.43	80TH	8.04
20.55	85TH	8.09
20.71	90TH	8.15
20.94	95TH	8.24
21.08	97TH	8.30
21.18	98TH	8.34
21.34	99TH	8.40

(63) HEEL ANKLE CIRCUMFERENCE

The circumference of the right foot at the ankle and base of the heel is measured with a tape passing over the point at which the heel first contacts the table and over the dorsal-juncture-of-the-foot-and-leg landmark at the front of the ankle. The subject stands with the feet about 10 cm apart and the weight distributed equally on both feet.



VARIABLE NO. 63—HEEL ANKLE CIRCUMFERENCE

FEMALES

MALES

THE SUMMARY STATISTICS

CENTIMETERS		INCHES
30.75	MEAN	12.10
0.06	SE (MEAN)	0.03
1.18	ST DEV	0.47
0.05	SE (SD)	0.02
27.60	MINIMUM	10.87
35.00	MAXIMUM	13.78
COEFF. OF VARIATION		3.8%
SYMMETRY—VETA I		0.34
KURTOSIS—VETA II		3.18
NUMBER OF SUBJECTS		334

THE SUMMARY STATISTICS

CENTIMETERS		INCHES
33.70	MEAN	13.27
0.07	SE (MEAN)	0.03
1.46	ST DEV	0.57
0.05	SE (SD)	0.02
30.30	MINIMUM	11.93
37.70	MAXIMUM	14.84
COEFF. OF VARIATION		4.3%
SYMMETRY—VETA I		0.18
KURTOSIS—VETA II		2.79
NUMBER OF SUBJECTS		487

PERCENTILES

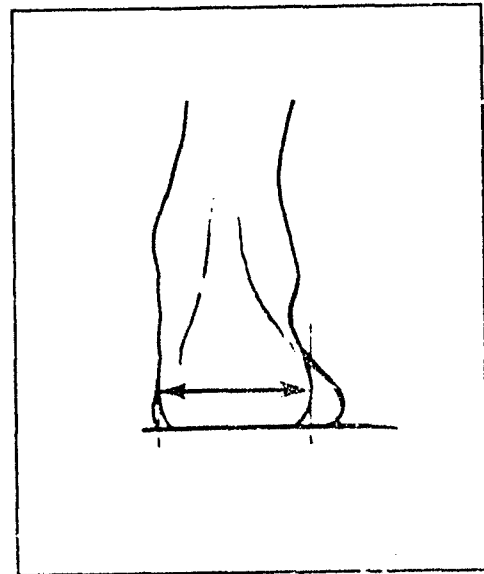
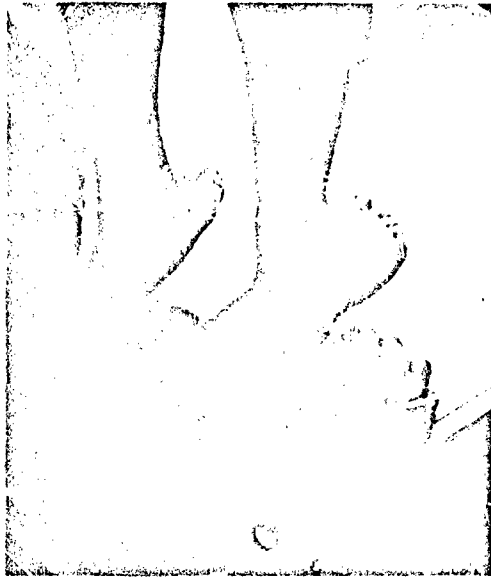
CENTIMETERS		INCHES
28.19	1ST	11.10
28.50	2ND	11.22
28.69	3RD	11.29
28.93	5TH	11.39
29.30	10TH	11.53
29.54	15TH	11.63
29.74	20TH	11.71
29.91	25TH	11.78
30.07	30TH	11.84
30.22	35TH	11.90
30.37	40TH	11.96
30.51	45TH	12.01
30.66	50TH	12.07
30.81	55TH	12.13
30.97	60TH	12.19
31.13	65TH	12.26
31.31	70TH	12.33
31.50	75TH	12.40
31.72	80TH	12.49
31.98	85TH	12.59
32.32	90TH	12.72
32.81	95TH	12.92
33.12	97TH	13.04
33.34	98TH	13.13
33.67	99TH	13.26

PERCENTILES

CENTIMETERS		INCHES
30.55	1ST	12.03
30.85	2ND	12.14
31.05	3RD	12.22
31.34	5TH	12.34
31.81	10TH	12.52
32.15	15TH	12.66
32.42	20TH	12.76
32.66	25TH	12.86
32.88	30TH	12.94
33.08	35TH	13.02
33.28	40TH	13.10
33.47	45TH	13.18
33.66	50TH	13.25
33.85	55TH	13.33
34.04	60TH	13.40
34.24	65TH	13.48
34.46	70TH	13.57
34.69	75TH	13.66
34.96	80TH	13.76
35.26	85TH	13.88
35.65	90TH	14.04
36.23	95TH	14.26
36.61	97TH	14.41
36.89	98TH	14.52
37.33	99TH	14.70

(64) HEEL BREADTH

The maximum horizontal distance between the medial and lateral points on the inside and outside of the right heel, at or posterior to the lateral malleolus landmark, is measured with a Holtain caliper. The measurement is taken just above the level of the standing surface at the most protruding points of the curvature of the heel. The subject stands with the feet about 10 cm apart and the weight distributed equally on both feet.



VARIABLE NO. 64—HEEL BREADTH

FEMALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
6.20	MEAN	2.44
0.02	SE (MEAN)	0.01
0.37	ST DEV	0.15
0.01	SE (SD)	0.01
5.30	MINIMUM	2.09
7.40	MAXIMUM	2.91
COEFF. OF VARIATION		6.0%
SYMMETRY—VETA I		0.40
KURTOSIS—VETA II		3.14
NUMBER OF SUBJECTS		334

PERCENTILES		
CENTIMETERS		INCHES
5.42	1ST	2.13
5.51	2ND	2.17
5.57	3RD	2.19
5.64	5TH	2.22
5.75	10TH	2.26
5.83	15TH	2.29
5.89	20TH	2.32
5.94	25TH	2.34
5.99	30TH	2.36
6.04	35TH	2.38
6.09	40TH	2.40
6.13	45TH	2.41
6.18	50TH	2.43
6.22	55TH	2.45
6.27	60TH	2.47
6.32	65TH	2.49
6.38	70TH	2.51
6.44	75TH	2.53
6.51	80TH	2.56
6.59	85TH	2.60
6.70	90TH	2.64
6.88	95TH	2.71
6.99	97TH	2.75
7.08	98TH	2.79
7.22	99TH	2.84

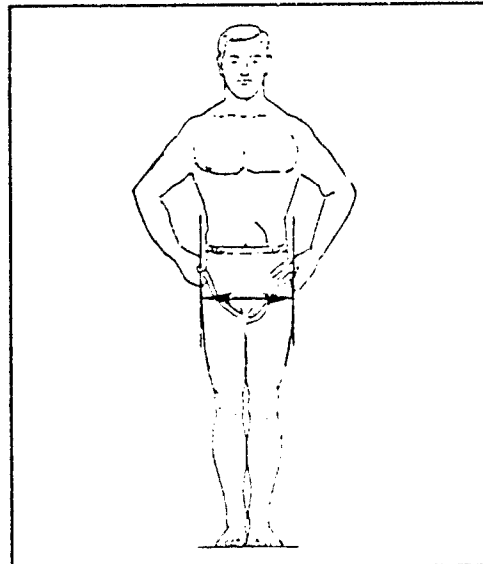
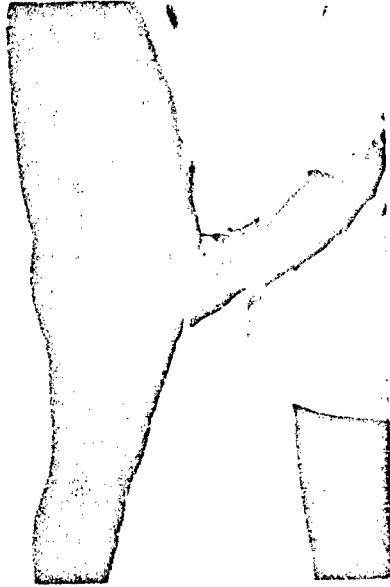
MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
6.78	MEAN	2.67
0.02	SE (MEAN)	0.01
0.41	ST DEV	0.16
0.01	SE (SD)	0.01
5.50	MINIMUM	2.17
8.10	MAXIMUM	3.19
COEFF. OF VARIATION		6.1%
SYMMETRY—VETA I		0.26
KURTOSIS—VETA II		3.27
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
5.90	1ST	2.32
6.00	2ND	2.36
6.06	3RD	2.39
6.15	5TH	2.42
6.28	10TH	2.47
6.37	15TH	2.51
6.44	20TH	2.53
6.50	25TH	2.56
6.56	30TH	2.58
6.61	35TH	2.60
6.66	40TH	2.62
6.71	45TH	2.64
6.76	50TH	2.66
6.81	55TH	2.68
6.87	60TH	2.70
6.92	65TH	2.72
6.98	70TH	2.75
7.05	75TH	2.77
7.12	80TH	2.80
7.21	85TH	2.84
7.33	90TH	2.89
7.51	95TH	2.96
7.64	97TH	3.01
7.73	98TH	3.04
7.88	99TH	3.10

(65) HIP BREADTH

The horizontal distance between the lateral buttock landmarks on the sides of the hips is measured with a beam caliper. The subject stands erect with the heels together and the weight distributed equally on both feet.



VARIABLE NO. 65—HIP BREADTH

FEMALES

MALES

THE SUMMARY STATISTICS

CENTIMETERS		INCHES
35.59	MEAN	14.01
0.12	SE (MEAN)	0.05
2.18	ST DEV	0.86
0.08	SE (SD)	0.03
29.80	MINIMUM	11.73
41.50	MAXIMUM	16.34
COEFF. OF VARIATION		6.1%
SYMMETRY—VETA I		0.01
KURTOSIS—VETA II		2.76
NUMBER OF SUBJECTS		334

THE SUMMARY STATISTICS

CENTIMETERS		INCHES
34.90	MEAN	13.74
0.08	SE (MEAN)	0.03
1.86	ST DEV	0.73
0.06	SE (SD)	0.02
30.60	MINIMUM	12.05
42.80	MAXIMUM	16.85
COEFF. OF VARIATION		5.3%
SYMMETRY—VETA I		0.37
KURTOSIS—VETA II		3.16
NUMBER OF SUBJECTS		487

PERCENTILES

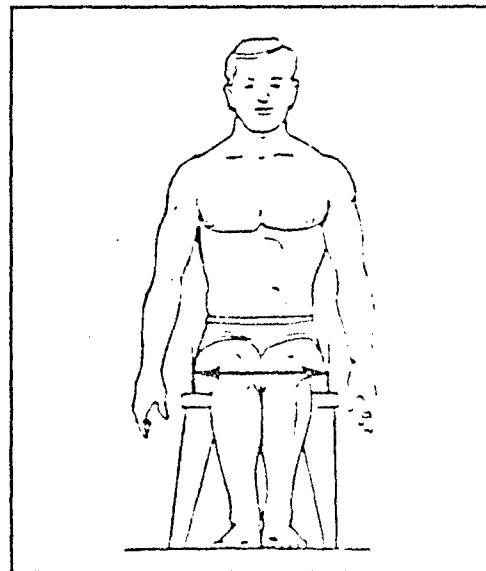
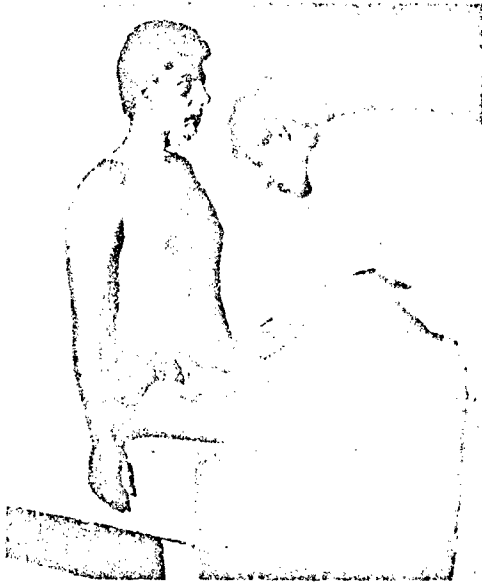
CENTIMETERS		INCHES
30.63	1ST	12.06
31.15	2ND	12.25
31.49	3RD	12.40
31.97	5TH	12.59
32.75	10TH	12.89
33.28	15TH	13.10
33.71	20TH	13.27
34.09	25TH	13.42
34.42	30TH	13.55
34.74	35TH	13.68
35.03	40TH	13.79
35.32	45TH	13.90
35.60	50TH	14.02
35.88	55TH	14.13
36.16	60TH	14.24
36.46	65TH	14.35
36.77	70TH	14.47
37.10	75TH	14.60
37.47	80TH	14.75
37.89	85TH	14.92
38.42	90TH	15.13
39.20	95TH	15.43
39.70	97TH	15.63
40.07	98TH	15.77
40.64	99TH	16.00

PERCENTILES

CENTIMETERS		INCHES
31.20	1ST	12.28
31.51	2ND	12.41
31.72	3RD	12.49
32.03	5TH	12.61
32.55	10TH	12.82
32.93	15TH	12.97
33.25	20TH	13.09
33.54	25TH	13.21
33.81	30TH	13.31
34.06	35TH	13.41
34.31	40TH	13.51
34.55	45TH	13.60
34.79	50TH	13.70
35.04	55TH	13.79
35.29	60TH	13.89
35.56	65TH	14.00
35.84	70TH	14.11
36.15	75TH	14.23
36.49	80TH	14.37
36.89	85TH	14.52
37.38	90TH	14.72
38.09	95TH	15.00
38.53	97TH	15.17
38.84	98TH	15.29
39.28	99TH	15.46

(66) HIP BREADTH, SITTING

The distance between the lateral points of the hips or thighs (whichever are broader) is measured with a beam caliper. The subject sits erect with the feet and knees together.



VARIABLE NO. 66—HIP BREADTH, SITTING

FEMALES

MALES

THE SUMMARY STATISTICS
CENTIMETERS INCHES

39.78 MEAN 15.66
0.15 SE(MEAN) 0.06
2.75 ST DEV 1.08
0.11 SE(SD) 0.04

32.60 MINIMUM 12.83
47.50 MAXIMUM 18.70

COEFF. OF VARIATION 6.9%
SYMMETRY—VETA I 0.17
KURTOSIS—VETA II 2.78

NUMBER OF SUBJECTS 334

THE SUMMARY STATISTICS
CENTIMETERS INCHES

37.18 MEAN 14.64
0.10 SE(MEAN) 0.04
2.19 ST DEV 0.86
0.07 SE(SD) 0.03

31.90 MINIMUM 12.56
45.30 MAXIMUM 17.83

COEFF. OF VARIATION 5.9%
SYMMETRY—VETA I 0.38
KURTOSIS—VETA II 3.23

NUMBER OF SUBJECTS 487

PERCENTILES
CENTIMETERS INCHES

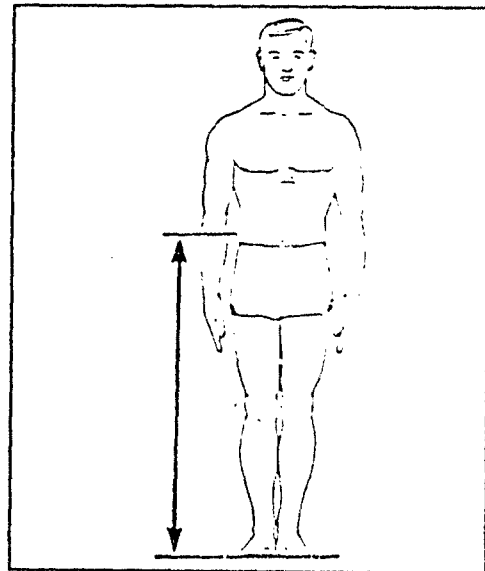
33.62 1ST 13.24
34.41 2ND 13.55
34.88 3RD 13.73
35.48 5TH 13.97
36.36 10TH 14.32
36.95 15TH 14.55
37.43 20TH 14.74
37.85 25TH 14.90
38.23 30TH 15.05
38.59 35TH 15.19
38.95 40TH 15.33
39.29 45TH 15.47
39.65 50TH 15.61
40.01 55TH 15.75
40.38 60TH 15.90
40.77 65TH 16.05
41.18 70TH 16.21
41.64 75TH 16.39
42.16 80TH 16.60
42.76 85TH 16.84
43.52 90TH 17.13
44.59 95TH 17.56
45.24 97TH 17.81
45.67 98TH 17.98
46.26 99TH 18.21

PERCENTILES
CENTIMETERS INCHES

32.84 1ST 12.93
33.21 2ND 13.07
33.46 3RD 13.18
33.83 5TH 13.32
34.45 10TH 13.56
34.90 15TH 13.74
35.28 20TH 13.89
35.62 25TH 14.02
35.93 30TH 14.14
36.22 35TH 14.26
36.50 40TH 14.37
36.78 45TH 14.48
37.06 50TH 14.59
37.35 55TH 14.70
37.64 60TH 14.82
37.94 65TH 14.94
38.27 70TH 15.07
38.62 75TH 15.21
39.02 80TH 15.36
39.47 85TH 15.54
40.05 90TH 15.77
40.89 95TH 16.10
41.41 97TH 16.30
41.78 98TH 16.45
42.34 99TH 16.67

(67) ILIOCRISTALE HEIGHT

The vertical distance between a standing surface and the ilio Cristale landmark on the top of the right side of the pelvis is measured with an anthropometer. The subject stands erect with the heels together and the weight distributed equally on both feet. The shoulders and upper extremities are relaxed.



VARIABLE NO. 67—ILIOCRISTALE HEIGHT

FEMALES

MALES

THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
102.04	MEAN	40.18	
0.17	SE(MEAN)	0.07	
3.19	ST DEV	1.26	
0.12	SE(SD)	0.05	
94.00	MINIMUM	37.01	
114.90	MAXIMUM	45.24	
COEFF. OF VARIATION		3.1%	
SYMMETRY—VETA I		0.60	
KURTOSIS—VETA II		3.57	
NUMBER OF SUBJECTS		334	

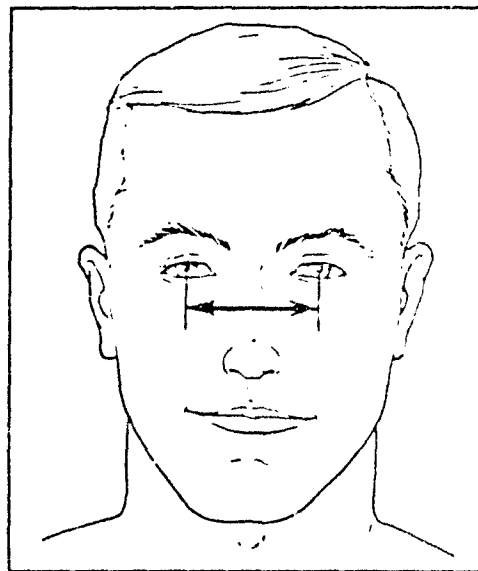
THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
107.62	MEAN	42.37	
0.22	SE(MEAN)	0.09	
4.91	ST DEV	1.93	
0.16	SE(SD)	0.06	
95.50	MINIMUM	37.60	
121.00	MAXIMUM	47.64	
COEFF. OF VARIATION		4.6%	
SYMMETRY—VETA I		0.13	
KURTOSIS—VETA II		2.66	
NUMBER OF SUBJECTS		487	

PERCENTILES		
CENTIMETERS		INCHES
96.03	1ST	37.81
96.58	2ND	38.03
96.95	3RD	38.17
97.46	5TH	38.37
98.29	10TH	38.70
98.87	15TH	38.93
99.36	20TH	39.12
99.79	25TH	39.29
100.20	30TH	39.45
100.58	35TH	39.60
100.95	40TH	39.74
101.32	45TH	39.89
101.70	50TH	40.04
102.09	55TH	40.19
102.49	60TH	40.35
102.92	65TH	40.52
103.39	70TH	40.70
103.91	75TH	40.91
104.52	80TH	41.15
105.25	85TH	41.44
106.22	90TH	41.82
107.77	95TH	42.43
108.84	97TH	42.85
109.67	98TH	43.18
111.04	99TH	43.72

PERCENTILES		
CENTIMETERS		INCHES
96.93	1ST	38.16
98.08	2ND	38.61
98.81	3RD	38.90
99.80	5TH	39.29
101.36	10TH	39.90
102.44	15TH	40.33
103.32	20TH	40.68
104.11	25TH	40.99
104.82	30TH	41.27
105.50	35TH	41.53
106.15	40TH	41.79
106.79	45TH	42.04
107.43	50TH	42.30
108.09	55TH	42.55
108.75	60TH	42.82
109.45	65TH	43.09
110.19	70TH	43.38
110.99	75TH	43.70
111.90	80TH	44.05
112.94	85TH	44.46
114.24	90TH	44.98
116.09	95TH	45.70
117.21	97TH	46.14
117.97	98TH	46.45
119.06	99TH	46.88

(68) INTERPUPILLARY BREADTH

The distance between the two pupils is measured with a pupillometer.



VARIABLE NO. 68—INTERPUPILLARY BREADTH

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
6.12	MEAN	2.41
0.02	SE(MEAN)	0.01
0.30	ST DEV	0.12
0.01	SE(SD)	0.00
5.30	MINIMUM	2.09
6.90	MAXIMUM	2.72
COEFF. OF VARIATION		4.9%
SYMMETRY—VETA I		-0.16
KURTOSIS—VETA II		2.95
NUMBER OF SUBJECTS		334

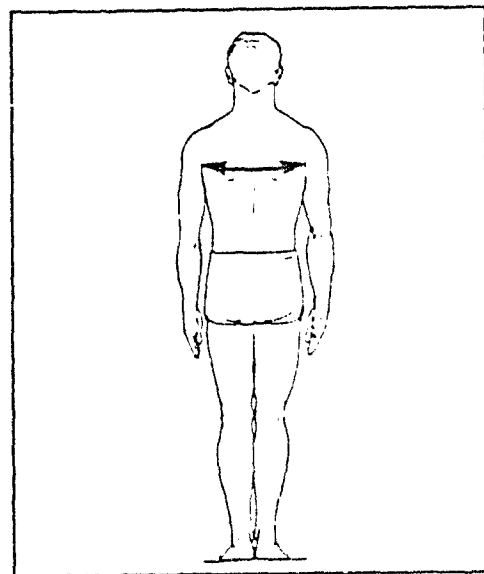
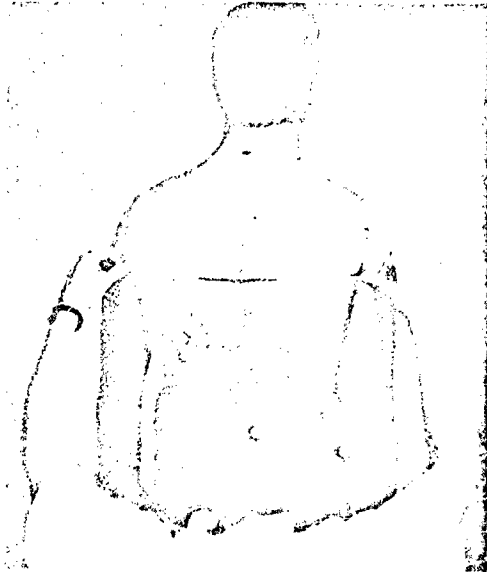
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
6.43	MEAN	2.53
0.01	SE(MEAN)	0.01
0.32	ST DEV	0.13
0.01	SE(SD)	0.00
5.60	MINIMUM	2.20
7.50	MAXIMUM	2.95
COEFF. OF VARIATION		5.0%
SYMMETRY—VETA I		0.15
KURTOSIS—VETA II		3.06
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
5.35	1ST	2.10
5.45	2ND	2.15
5.51	3RD	2.17
5.60	5TH	2.20
5.72	10TH	2.25
5.80	15TH	2.28
5.86	20TH	2.31
5.92	25TH	2.33
5.96	30TH	2.35
6.01	35TH	2.37
6.05	40TH	2.38
6.09	45TH	2.40
6.13	50TH	2.41
6.16	55TH	2.43
6.20	60TH	2.44
6.24	65TH	2.46
6.28	70TH	2.47
6.33	75TH	2.49
6.37	80TH	2.51
6.43	85TH	2.53
6.49	90TH	2.56
6.59	95TH	2.59
6.65	97TH	2.62
6.69	98TH	2.63
6.75	99TH	2.66

PERCENTILES		
CENTIMETERS		INCHES
5.70	1ST	2.24
5.78	2ND	2.27
5.83	3RD	2.30
5.90	5TH	2.32
6.02	10TH	2.37
6.09	15TH	2.40
6.15	20TH	2.42
6.21	25TH	2.44
6.26	30TH	2.46
6.30	35TH	2.48
6.34	40TH	2.50
6.38	45TH	2.51
6.42	50TH	2.53
6.46	55TH	2.54
6.50	60TH	2.56
6.54	65TH	2.58
6.59	70TH	2.59
6.64	75TH	2.61
6.69	80TH	2.63
6.75	85TH	2.66
6.83	90TH	2.69
6.96	95TH	2.74
7.04	97TH	2.77
7.10	98TH	2.80
7.20	99TH	2.84

(69) INTERSCYE I

The distance across the back between the right and left posterior-axillary-fold landmarks is measured with a tape. The tape is held on the skin surface except where the tape spans the hollow of the back. The subject stands erect looking straight ahead. The heels are together with the weight distributed equally on both feet. The shoulders and upper extremities are relaxed. The measurement is taken at the maximum point of quiet respiration.



VARIABLE NO. 69—INTERSCYE I

FEMALES

MALES

THE SUMMARY STATISTICS
CENTIMETERS INCHES

35.78 MEAN 14.09
0.15 SE(MEAN) 0.06
2.71 ST DEV 1.07
0.10 SE(SD) 0.04

26.60 MINIMUM 10.47
43.40 MAXIMUM 17.09

COEFF. OF VARIATION 7.6%
SYMMETRY—VETA I 0.07
KURTOSIS—VETA II 3.03

NUMBER OF SUBJECTS 334

THE SUMMARY STATISTICS
CENTIMETERS INCHES

40.87 MEAN 16.09
0.13 SE(MEAN) 0.05
2.82 ST DEV 1.11
0.09 SE(SD) 0.04

33.80 MINIMUM 13.31
50.20 MAXIMUM 19.76

COEFF. OF VARIATION 6.9%
SYMMETRY—VETA I 0.11
KURTOSIS—VETA II 2.81

NUMBER OF SUBJECTS 487

PERCENTILES
CENTIMETERS INCHES

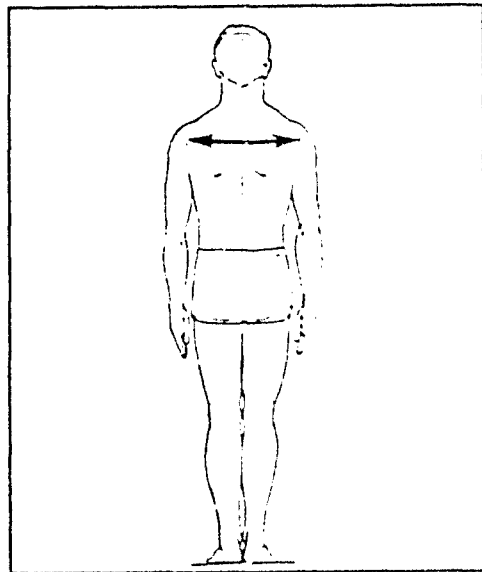
30.40 1ST 11.97
30.76 2ND 12.11
31.04 3RD 12.22
31.50 5TH 12.40
32.32 10TH 12.72
32.93 15TH 12.96
33.43 20TH 13.16
33.88 25TH 13.34
34.29 30TH 13.50
34.66 35TH 13.65
35.03 40TH 13.79
35.38 45TH 13.93
35.72 50TH 14.06
36.07 55TH 14.20
36.42 60TH 14.34
36.79 65TH 14.48
37.17 70TH 14.63
37.58 75TH 14.80
38.05 80TH 14.98
38.59 85TH 15.19
39.28 90TH 15.46
40.34 95TH 15.88
41.05 97TH 16.16
41.61 98TH 16.38
42.54 99TH 16.75

PERCENTILES
CENTIMETERS INCHES

34.75 1ST 13.68
35.32 2ND 13.91
35.71 3RD 14.06
36.27 5TH 14.28
37.20 10TH 14.65
37.86 15TH 14.90
38.39 20TH 15.12
38.87 25TH 15.30
39.30 30TH 15.47
39.70 35TH 15.63
40.08 40TH 15.78
40.45 45TH 15.93
40.82 50TH 16.07
41.20 55TH 16.22
41.57 60TH 16.37
41.96 65TH 16.52
42.37 70TH 16.68
42.82 75TH 16.86
43.31 80TH 17.05
43.88 85TH 17.27
44.58 90TH 17.55
45.61 95TH 17.96
46.26 97TH 18.21
46.73 98TH 18.40
47.44 99TH 18.68

(70) INTERSCYE II

The distance across the back between the right and left midscye landmarks is measured with a tape. The tape is held on the skin surface except where it spans the hollow of the back. The subject stands erect looking straight ahead. The heels are together with the weight distributed equally on both feet. The shoulders and upper extremities are relaxed. The measurement is taken at the maximum point of quiet respiration.



VARIABLE NO. 70—INTEKSCYE II

FEMALES

MALES

THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
38.29	MEAN	15.07	
0.13	SE (MEAN)	0.05	
2.40	ST DEV	0.95	
0.09	SE (SD)	0.04	
28.40	MINIMUM	11.18	
47.00	MAXIMUM	18.50	
COEFF. OF VARIATION		6.3%	
SYMMETRY—VETA I		-0.03	
KURTOSIS—VETA II		3.82	
NUMBER OF SUBJECTS		334	

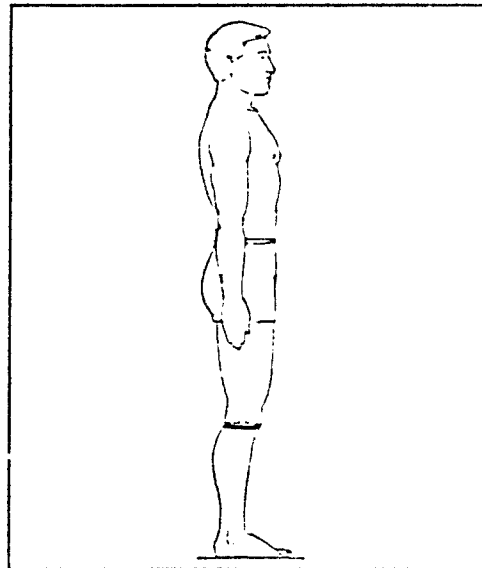
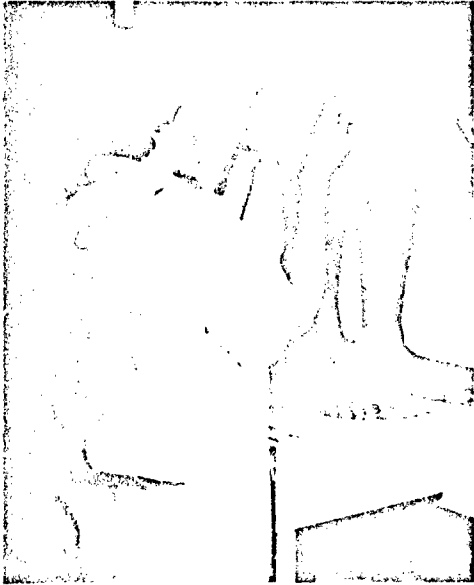
THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
41.66	MEAN	16.40	
0.12	SE (MEAN)	0.05	
2.60	ST DEV	1.02	
0.08	SE (SD)	0.03	
33.90	MINIMUM	13.35	
51.50	MAXIMUM	20.28	
COEFF. OF VARIATION		6.2%	
SYMMETRY—VETA I		0.24	
KURTOSIS—VETA II		3.12	
NUMBER OF SUBJECTS		487	

PERCENTILES		
CENTIMETERS		INCHES
32.39	1ST	12.75
33.34	2ND	13.13
33.88	3RD	13.34
34.53	5TH	13.59
35.42	10TH	13.94
35.96	15TH	14.16
36.38	20TH	14.32
36.74	25TH	14.47
37.06	30TH	14.59
37.36	35TH	14.71
37.65	40TH	14.82
37.93	45TH	14.93
38.21	50TH	15.04
38.50	55TH	15.16
38.80	60TH	15.27
39.11	65TH	15.40
39.45	70TH	15.53
39.82	75TH	15.68
40.25	80TH	15.85
40.75	85TH	16.04
41.39	90TH	16.30
42.33	95TH	16.67
42.91	97TH	16.90
43.32	98TH	17.05
43.90	99TH	17.28

PERCENTILES		
CENTIMETERS		INCHES
36.16	1ST	14.24
36.72	2ND	14.46
37.08	3RD	14.60
37.59	5TH	14.80
38.40	10TH	15.12
38.97	15TH	15.34
39.43	20TH	15.52
39.84	25TH	15.68
40.21	30TH	15.83
40.56	35TH	15.97
40.89	40TH	16.10
41.22	45TH	16.23
41.55	50TH	16.36
41.88	55TH	16.49
42.22	60TH	16.62
42.57	65TH	16.76
42.95	70TH	16.91
43.37	75TH	17.07
43.84	80TH	17.26
44.39	85TH	17.48
45.09	90TH	17.75
46.16	95TH	18.17
46.85	97TH	18.45
47.37	98TH	18.65
48.19	99TH	18.97

(71) KNEE CIRCUMFERENCE

The horizontal circumference of the right knee at the level of the midpatella landmark at the center of the knee is measured with a tape. The subject stands erect with the feet about 10 cm apart and the weight distributed equally on both feet.



VARIABLE NO. 71—KNEE CIRCUMFERENCE

FEMALES

MALES

THE SUMMARY STATISTICS
CENTIMETERS INCHES

THE SUMMARY STATISTICS
CENTIMETERS INCHES

37.09	MEAN	14.60
0.13	SE (MEAN)	0.05
2.34	ST DEV	0.92
0.09	SE (SD)	0.04
31.90	MINIMUM	12.56
44.10	MAXIMUM	16.18
COEFF. OF VARIATION		6.3%
SYMMETRY—VETA I		0.40
KURTOSIS—VETA II		2.92
NUMBER OF SUBJECTS		334

38.63	MEAN	15.21
0.09	SE (MEAN)	0.04
2.00	ST DEV	0.79
0.06	SE (SD)	0.03
33.50	MINIMUM	13.19
43.80	MAXIMUM	17.24
COEFF. OF VARIATION		5.2%
SYMMETRY—VETA I		0.24
KURTOSIS—VETA II		2.55
NUMBER OF SUBJECTS		487

PERCENTILES
CENTIMETERS INCHES

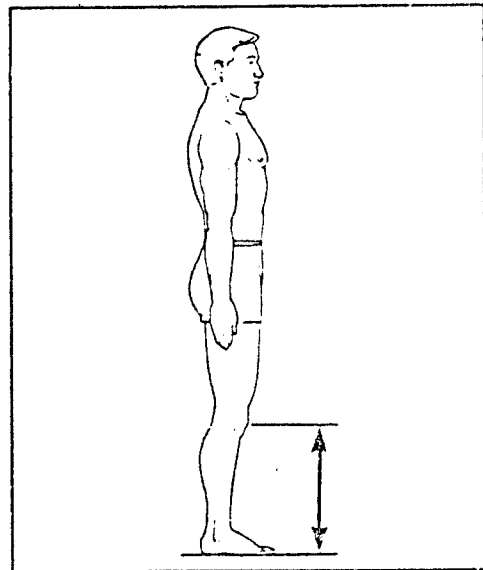
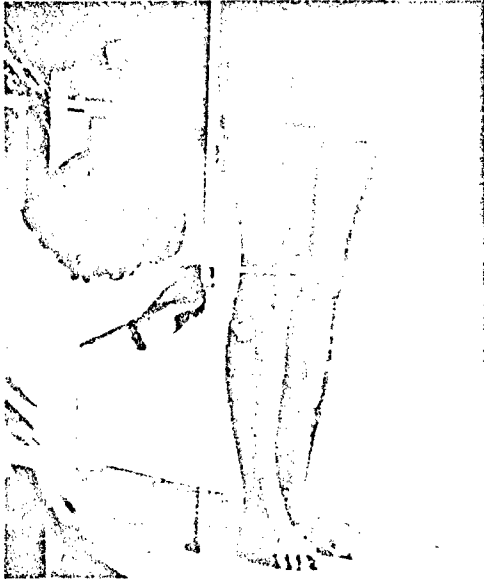
PERCENTILES
CENTIMETERS INCHES

32.70	1ST	12.88
32.93	2ND	12.96
33.13	3RD	13.04
33.48	5TH	13.18
34.13	10TH	13.44
34.62	15TH	13.63
35.04	20TH	13.79
35.41	25TH	13.94
35.74	30TH	14.07
36.06	35TH	14.20
36.36	40TH	14.32
36.66	45TH	14.43
36.95	50TH	14.55
37.24	55TH	14.66
37.55	60TH	14.78
37.86	65TH	14.91
38.19	70TH	15.04
38.56	75TH	15.18
38.98	80TH	15.35
39.47	85TH	15.54
40.13	90TH	15.80
41.19	95TH	16.22
41.95	97TH	16.52
42.56	98TH	16.76
43.63	99TH	17.18

34.53	1ST	13.59
34.95	2ND	13.76
35.21	3RD	13.86
35.56	5TH	14.00
36.12	10TH	14.22
36.52	15TH	14.38
36.85	20TH	14.51
37.15	25TH	14.62
37.43	30TH	14.73
37.69	35TH	14.84
37.96	40TH	14.94
38.22	45TH	15.05
38.49	50TH	15.15
38.76	55TH	15.26
39.04	60TH	15.37
39.34	65TH	15.49
39.66	70TH	15.61
40.00	75TH	15.75
40.40	80TH	15.90
40.85	85TH	16.08
41.41	90TH	16.30
42.20	95TH	16.61
42.66	97TH	16.80
42.96	98TH	16.91
43.35	99TH	17.07

(72) KNEE HEIGHT, MIDPATELLA

The vertical distance between a standing surface and the midpatella landmark at the center of the right knee is measured with an anthropometer. The subject stands erect with the heels together and the weight distributed equally on both feet.



VARIABLE NO. 72—KNEE HEIGHT, MIDPATELLA

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
47.16	MEAN	18.57
0.09	SE (MEAN)	0.04
1.68	ST DEV	0.66
0.07	SE (SD)	0.03
43.10	MINIMUM	16.97
53.60	MAXIMUM	21.10
COEFF. OF VARIATION		3.6%
SYMMETRY—VETA I		0.61
KURTOSIS—VETA II		3.58
NUMBER OF SUBJECTS		334

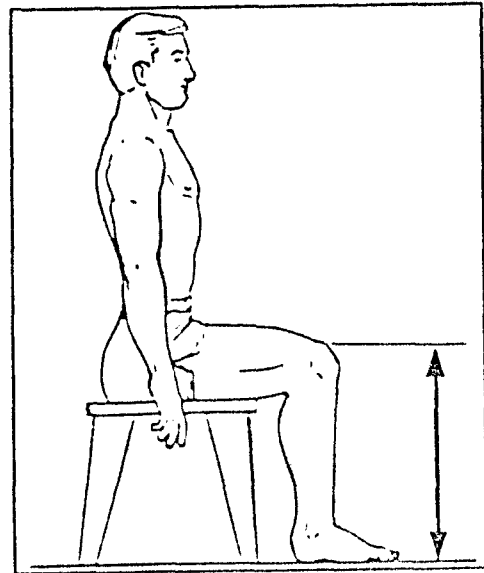
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
50.37	MEAN	19.83
0.11	SE (MEAN)	0.04
2.52	ST DEV	0.99
0.08	SE (SD)	0.03
43.80	MINIMUM	17.24
57.90	MAXIMUM	22.80
COEFF. OF VARIATION		5.0%
SYMMETRY—VETA I		0.19
KURTOSIS—VETA II		2.77
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
43.89	1ST	17.28
44.22	2ND	17.41
44.43	3RD	17.49
44.71	5TH	17.60
45.16	10TH	17.78
45.48	15TH	17.90
45.74	20TH	18.01
45.97	25TH	18.10
46.18	30TH	18.18
46.39	35TH	18.26
46.59	40TH	18.34
46.79	45TH	18.42
46.99	50TH	18.50
47.20	55TH	18.58
47.42	60TH	18.67
47.65	65TH	18.76
47.90	70TH	18.86
48.18	75TH	18.97
48.50	80TH	19.09
48.89	85TH	19.25
49.40	90TH	19.45
50.20	95TH	19.76
50.74	97TH	19.98
51.16	98TH	20.14
51.82	99TH	20.40

PERCENTILES		
CENTIMETERS		INCHES
45.15	1ST	17.78
45.63	2ND	17.97
45.95	3RD	18.09
46.41	5TH	18.27
47.17	10TH	18.57
47.72	15TH	18.79
48.17	20TH	18.96
48.57	25TH	19.12
48.93	30TH	19.27
49.28	35TH	19.40
49.61	40TH	19.53
49.94	45TH	19.66
50.27	50TH	19.79
50.60	55TH	19.92
50.94	60TH	20.06
51.29	65TH	20.19
51.67	70TH	20.34
52.08	75TH	20.50
52.53	80TH	20.68
53.06	85TH	20.89
53.72	90TH	21.15
54.67	95TH	21.52
55.27	97TH	21.76
55.69	98TH	21.92
56.31	99TH	22.17

(73) KNEE HEIGHT, SITTING

The vertical distance between a footrest surface and the suprapatella landmark at the top of the right knee (located and drawn while the subject stands) is measured with an anthropometer. The subject sits with the thighs parallel, the knees flexed 90 degrees, and the feet in line with the thighs.



VARIABLE NO. 73—KNEE HEIGHT, SITTING

FEMALES

MALES

THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
52.83	MEAN	20.80	
0.09	SE (MEAN)	0.04	
1.73	ST DEV	0.68	
0.07	SE (SD)	0.03	
48.40	MINIMUM	19.06	
60.00	MAXIMUM	23.62	
COEFF. OF VARIATION		3.3%	
SYMMETRY—VETA I		0.66	
KURTOSIS—VETA II		3.87	
NUMBER OF SUBJECTS		334	

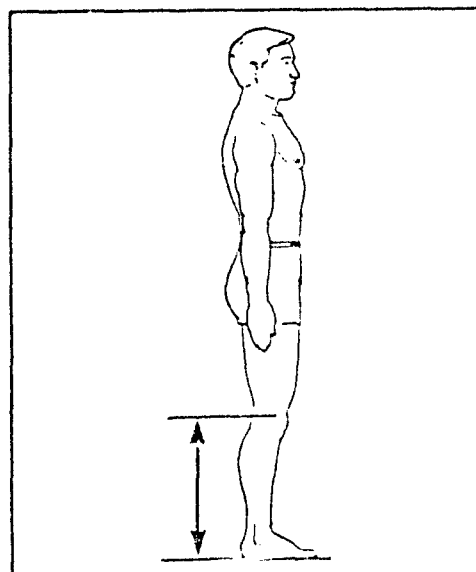
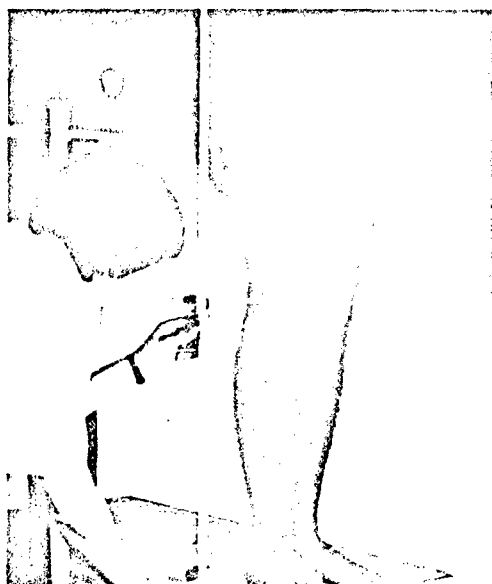
THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
55.90	MEAN	22.01	
0.12	SE (MEAN)	0.05	
2.58	ST DEV	1.02	
0.08	SE (SD)	0.03	
48.80	MINIMUM	19.21	
63.20	MAXIMUM	24.88	
COEFF. OF VARIATION		4.6%	
SYMMETRY—VETA I		0.17	
KURTOSIS—VETA II		2.79	
NUMBER OF SUBJECTS		487	

PERCENTILES		
CENTIMETERS		INCHES
49.50	1ST	19.49
49.84	2ND	19.62
50.05	3RD	19.71
50.34	5TH	19.82
50.79	10TH	20.00
51.11	15TH	20.12
51.37	20TH	20.22
51.60	25TH	20.32
51.82	30TH	20.40
52.03	35TH	20.48
52.23	40TH	20.56
52.44	45TH	20.64
52.64	50TH	20.73
52.86	55TH	20.81
53.08	60TH	20.90
53.32	65TH	20.99
53.57	70TH	21.09
53.86	75TH	21.20
54.19	80TH	21.33
54.58	85TH	21.49
55.09	90TH	21.69
55.88	95TH	22.00
56.40	97TH	22.20
56.78	98TH	22.36
57.39	99TH	22.59

PERCENTILES		
CENTIMETERS		INCHES
50.20	1ST	19.77
50.94	2ND	20.06
51.37	3RD	20.23
51.92	5TH	20.44
52.73	10TH	20.76
53.27	15TH	20.97
53.71	20TH	21.14
54.09	25TH	21.30
54.44	30TH	21.43
54.78	35TH	21.57
55.10	40TH	21.69
55.43	45TH	21.82
55.75	50TH	21.95
56.09	55TH	22.08
56.43	60TH	22.22
56.80	65TH	22.36
57.19	70TH	22.52
57.62	75TH	22.69
58.11	80TH	22.88
58.67	85TH	23.10
59.38	90TH	23.38
60.39	95TH	23.77
60.98	97TH	24.01
61.38	98TH	24.17
61.91	99TH	24.37

(74) LATERAL FEMORAL EPICONDYLE HEIGHT

The vertical distance between a standing surface and the standing lateral-femoral-epicondyle landmark on the outside of the right knee is measured with an anthropometer. The subject stands erect with the heels together and the weight distributed equally on both feet.



VARIABLE NO. 74—LATERAL FEMORAL EPICONDYLE HEIGHT

FEMALES

MALES

THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
47.30	MEAN	18.62	
0.09	SE (MEAN)	0.03	
1.62	ST DEV	0.64	
0.06	SE (SD)	0.02	
43.80	MINIMUM	17.24	
53.40	MAXIMUM	21.02	
COEFF. OF VARIATION		3.4%	
SYMMETRY—VETA I		0.55	
KURTOSIS—VETA II		3.59	
NUMBER OF SUBJECTS		334	

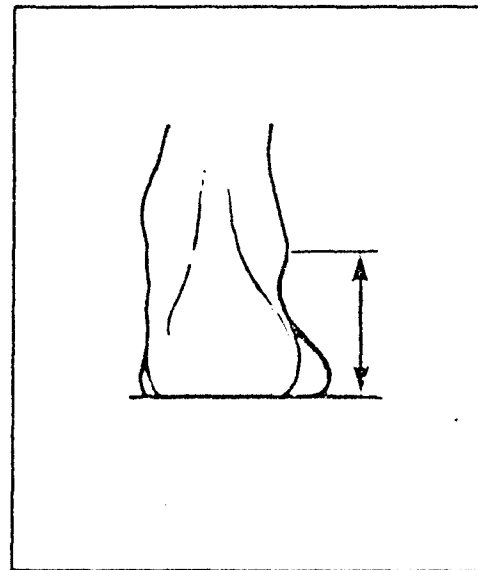
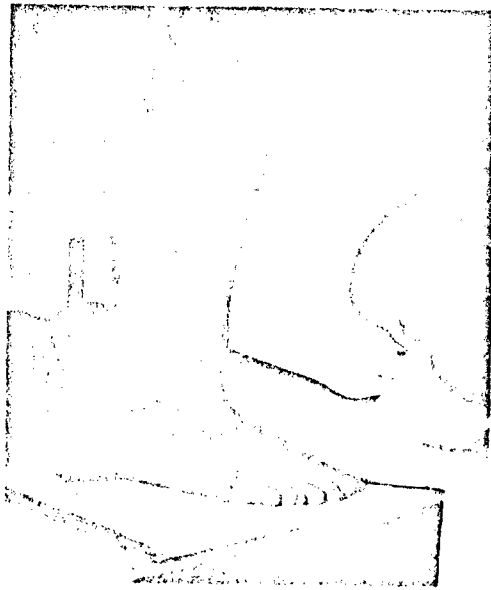
THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
50.44	MEAN	19.86	
0.11	SE (MEAN)	0.04	
2.42	ST DEV	0.95	
0.08	SE (SD)	0.03	
44.60	MINIMUM	17.56	
57.30	MAXIMUM	22.56	
COEFF. OF VARIATION		4.8%	
SYMMETRY—VETA I		0.16	
KURTOSIS—VETA II		2.71	
NUMBER OF SUBJECTS		487	

PERCENTILES		
CENTIMETERS		INCHES
44.04	1ST	17.34
44.37	2ND	17.47
44.58	3RD	17.55
44.86	5TH	17.66
45.32	10TH	17.84
45.65	15TH	17.97
45.91	20TH	18.07
46.14	25TH	18.17
46.36	30TH	18.25
46.56	35TH	18.33
46.76	40TH	18.41
46.96	45TH	18.49
47.16	50TH	18.57
47.37	55TH	18.65
47.58	60TH	18.73
47.80	65TH	18.82
48.04	70TH	18.91
48.31	75TH	19.02
48.62	80TH	19.14
48.98	85TH	19.28
49.45	90TH	19.47
50.18	95TH	19.76
50.67	97TH	19.95
51.03	98TH	20.09
51.61	99TH	20.32

PERCENTILES		
CENTIMETERS		INCHES
45.27	1ST	17.82
45.77	2ND	18.02
46.10	3RD	18.15
46.57	5TH	18.34
47.34	10TH	18.64
47.88	15TH	18.85
48.32	20TH	19.02
48.71	25TH	19.18
49.07	30TH	19.32
49.41	35TH	19.45
49.73	40TH	19.58
50.04	45TH	19.70
50.36	50TH	19.83
50.68	55TH	19.95
51.00	60TH	20.08
51.34	65TH	20.21
51.69	70TH	20.35
52.08	75TH	20.50
52.51	80TH	20.67
53.00	85TH	20.87
53.62	90TH	21.11
54.52	95TH	21.46
55.07	97TH	21.68
55.47	98TH	21.84
56.05	99TH	22.07

(75) LATERAL MALLEOLUS HEIGHT

The vertical distance between a standing surface and the lateral malleolus landmark on the outside of the right ankle is measured with a modified sliding caliper. The subject stands erect with the heels together and the weight distributed equally on both feet.



VARIABLE NO. 75—LATERAL MALLEOLUS HEIGHT

FEMALES

MALES

THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
6.36	MEAN	2.51	
0.03	SE(MEAN)	0.01	
0.52	ST DEV	0.20	
0.02	SE(SD)	0.01	
5.00	MINIMUM	1.97	
7.80	MAXIMUM	3.07	
COEFF. OF VARIATION		8.2%	
SYMMETRY—VETA I		0.11	
KURTOSIS—VETA II		2.87	
NUMBER OF SUBJECTS		334	

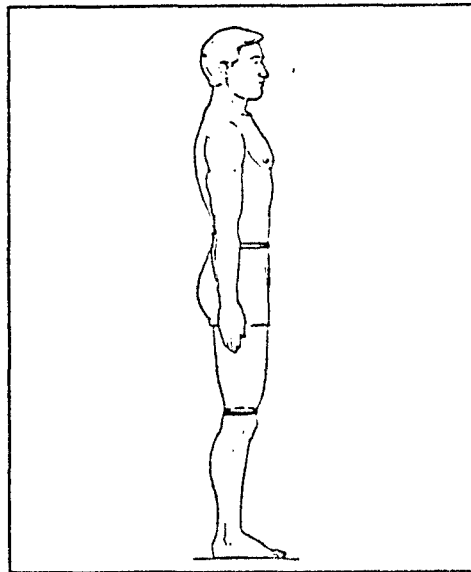
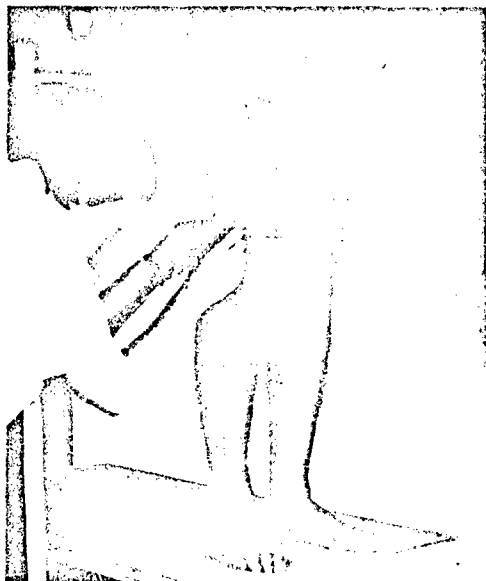
THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
6.95	MEAN	2.73	
0.02	SE(MEAN)	0.01	
0.51	ST DEV	0.20	
0.02	SE(SD)	0.01	
5.40	MINIMUM	2.13	
8.40	MAXIMUM	3.31	
COEFF. OF VARIATION		7.4%	
SYMMETRY—VETA I		-0.05	
KURTOSIS—VETA II		2.86	
NUMBER OF SUBJECTS		487	

PERCENTILES		
CENTIMETERS		INCHES
5.14	1ST	2.02
5.31	2ND	2.09
5.41	3RD	2.13
5.54	5TH	2.18
5.72	10TH	2.25
5.83	15TH	2.30
5.93	20TH	2.33
6.01	25TH	2.36
6.08	30TH	2.39
6.15	35TH	2.42
6.21	40TH	2.45
6.28	45TH	2.47
6.34	50TH	2.50
6.41	55TH	2.52
6.48	60TH	2.55
6.55	65TH	2.58
6.63	70TH	2.61
6.71	75TH	2.64
6.81	80TH	2.68
6.92	85TH	2.73
7.06	90TH	2.78
7.27	95TH	2.86
7.39	97TH	2.91
7.47	98TH	2.94
7.58	99TH	2.98

PERCENTILES		
CENTIMETERS		INCHES
5.73	1ST	2.26
5.88	2ND	2.32
5.98	3RD	2.35
6.10	5TH	2.40
6.29	10TH	2.47
6.41	15TH	2.52
6.51	20TH	2.56
6.59	25TH	2.60
6.67	30TH	2.63
6.74	35TH	2.65
6.81	40TH	2.68
6.88	45TH	2.71
6.94	50TH	2.73
7.01	55TH	2.76
7.08	60TH	2.79
7.15	65TH	2.81
7.22	70TH	2.84
7.30	75TH	2.87
7.39	80TH	2.91
7.49	85TH	2.95
7.62	90TH	3.00
7.79	95TH	3.07
7.89	97TH	3.11
7.97	98TH	3.14
8.06	99TH	3.17

(76) LOWER THIGH CIRCUMFERENCE

The horizontal circumference of the right thigh at the level of the suprapatella landmark at the top of the knee is measured with a tape. The subject stands erect with the feet about 10 cm apart and the weight distributed equally on both feet.



VARIABLE NO. 76—LOWER THIGH CIRCUMFERENCE

FEMALES

MALES

THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
38.21	MEAN	15.04	
0.15	SE (MEAN)	0.06	
2.78	ST DEV	1.10	
0.11	SE (SD)	0.04	
32.30	MINIMUM	12.72	
47.20	MAXIMUM	18.58	
COEFF. OF VARIATION		7.3%	
SYMMETRY—VETA I		0.40	
KURTOSIS—VETA II		3.02	
NUMBER OF SUBJECTS		334	

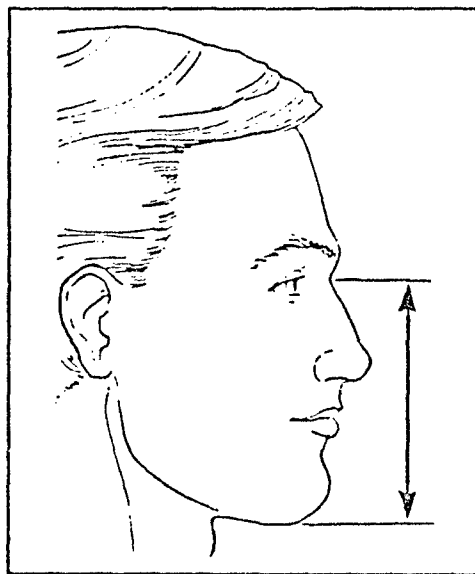
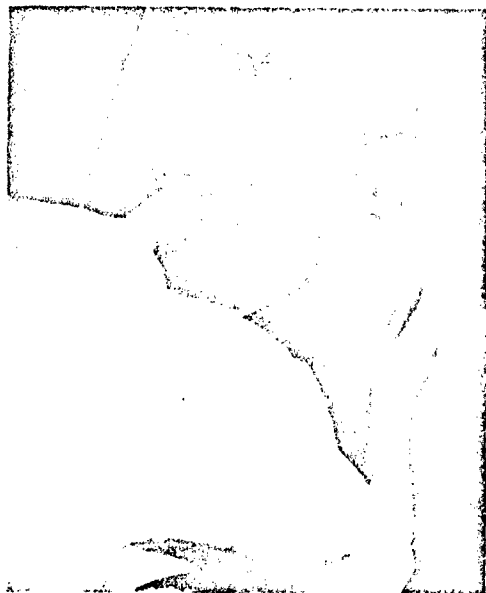
THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
39.06	MEAN	15.38	
0.11	SE (MEAN)	0.04	
2.39	ST DEV	0.94	
0.08	SE (SD)	0.03	
33.20	MINIMUM	13.07	
45.90	MAXIMUM	18.07	
COEFF. OF VARIATION		6.1%	
SYMMETRY—VETA I		0.22	
KURTOSIS—VETA II		2.59	
NUMBER OF SUBJECTS		487	

PERCENTILES		
CENTIMETERS		INCHES
32.84	1ST	12.93
33.18	2ND	13.06
33.45	3RD	13.17
33.90	5TH	13.34
34.69	10TH	13.66
35.28	15TH	13.89
35.77	20TH	14.08
36.21	25TH	14.26
36.61	30TH	14.41
36.98	35TH	14.56
37.34	40TH	14.70
37.69	45TH	14.84
38.04	50TH	14.98
38.40	55TH	15.12
38.76	60TH	15.26
39.13	65TH	15.41
39.53	70TH	15.56
39.97	75TH	15.74
40.47	80TH	15.94
41.07	85TH	16.17
41.86	90TH	16.48
43.11	95TH	16.97
44.01	97TH	17.33
44.71	98TH	17.60
45.93	99TH	18.08

PERCENTILES		
CENTIMETERS		INCHES
34.13	1ST	13.44
34.61	2ND	13.62
34.92	3RD	13.75
35.34	5TH	13.91
36.04	10TH	14.19
36.54	15TH	14.38
36.95	20TH	14.55
37.32	25TH	14.69
37.66	30TH	14.83
37.98	35TH	14.95
38.30	40TH	15.08
38.61	45TH	15.20
38.93	50TH	15.33
39.25	55TH	15.45
39.58	60TH	15.58
39.93	65TH	15.72
40.30	70TH	15.86
40.70	75TH	16.02
41.15	80TH	16.20
41.68	85TH	16.41
42.33	90TH	16.67
43.27	95TH	17.04
43.84	97TH	17.26
44.23	98TH	17.41
44.78	99TH	17.63

(77) MENTON-SELLION LENGTH

The distance between the menton landmark at the bottom of the chin and the sellion landmark at the deepest point of the nasal root depression is measured with a sliding caliper. The teeth are slightly occluded.



VARIABLE NO. 77—MENTON-SELLION LENGTH

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
11.46	MEAN	4.51
0.03	SE(MEAN)	0.01
0.61	ST DEV	0.24
0.02	SE(SD)	0.01
9.50	MINIMUM	3.74
13.20	MAXIMUM	5.20
COEFF. OF VARIATION		5.3%
SYMMETRY—VETA I		0.17
KURTOSIS—VETA II		3.24
NUMBER OF SUBJECTS		334

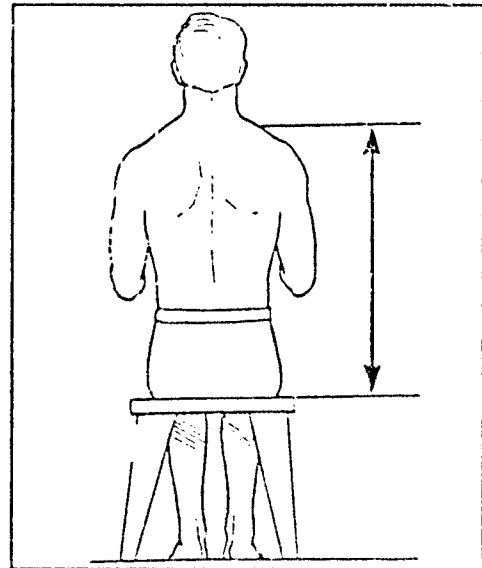
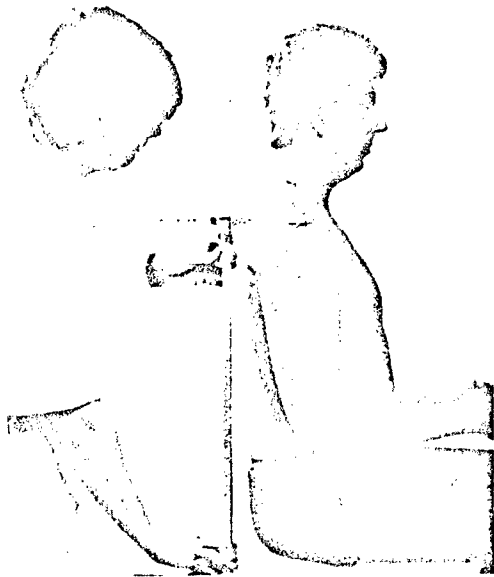
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
12.24	MEAN	4.82
0.03	SE(MEAN)	0.01
0.62	ST DEV	0.25
0.02	SE(SD)	0.01
10.70	MINIMUM	4.21
14.20	MAXIMUM	5.59
COEFF. OF VARIATION		5.1%
SYMMETRY—VETA I		0.23
KURTOSIS—VETA II		2.94
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
10.09	1ST	3.97
10.27	2ND	4.04
10.37	3RD	4.08
10.51	5TH	4.14
10.72	10TH	4.22
10.85	15TH	4.27
10.96	20TH	4.31
11.05	25TH	4.35
11.13	30TH	4.38
11.21	35TH	4.41
11.28	40TH	4.44
11.36	45TH	4.47
11.43	50TH	4.50
11.50	55TH	4.53
11.58	60TH	4.56
11.66	65TH	4.59
11.74	70TH	4.62
11.84	75TH	4.66
11.95	80TH	4.70
12.08	85TH	4.75
12.25	90TH	4.82
12.52	95TH	4.93
12.70	97TH	5.00
12.85	98TH	5.06
13.08	99TH	5.15

PERCENTILES		
CENTIMETERS		INCHES
10.87	1ST	4.28
11.02	2ND	4.34
11.11	3RD	4.37
11.24	5TH	4.42
11.44	10TH	4.50
11.58	15TH	4.56
11.70	20TH	4.61
11.80	25TH	4.64
11.89	30TH	4.68
11.97	35TH	4.71
12.06	40TH	4.75
12.14	45TH	4.78
12.21	50TH	4.81
12.30	55TH	4.84
12.38	60TH	4.87
12.46	65TH	4.91
12.55	70TH	4.94
12.65	75TH	4.98
12.76	80TH	5.02
12.89	85TH	5.08
13.06	90TH	5.14
13.31	95TH	5.24
13.47	97TH	5.30
13.59	98TH	5.35
13.78	99TH	5.43

(78) MIDSHOULDER HEIGHT, SITTING

The vertical distance between a sitting surface and the midshoulder landmark at the top of the right shoulder is measured with an anthropometer. The subject sits erect looking straight ahead. The shoulders and upper arms are relaxed and the forearms and hands are extended forward horizontally with the palms facing each other. The measurement is taken at the maximum point of quiet respiration.



VARIABLE NO. 78—MIDSHOULDER HEIGHT, SITTING

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
60.65	MEAN	23.88
0.12	SE (MEAN)	0.05
2.28	ST DEV	0.90
0.09	SE (SD)	0.03
54.40	MINIMUM	21.42
69.40	MAXIMUM	27.32
COEFF. OF VARIATION		3.8%
SYMMETRY—VETA I		0.02
KURTOSIS—VETA II		3.10
NUMBER OF SUBJECTS		334

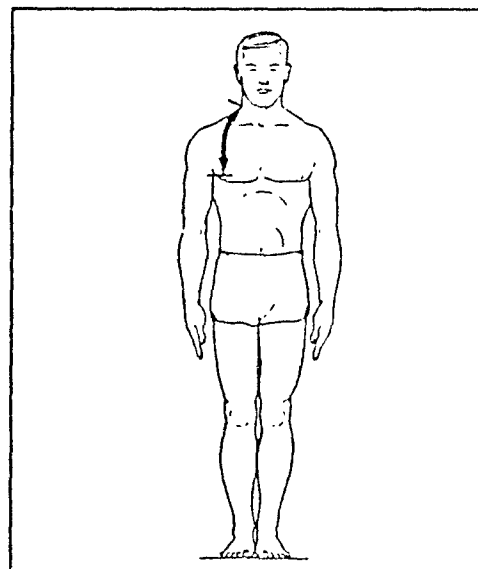
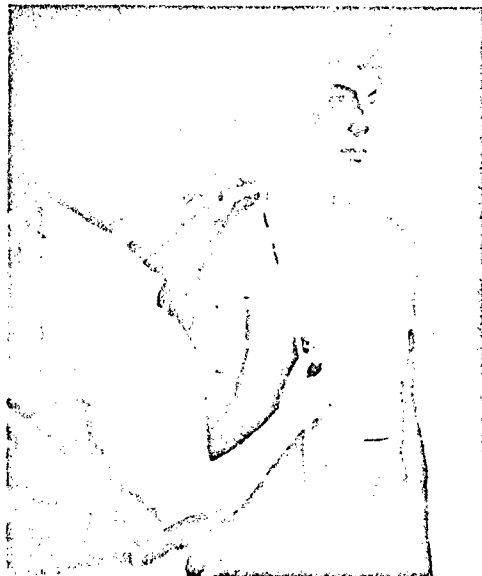
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
64.24	MEAN	25.29
0.12	SE (MEAN)	0.05
2.74	ST DEV	1.08
0.09	SE (SD)	0.03
54.70	MINIMUM	21.54
72.30	MAXIMUM	28.46
COEFF. OF VARIATION		4.3%
SYMMETRY—VETA I		-0.19
KURTOSIS—VETA II		3.25
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
55.31	1ST	21.78
55.90	2ND	22.01
56.29	3RD	22.16
56.83	5TH	22.37
57.67	10TH	22.71
58.25	15TH	22.93
58.71	20TH	23.11
59.11	25TH	23.27
59.46	30TH	23.41
59.79	35TH	23.54
60.10	40TH	23.66
60.40	45TH	23.78
60.70	50TH	23.90
60.99	55TH	24.01
61.28	60TH	24.13
61.58	65TH	24.25
61.90	70TH	24.37
62.23	75TH	24.50
62.60	80TH	24.65
63.02	85TH	24.81
63.54	90TH	25.01
64.26	95TH	25.30
64.71	97TH	25.48
65.03	98TH	25.60
65.50	99TH	25.79

PERCENTILES		
CENTIMETERS		INCHES
56.94	1ST	22.42
58.07	2ND	22.86
58.74	3RD	23.12
59.58	5TH	23.46
60.76	10TH	23.92
61.50	15TH	24.21
62.06	20TH	24.43
62.53	25TH	24.62
62.94	30TH	24.78
63.31	35TH	24.92
63.66	40TH	25.06
63.99	45TH	25.19
64.32	50TH	25.32
64.64	55TH	25.45
64.97	60TH	25.58
65.31	65TH	25.71
65.67	70TH	25.85
66.05	75TH	26.01
66.49	80TH	26.18
66.99	85TH	26.38
67.64	90TH	26.63
68.60	95TH	27.01
69.22	97TH	27.25
69.68	98TH	27.43
70.39	99TH	27.71

(79) NECK-BUSTPOINT/THELION LENGTH

The distance between the trapezius landmark at the right side of the neck and the right bustpoint landmark on women or the right nipple (thelion) on men is measured with a tape. The subject stands erect looking straight ahead. The shoulders and upper extremities are relaxed. The measurement is taken at the maximum point of quiet respiration.



VARIABLE NO. 79—NECK-BUSTPOINT/IBELION LENGTH

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
27.38	MEAN	10.78
0.12	SE(MEAN)	0.05
2.28	ST DEV	0.90
0.09	SE(SD)	0.03
20.90	MINIMUM	8.23
34.70	MAXIMUM	13.66
COEFF. OF VARIATION		8.3%
SYMMETRY—VETA I		0.26
KURTOSIS—VETA II		3.09
NUMBER OF SUBJECTS		334

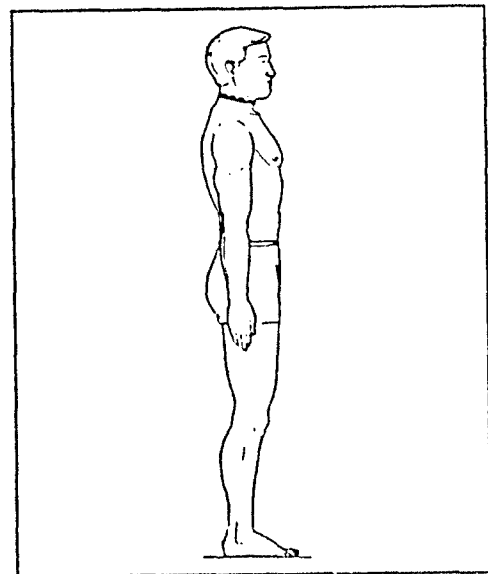
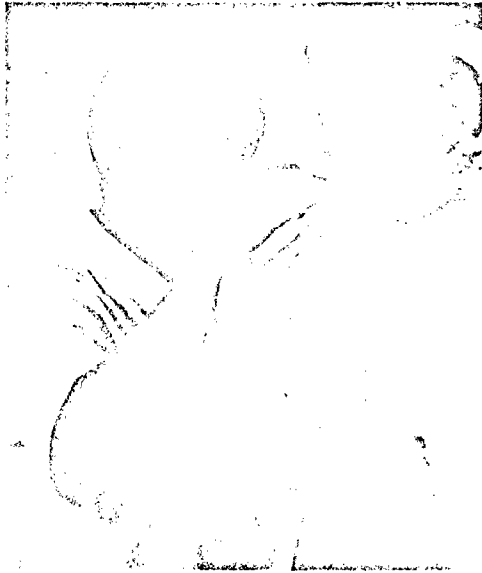
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
28.07	MEAN	11.05
0.08	SE(MEAN)	0.03
1.70	ST DEV	0.67
0.05	SE(SD)	0.02
24.00	MINIMUM	9.45
33.80	MAXIMUM	13.31
COEFF. OF VARIATION		6.1%
SYMMETRY—VETA I		0.16
KURTOSIS—VETA II		2.78
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
22.54	1ST	8.87
23.03	2ND	9.07
23.35	3RD	9.19
23.81	5TH	9.37
24.54	10TH	9.66
25.05	15TH	9.86
25.45	20TH	10.02
25.81	25TH	10.16
26.13	30TH	10.29
26.43	35TH	10.41
26.72	40TH	10.52
27.00	45TH	10.63
27.28	50TH	10.74
27.56	55TH	10.85
27.84	60TH	10.96
28.14	65TH	11.08
28.46	70TH	11.21
28.82	75TH	11.35
29.22	80TH	11.50
29.69	85TH	11.69
30.32	90TH	11.94
31.29	95TH	12.32
31.97	97TH	12.59
32.49	98TH	12.79
33.36	99TH	13.13

PERCENTILES		
CENTIMETERS		INCHES
24.36	1ST	9.59
24.76	2ND	9.75
25.01	3RD	9.85
25.35	5TH	9.98
25.89	10TH	10.19
26.26	15TH	10.34
26.57	20TH	10.46
26.84	25TH	10.57
27.10	30TH	10.67
27.33	35TH	10.76
27.56	40TH	10.85
27.78	45TH	10.94
28.01	50TH	11.03
28.24	55TH	11.12
28.47	60TH	11.21
28.72	65TH	11.31
28.92	70TH	11.41
29.26	75TH	11.52
29.57	80TH	11.64
29.93	85TH	11.78
30.38	90TH	11.96
31.00	95TH	12.20
31.36	97TH	12.35
31.61	98TH	12.45
31.94	99TH	12.58

(80) NECK CIRCUMFERENCE

The circumference of the neck at the level of the infrathyroid landmark (Adam's apple) is measured with a tape. The plane of the measurement is perpendicular to the long axis of the neck. The subject stands erect with the head in the Frankfort plane. The shoulders and upper extremities are relaxed.



VARIABLE NO. 80—NECK CIRCUMFERENCE

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
31.74	MEAN	12.50
0.09	SE(MEAN)	0.03
1.60	ST DEV	0.63
0.06	SE(SD)	0.02
27.20	MINIMUM	10.71
37.20	MAXIMUM	14.65
COEFF. OF VARIATION		5.0%
SYMMETRY—VETA I		0.45
KURTOSIS—VETA II		3.62
NUMBER OF SUBJECTS		334

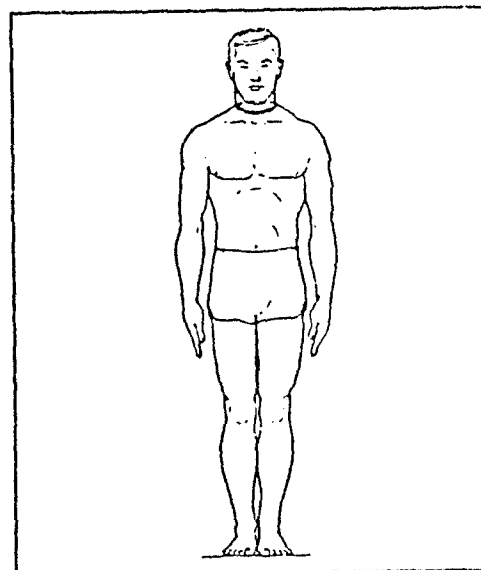
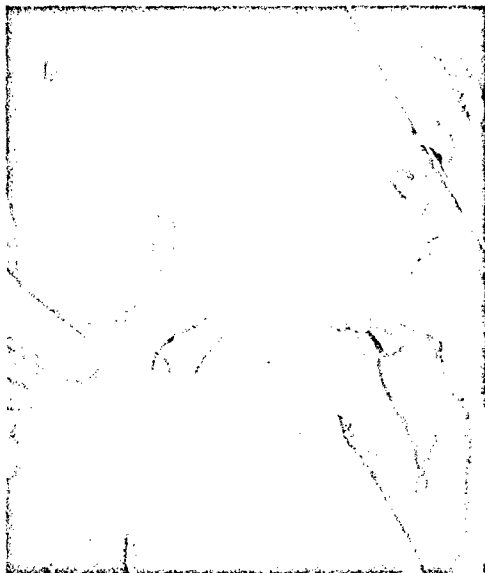
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
38.01	MEAN	14.96
0.08	SE(MEAN)	0.03
1.78	ST DEV	0.70
0.06	SE(SD)	0.02
33.40	MINIMUM	13.15
42.90	MAXIMUM	16.89
COEFF. OF VARIATION		4.7%
SYMMETRY—VETA I		0.30
KURTOSIS—VETA II		2.77
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
28.38	1ST	11.17
28.74	2ND	11.32
28.98	3RD	11.41
29.31	5TH	11.54
29.82	10TH	11.74
30.16	15TH	11.88
30.44	20TH	11.98
30.67	25TH	12.08
30.89	30TH	12.16
31.08	35TH	12.24
31.27	40TH	12.31
31.45	45TH	12.38
31.64	50TH	12.46
31.82	55TH	12.53
32.01	60TH	12.60
32.21	65TH	12.68
32.43	70TH	12.77
32.67	75TH	12.86
32.96	80TH	12.98
33.30	85TH	13.11
33.77	90TH	13.29
34.54	95TH	13.60
35.11	97TH	13.82
35.57	98TH	14.00
36.37	99TH	14.32

PERCENTILES		
CENTIMETERS		INCHES
34.37	1ST	13.53
34.75	2ND	13.68
34.99	3RD	13.78
35.31	5TH	13.90
35.81	10TH	14.10
36.17	15TH	14.24
36.46	20TH	14.35
36.72	25TH	14.46
36.96	30TH	14.55
37.20	35TH	14.64
37.42	40TH	14.73
37.65	45TH	14.82
37.88	50TH	14.91
38.11	55TH	15.00
38.35	60TH	15.10
38.61	65TH	15.20
38.88	70TH	15.31
39.19	75TH	15.43
39.53	80TH	15.56
39.93	85TH	15.72
40.44	90TH	15.92
41.19	95TH	16.22
41.65	97TH	16.40
41.97	98TH	16.53
42.44	99TH	16.71

(81) NECK CIRCUMFERENCE, BASE

The circumference of the base of the neck is measured with a tape passing over the drawn lateral and anterior neck landmarks. The subject stands erect with the head in the Frankfort plane. The shoulders and upper extremities are relaxed.



VARIABLE NO. 81—NECK CIRCUMFERENCE, BASE

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
34.96	MEAN	13.76
0.09	SE (MEAN)	0.03
1.58	ST DEV	0.62
0.06	SE(SD)	0.02
29.90	MINIMUM	11.77
39.70	MAXIMUM	15.63
COEFF. OF VARIATION		4.5%
SYMMETRY—VETA I		0.21
KURTOSIS—VETA II		3.11
NUMBER OF SUBJECTS		334

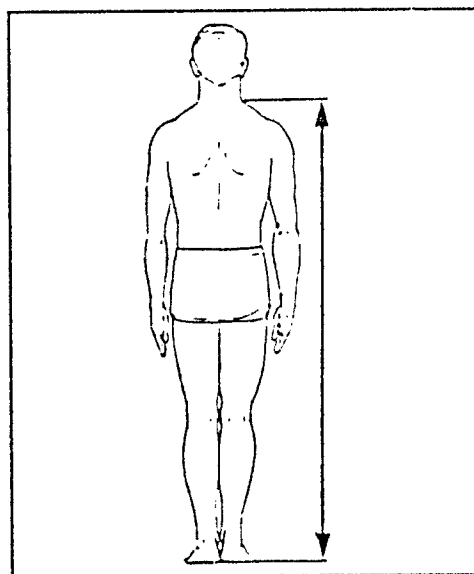
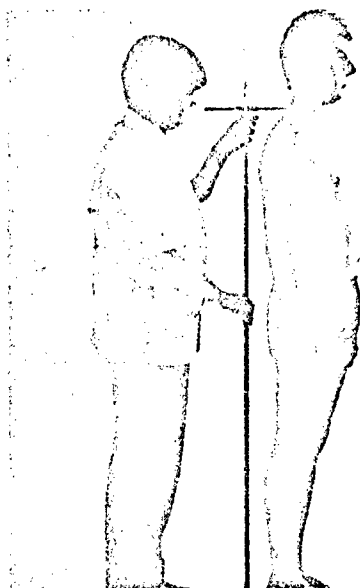
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
40.83	MEAN	16.08
0.08	SE (MEAN)	0.03
1.84	ST DEV	0.73
0.06	SE(SD)	0.02
35.30	MINIMUM	13.90
45.90	MAXIMUM	18.07
COEFF. OF VARIATION		4.5%
SYMMETRY—VETA I		0.24
KURTOSIS—VETA II		2.86
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
31.52	1ST	12.41
31.91	2ND	12.56
32.15	3RD	12.66
32.48	5TH	12.79
33.00	10TH	12.99
33.35	15TH	13.13
33.62	20TH	13.24
33.87	25TH	13.33
34.09	30TH	13.42
34.30	35TH	13.50
34.50	40TH	13.58
34.70	45TH	13.66
34.89	50TH	13.74
35.09	55TH	13.82
35.29	60TH	13.90
35.51	65TH	13.98
35.74	70TH	14.07
35.99	75TH	14.17
36.28	80TH	14.28
36.62	85TH	14.42
37.05	90TH	14.59
37.73	95TH	14.85
38.17	97TH	15.03
38.51	98TH	15.16
39.05	99TH	15.37

PERCENTILES		
CENTIMETERS		INCHES
36.84	1ST	14.50
37.35	2ND	14.70
37.65	3RD	14.82
38.03	5TH	14.97
38.59	10TH	15.19
38.96	15TH	15.34
39.26	20TH	15.46
39.53	25TH	15.56
39.78	30TH	15.66
40.01	35TH	15.75
40.24	40TH	15.84
40.47	45TH	15.93
40.70	50TH	16.02
40.94	55TH	16.12
41.19	60TH	16.22
41.45	65TH	16.32
41.73	70TH	16.43
42.04	75TH	16.55
42.40	80TH	16.69
42.82	85TH	16.86
43.36	90TH	17.07
44.14	95TH	17.38
44.62	97TH	17.57
44.95	98TH	17.70
45.42	99TH	17.88

(82) NECK HEIGHT, LATERAL

The vertical distance between a standing surface and the trapezius landmark on the right side of the neck is measured with an anthropometer. The subject stands erect with the head in the Frankfort plane. The heels are together with the weight distributed equally on both feet. The shoulders and upper extremities are relaxed. The measurement is taken at the maximum point of quiet respiration.



VARIABLE NO. 82—NECK HEIGHT, LATERAL

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
144.07	MEAN	56.72
0.22	SE(MEAN)	0.09
4.05	ST DEV	1.59
0.16	SE(SD)	0.06
133.50	MINIMUM	52.56
161.30	MAXIMUM	63.50
COEFF. OF VARIATION		2.8%
SYMMETRY—VETA I		0.45
KURTOSIS—VETA II		3.63
NUMBER OF SUBJECTS		334

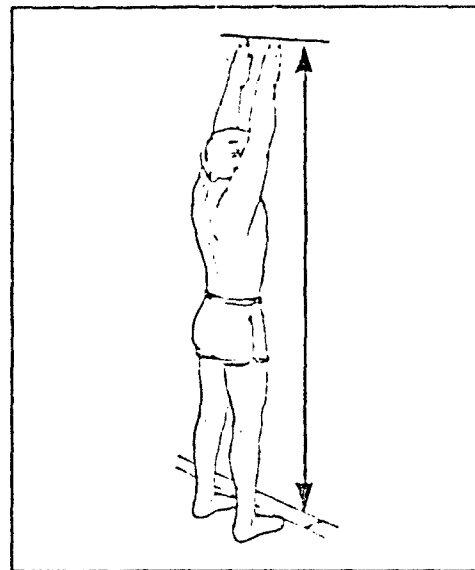
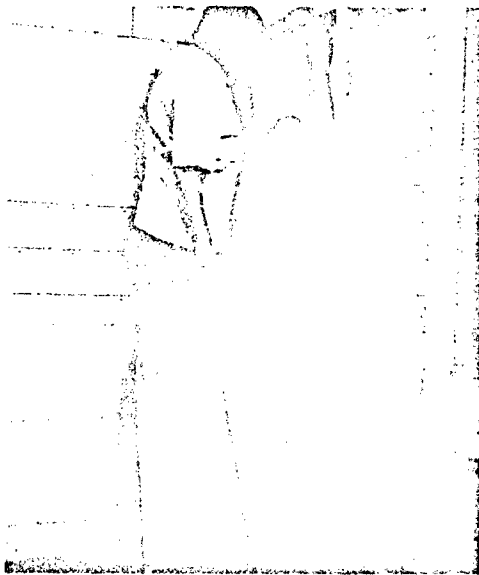
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
152.22	MEAN	59.93
0.27	SE(MEAN)	0.10
5.87	ST DEV	2.31
0.19	SE(SD)	0.07
134.90	MINIMUM	53.11
167.70	MAXIMUM	66.02
COEFF. OF VARIATION		3.9%
SYMMETRY—VETA I		-0.02
KURTOSIS—VETA II		2.78
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
135.07	1ST	53.18
136.31	2ND	53.67
137.02	3RD	53.95
137.91	5TH	54.30
139.18	10TH	54.80
140.01	15TH	55.12
140.67	20TH	55.38
141.25	25TH	55.61
141.77	30TH	55.82
142.27	35TH	56.01
142.76	40TH	56.21
143.25	45TH	56.40
143.74	50TH	56.59
144.25	55TH	56.79
144.77	60TH	57.00
145.33	65TH	57.22
145.94	70TH	57.45
146.61	75TH	57.72
147.37	80TH	58.02
148.28	85TH	58.38
149.44	90TH	58.84
151.15	95TH	59.51
152.22	97TH	59.93
152.97	98TH	60.23
154.05	99TH	60.65

PERCENTILES		
CENTIMETERS		INCHES
138.26	1ST	54.43
140.05	2ND	55.14
141.14	3RD	55.57
142.55	5TH	56.12
144.67	10TH	56.96
146.08	15TH	57.51
147.19	20TH	57.95
148.17	25TH	58.33
149.04	30TH	58.63
149.86	35TH	59.00
150.65	40TH	59.31
151.41	45TH	59.61
152.17	50TH	59.91
152.94	55TH	60.21
153.72	60TH	60.52
154.54	65TH	60.84
155.40	70TH	61.18
156.33	75TH	61.55
157.36	80TH	61.95
158.55	85TH	62.42
160.01	90TH	63.00
162.05	95TH	63.80
163.25	97TH	64.27
164.04	98TH	64.58
165.11	99TH	65.00

(83) OVERHEAD FINGERTIP REACH

The vertical distance between a standing surface and the tip of the right middle finger when the arm is extended overhead is measured on a wall scale. The subject stands facing a wall-mounted scale with both arms extended overhead parallel to each other. The toes are 20 cm from the wall and the feet are about 10 cm apart. The palms of the hands rest on the scale. A block is placed against the tip of the finger to establish the measurement. The measurement is taken at the maximum point of quiet respiration.



VARIABLE NO. 83—OVERHEAD FINGER TIP REACH

FEMALES

MALES

THE SUMMARY STATISTICS

CENTIMETERS		INCHES
212.23	MEAN	83.55
0.33	SE (MEAN)	0.13
6.12	ST DEV	2.41
0.24	SE (SD)	0.09
198.10	MINIMUM	77.99
237.60	MAXIMUM	93.54
COEFF. OF VARIATION		2.9%
SYMMETRY—VETA I		0.60
KURTOSIS—VETA II		3.70
NUMBER OF SUBJECTS		334

THE SUMMARY STATISTICS

CENTIMETERS		INCHES
224.26	MEAN	88.29
0.41	SE (MEAN)	0.16
9.09	ST DEV	3.58
0.29	SE (SD)	0.11
200.50	MINIMUM	78.94
250.80	MAXIMUM	98.74
COEFF. OF VARIATION		4.1%
SYMMETRY—VETA I		0.06
KURTOSIS—VETA II		2.78
NUMBER OF SUBJECTS		487

PERCENTILES

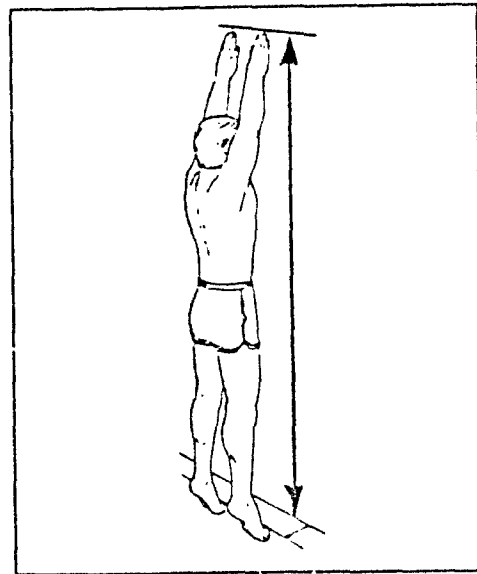
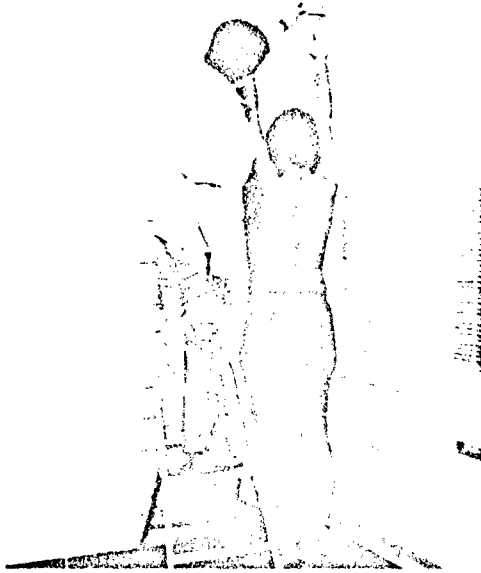
CENTIMETERS		INCHES
200.59	1ST	78.97
201.55	2ND	79.35
202.21	3RD	79.61
203.17	5TH	79.99
204.80	10TH	80.63
205.99	15TH	81.10
206.98	20TH	81.49
207.87	25TH	81.84
208.69	30TH	82.16
209.48	35TH	82.47
210.24	40TH	82.77
210.99	45TH	83.07
211.75	50TH	83.37
212.52	55TH	83.67
213.32	60TH	83.98
214.16	65TH	84.31
215.05	70TH	84.67
216.04	75TH	85.05
217.15	80TH	85.49
218.46	85TH	86.01
220.15	90TH	86.67
222.67	95TH	87.66
224.31	97TH	88.31
225.52	98TH	88.79
227.40	99TH	89.53

PERCENTILES

CENTIMETERS		INCHES
203.52	1ST	80.12
205.81	2ND	81.03
207.29	3RD	81.61
209.31	5TH	82.41
212.49	10TH	83.66
214.66	15TH	84.51
216.40	20TH	85.20
217.92	25TH	85.80
219.29	30TH	86.34
220.57	35TH	86.84
221.79	40TH	87.32
222.97	45TH	87.78
224.15	50TH	88.25
225.33	55TH	88.71
226.52	60TH	89.18
227.77	65TH	89.67
229.08	70TH	90.19
230.50	75TH	90.75
232.09	80TH	91.38
233.93	85TH	92.10
236.25	90TH	93.01
239.63	95TH	94.34
241.78	97TH	95.19
243.33	98TH	95.80
245.71	99TH	96.74

(84) OVERHEAD FINGERTIP REACH, EXTENDED

The vertical distance between a standing surface and the tip of the right middle finger when the arm is extended overhead as high as possible is measured on a wall scale. The subject stands on his/her toes facing a wall-mounted scale with both arms parallel and extended overhead as high as possible. The toes are 20 cm from the wall and the feet are about 10 cm apart. The palms of the hands rest on the scale. A block is placed against the tip of the finger to establish the measurement. The measurement is taken at the maximum point of quiet respiration.



VARIABLE NO. 84—OVERHEAD FINGERTIP REACH, EXTENDED

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
221.64	MEAN	87.26
0.34	SE(MEAN)	0.13
6.22	ST DEV	2.45
0.24	SE(SD)	0.09
209.10	MINIMUM	82.32
246.40	MAXIMUM	97.01
COEFF. OF VARIATION		2.8%
SYMMETRY—VETA I		0.62
KURTOSIS—VETA II		3.58
NUMBER OF SUBJECTS		334

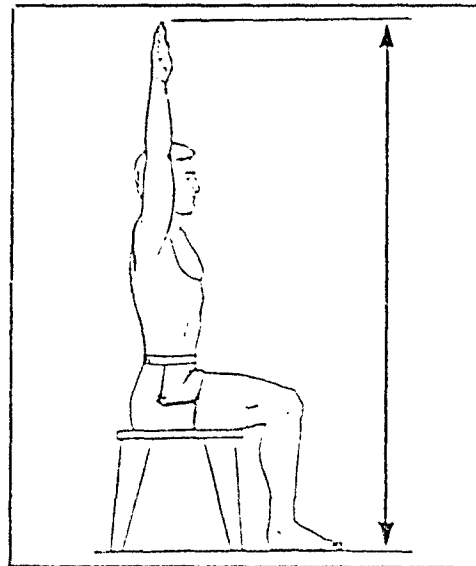
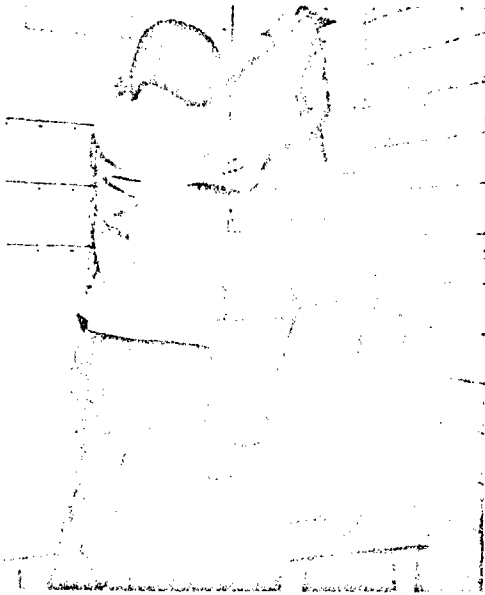
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
234.17	MEAN	92.19
0.42	SE(MEAN)	0.17
9.29	ST DEV	3.66
0.30	SE(SD)	0.12
208.90	MINIMUM	82.24
262.10	MAXIMUM	103.19
COEFF. OF VARIATION		4.0%
SYMMETRY—VETA I		0.06
KURTOSIS—VETA II		2.77
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
209.71	1ST	82.56
210.88	2ND	83.02
211.62	3RD	83.31
212.62	5TH	83.71
214.22	10TH	84.34
215.36	15TH	84.79
216.32	20TH	85.16
217.18	25TH	85.51
217.99	30TH	85.82
218.77	35TH	86.13
219.53	40TH	86.43
220.29	45TH	86.73
221.06	50TH	87.03
221.86	55TH	87.35
222.69	60TH	87.67
223.57	65TH	88.02
224.52	70TH	88.39
225.56	75TH	88.80
226.76	80TH	89.28
228.16	85TH	89.83
229.96	90TH	90.54
232.60	95TH	91.58
234.26	97TH	92.23
235.44	98TH	92.69
237.16	99TH	93.37

PERCENTILES		
CENTIMETERS		INCHES
213.29	1ST	83.97
215.62	2ND	84.89
217.09	3RD	85.47
219.09	5TH	86.25
222.21	10TH	87.49
224.37	15TH	88.34
226.11	20TH	89.02
227.64	25TH	89.62
229.03	30TH	90.17
230.34	35TH	90.68
231.59	40TH	91.18
232.81	45TH	91.66
234.03	50TH	92.14
235.25	55TH	92.62
236.50	60TH	93.11
237.80	65TH	93.62
239.17	70TH	94.16
240.65	75TH	94.75
242.31	80TH	95.40
244.19	85TH	96.14
246.53	90TH	97.06
249.82	95TH	98.36
251.79	97TH	99.13
253.13	98TH	99.66
255.01	99TH	100.40

(85) OVERHEAD FINGERTIP REACH, SITTING

The vertical distance between a sitting surface and the tip of the right middle finger of a seated subject whose arm is extended overhead is measured on a wall scale. The subject sits erect on a flat surface 40.8 cm high with the right arm and hand extended vertically overhead as far as possible and the palm of the hand facing forward. Neither the back nor the arm touches a wall. A block placed at the tip of the middle finger spans the distance between the finger and the wall and establishes the measurement on the wall scale. The measurement is made at the maximum point of quiet respiration.



VARIABLE NO. 85—OVERHEAD FINGERTIP REACH, SITTING

FEMALES

THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
136.26	MEAN	53.64	
0.22	SE(MEAN)	0.09	
4.10	ST DEV	1.62	
0.16	SE(SD)	0.06	
123.70	MINIMUM	48.70	
149.00	MAXIMUM	58.66	
COEFF. OF VARIATION		3.0%	
SYMMETRY—VETA I		0.21	
KURTOSIS—VETA II		3.16	
NUMBER OF SUBJECTS		334	

MALES

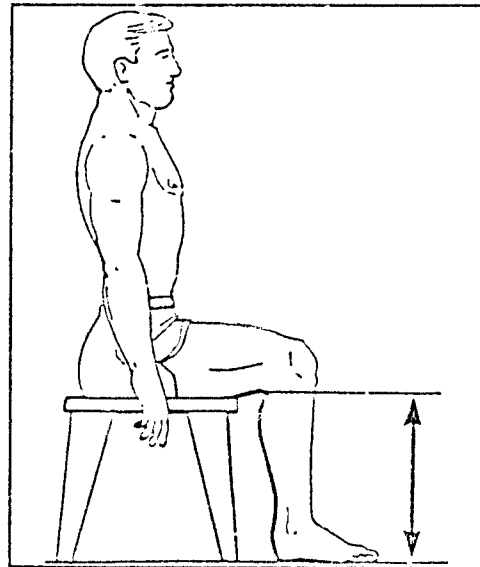
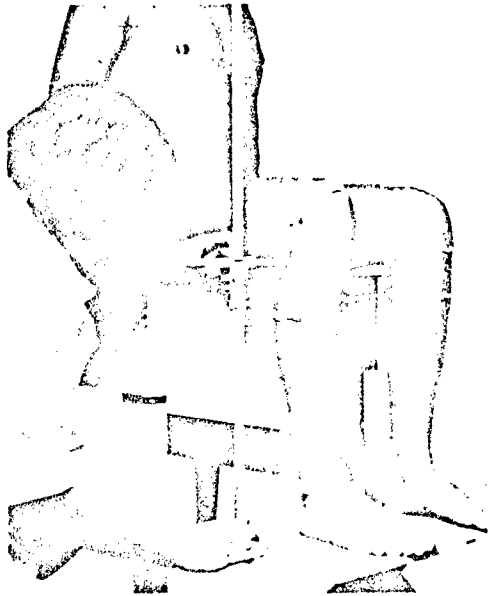
THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
143.99	MEAN	56.69	
0.25	SE(MEAN)	0.10	
5.58	ST DEV	2.20	
0.18	SE(SD)	0.07	
128.00	MINIMUM	50.39	
158.30	MAXIMUM	62.32	
COEFF. OF VARIATION		3.9%	
SYMMETRY—VETA I		-0.01	
KURTOSIS—VETA II		2.85	
NUMBER OF SUBJECTS		487	

PERCENTILES		
CENTIMETERS		INCHES
127.00	1ST	50.00
128.09	2ND	50.43
128.77	3RD	50.70
129.68	5TH	51.05
131.05	10TH	51.60
131.98	15TH	51.96
132.72	20TH	52.25
133.37	25TH	52.51
133.95	30TH	52.74
134.50	35TH	52.95
135.02	40TH	53.16
135.54	45TH	53.36
136.05	50TH	53.56
136.57	55TH	53.77
137.11	60TH	53.98
137.67	65TH	54.20
138.27	70TH	54.44
138.92	75TH	54.69
139.67	80TH	54.99
140.54	85TH	55.33
141.67	90TH	55.77
143.36	95TH	56.44
144.46	97TH	56.87
145.27	98TH	57.19
146.53	99TH	57.69

PERCENTILES		
CENTIMETERS		INCHES
130.74	1ST	51.47
132.35	2ND	52.10
133.35	3RD	52.50
134.70	5TH	53.03
136.75	10TH	53.84
138.13	15TH	54.38
139.21	20TH	54.81
140.15	25TH	55.18
140.99	30TH	55.51
141.77	35TH	55.82
142.51	40TH	56.11
143.23	45TH	56.39
143.95	50TH	56.67
144.66	55TH	56.95
145.38	60TH	57.24
146.13	65TH	57.53
146.93	70TH	57.84
147.78	75TH	58.18
148.75	80TH	58.56
149.86	85TH	59.00
151.26	90TH	59.55
153.31	95TH	60.36
154.62	97TH	60.87
155.57	98TH	61.25
157.02	99TH	61.82

(86) POPLITEAL HEIGHT

The vertical distance from a footrest surface to the back of the right knee (the popliteal fossa at the dorsal juncture of the right calf and thigh) is measured with an anthropometer. The subject sits with the thighs parallel, the feet in line with the thighs, and the knees flexed 90 degrees.



VARIABLE NO. 86—POPLITEAL HEIGHT

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
40.06	MEAN	15.77
0.09	SE(MEAN)	0.03
1.62	ST DEV	0.64
0.06	SE(SD)	0.02
36.30	MINIMUM	14.29
45.80	MAXIMUM	18.03
COEFF. OF VARIATION		4.0%
SYMMETRY—VETA I		0.39
KURTOSIS—VETA II		3.15
NUMBER OF SUBJECTS		334

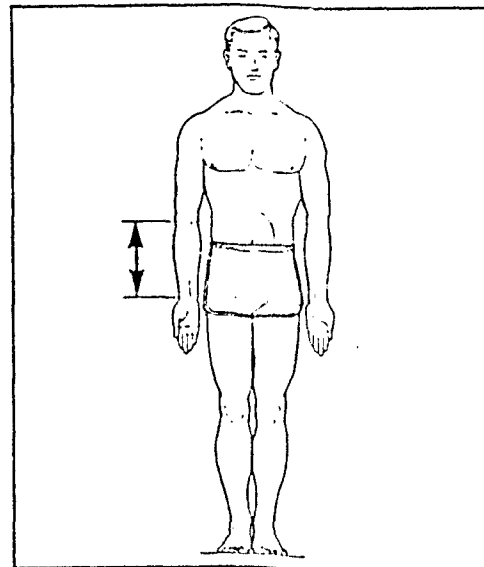
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
43.21	MEAN	17.01
0.11	SE(MEAN)	0.04
2.32	ST DEV	0.91
0.07	SE(SD)	0.03
36.70	MINIMUM	14.45
49.50	MAXIMUM	19.49
COEFF. OF VARIATION		5.4%
SYMMETRY—VETA I		0.22
KURTOSIS—VETA II		2.90
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
36.82	1ST	14.50
37.11	2ND	14.61
37.31	3RD	14.69
37.60	5TH	14.80
38.07	10TH	14.99
38.41	15TH	15.12
38.69	20TH	15.23
38.93	25TH	15.33
39.16	30TH	15.42
39.37	35TH	15.50
39.57	40TH	15.58
39.77	45TH	15.66
39.97	50TH	15.73
40.17	55TH	15.81
40.37	60TH	15.90
40.59	65TH	15.98
40.82	70TH	16.07
41.08	75TH	16.17
41.37	80TH	16.29
41.71	85TH	16.42
42.17	90TH	16.60
42.87	95TH	16.88
43.36	97TH	17.07
43.73	98TH	17.22
44.35	99TH	17.46

PERCENTILES		
CENTIMETERS		INCHES
37.82	1ST	14.89
38.65	2ND	15.22
39.10	3RD	15.40
39.66	5TH	15.61
40.42	10TH	15.91
40.89	15TH	16.10
41.27	20TH	16.25
41.60	25TH	16.38
41.90	30TH	16.50
42.18	35TH	16.61
42.46	40TH	16.72
42.74	45TH	16.83
43.03	50TH	16.94
43.32	55TH	17.05
43.63	60TH	17.18
43.95	65TH	17.30
44.31	70TH	17.44
44.70	75TH	17.60
45.15	80TH	17.78
45.68	85TH	17.98
46.36	90TH	18.25
47.33	95TH	18.63
47.92	97TH	18.86
48.31	98TH	19.02
48.83	99TH	19.23

(87) RADIALE-STYLION LENGTH

The distance between the radiale landmark on the right elbow and the stylium landmark on the right wrist is measured with a beam caliper held parallel to the long axis of the forearm. The subject stands with the arms relaxed at the sides. The hand and fingers are held straight in line with the long axis of the forearm.



VARIABLE NO. 57 - RADIALE-STYLION LENGTH

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
24.70	MEAN	9.72
0.05	SE (MEAN)	0.02
0.94	ST DEV	0.37
0.04	SE (SD)	0.01
22.50	MINIMUM	8.86
28.60	MAXIMUM	11.26
COEFF. OF VARIATION		3.8%
SYMMETRY---VETA I		0.64
KURTOSIS---VETA II		3.71
NUMBER OF SUBJECTS		334

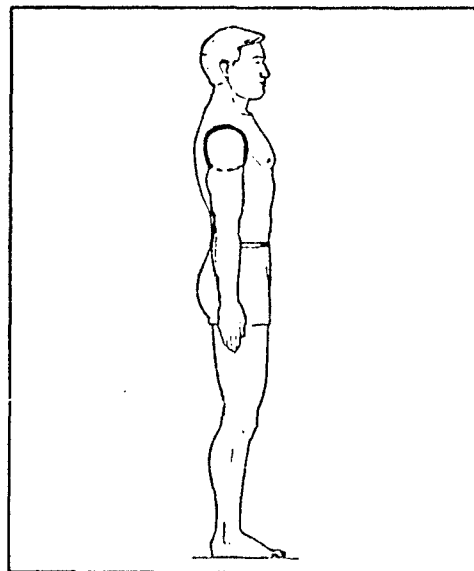
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
26.84	MEAN	10.57
0.06	SE (MEAN)	0.02
1.37	ST DEV	0.54
0.04	SE (SD)	0.02
23.00	MINIMUM	9.06
30.80	MAXIMUM	12.13
COEFF. OF VARIATION		5.1%
SYMMETRY---VETA I		0.15
KURTOSIS---VETA II		2.91
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
22.97	1ST	9.04
23.12	2ND	9.10
23.22	3RD	9.14
23.36	5TH	9.20
23.60	10TH	9.29
23.77	15TH	9.36
23.91	20TH	9.41
24.04	25TH	9.46
24.16	30TH	9.51
24.27	35TH	9.56
24.38	40TH	9.60
24.49	45TH	9.64
24.61	50TH	9.69
24.72	55TH	9.73
24.84	60TH	9.78
24.97	65TH	9.83
25.11	70TH	9.89
25.27	75TH	9.95
25.45	80TH	10.02
25.66	85TH	10.10
25.95	90TH	10.21
26.39	95TH	10.39
26.59	97TH	10.51
26.92	98TH	10.60
27.28	99TH	10.74

PERCENTILES		
CENTIMETERS		INCHES
23.85	1ST	9.39
24.16	2ND	9.51
24.36	3RD	9.59
24.65	5TH	9.70
25.11	10TH	9.89
25.43	15TH	10.01
25.69	20TH	10.11
25.91	25TH	10.20
26.11	30TH	10.28
26.30	35TH	10.35
26.47	40TH	10.42
26.65	45TH	10.49
26.82	50TH	10.56
26.99	55TH	10.62
27.16	60TH	10.69
27.34	65TH	10.76
27.53	70TH	10.84
27.74	75TH	10.92
27.97	80TH	11.01
28.25	85TH	11.12
28.61	90TH	11.26
29.17	95TH	11.48
29.55	97TH	11.63
29.84	98TH	11.75
30.33	99TH	11.94

(88) SCYE CIRCUMFERENCE

The vertical circumference of the right upper arm (scye) is measured with a tape passing through the armpit and over the acromion landmark on the tip of the shoulder. The subject stands erect looking straight ahead. The shoulders and upper extremities are relaxed with the palms facing the thighs.



VARIABLE NO. 88—SCYE CIRCUMFERENCE

FEMALES

MALES

THE SUMMARY STATISTICS
CENTIMETERS INCHES

38.02 MEAN 14.97
0.13 SE (MEAN) 0.05
2.30 ST DEV 0.91
0.09 SE (SD) 0.04

32.30 MINIMUM 12.72
45.20 MAXIMUM 17.80

COEFF. OF VARIATION 6.1%
SYMMETRY—VETA I 0.34
KURTOSIS—VETA II 3.14

NUMBER OF SUBJECTS 334

THE SUMMARY STATISTICS
CENTIMETERS INCHES

44.65 MEAN 17.58
0.10 SE (MEAN) 0.04
2.28 ST DEV 0.90
0.07 SE (SD) 0.03

38.40 MINIMUM 15.12
51.00 MAXIMUM 20.08

COEFF. OF VARIATION 5.1%
SYMMETRY—VETA I 0.12
KURTOSIS—VETA II 2.82

NUMBER OF SUBJECTS 487

PERCENTILES
CENTIMETERS INCHES

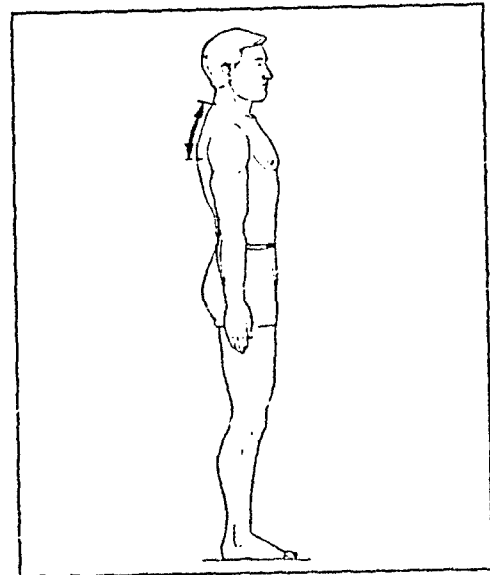
32.82 1ST 12.92
33.53 2ND 13.20
33.94 3RD 13.36
34.46 5TH 13.57
35.20 10TH 13.86
35.69 15TH 14.05
36.07 20TH 14.20
36.40 25TH 14.33
36.71 30TH 14.45
36.99 35TH 14.56
37.27 40TH 14.67
37.55 45TH 14.78
37.83 50TH 14.89
38.12 55TH 15.01
38.42 60TH 15.13
38.74 65TH 15.25
39.09 70TH 15.39
39.48 75TH 15.54
39.92 80TH 15.72
40.45 85TH 15.93
41.14 90TH 16.20
42.18 95TH 16.61
42.86 97TH 16.87
43.35 98TH 17.07
44.10 99TH 17.36

PERCENTILES
CENTIMETERS INCHES

39.53 1ST 15.56
40.07 2ND 15.78
40.43 3RD 15.92
40.93 5TH 16.11
41.72 10TH 16.42
42.26 15TH 16.64
42.69 20TH 16.81
43.07 25TH 16.96
43.41 30TH 17.09
43.73 35TH 17.22
44.03 40TH 17.33
44.32 45TH 17.45
44.61 50TH 17.56
44.89 55TH 17.67
45.19 60TH 17.79
45.49 65TH 17.91
45.81 70TH 18.04
46.16 75TH 18.17
46.56 80TH 18.33
47.02 85TH 18.51
47.61 90TH 18.74
48.52 95TH 19.10
49.13 97TH 19.34
49.59 98TH 19.53
50.36 99TH 19.83

(89) SCYE DEPTH

The surface distance along the spine between the cervicale landmark on the base of the back of the neck and the scye-level-at-midspine landmark is measured with a tape. The subject stands erect with the head in the Frankfort plane. The shoulders and upper extremities are relaxed.



VARIABLE NO. 89—SCYE DEPTH

FEMALES

MALES

THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
19.23	MEAN	7.57	
0.08	SE (MEAN)	0.03	
1.46	ST DEV	0.57	
0.06	SE (SD)	0.02	
14.70	MINIMUM	5.79	
22.90	MAXIMUM	9.02	
COEFF. OF VARIATION		7.6%	
SYMMETRY—VETA I		0.21	
KURTOSIS—VETA II		2.75	
NUMBER OF SUBJECTS		334	

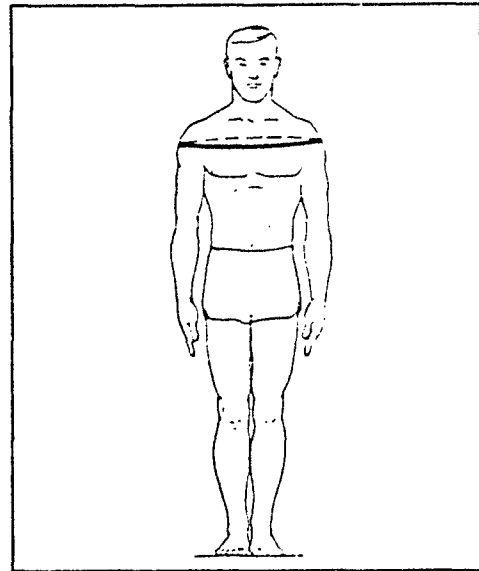
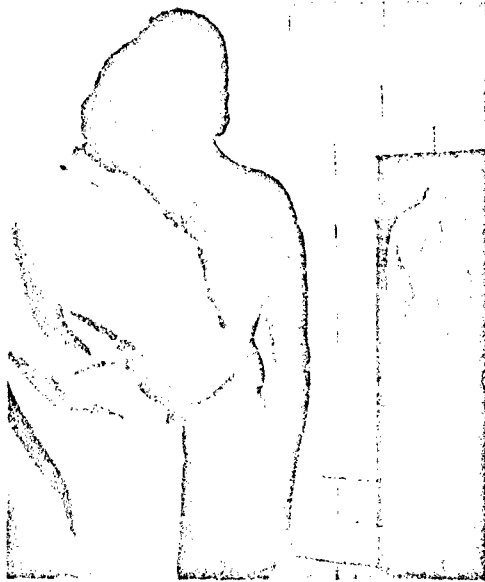
THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
21.81	MEAN	8.59	
0.06	SE (MEAN)	0.02	
1.37	ST DEV	0.54	
0.04	SE (SD)	0.02	
16.80	MINIMUM	6.61	
26.10	MAXIMUM	10.28	
COEFF. OF VARIATION		6.3%	
SYMMETRY—VETA I		0.06	
KURTOSIS—VETA II		3.15	
NUMBER OF SUBJECTS		487	

PERCENTILES		
CENTIMETERS		INCHES
16.38	1ST	6.45
16.64	2ND	6.55
16.80	3RD	6.61
17.03	5TH	6.71
17.42	10TH	6.86
17.70	15TH	6.97
17.94	20TH	7.06
18.16	25TH	7.15
18.36	30TH	7.23
18.56	35TH	7.31
18.75	40TH	7.38
18.94	45TH	7.46
19.13	50TH	7.53
19.33	55TH	7.61
19.53	60TH	7.69
19.74	65TH	7.77
19.97	70TH	7.85
20.22	75TH	7.96
20.50	80TH	8.07
20.83	85TH	8.20
21.23	90TH	8.36
21.80	95TH	8.58
22.14	97TH	8.72
22.37	98TH	8.81
22.61	99TH	8.93

PERCENTILES		
CENTIMETERS		INCHES
18.82	1ST	7.41
19.14	2ND	7.53
19.34	3RD	7.62
19.63	5TH	7.73
20.09	10TH	7.91
20.41	15TH	8.03
20.66	20TH	8.13
20.88	25TH	8.22
21.08	30TH	8.30
21.27	35TH	8.37
21.45	40TH	8.44
21.62	45TH	8.51
21.79	50TH	8.58
21.96	55TH	8.65
22.14	60TH	8.72
22.32	65TH	8.79
22.51	70TH	8.86
22.72	75TH	8.94
22.95	80TH	9.04
23.22	85TH	9.14
23.57	90TH	9.28
24.08	95TH	9.48
24.42	97TH	9.61
24.67	98TH	9.71
25.07	99TH	9.87

(90) SHOULDER CIRCUMFERENCE

The horizontal circumference of the shoulders at the level of the maximum protrusion of the right deltoid muscle is measured with a tape. The subject stands erect looking straight ahead. The shoulders and upper extremities are relaxed with the palms facing the thighs. The measurement is taken at the maximum point of quiet respiration.



VARIABLE NO. 90—SHOULDER CIRCUMFERENCE

FEMALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
104.12	MEAN	40.99
0.29	SE(MEAN)	0.11
5.22	ST DEV	2.05
0.20	SE(SD)	0.08
89.70	MINIMUM	35.31
126.10	MAXIMUM	49.65
COEFF. OF VARIATION		5.0%
SYMMETRY—VETA I		0.35
KURTOSIS—VETA II		3.54
NUMBER OF SUBJECTS		334

MALES

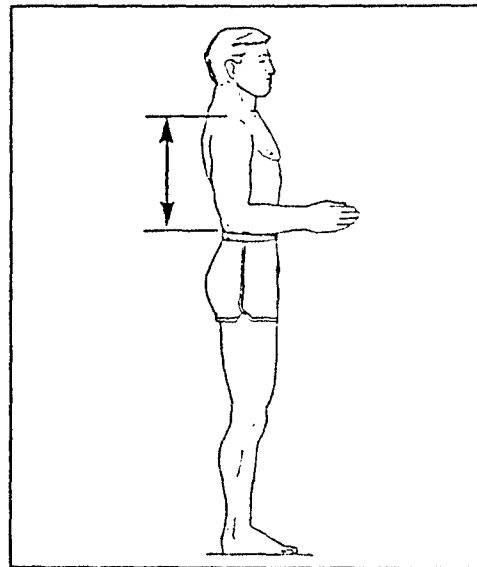
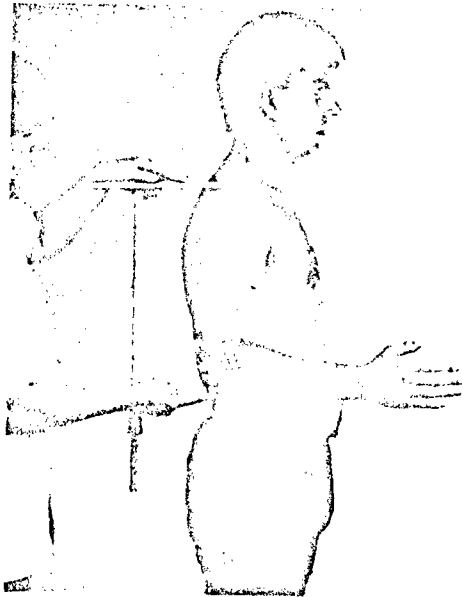
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
117.50	MEAN	46.26
0.24	SE(MEAN)	0.10
5.34	ST DEV	2.10
0.17	SE(SD)	0.07
100.90	MINIMUM	39.72
132.90	MAXIMUM	52.32
COEFF. OF VARIATION		4.5%
SYMMETRY—VETA I		0.10
KURTOSIS—VETA II		2.88
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
92.84	1ST	36.55
94.23	2ND	37.10
95.06	3RD	37.42
96.13	5TH	37.85
97.74	10TH	38.48
98.83	15TH	38.91
99.70	20TH	39.25
100.47	25TH	39.56
101.18	30TH	39.84
101.85	35TH	40.10
102.50	40TH	40.35
103.14	45TH	40.61
103.80	50TH	40.86
104.46	55TH	41.13
105.15	60TH	41.40
105.87	65TH	41.68
106.65	70TH	41.99
107.51	75TH	42.33
108.48	80TH	42.71
109.61	85TH	43.16
111.06	90TH	43.72
113.15	95TH	44.55
114.45	97TH	45.06
115.35	98TH	45.41
116.65	99TH	45.92

PERCENTILES		
CENTIMETERS		INCHES
105.65	1ST	41.59
107.22	2ND	42.21
108.14	3RD	42.57
109.30	5TH	43.03
111.00	10TH	43.70
112.13	15TH	44.14
113.03	20TH	44.50
113.82	25TH	44.81
114.55	30TH	45.10
115.24	35TH	45.37
115.91	40TH	45.63
116.57	45TH	45.89
117.24	50TH	46.16
117.93	55TH	46.43
118.64	60TH	46.71
119.38	65TH	47.00
120.19	70TH	47.32
121.07	75TH	47.66
122.06	80TH	48.06
123.22	85TH	48.51
124.68	90TH	49.09
126.75	95TH	49.90
127.99	97TH	50.39
128.81	98TH	50.71
129.92	99TH	51.15

(91) SHOULDER-ELBOW LENGTH

The distance between the acromion landmark on the tip of the right shoulder and the olecranon landmark on the bottom of the right elbow is measured with a beam caliper parallel to the long axis of the upper arm. The subject stands with the right upper arm hanging at the side and the elbow flexed 90 degrees. The hand is straight and the palm faces inward.



VARIABLE NO. 91—SHOULDER-ELBOW LENGTH

FEMALES

THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
34.62	MEAN	13.63	
0.07	SE (MEAN)	0.03	
1.19	ST DEV	0.47	
0.05	SE (SD)	0.02	
32.10	MINIMUM	12.64	
38.40	MAXIMUM	15.12	
COEFF. OF VARIATION		3.4%	
SYMMETRY—VETA I		0.61	
KURTOSIS—VETA II		3.14	
NUMBER OF SUBJECTS		334	

MALES

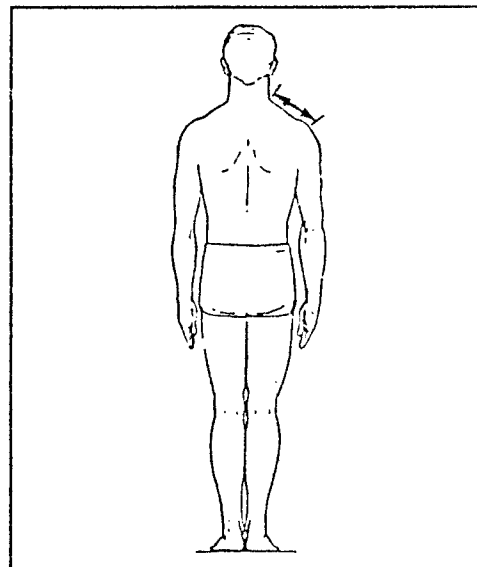
THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
37.18	MEAN	14.64	
0.08	SE (MEAN)	0.03	
1.73	ST DEV	0.68	
0.06	SE (SD)	0.02	
32.50	MINIMUM	12.80	
42.50	MAXIMUM	16.73	
COEFF. OF VARIATION		4.7%	
SYMMETRY—VETA I		0.06	
KURTOSIS—VETA II		2.86	
NUMBER OF SUBJECTS		487	

PERCENTILES		
CENTIMETERS		INCHES
32.26	1ST	12.70
32.55	2ND	12.82
32.72	3RD	12.88
32.93	5TH	12.97
33.24	10TH	13.09
33.45	15TH	13.17
33.62	20TH	13.23
33.77	25TH	13.29
33.91	30TH	13.35
34.05	35TH	13.41
34.19	40TH	13.46
34.33	45TH	13.51
34.47	50TH	13.57
34.62	55TH	13.63
34.78	60TH	13.69
34.95	65TH	13.76
35.13	70TH	13.83
35.34	75TH	13.91
35.58	80TH	14.01
35.87	85TH	14.12
35.26	90TH	14.27
36.84	95TH	14.50
37.21	97TH	14.65
37.48	98TH	14.76
37.89	99TH	14.92

PERCENTILES		
CENTIMETERS		INCHES
33.26	1ST	13.09
33.70	2ND	13.27
33.98	3RD	13.38
34.38	5TH	13.53
34.99	10TH	13.78
35.41	15TH	13.94
35.74	20TH	14.07
36.02	25TH	14.18
36.28	30TH	14.28
36.52	35TH	14.38
36.74	40TH	14.46
36.96	45TH	14.55
37.18	50TH	14.64
37.39	55TH	14.72
37.61	60TH	14.81
37.84	65TH	14.90
38.08	70TH	14.99
38.34	75TH	15.09
38.63	80TH	15.21
38.98	85TH	15.34
39.41	90TH	15.52
40.08	95TH	15.78
40.52	97TH	15.95
40.85	98TH	16.08
41.38	99TH	16.29

(92) SHOULDER LENGTH

The surface distance between the trapezius landmark at the base of the side of the neck and the acromion landmark on the tip of the right shoulder is measured with a tape. The subject stands looking straight ahead. The shoulders and upper extremities are relaxed.



VARIABLE NO. 92—SHOULDER LENGTH

FEMALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
14.69	MEAN	5.78
0.06	SE (MEAN)	0.02
1.09	ST DEV	0.43
0.04	SE (SD)	0.02
11.70	MINIMUM	4.61
18.20	MAXIMUM	7.17
COEFF. OF VARIATION		7.4%
SYMMETRY—VETA I		0.06
KURTOSIS—VETA II		3.13
NUMBER OF SUBJECTS		334

MALES

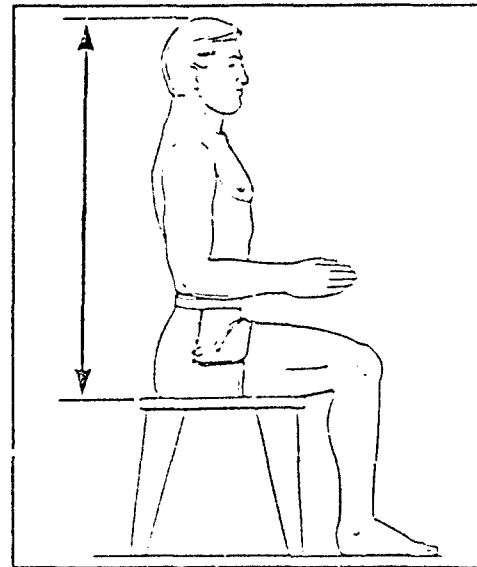
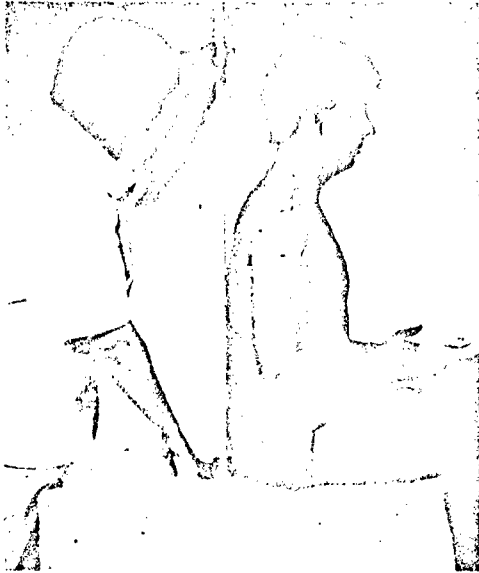
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
15.41	MEAN	6.07
0.05	SE (MEAN)	0.02
1.01	ST DEV	0.40
0.03	SE (SD)	0.01
12.70	MINIMUM	5.00
18.40	MAXIMUM	7.24
COEFF. OF VARIATION		6.6%
SYMMETRY—VETA I		0.07
KURTOSIS—VETA II		2.70
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
11.99	1ST	4.72
12.37	2ND	4.87
12.60	3RD	4.96
12.89	5TH	5.07
13.30	10TH	5.24
13.57	15TH	5.34
13.78	20TH	5.42
13.95	25TH	5.49
14.11	30TH	5.56
14.26	35TH	5.61
14.40	40TH	5.67
14.54	45TH	5.72
14.67	50TH	5.78
14.81	55TH	5.83
14.95	60TH	5.89
15.09	65TH	5.94
15.25	70TH	6.00
15.42	75TH	6.07
15.61	80TH	6.15
15.83	85TH	6.23
16.12	90TH	6.35
16.53	95TH	6.51
16.80	97TH	6.61
16.98	98TH	6.69
17.26	99TH	6.80

PERCENTILES		
CENTIMETERS		INCHES
13.09	1ST	5.15
13.38	2ND	5.27
13.56	3RD	5.34
13.79	5TH	5.43
14.13	10TH	5.56
14.35	15TH	5.65
14.54	20TH	5.73
14.70	25TH	5.79
14.85	30TH	5.85
14.99	35TH	5.90
15.12	40TH	5.95
15.25	45TH	6.00
15.38	50TH	6.06
15.52	55TH	6.11
15.65	60TH	6.16
15.79	65TH	6.22
15.95	70TH	6.28
16.11	75TH	6.34
16.30	80TH	6.42
16.51	85TH	6.50
16.78	90TH	6.60
17.15	95TH	6.75
17.37	97TH	6.84
17.52	98TH	6.90
17.71	99TH	6.97

(93) SITTING HEIGHT

The vertical distance between a sitting surface and the top of the head is measured with an anthropometer. The subject sits erect with the head in the Frankfort plane. The shoulders and upper arms are relaxed and the forearms and hands are extended forward horizontally with the palms facing each other. The thighs are parallel and the knees are flexed 90 degrees with the feet in line with the thighs. The measurement is made at the maximum point of quiet respiration.



VARIABLE NO. 93—SITTING HEIGHT

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
88.28	MEAN	34.76
0.15	SE(MEAN)	0.06
2.80	ST DEV	1.10
0.11	SE(SD)	0.04
80.00	MINIMUM	31.50
97.10	MAXIMUM	38.23
COEFF. OF VARIATION		3.2%
SYMMETRY—VETA I		-0.02
KURTOSIS—VETA II		3.07
NUMBER OF SUBJECTS		334

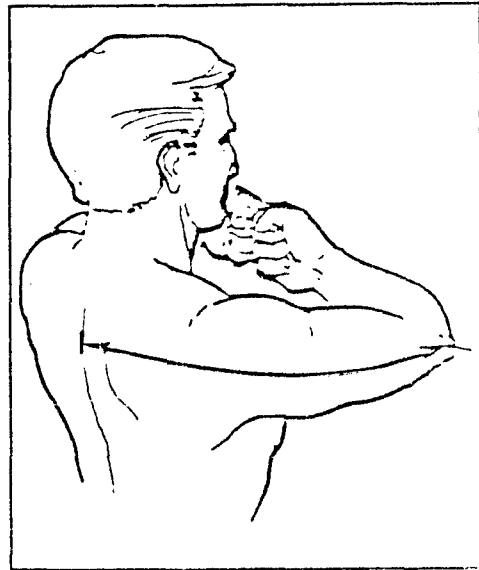
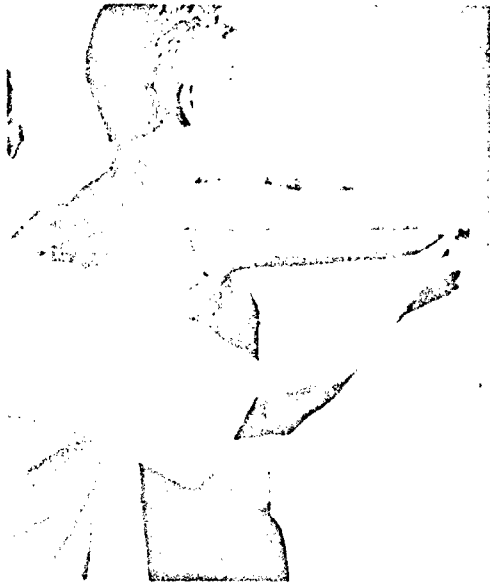
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
92.95	MEAN	36.59
0.15	SE(MEAN)	0.06
3.32	ST DEV	1.31
0.11	SE(SD)	0.04
81.90	MINIMUM	32.24
102.10	MAXIMUM	40.20
COEFF. OF VARIATION		3.6%
SYMMETRY—VETA I		-0.25
KURTOSIS—VETA II		3.14
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
81.46	1ST	32.07
82.31	2ND	32.40
82.85	3RD	32.62
83.58	5TH	32.90
84.68	10TH	33.34
85.41	15TH	33.63
85.97	20TH	33.85
86.46	25TH	34.04
86.88	30TH	34.21
87.27	35TH	34.36
87.63	40TH	34.50
87.98	45TH	34.64
88.32	50TH	34.77
88.66	55TH	34.91
89.00	60TH	35.04
89.35	65TH	35.18
89.72	70TH	35.32
90.12	75TH	35.48
90.56	80TH	35.66
91.08	85TH	35.86
91.75	90TH	36.12
92.78	95TH	36.53
93.49	97TH	36.81
94.03	98TH	37.02
94.93	99TH	37.38

PERCENTILES		
CENTIMETERS		INCHES
84.40	1ST	33.23
85.56	2ND	33.69
86.28	3RD	33.97
87.23	5TH	34.34
88.63	10TH	34.89
89.54	15TH	35.25
90.24	20TH	35.53
90.83	25TH	35.76
91.35	30TH	35.96
91.82	35TH	36.15
92.26	40TH	36.32
92.68	45TH	36.49
93.09	50TH	36.65
93.49	55TH	36.81
93.90	60TH	36.97
94.31	65TH	37.13
94.75	70TH	37.30
95.21	75TH	37.48
95.73	80TH	37.69
96.32	85TH	37.92
97.07	90TH	38.22
98.18	95TH	38.66
98.92	97TH	38.94
99.47	98TH	39.16
100.35	99TH	39.51

(94) SLEEVE LENGTH: SPINE-ELBOW

The horizontal surface distance between the midspine landmark and the olecranon-center landmark on the tip of the raised elbow is measured with a tape. The measurement is made while the subject holds his/her arms up in a horizontal position parallel to the standing surface and joins them by bringing the fists together at the metacarpophalangeal and proximal interphalangeal knuckles. The forearms and fists are in a straight line.



VARIABLE NO. 94—SLEEVE LENGTH: SPINE-ELBOW

FEMALES

MALES

THE SUMMARY STATISTICS

CENTIMETERS		INCHES
55.31	MEAN	21.78
0.10	SE (MEAN)	0.04
1.92	ST DEV	0.75
0.07	SE (SD)	0.03
50.70	MINIMUM	19.96
61.50	MAXIMUM	24.21
COEFF. OF VARIATION		3.5%
SYMMETRY—VETA I		0.01
KURTOSIS—VETA II		2.73
NUMBER OF SUBJECTS		334

THE SUMMARY STATISTICS

CENTIMETERS		INCHES
59.96	MEAN	23.60
0.11	SE (MEAN)	0.05
2.52	ST DEV	0.99
0.08	SE (SD)	0.03
52.10	MINIMUM	20.51
67.60	MAXIMUM	26.61
COEFF. OF VARIATION		4.2%
SYMMETRY—VETA I		0.12
KURTOSIS—VETA II		3.14
NUMBER OF SUBJECTS		487

PERCENTILES

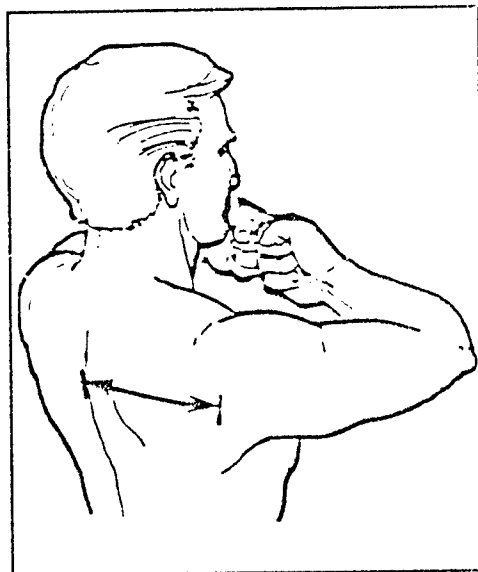
CENTIMETERS		INCHES
50.98	1ST	20.07
51.42	2ND	20.24
51.71	3RD	20.36
52.12	5TH	20.52
52.79	10TH	20.78
53.25	15TH	20.97
53.63	20TH	21.12
53.97	25TH	21.25
54.27	30TH	21.36
54.54	35TH	21.47
54.81	40TH	21.58
55.07	45TH	21.68
55.32	50TH	21.78
55.58	55TH	21.88
55.84	60TH	21.98
56.10	65TH	22.09
56.38	70TH	22.20
56.68	75TH	22.31
57.01	80TH	22.44
57.38	85TH	22.59
57.84	90TH	22.77
58.49	95TH	23.03
58.89	97TH	23.18
59.16	98TH	23.29
59.57	99TH	23.45

PERCENTILES

CENTIMETERS		INCHES
54.15	1ST	21.32
54.83	2ND	21.59
55.27	3RD	21.76
55.86	5TH	21.99
56.76	10TH	22.35
57.37	15TH	22.59
57.85	20TH	22.78
58.27	25TH	22.94
58.64	30TH	23.09
58.98	35TH	23.22
59.30	40TH	23.35
59.61	45TH	23.47
59.92	50TH	23.59
60.23	55TH	23.71
60.55	60TH	23.84
60.88	65TH	23.97
61.22	70TH	24.10
61.60	75TH	24.25
62.03	80TH	24.42
62.54	85TH	24.62
63.20	90TH	24.88
64.22	95TH	25.28
64.92	97TH	25.56
65.46	98TH	25.77
66.35	99TH	26.12

(95) SLEEVE LENGTH: SPINE-SCYE

The horizontal surface distance between the midspine landmark and the right posterior-diagonal-scye landmark at the back of the raised right arm near the armpit is measured with a tape. The measurement is made while the subject holds his/her arms up in a horizontal position parallel to the standing surface and joins them by bringing the fists together at the metacarpophalangeal and proximal interphalangeal knuckles. The forearms and fists are in a straight line.



VARIABLE NO. 95—SLEEVE LENGTH: SPINE-SCYE

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
21.31	MEAN	8.39
0.07	SE (MEAN)	0.03
1.29	ST DEV	0.51
0.05	SE(SD)	0.02
16.70	MINIMUM	6.57
25.20	MAXIMUM	9.92
COEFF. OF VARIATION		6.1%
SYMMETRY—VETA I		-0.24
KURTOSIS—VETA II		3.63
NUMBER OF SUBJECTS		334

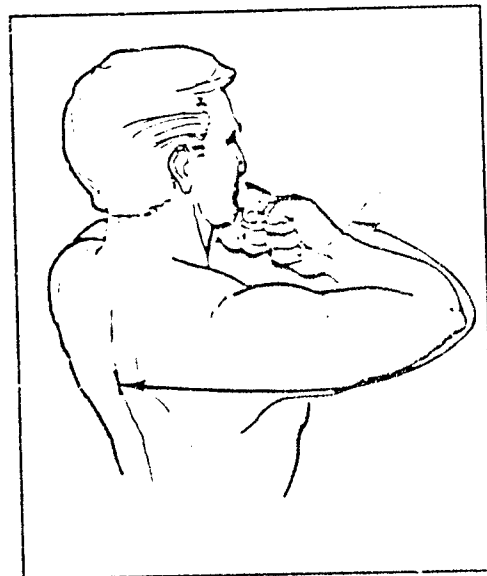
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
23.50	MEAN	9.25
0.06	SE (MEAN)	0.03
1.41	ST DEV	0.55
0.05	SE(SD)	0.02
19.50	MINIMUM	7.68
28.60	MAXIMUM	11.26
COEFF. OF VARIATION		6.0%
SYMMETRY—VETA I		0.09
KURTOSIS—VETA II		3.31
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
18.17	1ST	7.15
18.58	2ND	7.31
18.83	3RD	7.42
19.18	5TH	7.55
19.69	10TH	7.75
20.03	15TH	7.89
20.29	20TH	7.99
20.51	25TH	8.08
20.71	30TH	8.15
20.88	35TH	8.22
21.05	40TH	8.29
21.20	45TH	8.35
21.36	50TH	8.41
21.51	55TH	8.47
21.66	60TH	8.53
21.82	65TH	8.59
21.99	70TH	8.66
22.17	75TH	8.73
22.37	80TH	8.81
22.61	85TH	8.90
22.91	90TH	9.02
23.40	95TH	9.21
23.73	97TH	9.34
24.00	98TH	9.45
24.44	99TH	9.62

PERCENTILES		
CENTIMETERS		INCHES
20.27	1ST	7.98
20.58	2ND	8.10
20.80	3RD	8.19
21.13	5TH	8.32
21.66	10TH	8.53
22.03	15TH	8.67
22.32	20TH	8.79
22.57	25TH	8.89
22.79	30TH	8.97
22.99	35TH	9.05
23.17	40TH	9.12
23.35	45TH	9.19
23.52	50TH	9.26
23.69	55TH	9.33
23.86	60TH	9.40
24.04	65TH	9.46
24.22	70TH	9.53
24.41	75TH	9.61
24.63	80TH	9.70
24.88	85TH	9.80
25.21	90TH	9.93
25.74	95TH	10.13
26.12	97TH	10.28
26.43	98TH	10.41
26.98	99TH	10.62

(96) SLEEVE LENGTH: SPINE-WRIST

The horizontal surface distance from the midspine landmark, across the olecranon-center landmark at the tip of the raised right elbow, to the dorsal wrist landmark is measured with a tape. The measurement is made while the subject holds his/her arms up in a horizontal position parallel to the standing surface and joins them by bringing the fists together at the metacarpophalangeal and proximal interphalangeal knuckles. The forearms and fists are in a straight line.



VARIABLE NO. 96—SLEEVE LENGTH: SPINE-WRIST

FEMALES

MALES

THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
82.57	MEAN	32.51	
0.13	SE(MEAN)	0.05	
2.45	ST DEV	0.97	
0.09	SE(SD)	0.04	
77.00	MINIMUM	30.31	
92.20	MAXIMUM	36.30	
COEFF. OF VARIATION		3.0%	
SYMMETRY—VETA I		0.33	
KURTOSIS—VETA II		3.09	
NUMBER OF SUBJECTS		334	

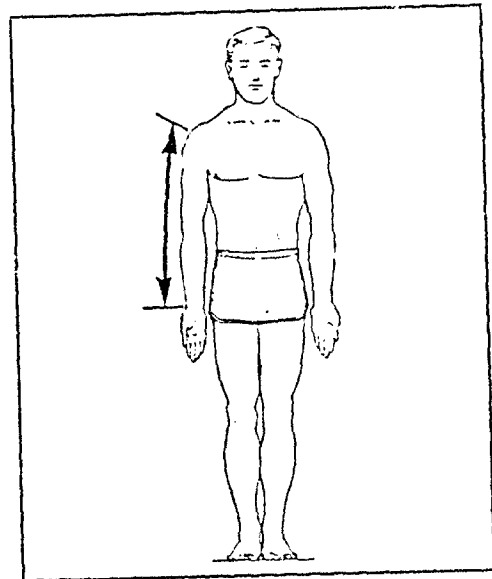
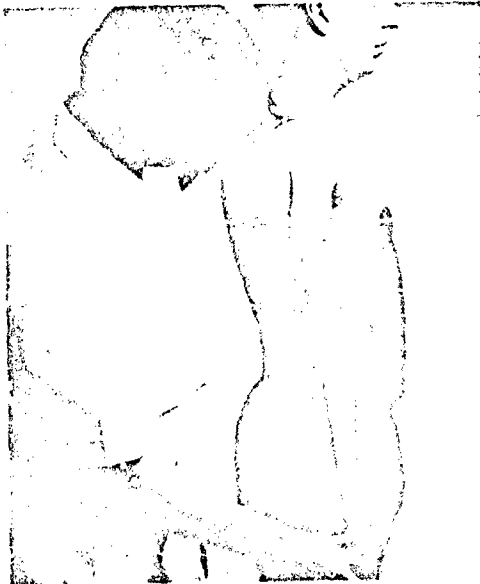
THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
89.50	MEAN	35.24	
0.16	SE(MEAN)	0.06	
3.53	ST DEV	1.39	
0.11	SE(SD)	0.04	
79.60	MINIMUM	31.34	
100.20	MAXIMUM	39.45	
COEFF. OF VARIATION		3.9%	
SYMMETRY—VETA I		0.15	
KURTOSIS—VETA II		2.98	
NUMBER OF SUBJECTS		487	

PERCENTILES		
CENTIMETERS		INCHES
77.62	1ST	30.56
78.06	2ND	30.73
78.36	3RD	30.85
78.79	5TH	31.02
79.50	10TH	31.30
80.01	15TH	31.50
80.44	20TH	31.67
80.82	25TH	31.82
81.17	30TH	31.96
81.50	35TH	32.09
81.92	40TH	32.21
82.14	45TH	32.34
82.46	50TH	32.46
82.78	55TH	32.59
83.11	60TH	32.72
83.45	65TH	32.86
83.82	70TH	33.00
84.22	75TH	33.16
84.68	80TH	33.34
85.20	85TH	33.54
85.87	90TH	33.81
86.84	95TH	34.19
87.46	97TH	34.43
87.90	98TH	34.61
88.57	99TH	34.87

PERCENTILES		
CENTIMETERS		INCHES
81.83	1ST	32.21
82.57	2ND	32.51
83.08	3RD	32.71
83.80	5TH	32.99
84.98	10TH	33.46
85.81	15TH	33.78
86.47	20TH	34.04
87.06	25TH	34.27
87.58	30TH	34.48
88.07	35TH	34.67
88.54	40TH	34.86
88.99	45TH	35.03
89.44	50TH	35.21
89.89	55TH	35.39
90.34	60TH	35.57
90.82	65TH	35.76
91.32	70TH	35.95
91.86	75TH	36.17
92.48	80TH	36.41
93.19	85TH	36.69
94.10	90TH	37.05
95.48	95TH	37.59
96.41	97TH	37.96
97.11	98TH	38.23
98.24	99TH	38.68

(97) SLEEVE CUTSEAM

The straight-line distance between the acromion landmark on the tip of the right shoulder and the stylium landmark on the right wrist is measured with a tape. The subject stands erect with both arms straight at the sides and the palms facing forward.



VARIABLE NO. 97—SLEEVE CIRCUM

FEMALES

MALES

THE SUMMARY STATISTICS

CENTIMETERS		INCHES
56.09	MEAN	22.08
0.11	SE (MEAN)	0.04
1.94	ST DEV	0.76
0.07	SE (SD)	0.03
51.50	MINIMUM	20.28
64.10	MAXIMUM	25.24
COEFF. OF VARIATION		3.5%
SYMMETRY—VETA I		0.66
KURTOSIS—VETA II		3.81
NUMBER OF SUBJECTS		334

THE SUMMARY STATISTICS

CENTIMETERS		INCHES
60.14	MEAN	23.68
0.14	SE (MEAN)	0.05
2.99	ST DEV	1.18
0.10	SE (SD)	0.04
53.00	MINIMUM	20.87
68.40	MAXIMUM	26.93
COEFF. OF VARIATION		5.0%
SYMMETRY—VETA I		0.14
KURTOSIS—VETA II		2.73
NUMBER OF SUBJECTS		487

PERCENTILES

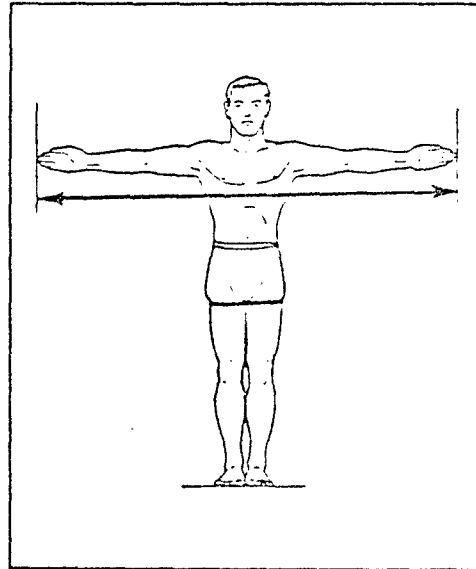
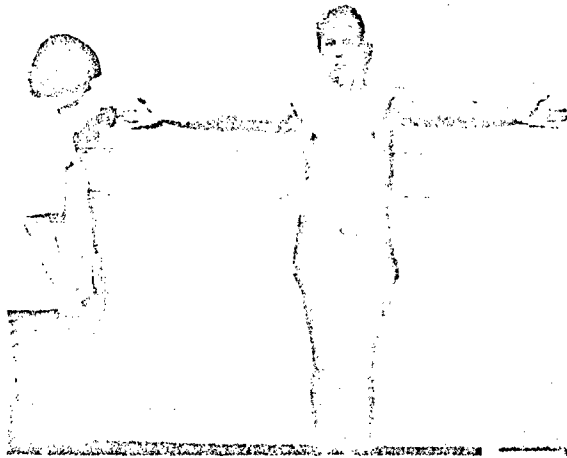
CENTIMETERS		INCHES
52.61	1ST	20.71
52.80	2ND	20.79
52.97	3RD	20.85
53.25	5TH	20.96
53.76	10TH	21.16
54.14	15TH	21.31
54.46	20TH	21.44
54.74	25TH	21.55
55.00	30TH	21.65
55.21	35TH	21.75
55.47	40TH	21.84
55.70	45TH	21.93
55.93	50TH	22.02
56.16	55TH	22.11
56.40	60TH	22.20
56.65	65TH	22.30
56.92	70TH	22.41
57.22	75TH	22.53
57.57	80TH	22.67
58.00	85TH	22.83
58.58	90TH	23.06
59.56	95TH	23.45
60.29	97TH	23.74
60.90	98TH	23.97
61.97	99TH	24.40

PERCENTILES

CENTIMETERS		INCHES
53.74	1ST	21.16
54.27	2ND	21.37
54.66	3RD	21.52
55.24	5TH	21.75
56.22	10TH	22.13
56.92	15TH	22.41
57.50	20TH	22.64
58.01	25TH	22.84
58.46	30TH	23.02
58.89	35TH	23.19
59.30	40TH	23.35
59.69	45TH	23.50
60.08	50TH	23.65
60.47	55TH	23.81
60.87	60TH	23.96
61.27	65TH	24.12
61.70	70TH	24.29
62.17	75TH	24.48
62.69	80TH	24.68
63.29	85TH	24.92
64.06	90TH	25.22
65.21	95TH	25.67
65.98	97TH	25.98
66.56	98TH	26.20
67.51	99TH	26.58

(98) SPAN

The distance between the tips of the middle fingers of the horizontally outstretched arms is measured on a wall chart. The subject stands erect with his/her back against a wall-mounted scale and with the heels together. Both arms and hands are stretched horizontally against a back wall with the tip of the middle finger of one hand just touching a side wall. A block is placed at the tip of the middle finger of the other hand to establish the measurement on the scale. The measurement is taken at the maximum point of quiet respiration.



VARIABLE NO. 98—SPAN

FEMALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
170.76	MEAN	67.23
0.26	SE (MEAN)	0.10
4.83	ST DEV	1.90
0.19	SE(SD)	0.07
164.00	MINIMUM	64.57
193.30	MAXIMUM	76.10
COEFF. OF VARIATION		2.3%
SYMMETRY—VETA I		0.95
KURTOSIS—VETA II		4.06
NUMBER OF SUBJECTS		334

MALES

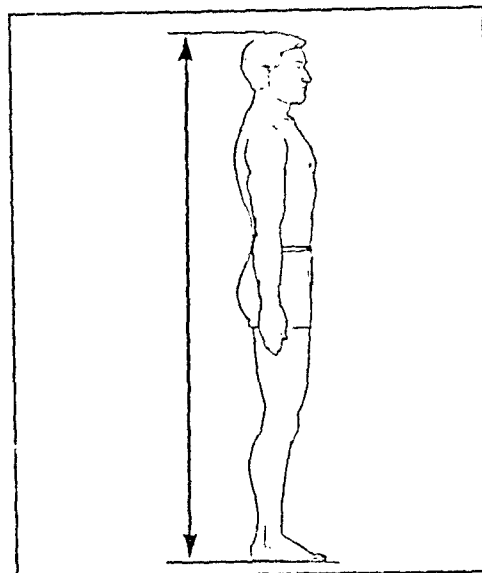
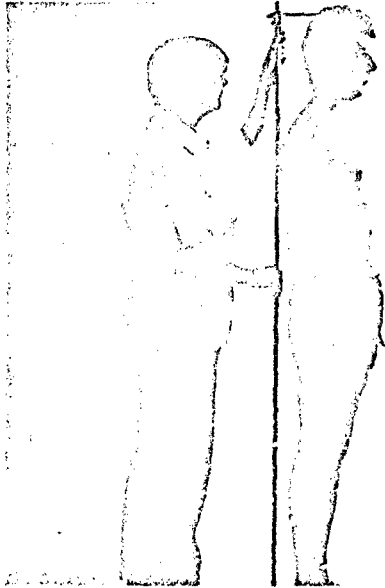
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
182.79	MEAN	71.96
0.35	SE (MEAN)	0.14
7.74	ST DEV	3.05
0.25	SE(SD)	0.10
159.60	MINIMUM	62.83
205.60	MAXIMUM	80.94
COEFF. OF VARIATION		4.2%
SYMMETRY—VETA I		0.06
KURTOSIS—VETA II		2.67
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
163.91	1ST	64.53
164.07	2ND	64.59
164.23	3RD	64.66
164.55	5TH	64.78
165.15	10TH	65.02
165.69	15TH	65.23
166.39	20TH	65.51
167.04	25TH	65.76
167.62	30TH	65.99
168.11	35TH	66.18
168.57	40TH	66.37
169.15	45TH	66.59
169.80	50TH	66.85
170.68	55TH	67.20
171.39	60TH	67.48
172.04	65TH	67.73
172.64	70TH	67.97
173.46	75TH	68.29
174.50	80TH	68.70
175.74	85TH	69.19
178.20	90TH	70.16
180.08	95TH	70.90
180.75	97TH	71.16
182.19	98TH	71.73
183.58	99TH	72.28

PERCENTILES		
CENTIMETERS		INCHES
166.32	1ST	65.48
167.74	2ND	66.04
168.74	3RD	66.43
170.21	5TH	67.01
172.69	10TH	67.99
174.49	15TH	68.70
175.97	20TH	69.28
177.28	25TH	69.79
178.47	30TH	70.26
179.58	35TH	70.70
180.65	40TH	71.12
181.68	45TH	71.53
182.71	50TH	71.93
183.74	55TH	72.34
184.78	60TH	72.75
185.85	65TH	73.17
186.98	70TH	73.61
188.19	75TH	74.09
189.53	80TH	74.62
191.06	85TH	75.22
192.94	90TH	75.96
195.61	95TH	77.01
197.25	97TH	77.66
198.41	98TH	78.11
200.13	99TH	78.79

(99) STATURE

The vertical distance from a standing surface to the top of the head is measured with an anthropometer. The subject stands erect with the head in the Frankfort plane. The heels are together with the weight distributed equally on both feet. The shoulders and upper extremities are relaxed. The measurement is taken at the maximum point of quiet respiration.



VARIABLE NO. 99—STATURE

FEMALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
168.02	MEAN	66.15
0.25	SE(MEAN)	0.10
4.52	ST DEV	1.78
0.17	SE(SD)	0.07
156.20	MINIMUM	61.50
187.00	MAXIMUM	73.62
COEFF. OF VARIATION		2.7%
SYMMETRY—VETA I		0.38
KURTOSIS—VETA II		3.62
NUMBER OF SUBJECTS		334

PERCENTILES		
CENTIMETERS		INCHES
157.29	1ST	61.92
159.07	2ND	62.63
160.03	3RD	63.00
161.17	5TH	63.45
162.68	10TH	64.05
163.60	15TH	64.41
164.32	20TH	64.69
164.94	25TH	64.94
165.51	30TH	65.16
166.04	35TH	65.37
166.57	40TH	65.58
167.10	45TH	65.79
167.64	50TH	66.00
168.20	55TH	66.22
168.78	60TH	66.45
169.41	65TH	66.70
170.09	70TH	66.96
170.85	75TH	67.26
171.72	80TH	67.61
172.75	85TH	68.01
174.06	90TH	68.53
175.95	95TH	69.27
177.08	97TH	69.72
177.83	98TH	70.01
178.80	99TH	70.39

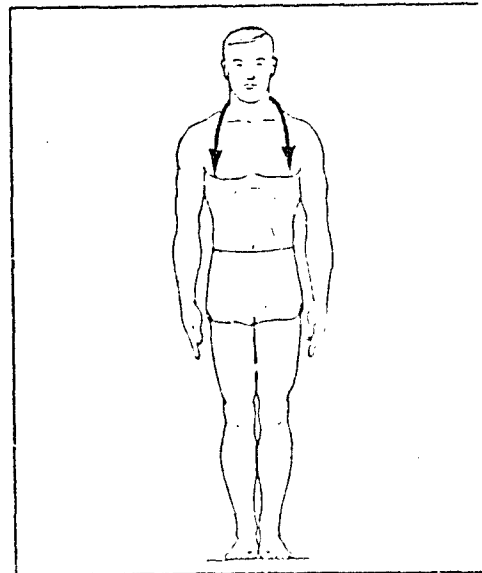
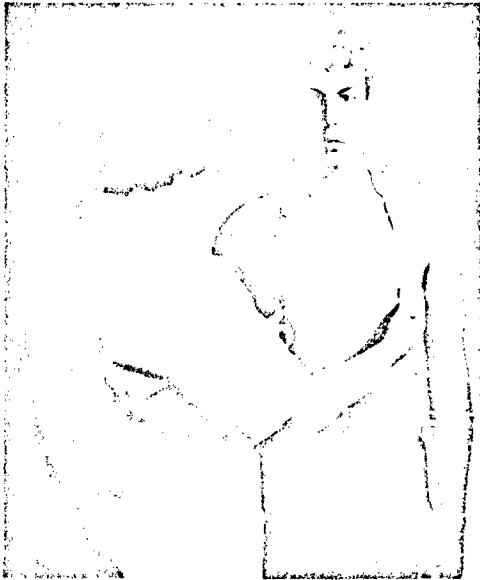
MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
177.10	MEAN	69.73
0.29	SE(MEAN)	0.12
6.47	ST DEV	2.55
0.21	SE(SD)	0.08
157.90	MINIMUM	62.17
194.10	MAXIMUM	76.42
COEFF. OF VARIATION		3.7%
SYMMETRY—VETA I		-0.07
KURTOSIS—VETA II		2.82
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
161.85	1ST	63.72
163.66	2ND	64.43
164.80	3RD	64.88
166.33	5TH	65.49
168.69	10TH	66.41
170.29	15TH	67.04
171.55	20TH	67.54
172.65	25TH	67.97
173.64	30TH	68.36
174.56	35TH	68.72
175.43	40TH	69.07
176.27	45TH	69.40
177.11	50TH	69.73
177.95	55TH	70.06
178.80	60TH	70.39
179.67	65TH	70.74
180.60	70TH	71.10
181.59	75TH	71.49
182.69	80TH	71.93
183.96	85TH	72.42
185.52	90TH	73.04
187.75	95TH	73.92
189.11	97TH	74.45
190.06	98TH	74.83
191.44	99TH	75.37

(100) STRAP LENGTH

The surface distance from the right bustpoint landmark on women or the right nipple (thelion) on men across the back of the neck to the left bustpoint or nipple is measured with a tape passing over the left and right lateral neck landmarks. The subject stands erect with the head in the Frankfort plane. The shoulders and upper extremities are relaxed. The measurement is made at the maximum point of quiet respiration.



VARIABLE NO. 100—STRAP LENGTH

FEMALES

MALES

THE SUMMARY STATISTICS

CENTIMETERS		INCHES
69.28	MEAN	27.28
0.26	SE(MEAN)	0.10
4.68	ST DEV	1.84
0.18	SE(SD)	0.07
57.70	MINIMUM	22.72
86.70	MAXIMUM	34.13
COEFF. OF VARIATION		6.7%
SYMMETRY—VETA I		0.37
KURTOSIS—VETA II		3.36
NUMBER OF SUBJECTS		334

THE SUMMARY STATISTICS

CENTIMETERS		INCHES
71.93	MEAN	28.32
0.16	SE(MEAN)	0.06
3.58	ST DEV	1.41
0.11	SE(SD)	0.05
61.90	MINIMUM	24.37
82.70	MAXIMUM	32.56
COEFF. OF VARIATION		5.0%
SYMMETRY—VETA I		0.22
KURTOSIS—VETA II		2.85
NUMBER OF SUBJECTS		487

PERCENTILES

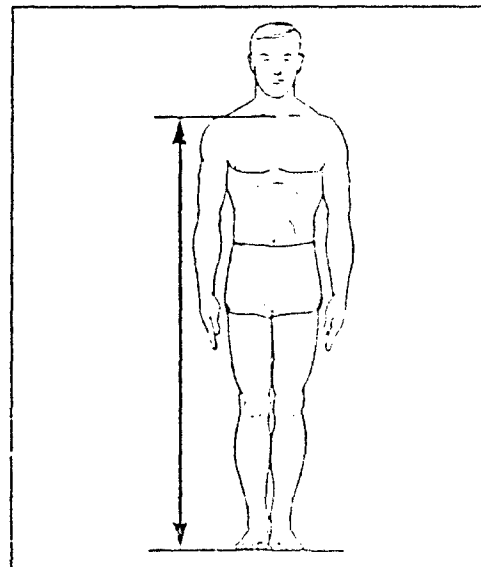
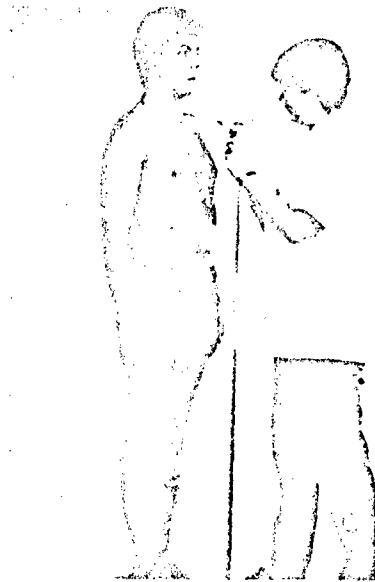
CENTIMETERS		INCHES
58.82	1ST	23.16
60.18	2ND	23.69
61.00	3RD	24.01
62.04	5TH	24.43
63.58	10TH	25.03
64.59	15TH	25.43
65.39	20TH	25.74
66.03	25TH	26.02
66.71	30TH	26.26
67.30	35TH	26.49
67.86	40TH	26.72
68.42	45TH	26.94
69.98	50TH	27.16
69.55	55TH	27.38
70.14	60TH	27.61
70.76	65TH	27.86
71.43	70TH	28.12
72.17	75TH	28.41
73.02	80TH	28.75
74.04	85TH	29.15
75.36	90TH	29.67
77.38	95TH	30.47
78.73	97TH	31.00
79.73	98TH	31.39
81.31	99TH	32.01

PERCENTILES

CENTIMETERS		INCHES
63.99	1ST	25.19
64.98	2ND	25.58
65.57	3RD	25.81
66.33	5TH	26.11
67.47	10TH	26.56
68.24	15TH	26.86
68.85	20TH	27.11
69.39	25TH	27.32
69.89	30TH	27.51
70.36	35TH	27.70
70.81	40TH	27.88
71.26	45TH	28.05
71.71	50TH	28.23
72.18	55TH	28.42
72.65	60TH	28.60
73.16	65TH	28.80
73.70	70TH	29.01
74.29	75TH	29.25
74.96	80TH	29.51
75.75	85TH	29.82
76.74	90TH	30.21
78.18	95TH	30.73
79.07	97TH	31.13
79.69	98TH	31.37
80.57	99TH	31.72

(101) SUPRASTERNALE HEIGHT

The vertical distance between a standing surface and the suprasternale landmark on the notch at the top of the breastbone is measured with an anthropometer. The subject stands erect looking straight ahead. The heels are together with the weight distributed equally on both feet. The shoulders and upper extremities are relaxed. The measurement is made at the maximum point of quiet respiration.



VARIABLE NO. 101—SUPRASTERNALE HEIGHT

FEMALES

MALES

THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
137.03	MEAN	53.95	
0.22	SE (MEAN)	0.08	
3.93	ST DEV	1.55	
0.15	SE (SD)	0.06	
126.40	MINIMUM	49.76	
153.80	MAXIMUM	60.55	
COEFF. OF VARIATION		2.9%	
SYMMETRY—VETA I		0.43	
KURTOSIS—VETA II		3.64	
NUMBER OF SUBJECTS		334	

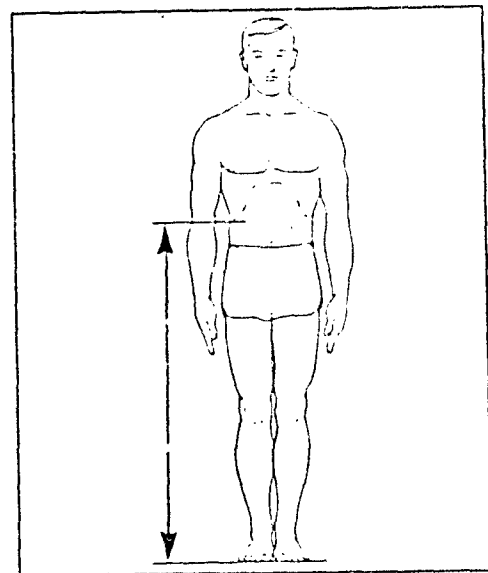
THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
144.88	MEAN	57.04	
0.25	SE (MEAN)	0.10	
5.62	ST DEV	2.21	
0.18	SE (SD)	0.07	
126.30	MINIMUM	49.72	
160.20	MAXIMUM	63.07	
COEFF. OF VARIATION		3.9%	
SYMMETRY—VETA I		-0.06	
KURTOSIS—VETA II		2.79	
NUMBER OF SUBJECTS		487	

PERCENTILES		
CENTIMETERS		INCHES
128.41	1ST	50.56
129.54	2ND	51.00
130.20	3RD	51.26
131.05	5TH	51.60
132.30	10TH	52.09
133.12	15TH	52.41
133.78	20TH	52.67
134.35	25TH	52.89
134.87	30TH	53.10
135.37	35TH	53.29
135.84	40TH	53.48
136.31	45TH	53.67
136.79	50TH	53.85
137.28	55TH	54.05
137.78	60TH	54.24
138.31	65TH	54.45
138.88	70TH	54.68
139.52	75TH	54.93
140.24	80TH	55.21
141.09	85TH	55.55
142.19	90TH	55.98
143.81	95TH	56.62
144.85	97TH	57.03
145.59	98TH	57.32
146.70	99TH	57.76

PERCENTILES		
CENTIMETERS		INCHES
131.71	1ST	51.86
133.35	2ND	52.50
134.35	3RD	52.89
135.66	5TH	53.41
137.65	10TH	54.19
138.99	15TH	54.72
140.05	20TH	55.14
140.98	25TH	55.50
141.82	30TH	55.84
142.61	35TH	56.15
143.36	40TH	56.44
144.10	45TH	56.73
144.84	50TH	57.02
145.58	55TH	57.31
146.33	60TH	57.61
147.11	65TH	57.92
147.93	70TH	58.24
148.82	75TH	58.59
149.81	80TH	58.98
150.93	85TH	59.42
152.31	90TH	59.96
154.19	95TH	60.71
155.27	97TH	61.13
155.97	98TH	61.41
156.87	99TH	61.76

(102) TENTH RIB HEIGHT

The vertical distance between a standing surface and the tenth rib landmark at the bottom of the right side of the rib cage is measured with an anthropometer. The subject stands erect looking straight ahead. The heels are together with the weight distributed equally on both feet. The shoulders and upper extremities are relaxed. The measurement is made at the maximum point of quiet respiration.



VARIABLE NO. 102—TENTH RIB HEIGHT

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
107.31	MEAN	42.25
0.19	SE (MEAN)	0.07
3.45	ST DEV	1.36
0.13	SE (SD)	0.05
98.30	MINIMUM	38.70
119.70	MAXIMUM	47.13
COEFF. OF VARIATION		3.2%
SYMMETRY—VETA I		0.40
KURTOSIS—VETA II		3.32
NUMBER OF SUBJECTS		334

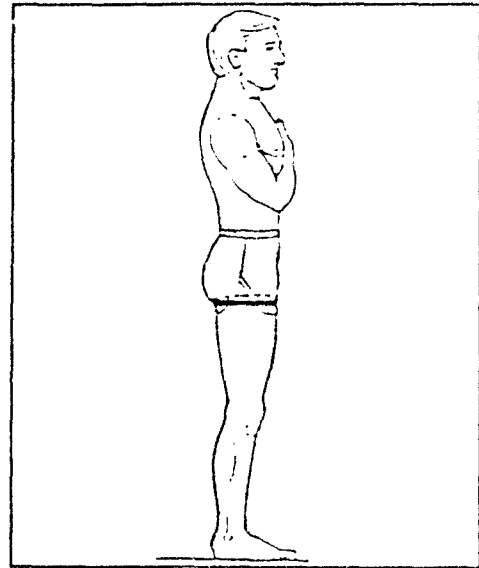
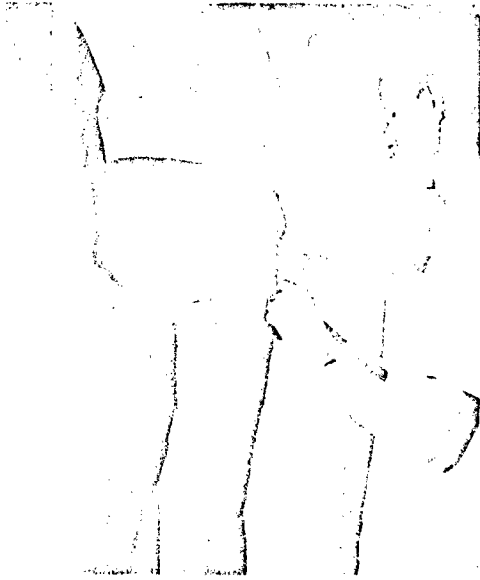
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
112.13	MEAN	44.14
0.21	SE (MEAN)	0.08
4.74	ST DEV	1.86
0.15	SE (SD)	0.06
99.20	MINIMUM	39.06
124.90	MAXIMUM	49.17
COEFF. OF VARIATION		4.2%
SYMMETRY—VETA I		0.04
KURTOSIS—VETA II		2.83
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
100.00	1ST	39.37
100.97	2ND	39.75
101.53	3RD	39.97
102.22	5TH	40.25
103.23	10TH	40.64
103.89	15TH	40.90
104.42	20TH	41.11
104.90	25TH	41.30
105.34	30TH	41.47
105.76	35TH	41.64
106.17	40TH	41.80
106.59	45TH	41.96
107.01	50TH	42.13
107.45	55TH	42.30
107.90	60TH	42.48
108.39	65TH	42.67
108.92	70TH	42.88
109.50	75TH	43.11
110.18	80TH	43.38
110.97	85TH	43.69
112.00	90TH	44.09
113.50	95TH	44.68
114.43	97TH	45.05
115.08	98TH	45.31
116.00	99TH	45.67

PERCENTILES		
CENTIMETERS		INCHES
100.97	1ST	39.75
102.36	2ND	40.30
103.22	3RD	40.64
104.35	5TH	41.08
106.05	10TH	41.75
107.18	15TH	42.20
108.08	20TH	42.55
108.85	25TH	42.86
109.55	30TH	43.13
110.20	35TH	43.39
110.83	40TH	43.63
111.43	45TH	43.87
112.03	50TH	44.11
112.64	55TH	44.35
113.26	60TH	44.59
113.90	65TH	44.84
114.58	70TH	45.11
115.33	75TH	45.40
116.16	80TH	45.73
117.12	85TH	46.11
118.34	90TH	46.59
120.12	95TH	47.29
121.24	97TH	47.73
122.03	98TH	48.04
123.22	99TH	48.51

(103) THIGH CIRCUMFERENCE

The circumference of the right thigh at its juncture with the buttock is measured with a tape. The measurement is made perpendicular to the long axis of the thigh. The subject stands erect with the weight distributed equally on both feet. The legs are spread apart just enough so that the thighs do not touch.



VARIABLE NO. 103—THIGH CIRCUMFERENCE

FEMALES

MALES

THE SUMMARY STATISTICS
CENTIMETERS INCHES

THE SUMMARY STATISTICS
CENTIMETERS INCHES

58.75	MEAN	23.13
0.25	SE (MEAN)	0.10
4.57	ST DEV	1.80
0.10	SE (SD)	0.07
48.00	MINIMUM	18.90
72.60	MAXIMUM	28.58
COEFF. OF VARIATION		7.8%
SYMMETRY—VETA I		0.32
KURTOSIS—VETA II		3.16
NUMBER OF SUBJECTS		334

59.44	MEAN	23.40
0.19	SE (MEAN)	0.08
4.30	ST DEV	1.69
0.14	SE (SD)	0.05
46.60	MINIMUM	18.35
78.20	MAXIMUM	30.79
COEFF. OF VARIATION		7.2%
SYMMETRY—VETA I		0.16
KURTOSIS—VETA II		3.50
NUMBER OF SUBJECTS		487

PERCENTILES
CENTIMETERS INCHES

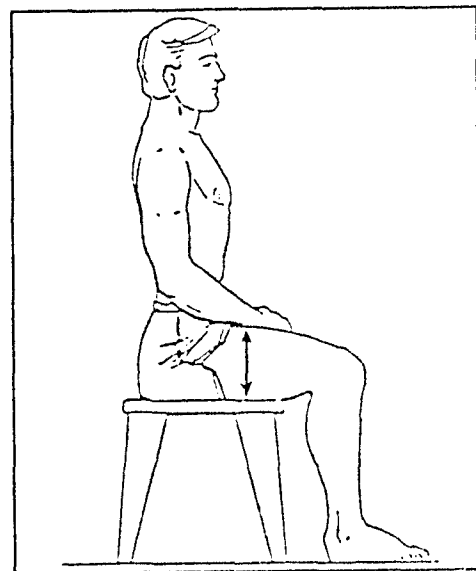
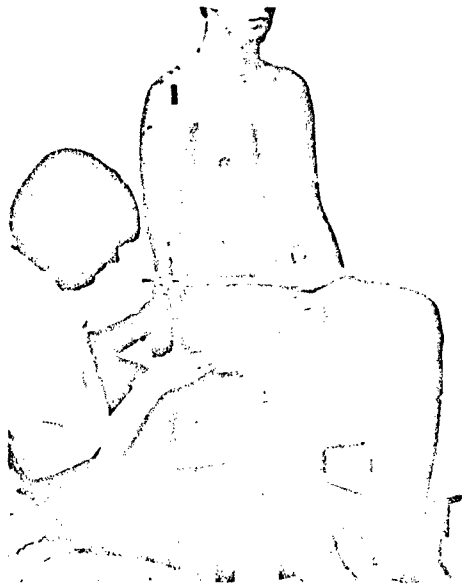
PERCENTILES
CENTIMETERS INCHES

48.24	1ST	18.99
49.68	2ND	19.56
50.52	3RD	19.89
51.59	5TH	20.31
53.13	10TH	20.92
54.12	15TH	21.31
54.91	20TH	21.62
55.59	25TH	21.88
56.20	30TH	22.13
56.78	35TH	22.35
57.34	40TH	22.57
57.89	45TH	22.79
58.44	50TH	23.01
59.01	55TH	23.23
59.60	60TH	23.47
60.23	65TH	23.71
60.91	70TH	23.98
61.66	75TH	24.28
62.53	80TH	24.62
63.56	85TH	25.02
64.91	90TH	25.56
66.99	95TH	26.37
68.36	97TH	26.92
69.38	98TH	27.32
70.97	99TH	27.94

49.77	1ST	19.59
50.85	2ND	20.02
51.54	3RD	20.29
52.50	5TH	20.67
53.98	10TH	21.25
55.00	15TH	21.65
55.81	20TH	21.97
56.52	25TH	22.25
57.15	30TH	22.50
57.74	35TH	22.73
58.30	40TH	22.95
58.84	45TH	23.17
59.38	50TH	23.38
59.92	55TH	23.59
60.47	60TH	23.81
61.03	65TH	24.03
61.63	70TH	24.26
62.28	75TH	24.52
63.01	80TH	24.81
63.84	85TH	25.13
64.90	90TH	25.55
66.45	95TH	26.16
67.44	97TH	26.55
68.17	98TH	26.84
69.29	99TH	27.28

(104) THIGH CLEARANCE

The vertical distance between a sitting surface and the highest point on the top of the right thigh is measured with an anthropometer. The subject sits with the thighs parallel, knees flexed 90 degrees, and the feet in line with the thighs.



VARIABLE NO. 104—HIGH CLEARANCE

FEMALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
15.95	MEAN	6.28
0.07	SE(MEAN)	0.03
1.26	ST DEV	0.50
0.05	SE(SD)	0.02
12.90	MINIMUM	5.08
20.60	MAXIMUM	8.11
COEFF. OF VARIATION		7.9%
SYMMETRY—VETA I		0.50
KURTOSIS—VETA II		3.37
NUMBER OF SUBJECTS		334

MALES

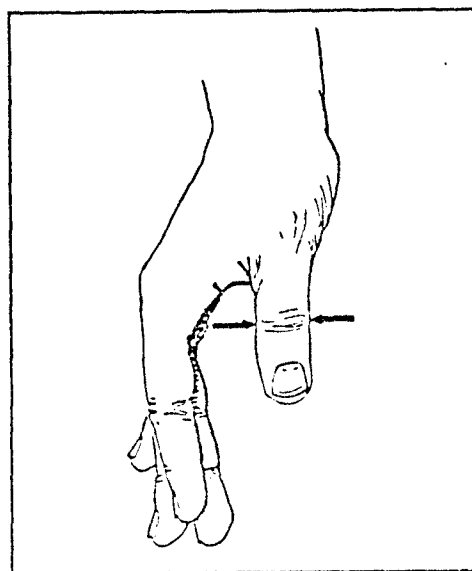
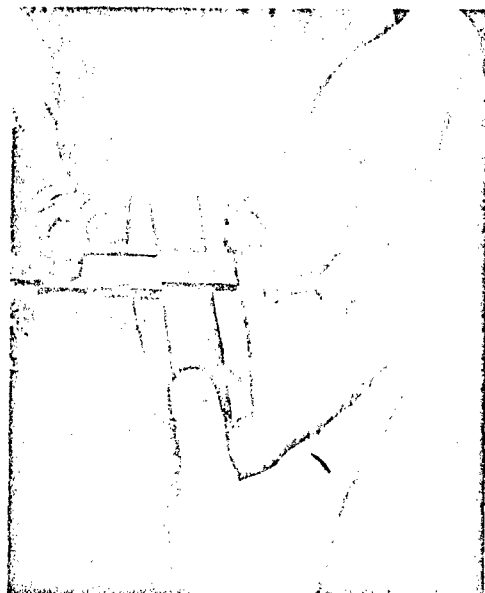
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
16.79	MEAN	6.61
0.05	SE(MEAN)	0.02
1.10	ST DEV	0.43
0.04	SE(SD)	0.01
13.60	MINIMUM	5.35
20.90	MAXIMUM	8.23
COEFF. OF VARIATION		6.5%
SYMMETRY—VETA I		0.10
KURTOSIS—VETA II		3.11
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
13.47	1ST	5.30
13.68	2ND	5.39
13.83	3RD	5.45
14.05	5TH	5.53
14.41	10TH	5.67
14.67	15TH	5.78
14.88	20TH	5.86
15.07	25TH	5.93
15.24	30TH	6.00
15.40	35TH	6.06
15.55	40TH	6.12
15.70	45TH	6.18
15.86	50TH	6.24
16.01	55TH	6.30
16.17	60TH	6.37
16.34	65TH	6.43
16.51	70TH	6.50
16.71	75TH	6.58
16.94	80TH	6.67
17.22	85TH	6.78
17.58	90TH	6.92
18.16	95TH	7.15
18.57	97TH	7.31
18.90	98TH	7.44
19.45	99TH	7.66

PERCENTILES		
CENTIMETERS		INCHES
14.31	1ST	5.63
14.57	2ND	5.74
14.75	3RD	5.81
14.99	5TH	5.90
15.37	10TH	6.05
15.63	15TH	6.15
15.84	20TH	6.24
16.03	25TH	6.31
16.19	30TH	6.38
16.35	35TH	6.44
16.49	40TH	6.49
16.64	45TH	6.55
16.78	50TH	6.60
16.92	55TH	6.66
17.06	60TH	6.72
17.21	65TH	6.77
17.36	70TH	6.84
17.53	75TH	6.90
17.72	80TH	6.97
17.93	85TH	7.06
18.20	90TH	7.17
18.61	95TH	7.32
18.86	97TH	7.43
19.05	98TH	7.50
19.35	99TH	7.62

(105) THUMB BREADTH

The maximum breadth of the right thumb perpendicular to its long axis is measured with a Holtain caliper. The thumb is straight and held away from the hand at about a 45-degree angle.



VARIABLE NO. 105—THUMB BREADTH

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
2.08	MEAN	0.82
0.01	SE (MEAN)	0.00
0.11	ST DEV	0.04
0.00	SE (SD)	0.00
1.80	MINIMUM	0.71
2.40	MAXIMUM	0.94
COEFF. OF VARIATION		5.4%
SYMMETRY—VETA I		0.20
KURTOSIS—VETA II		2.55
NUMBER OF SUBJECTS		334

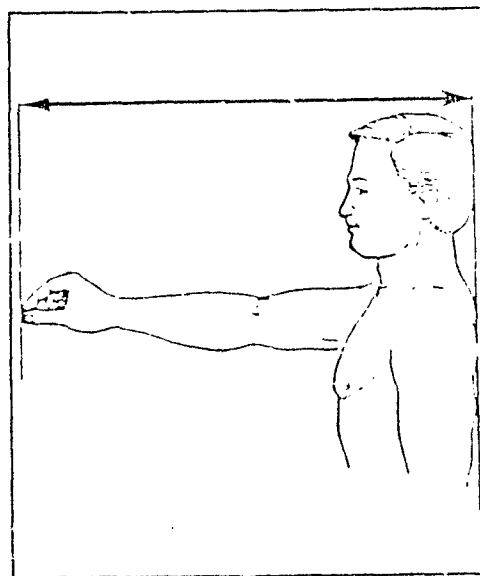
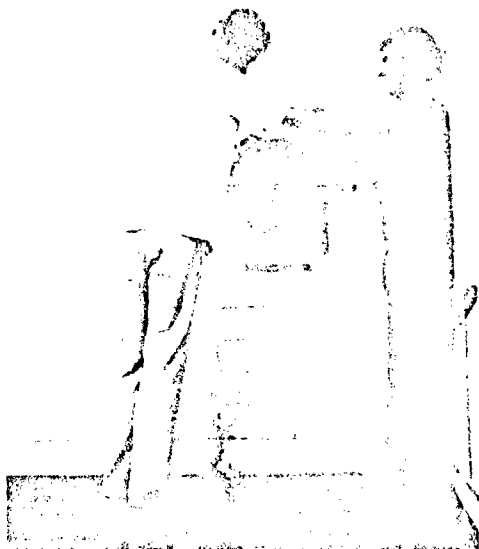
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
2.38	MEAN	0.94
0.01	SE (MEAN)	0.00
0.13	ST DEV	0.05
0.00	SE (SD)	0.00
2.00	MINIMUM	0.79
2.80	MAXIMUM	1.10
COEFF. OF VARIATION		5.3%
SYMMETRY—VETA I		0.10
KURTOSIS—VETA II		2.88
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
1.85	1ST	0.73
1.87	2ND	0.74
1.88	3RD	0.74
1.90	5TH	0.75
1.93	10TH	0.76
1.96	15TH	0.77
1.98	20TH	0.78
2.00	25TH	0.79
2.01	30TH	0.79
2.03	35TH	0.80
2.05	40TH	0.81
2.06	45TH	0.81
2.08	50TH	0.82
2.10	55TH	0.82
2.11	60TH	0.83
2.13	65TH	0.84
2.15	70TH	0.84
2.17	75TH	0.85
2.19	80TH	0.86
2.21	85TH	0.87
2.24	90TH	0.88
2.28	95TH	0.90
2.31	97TH	0.91
2.33	98TH	0.92
2.35	99TH	0.93

PERCENTILES		
CENTIMETERS		INCHES
2.10	1ST	0.83
2.14	2ND	0.84
2.16	3RD	0.85
2.18	5TH	0.86
2.23	10TH	0.88
2.25	15TH	0.89
2.28	20TH	0.90
2.29	25TH	0.90
2.31	30TH	0.91
2.33	35TH	0.92
2.35	40TH	0.92
2.36	45TH	0.93
2.38	50TH	0.94
2.40	55TH	0.94
2.41	60TH	0.95
2.43	65TH	0.96
2.45	70TH	0.96
2.47	75TH	0.97
2.50	80TH	0.98
2.52	85TH	0.99
2.56	90TH	1.01
2.60	95TH	1.02
2.63	97TH	1.04
2.65	98TH	1.04
2.67	99TH	1.05

(106) THUMB TIP REACH

The horizontal distance from a back wall to the tip of the right thumb is measured on a wall scale. The subject stands erect in a corner looking straight ahead with the feet together and the heels 20 cm from the back wall. The buttocks and shoulders are against the wall. The right arm and hand, palm down, are stretched forward horizontally along a scale on the side wall. The thumb continues the horizontal line of the arm and the index finger curves around to touch the pad at the end of thumb. The subject's right shoulder is held against the rear wall.



VARIABLE NO. 106—THUMB TIP REACH

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
75.02	MEAN	29.53
0.14	SE (MEAN)	0.06
2.57	ST DEV	1.01
0.10	SE (SD)	0.04
69.10	MINIMUM	27.20
83.70	MAXIMUM	32.95
COEFF. OF VARIATION		3.4%
SYMMETRY—VETA I		0.44
KURTOSIS—VETA II		3.13
NUMBER OF SUBJECTS		334

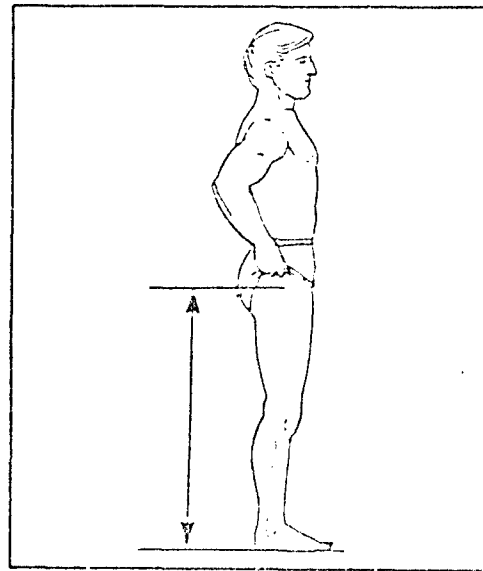
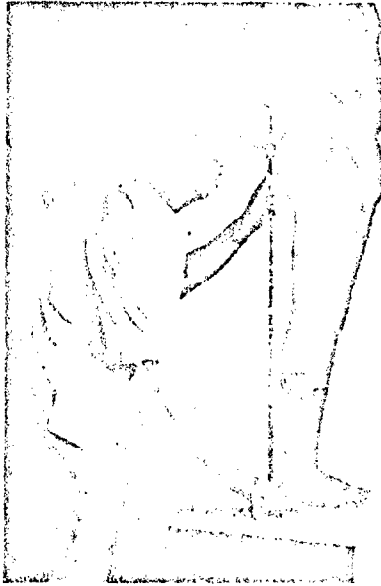
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
80.48	MEAN	31.68
0.17	SE (MEAN)	0.07
3.79	ST DEV	1.49
0.12	SE (SD)	0.05
70.50	MINIMUM	27.76
92.60	MAXIMUM	36.46
COEFF. OF VARIATION		4.7%
SYMMETRY—VETA I		0.16
KURTOSIS—VETA II		3.04
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
70.36	1ST	27.70
70.56	2ND	27.78
70.76	3RD	27.86
71.10	5TH	27.99
71.77	10TH	28.26
72.30	15TH	28.46
72.74	20TH	28.64
73.15	25TH	28.80
73.52	30TH	28.94
73.87	35TH	29.08
74.20	40TH	29.21
74.53	45TH	29.34
74.86	50TH	29.47
75.19	55TH	29.60
75.53	60TH	29.74
75.88	65TH	29.88
76.26	70TH	30.02
76.66	75TH	30.18
77.12	80TH	30.36
77.65	85TH	30.57
78.34	90TH	30.84
79.40	95TH	31.26
80.13	97TH	31.55
80.68	98TH	31.77
81.61	99TH	32.13

PERCENTILES		
CENTIMETERS		INCHES
72.78	1ST	28.65
73.06	2ND	28.76
73.42	3RD	28.90
74.09	5TH	29.17
75.40	10TH	29.68
76.39	15TH	30.08
77.20	20TH	30.39
77.91	25TH	30.67
78.53	30TH	30.92
79.09	35TH	31.14
79.62	40TH	31.35
80.12	45TH	31.54
80.59	50TH	31.73
81.06	55TH	31.91
81.51	60TH	32.09
81.97	65TH	32.27
82.44	70TH	32.46
82.95	75TH	32.66
83.51	80TH	32.88
84.16	85TH	33.13
85.03	90TH	33.47
86.49	95TH	34.05
87.63	97TH	34.50
88.62	98TH	34.89
90.47	99TH	35.62

(107) TROCHANTERIC HEIGHT*

The vertical distance between a standing surface and the trochanterion landmark on the upper side of the right thigh is measured with an anthropometer. The subject stands erect looking straight ahead. The heels are together with the weight distributed equally on both feet.



* Same as Trochanteric Height in previous reports.

VARIABLE NO. 107--TROCHANTERIC HEIGHT

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
88.24	MEAN	34.74
0.15	SE (MEAN)	0.06
2.82	ST DEV	1.11
0.11	SE (SD)	0.04
81.70	MINIMUM	32.17
101.00	MAXIMUM	39.76
COEFF. OF VARIATION		3.2%
SYMMETRY—VETA I		0.65
KURTOSIS—VETA II		4.23
NUMBER OF SUBJECTS		334

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
92.17	MEAN	36.29
0.20	SE (MEAN)	0.08
4.35	ST DEV	1.71
0.14	SE (SD)	0.05
82.20	MINIMUM	32.36
103.80	MAXIMUM	40.87
COEFF. OF VARIATION		4.7%
SYMMETRY—VETA I		0.26
KURTOSIS—VETA II		2.73
NUMBER OF SUBJECTS		437

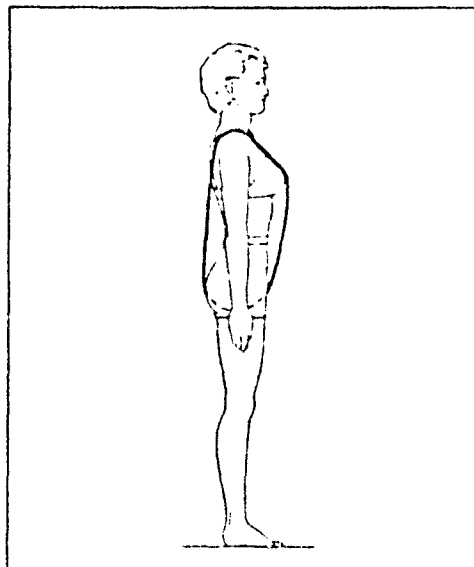
PERCENTILES		
CENTIMETERS		INCHES
82.69	1ST	32.56
83.22	2ND	32.77
83.57	3RD	32.90
84.06	5TH	33.10
84.85	10TH	33.41
85.41	15TH	33.63
85.86	20TH	33.81
86.27	25TH	33.96
86.64	30TH	34.11
86.99	35TH	34.25
87.33	40TH	34.38
87.67	45TH	34.52
88.01	50TH	34.65
88.35	55TH	34.79
88.71	60TH	34.93
89.09	65TH	35.07
89.49	70TH	35.23
89.94	75TH	35.41
90.46	80TH	35.61
91.07	85TH	35.85
91.88	90TH	36.17
93.12	95TH	36.66
93.97	97TH	37.00
94.61	98TH	37.25
95.66	99TH	37.66

PERCENTILES		
CENTIMETERS		INCHES
82.89	1ST	32.64
83.97	2ND	33.06
84.62	3RD	33.32
85.47	5TH	33.65
86.77	10TH	34.16
87.66	15TH	34.51
88.39	20TH	34.80
89.04	25TH	35.05
89.63	30TH	35.29
90.20	35TH	35.51
90.76	40TH	35.73
91.31	45TH	35.95
91.87	50TH	36.17
92.44	55TH	36.39
93.04	60TH	36.53
93.66	65TH	36.87
94.34	70TH	37.14
95.08	75TH	37.43
95.92	80TH	37.76
96.90	85TH	38.15
98.14	90TH	38.64
99.93	95TH	39.34
101.03	97TH	39.77
101.78	98TH	40.07
102.84	99TH	40.49

(108) VERTICAL TRUNK CIRCUMFERENCE (ASCC)*

The vertical circumference of the torso is measured with a tape passing between the buttocks, to the right of the genitalia, over the right bustpoint landmark on women or the nipple (thelion) on men, and across the midshoulder landmark. The subject stands erect looking straight ahead with the right arm hanging relaxed at the side. The heels are together with the weight distributed equally on both feet. The measurement is taken at the midpoint of quiet respiration.

* Aircrew Standardization Coordinating Committee



VARIABLE NO. 108—VERTICAL TRUNK CIRCUMFERENCE (ASCC)

FEMALES

MALES

THE SUMMARY STATISTICS
CENTIMETERS INCHES

153.47 MEAN 60.42
 0.33 SE (MEAN) 0.13
 6.11 ST DEV 2.40
 0.24 SE (SD) 0.09

137.50 MINIMUM 54.13
 174.00 MAXIMUM 68.50

COEFF. OF VARIATION 4.0%
 SYMMETRY—VETA I 0.38
 KURTOSIS—VETA II 3.32

NUMBER OF SUBJECTS 334

THE SUMMARY STATISTICS
CENTIMETERS INCHES

161.10 MEAN 63.42
 0.30 SE (MEAN) 0.12
 6.69 ST DEV 2.64
 0.21 SE (SD) 0.08

135.00 MINIMUM 53.15
 180.30 MAXIMUM 70.98

COEFF. OF VARIATION 4.2%
 SYMMETRY—VETA I 0.00
 KURTOSIS—VETA II 3.14

NUMBER OF SUBJECTS 487

PERCENTILES
CENTIMETERS INCHES

140.94 1ST 55.49
 142.10 2ND 55.95
 142.91 3RD 56.26
 144.07 5TH 56.72
 145.97 10TH 57.47
 147.31 15TH 57.99
 148.37 20TH 58.42
 149.31 25TH 58.78
 150.15 30TH 59.11
 150.93 35TH 59.42
 151.68 40TH 59.72
 152.40 45TH 60.00
 153.13 50TH 60.29
 153.86 55TH 60.58
 154.61 60TH 60.87
 155.39 65TH 61.18
 156.23 70TH 61.51
 157.17 75TH 61.88
 158.24 80TH 62.30
 159.53 85TH 62.81
 161.27 90TH 63.49
 164.11 95TH 64.61
 166.18 97TH 65.42
 167.84 98TH 66.08
 170.72 99TH 67.21

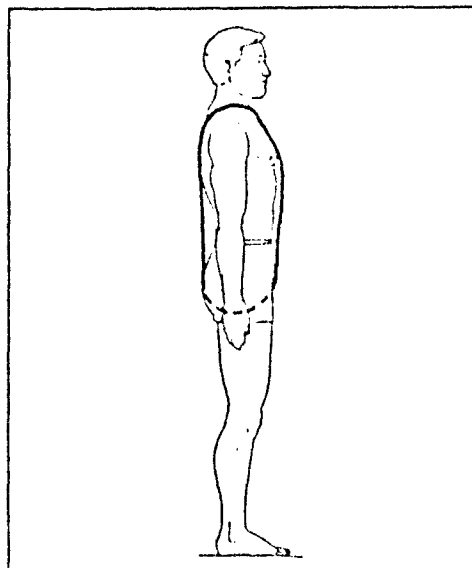
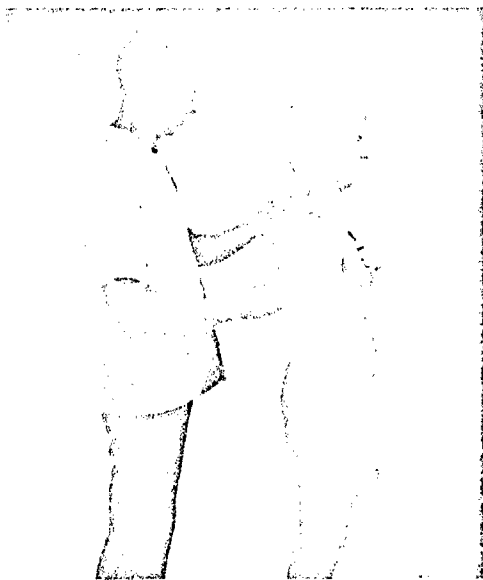
PERCENTILES
CENTIMETERS INCHES

145.97 1ST 57.47
 147.70 2ND 58.15
 148.81 3RD 58.59
 150.32 5TH 59.18
 152.66 10TH 60.10
 154.25 15TH 60.73
 155.51 20TH 61.22
 156.60 25TH 61.65
 157.58 30TH 62.04
 158.48 35TH 62.39
 159.34 40TH 62.73
 160.18 45TH 63.06
 161.00 50TH 63.39
 161.83 55TH 63.71
 162.67 60TH 64.04
 163.54 65TH 64.39
 164.46 70TH 64.75
 165.46 75TH 65.14
 166.59 80TH 65.59
 167.90 85TH 66.10
 169.57 90TH 66.76
 172.09 95TH 67.75
 173.75 97TH 68.41
 174.99 98TH 68.90
 176.98 99TH 69.68

(109) VERTICAL TORSO CIRCUMFERENCE (USA)*

The vertical circumference of the torso is measured with a tape passing over the maximum protrusion of the right buttock, to the right of the genitalia, over the right bustpoint landmark on women or the nipple (thelion) on men, and across the midshoulder landmark. The subject stands erect looking straight ahead with the right arm hanging relaxed at the side. The heels are together with the weight distributed equally on both feet. The measurement is taken at the maximum point of quiet respiration.

* U.S. Army



VARIABLE NO. 109—VERTICAL TRUNK CIRCUMFERENCE (USA)

FEMALES

MALES

THE SUMMARY STATISTICS
CENTIMETERS INCHES

157.77 MEAN 62.11
0.34 SE (MEAN) 0.13
6.27 ST DEV 2.47
0.24 SE (SD) 0.10

141.90 MINIMUM 55.87
177.30 MAXIMUM 69.80

COEFF. OF VARIATION 4.0%
SYMMETRY—VETA I 0.31
KURTOSIS—VETA II 3.20

NUMBER OF SUBJECTS 334

THE SUMMARY STATISTICS
CENTIMETERS INCHES

165.60 MEAN 65.20
0.31 SE (MEAN) 0.12
6.86 ST DEV 2.70
0.22 SE (SD) 0.09

137.80 MINIMUM 54.25
184.80 MAXIMUM 72.76

COEFF. OF VARIATION 4.1%
SYMMETRY—VETA I -0.04
KURTOSIS—VETA II 3.21

NUMBER OF SUBJECTS 487

PERCENTILES
CENTIMETERS INCHES

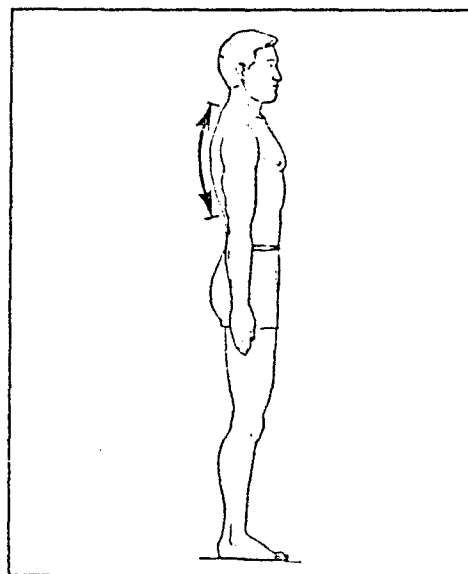
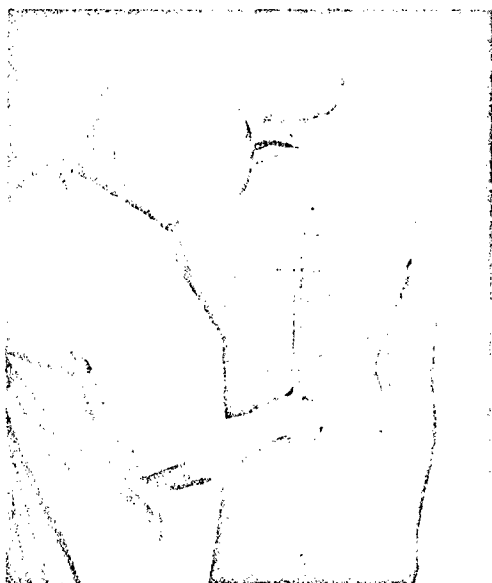
144.15 1ST 56.75
145.72 2ND 57.37
146.70 3RD 57.76
148.03 5TH 58.28
150.06 10TH 59.08
151.43 15TH 59.62
152.53 20TH 60.05
153.48 25TH 60.42
154.34 30TH 60.76
155.14 35TH 61.08
155.91 40TH 61.38
156.66 45TH 61.68
157.41 50TH 61.97
158.18 55TH 62.27
158.96 60TH 62.58
159.79 65TH 62.91
160.68 70TH 63.26
161.66 75TH 63.65
162.79 80TH 64.09
164.13 85TH 64.62
165.91 90TH 65.32
168.69 95TH 66.41
170.61 97TH 67.17
172.08 98TH 67.75
174.51 99TH 68.71

PERCENTILES
CENTIMETERS INCHES

149.90 1ST 59.02
151.72 2ND 59.73
152.88 3RD 60.19
154.46 5TH 60.81
156.89 10TH 61.77
158.54 15TH 62.42
159.84 20TH 62.93
160.98 25TH 63.38
161.99 30TH 63.78
162.94 35TH 64.15
163.83 40TH 64.50
164.70 45TH 64.84
165.56 50TH 65.18
166.42 55TH 65.52
167.30 60TH 65.86
168.20 65TH 66.22
169.16 70TH 66.60
170.19 75TH 67.01
171.35 80TH 67.46
172.70 85TH 67.99
174.40 90TH 68.66
176.91 95TH 69.65
178.53 97TH 70.29
179.72 98TH 70.76
181.57 99TH 71.49

(110) WAIST BACK LENGTH (NATURAL INDENTATION)

The surface distance between the cervicale landmark on the back of the neck and the posterior-waist (natural indentation) landmark is measured with a tape. The subject stands erect with the head in the Frankfort plane. The shoulders and upper extremities are relaxed. The measurement is taken at the maximum point of quiet respiration.



VARIABLE NO. 110—WAIST BACK LENGTH (NATURAL INDENTATION)

FEMALES

THE SUMMARY STATISTICS

CENTIMETERS		INCHES
38.21	MEAN	15.04
0.13	SE (MEAN)	0.05
2.30	ST DEV	0.90
0.09	SE (SD)	0.03
31.90	MINIMUM	12.56
47.70	MAXIMUM	18.78
COEFF. OF VARIATION		6.0%
SYMMETRY—VETA I		0.30
KURTOSIS—VETA II		3.63
NUMBER OF SUBJECTS		334

MALES

THE SUMMARY STATISTICS

CENTIMETERS		INCHES
42.16	MEAN	16.60
0.10	SE (MEAN)	0.04
2.12	ST DEV	0.83
0.07	SE (SD)	0.03
36.30	MINIMUM	14.29
49.30	MAXIMUM	19.41
COEFF. OF VARIATION		5.0%
SYMMETRY—VETA I		0.02
KURTOSIS—VETA II		3.03
NUMBER OF SUBJECTS		487

PERCENTILES

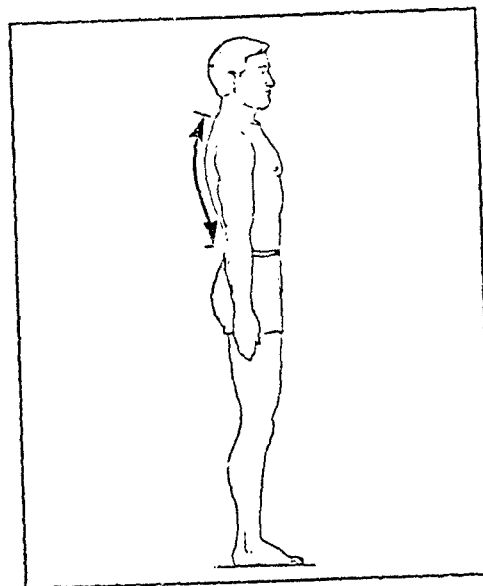
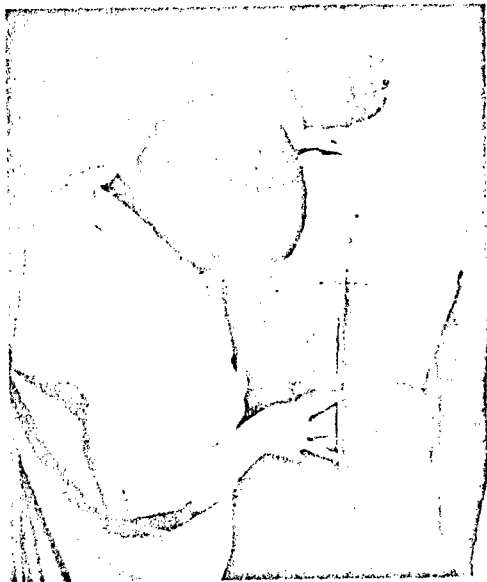
CENTIMETERS		INCHES
32.81	1ST	12.92
33.61	2ND	13.23
34.06	3RD	13.41
34.64	5TH	13.64
35.44	10TH	13.95
35.96	15TH	14.16
36.35	20TH	14.31
36.69	25TH	14.45
37.00	30TH	14.57
37.28	35TH	14.68
37.56	40TH	14.79
37.82	45TH	14.89
38.10	50TH	15.00
38.37	55TH	15.11
38.66	60TH	15.22
38.96	65TH	15.34
39.28	70TH	15.46
39.64	75TH	15.61
40.05	80TH	15.77
40.54	85TH	15.96
41.18	90TH	16.21
42.15	95TH	16.60
42.79	97TH	16.85
43.26	98TH	17.03
43.98	99TH	17.31

PERCENTILES

CENTIMETERS		INCHES
36.90	1ST	14.53
37.64	2ND	14.82
38.08	3RD	14.99
38.65	5TH	15.21
39.46	10TH	15.54
39.98	15TH	15.74
40.39	20TH	15.90
40.74	25TH	16.04
41.05	30TH	16.16
41.33	35TH	16.27
41.61	40TH	16.38
41.87	45TH	16.49
42.14	50TH	16.59
42.40	55TH	16.69
42.67	60TH	16.80
42.95	65TH	16.91
43.25	70TH	17.03
43.57	75TH	17.15
43.94	80TH	17.30
44.36	85TH	17.46
44.90	90TH	17.68
45.68	95TH	17.98
46.17	97TH	18.18
46.51	98TH	18.31
47.03	99TH	18.52

(111) WAIST BACK LENGTH (CERHALION)

The surface distance between the cervicale landmark at the back of the neck and the posterior-waist (omphalion) landmark at the level of the navel is measured with a tape. The subject stands erect with the head in the Frankfort plane. The shoulders and upper extremities are relaxed. The measurement is taken at the maximum point of quiet respiration.



VARIABLE NO. 111—WALST BACK LENGTH (CATHALIGN)

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
45.71	MEAN	18.00
0.12	SE(MEAN)	0.05
2.22	ST DEV	0.87
0.09	SE(SD)	0.03
41.00	MINIMUM	16.14
55.50	MAXIMUM	21.85
COEFF. OF VARIATION		4.9%
SYMMETRY—VETA I		0.48
KURTOSIS—VETA II		3.50
NUMBER OF SUBJECTS		334

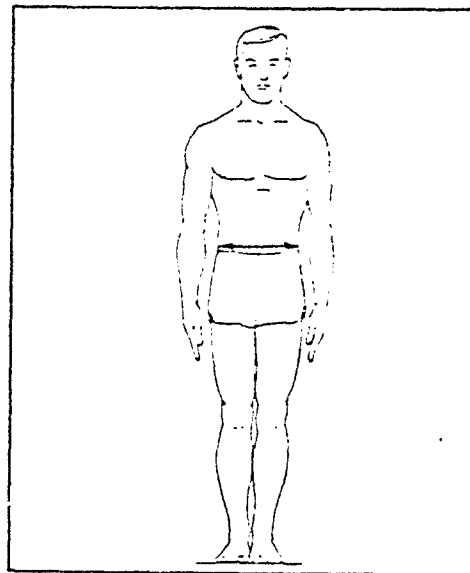
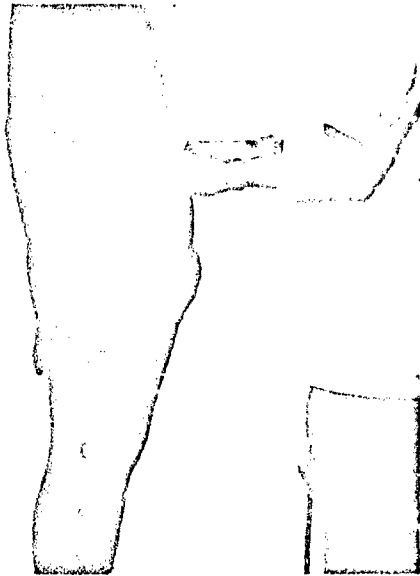
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
48.75	MEAN	19.19
0.11	SE(MEAN)	0.04
2.41	ST DEV	0.95
0.08	SE(SD)	0.03
41.30	MINIMUM	16.26
55.40	MAXIMUM	21.81
COEFF. OF VARIATION		5.0%
SYMMETRY—VETA I		-0.04
KURTOSIS—VETA II		3.01
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
41.52	1ST	16.35
41.81	2ND	16.46
42.03	3RD	16.55
42.36	5TH	16.68
42.96	10TH	16.91
43.40	15TH	17.09
43.78	20TH	17.23
44.11	25TH	17.37
44.42	30TH	17.49
44.72	35TH	17.61
45.00	40TH	17.72
45.28	45TH	17.83
45.57	50TH	17.94
45.85	55TH	18.05
46.15	60TH	18.17
46.45	65TH	18.29
46.78	70TH	18.42
47.14	75TH	18.56
47.54	80TH	18.72
48.02	85TH	18.90
48.63	90TH	19.14
49.54	95TH	19.50
50.14	97TH	19.74
50.59	98TH	19.92
51.30	99TH	20.20

PERCENTILES		
CENTIMETERS		INCHES
43.18	1ST	17.00
43.80	2ND	17.24
44.20	3RD	17.40
44.76	5TH	17.62
45.65	10TH	17.97
46.25	15TH	18.21
46.73	20TH	18.40
47.14	25TH	18.56
47.51	30TH	18.70
47.85	35TH	18.84
48.17	40TH	18.96
48.47	45TH	19.08
48.78	50TH	19.20
49.08	55TH	19.32
49.38	60TH	19.44
49.70	65TH	19.57
50.03	70TH	19.70
50.38	75TH	19.84
50.78	80TH	19.99
51.24	85TH	20.17
51.82	90TH	20.40
52.71	95TH	20.75
53.30	97TH	20.98
53.74	98TH	21.16
54.46	99TH	21.44

(112) WAIST BREADTH

The horizontal breadth of the waist at the level of umbilicus is measured with a beam caliper. The subject stands erect looking straight ahead. The heels are together with the weight distributed equally on both feet. The measurement is taken at the maximum point of quiet respiration.



VARIABLE NO. 112—WAIST CIRCUMFERENCE

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
30.23	MEAN	11.90
0.16	SE(MEAN)	0.06
2.96	ST DEV	1.16
0.11	SE(SD)	0.05
24.20	MINIMUM	9.53
39.00	MAXIMUM	15.35
COEFF. OF VARIATION		9.8%
SYMMETRY—VETA I		0.46
KURTOSIS—VETA II		2.75
NUMBER OF SUBJECTS		334

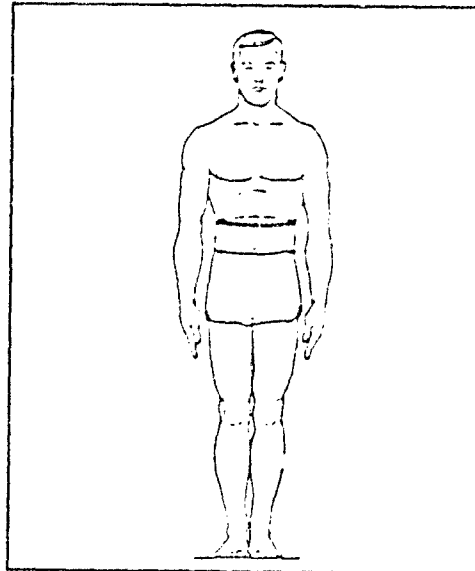
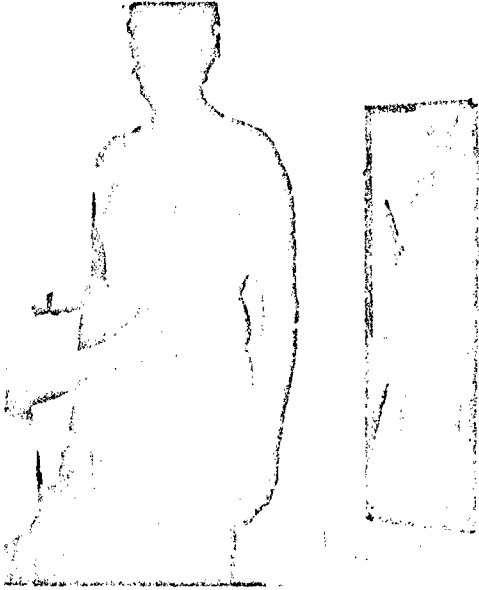
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
32.31	MEAN	12.72
0.11	SE(MEAN)	0.04
2.51	ST DEV	0.99
0.08	SE(SD)	0.03
25.80	MINIMUM	10.16
42.20	MAXIMUM	16.61
COEFF. OF VARIATION		7.8%
SYMMETRY—VETA I		0.23
KURTOSIS—VETA II		2.89
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
24.47	1ST	9.63
25.08	2ND	9.87
25.44	3RD	10.01
25.91	5TH	10.20
26.64	10TH	10.49
27.16	15TH	10.69
27.60	20TH	10.86
28.00	25TH	11.02
28.38	30TH	11.17
28.75	35TH	11.32
29.12	40TH	11.47
29.50	45TH	11.61
29.88	50TH	11.76
30.28	55TH	11.92
30.70	60TH	12.09
31.14	65TH	12.25
31.62	70TH	12.45
32.16	75TH	12.66
32.77	80TH	12.90
33.48	85TH	13.18
34.37	90TH	13.53
35.65	95TH	14.03
36.40	97TH	14.33
36.90	98TH	14.53
37.54	99TH	14.78

PERCENTILES		
CENTIMETERS		INCHES
27.26	1ST	10.73
27.65	2ND	10.89
27.93	3RD	11.00
28.36	5TH	11.16
29.09	10TH	11.45
29.62	15TH	11.66
30.07	20TH	11.84
30.48	25TH	12.00
30.85	30TH	12.15
31.20	35TH	12.28
31.54	40TH	12.42
31.87	45TH	12.55
32.20	50TH	12.68
32.54	55TH	12.81
32.88	60TH	12.95
33.24	65TH	13.09
33.61	70TH	13.23
34.02	75TH	13.39
34.47	80TH	13.57
34.99	85TH	13.78
35.64	90TH	14.03
36.55	95TH	14.39
37.10	97TH	14.61
37.49	98TH	14.76
38.06	99TH	14.98

(113) WAIST CIRCUMFERENCE (NATURAL INDENTATION)

The horizontal circumference of the waist at the level of its natural indentation is measured with a tape passing over right and left waist (natural indentation) landmarks. The subject stands erect looking straight ahead. The heels are together with the weight distributed equally on both feet. The measurement is made at the maximum point of quiet respiration.



VARIABLE NO. 113--WAIST CIRCUMFERENCE (NATURAL INDENTATION)

FEMALES

MALES

THE SUMMARY STATISTICS
CENTIMETERS INCHES

74.15 MEAN 29.19
0.39 SE (MEAN) 0.15
7.11 ST DEV 2.80
0.28 SE (SD) 0.11

57.30 MINIMUM 22.56
98.70 MAXIMUM 38.86

COEFF. OF VARIATION 9.6%
SYMMETRY---VETA I 0.78
KURTOSIS---VETA II 3.79

NUMBER OF SUBJECTS 334

THE SUMMARY STATISTICS
CENTIMETERS INCHES

85.64 MEAN 33.72
0.30 SE (MEAN) 0.12
6.56 ST DEV 2.58
0.21 SE (SD) 0.08

68.90 MINIMUM 27.13
106.40 MAXIMUM 41.89

COEFF. OF VARIATION 7.7%
SYMMETRY---VETA I 0.09
KURTOSIS---VETA II 2.72

NUMBER OF SUBJECTS 487

PERCENTILES
CENTIMETERS INCHES

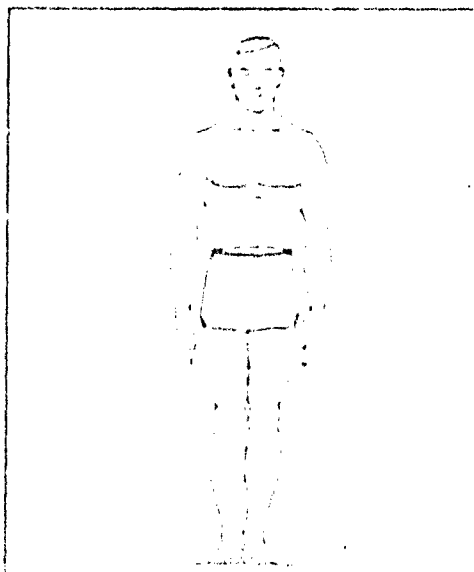
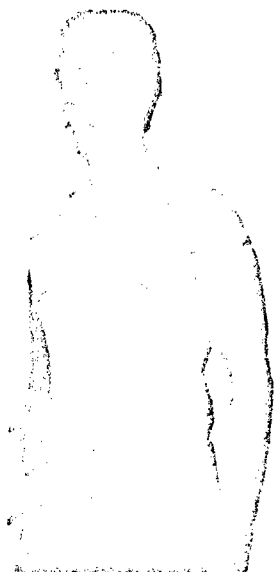
61.40 1ST 24.17
62.55 2ND 24.63
63.31 3RD 24.92
64.35 5TH 25.34
66.05 10TH 26.00
67.25 15TH 26.48
68.25 20TH 26.87
69.15 25TH 27.23
69.99 30TH 27.56
70.79 35TH 27.87
71.58 40TH 28.18
72.38 45TH 28.50
73.19 50TH 28.82
74.04 55TH 29.15
74.93 60TH 29.50
75.89 65TH 29.88
76.94 70TH 30.29
78.14 75TH 30.76
79.55 80TH 31.32
81.29 85TH 32.00
83.66 90TH 32.94
87.56 95TH 34.47
90.37 97TH 35.58
92.59 98TH 36.45
96.36 99TH 37.94

PERCENTILES
CENTIMETERS INCHES

70.89 1ST 27.91
72.62 2ND 28.59
73.68 3RD 29.01
75.09 5TH 29.56
77.27 10TH 30.42
78.75 15TH 31.01
79.95 20TH 31.48
81.01 25TH 31.89
81.93 30TH 32.27
82.88 35TH 32.63
83.76 40TH 32.97
84.61 45TH 33.31
85.47 50TH 33.65
86.34 55TH 33.99
87.23 60TH 34.34
88.15 65TH 34.71
89.13 70TH 35.09
90.20 75TH 35.51
91.38 80TH 35.93
92.74 85TH 36.51
94.41 90TH 37.17
96.73 95TH 38.08
98.07 97TH 38.61
98.96 98TH 38.96
100.13 99TH 39.42

(114) WAIST CIRCUMFERENCE (CEPHALION)

The horizontal circumference of the waist at the level of the center of the navel (cephalion) is measured with a tape. The subject stands erect looking straight ahead. The heels are together with the weight distributed equally on both feet. The measurement is made at the maximum point of quiet respiration.



VARIABLE NO. 114—WAIST CIRCUMFERENCE (CINFALIGN)

FEMALES

MALES

THE SUMMARY STATISTICS
CENTIMETERS INCHES

81.65 MEAN 32.15
0.49 SE(MEAN) 0.19
8.97 ST DEV 3.53
0.35 SE(SD) 0.14

64.00 MINIMUM 25.20
109.90 MAXIMUM 43.27

COEFF. OF VARIATION 11.0%
SYMMETRY—VETA I 0.54
KURTOSIS—VETA II 2.87

NUMBER OF SUBJECTS 334

THE SUMMARY STATISTICS
CENTIMETERS INCHES

88.84 MEAN 34.98
0.34 SE(MEAN) 0.14
7.58 ST DEV 2.99
0.24 SE(SD) 0.10

69.00 MINIMUM 27.17
119.00 MAXIMUM 46.85

COEFF. OF VARIATION 8.5%
SYMMETRY—VETA I 0.15
KURTOSIS—VETA II 2.84

NUMBER OF SUBJECTS 487

PERCENTILES
CENTIMETERS INCHES

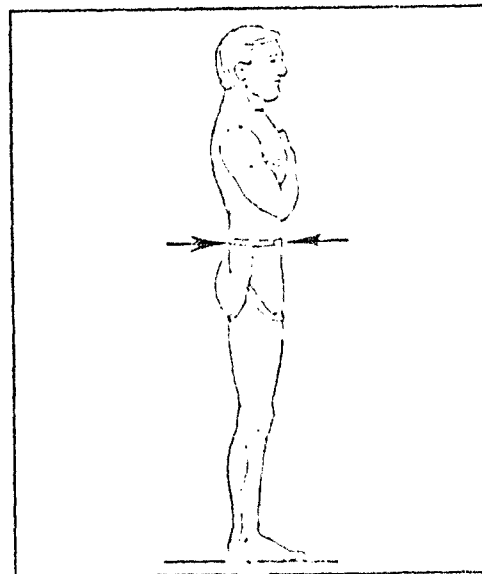
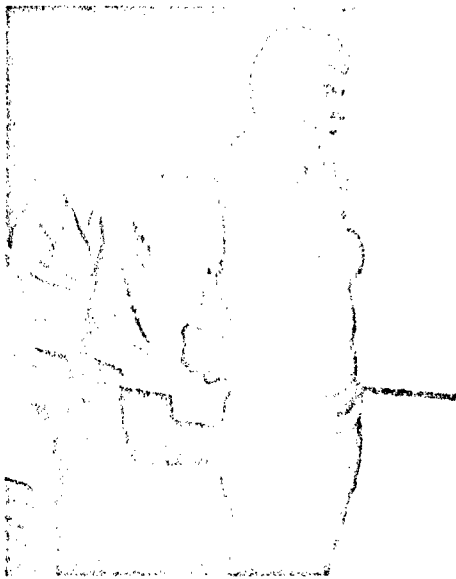
85.94 1ST 25.96
67.07 2ND 26.40
67.82 3RD 26.70
68.92 5TH 27.13
70.84 10TH 27.89
72.33 15TH 28.48
73.63 20TH 28.99
74.85 25TH 29.47
76.01 30TH 29.92
77.14 35TH 30.37
78.27 40TH 30.82
79.41 45TH 31.26
80.58 50TH 31.72
81.79 55TH 32.20
83.06 60TH 32.70
84.41 65TH 33.23
85.87 70TH 33.81
87.48 75TH 34.44
89.33 80TH 35.17
91.48 85TH 36.02
94.22 90TH 37.10
99.19 95TH 38.66
100.62 97TH 39.62
102.30 98TH 40.28
104.67 99TH 41.21

PERCENTILES
CENTIMETERS INCHES

73.29 1ST 28.85
74.44 2ND 29.31
75.30 3RD 29.65
76.62 5TH 30.16
78.93 10TH 31.07
80.64 15TH 31.75
82.07 20TH 32.31
83.35 25TH 32.82
84.53 30TH 33.28
85.63 35TH 33.71
86.68 40TH 34.13
87.71 45TH 34.53
88.74 50TH 34.94
89.77 55TH 35.34
90.81 60TH 35.75
91.88 65TH 36.17
93.01 70TH 36.62
94.22 75TH 37.09
95.55 80TH 37.62
97.06 85TH 38.21
98.91 90TH 38.94
101.49 95TH 39.96
103.04 97TH 40.57
104.10 98TH 40.99
105.65 99TH 41.59

(115) WAIST DEPTH

The horizontal distance between the front and back of the waist at the level of the center of the navel (omphalion) is measured with a beam caliper. The subject stands erect looking straight ahead. The heels are together with the weight distributed equally on both feet. The measurement is taken at the maximum point of quiet respiration.



VARIABLE NO. 115—WAIST DEPTH

FEMALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
20.69	MEAN	8.14
0.15	SE (MEAN)	0.06
2.70	ST DEV	1.06
0.10	SE (SD)	0.04
15.50	MINIMUM	6.10
29.00	MAXIMUM	11.42
COEFF. OF VARIATION		13.1%
SYMMETRY—VETA I		0.61
KURTOSIS—VETA II		3.05
NUMBER OF SUBJECTS		334

PERCENTILES		
CENTIMETERS		INCHES
16.09	1ST	6.33
16.36	2ND	6.44
16.56	3RD	6.52
16.88	5TH	6.65
17.46	10TH	6.87
17.91	15TH	7.05
18.30	20TH	7.21
18.66	25TH	7.35
19.01	30TH	7.48
19.34	35TH	7.61
19.67	40TH	7.74
20.00	45TH	7.88
20.34	50TH	8.01
20.69	55TH	8.15
21.06	60TH	8.29
21.45	65TH	8.45
21.88	70TH	8.61
22.35	75TH	8.80
22.90	80TH	9.01
23.55	85TH	9.27
24.40	90TH	9.61
25.71	95TH	10.12
26.59	97TH	10.47
27.24	98TH	10.72
28.29	99TH	11.14

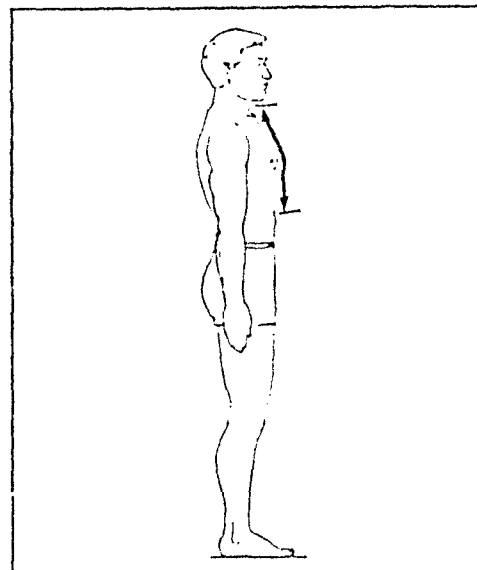
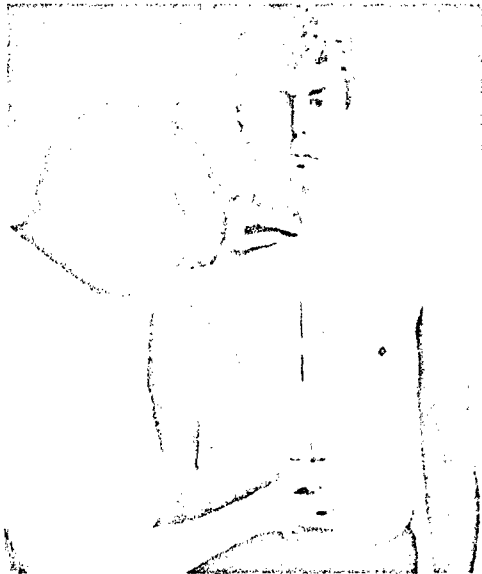
MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
23.19	MEAN	9.13
0.11	SE (MEAN)	0.04
2.39	ST DEV	0.94
0.08	SE (SD)	0.03
17.50	MINIMUM	6.89
33.50	MAXIMUM	13.19
COEFF. OF VARIATION		10.3%
SYMMETRY—VETA I		0.27
KURTOSIS—VETA II		3.00
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
18.28	1ST	7.20
18.71	2ND	7.37
19.00	3RD	7.48
19.42	5TH	7.65
20.12	10TH	7.92
20.64	15TH	8.13
21.06	20TH	8.29
21.45	25TH	8.44
21.80	30TH	8.58
22.13	35TH	8.71
22.45	40TH	8.84
22.77	45TH	8.96
23.09	50TH	9.09
23.41	55TH	9.22
23.74	60TH	9.35
24.08	65TH	9.48
24.45	70TH	9.62
24.84	75TH	9.78
25.28	80TH	9.95
25.79	85TH	10.15
26.42	90TH	10.40
27.31	95TH	10.75
27.85	97TH	10.96
28.22	98TH	11.11
28.75	99TH	11.32

(116) WAIST FRONT LENGTH (NATURAL INDENTATION)

The surface distance between the anterior-neck landmark and the anterior-waist (natural indentation) landmark is measured with a tape. The subject stands erect with the head in the Frankfort plane. The measurement is made at the maximum point of quiet respiration.



VARIABLE NO. 116—WAIST FRONT LENGTH (NATURAL INDENTATION)

FEMALES

THE SUMMARY STATISTICS

CENTIMETERS		INCHES
32.40	MEAN	12.76
0.12	SE (MEAN)	0.05
2.22	ST DEV	0.87
0.09	SE (SD)	0.03
26.80	MINIMUM	10.55
40.40	MAXIMUM	15.91
COEFF. OF VARIATION		6.8%
SYMMETRY—VETA I		0.58
KURTOSIS—VETA II		3.76
NUMBER OF SUBJECTS		334

MALES

THE SUMMARY STATISTICS

CENTIMETERS		INCHES
35.23	MEAN	13.87
0.09	SE (MEAN)	0.03
1.92	ST DEV	0.75
0.06	SE (SD)	0.02
30.40	MINIMUM	11.97
41.80	MAXIMUM	16.46
COEFF. OF VARIATION		5.4%
SYMMETRY—VETA I		-0.01
KURTOSIS—VETA II		2.94
NUMBER OF SUBJECTS		487

PERCENTILES

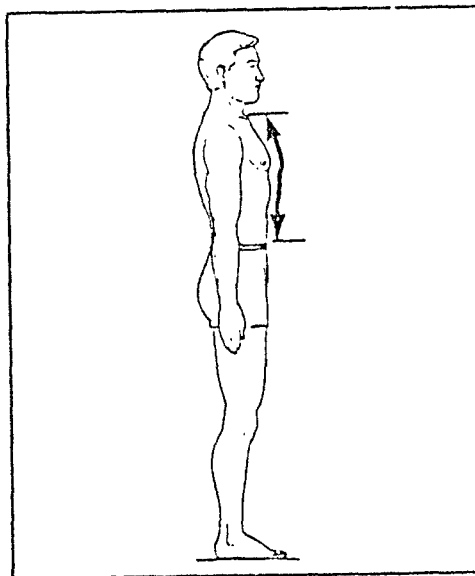
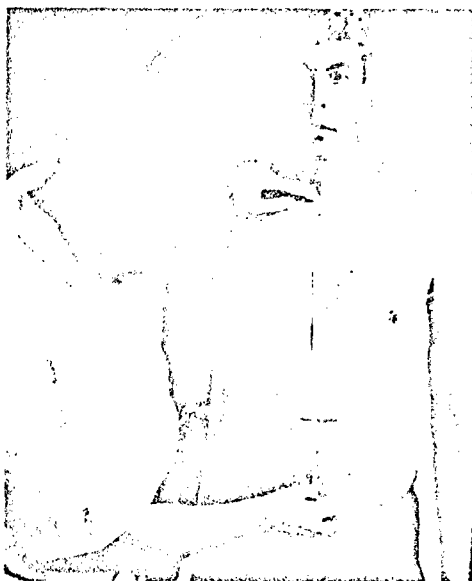
CENTIMETERS		INCHES
28.08	1ST	11.06
28.46	2ND	11.21
28.73	3RD	11.31
29.12	5TH	11.46
29.76	10TH	11.72
30.21	15TH	11.89
30.57	20TH	12.04
30.89	25TH	12.16
31.18	30TH	12.28
31.45	35TH	12.38
31.71	40TH	12.48
31.97	45TH	12.58
32.22	50TH	12.69
32.48	55TH	12.79
32.75	60TH	12.89
33.03	65TH	13.00
33.34	70TH	13.12
33.68	75TH	13.26
34.08	80TH	13.42
34.57	85TH	13.61
35.25	90TH	13.88
36.38	95TH	14.32
37.22	97TH	14.65
37.90	98TH	14.92
39.11	99TH	15.40

PERCENTILES

CENTIMETERS		INCHES
30.69	1ST	12.08
31.15	2ND	12.26
31.47	3RD	12.39
31.93	5TH	12.57
32.68	10TH	12.86
33.19	15TH	13.07
33.59	20TH	13.22
33.94	25TH	13.36
34.24	30TH	13.48
34.52	35TH	13.59
34.78	40TH	13.69
35.03	45TH	13.79
35.28	50TH	13.89
35.52	55TH	13.98
35.75	60TH	14.08
36.00	65TH	14.17
36.25	70TH	14.27
36.53	75TH	14.38
36.83	80TH	14.50
37.18	85TH	14.64
37.62	90TH	14.81
38.31	95TH	15.08
38.78	97TH	15.27
39.15	98TH	15.41
39.78	99TH	15.66

(117) WAIST FRONT LENGTH (Cephalion)

The surface distance between the anterior-neck landmark and the center of the navel (omphalion) is measured with a tape. The subject stands erect with the head in the Frankfort plane. The measurement is made at the maximum point of quiet respiration



VARIABLE NO. 117—WAIST FRONT LENGTH (CEPHALIC)

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
40.28	MEAN	15.86
0.12	SE (MEAN)	0.05
2.24	ST DEV	0.88
0.09	SE (SD)	0.03
34.20	MINIMUM	13.46
48.10	MAXIMUM	18.94
COEFF. OF VARIATION		5.6%
SYMMETRY—VETA I		0.37
KURTOSIS—VETA II		3.27
NUMBER OF SUBJECTS		334

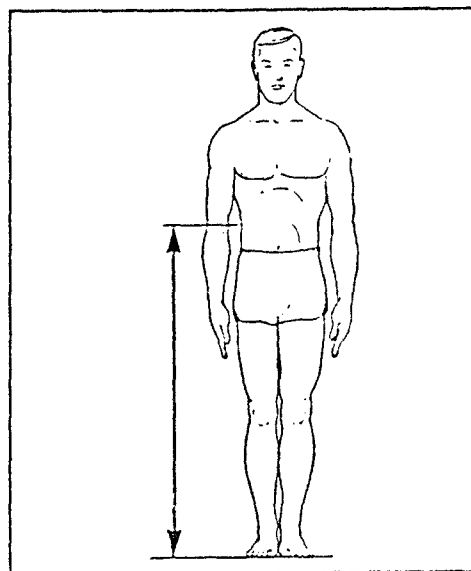
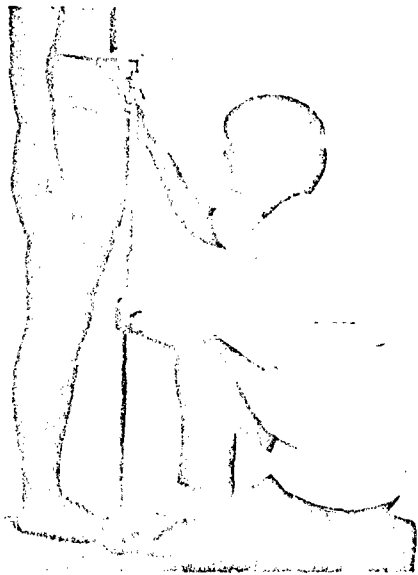
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
41.98	MEAN	16.53
0.10	SE (MEAN)	0.04
2.15	ST DEV	0.85
0.07	SE (SD)	0.03
34.10	MINIMUM	13.43
48.80	MAXIMUM	19.21
COEFF. OF VARIATION		5.1%
SYMMETRY—VETA I		0.03
KURTOSIS—VETA II		3.20
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
35.86	1ST	14.12
36.26	2ND	14.27
36.52	3RD	14.38
36.90	5TH	14.53
37.53	10TH	14.78
37.98	15TH	14.95
38.36	20TH	15.10
38.69	25TH	15.23
39.00	30TH	15.35
39.29	35TH	15.47
39.57	40TH	15.58
39.84	45TH	15.69
40.12	50TH	15.80
40.41	55TH	15.91
40.70	60TH	16.02
41.01	65TH	16.14
41.34	70TH	16.27
41.70	75TH	16.42
42.12	80TH	16.58
42.62	85TH	16.78
43.26	90TH	17.03
44.25	95TH	17.42
44.93	97TH	17.69
45.43	98TH	17.89
46.26	99TH	18.21

PERCENTILES		
CENTIMETERS		INCHES
37.41	1ST	14.73
37.85	2ND	14.90
38.15	3RD	15.02
38.58	5TH	15.19
39.28	10TH	15.47
39.78	15TH	15.66
40.18	20TH	15.82
40.53	25TH	15.96
40.85	30TH	16.08
41.14	35TH	16.20
41.42	40TH	16.31
41.69	45TH	16.41
41.95	50TH	16.52
42.22	55TH	16.62
42.49	60TH	16.73
42.77	65TH	16.84
43.06	70TH	16.95
43.38	75TH	17.08
43.75	80TH	17.22
44.17	85TH	17.39
44.72	90TH	17.60
45.56	95TH	17.94
46.13	97TH	18.16
46.57	98TH	18.34
47.31	99TH	18.62

(118) WAIST HEIGHT (NATURAL INDENTATION)

The vertical distance between a standing surface and the landmark at the natural indentation of the right waist is measured with an anthropometer. The subject stands erect looking straight ahead. The heels are together with the weight distributed equally on both feet. The shoulders and upper extremities are relaxed. The measurement is made at the maximum point of quiet respiration.



VARIABLE NO. 118—WAIST HEIGHT (NATURAL INDENTATION)

FEMALES

MALES

THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
108.75	MEAN	42.82	
0.21	SE (MEAN)	0.08	
3.83	ST DEV	1.51	
0.15	SE (SD)	0.06	
97.70	MINIMUM	38.46	
122.20	MAXIMUM	48.11	
COEFF. OF VARIATION		3.5%	
SYMMETRY—VETA I		0.36	
KURTOSIS—VETA II		3.28	
NUMBER OF SUBJECTS		334	

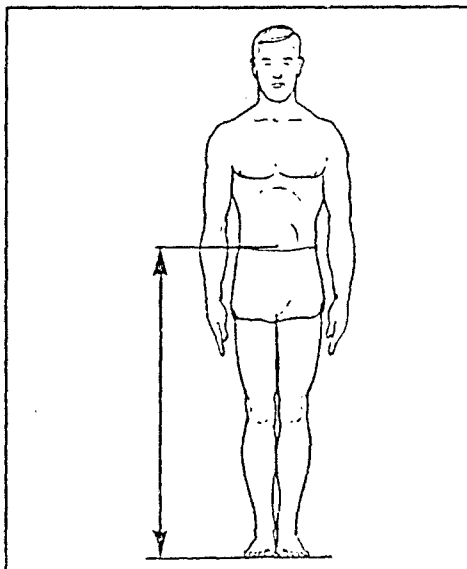
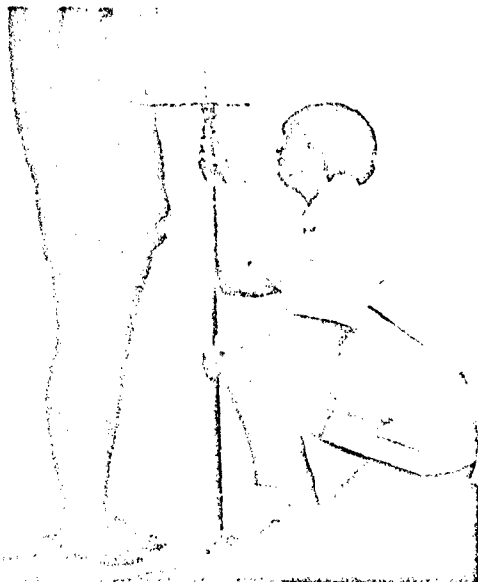
THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
113.14	MEAN	44.54	
0.22	SE (MEAN)	0.09	
4.80	ST DEV	1.89	
0.15	SE (SD)	0.06	
99.30	MINIMUM	39.09	
126.70	MAXIMUM	49.88	
COEFF. OF VARIATION		4.2%	
SYMMETRY—VETA I		0.04	
KURTOSIS—VETA II		2.83	
NUMBER OF SUBJECTS		487	

PERCENTILES		
CENTIMETERS		INCHES
101.06	1ST	39.79
101.87	2ND	40.11
102.38	3RD	40.31
103.06	5TH	40.57
104.13	10TH	41.00
104.88	15TH	41.29
105.49	20TH	41.53
106.04	25TH	41.75
106.55	30TH	41.95
107.03	35TH	42.14
107.50	40TH	42.32
107.97	45TH	42.51
108.44	50TH	42.69
108.93	55TH	42.88
109.43	60TH	43.08
109.96	65TH	43.29
110.53	70TH	43.52
111.17	75TH	43.77
111.89	80TH	44.05
112.75	85TH	44.39
113.85	90TH	44.82
115.50	95TH	45.47
116.56	97TH	45.89
117.34	98TH	46.20
118.51	99TH	46.66

PERCENTILES		
CENTIMETERS		INCHES
101.94	1ST	40.13
103.28	2ND	40.66
104.11	3RD	40.99
105.23	5TH	41.43
106.92	10TH	42.10
108.07	15TH	42.55
108.98	20TH	42.91
109.78	25TH	43.22
110.50	30TH	43.50
111.17	35TH	43.77
111.81	40TH	44.02
112.43	45TH	44.26
113.05	50TH	44.51
113.67	55TH	44.75
114.31	60TH	45.00
114.97	65TH	45.26
115.67	70TH	45.54
116.42	75TH	45.84
117.27	80TH	46.17
118.23	85TH	46.55
119.44	90TH	47.03
121.17	95TH	47.71
122.23	97TH	48.12
122.96	98TH	48.41
124.03	99TH	48.83

(119) WAIST HEIGHT (CERHALION)

The vertical distance between a standing surface and the center of the navel (cerhalion) is measured with an anthropometer. The subject stands erect looking straight ahead. The heels are together with the weight distributed equally on both feet. The shoulders and upper extremities are relaxed. The measurement is made at the maximum point of quiet respiration.



VARIABLE NO. 119—WAIST HEIGHT (CATHALIC)

FEMALES

MALES

THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
101.27	MEAN	39.87	
0.18	SE(MEAN)	0.07	
3.35	ST DEV	1.32	
0.13	SE(SD)	0.05	
92.00	MINIMUM	36.22	
114.50	MAXIMUM	45.08	
COEFF. OF VARIATION		3.3%	
SYMMETRY—VETA I		0.42	
KURTOSIS—VETA II		3.60	
NUMBER OF SUBJECTS		334	

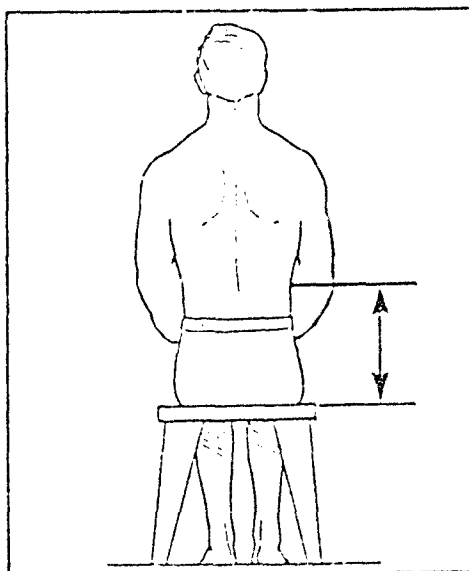
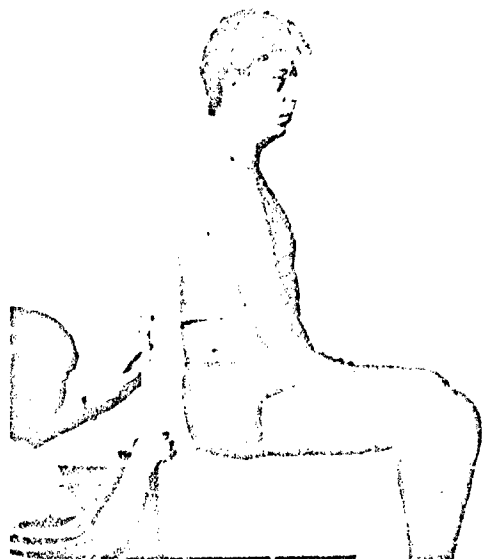
THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
106.50	MEAN	41.93	
0.22	SE(MEAN)	0.09	
4.80	ST DEV	1.89	
0.15	SE(SD)	0.06	
93.20	MINIMUM	36.69	
120.30	MAXIMUM	47.36	
COEFF. OF VARIATION		4.5%	
SYMMETRY—VETA I		0.01	
KURTOSIS—VETA II		2.77	
NUMBER OF SUBJECTS		487	

PERCENTILES		
CENTIMETERS		INCHES
94.07	1ST	37.03
94.96	2ND	37.39
95.50	3RD	37.60
96.21	5TH	37.88
97.26	10TH	38.29
97.96	15TH	38.57
98.51	20TH	38.79
99.00	25TH	38.98
99.44	30TH	39.15
99.86	35TH	39.31
100.26	40TH	39.47
100.65	45TH	39.63
101.05	50TH	39.79
101.46	55TH	39.95
101.88	60TH	40.11
102.33	65TH	40.29
102.81	70TH	40.48
103.34	75TH	40.69
103.96	80TH	40.93
104.69	85TH	41.21
105.64	90TH	41.59
107.12	95TH	42.17
108.11	97TH	42.56
108.85	98TH	42.85
110.03	99TH	43.32

PERCENTILES		
CENTIMETERS		INCHES
95.08	1ST	37.43
96.59	2ND	38.03
97.49	3RD	38.38
98.65	5TH	38.84
100.36	10TH	39.51
101.50	15TH	39.96
102.39	20TH	40.31
103.17	25TH	40.62
103.88	30TH	40.90
104.54	35TH	41.16
105.17	40TH	41.41
105.79	45TH	41.65
106.41	50TH	41.89
107.03	55TH	42.14
107.67	60TH	42.39
108.34	65TH	42.65
109.04	70TH	42.93
109.81	75TH	43.23
110.66	80TH	43.57
111.65	85TH	43.96
112.86	90TH	44.43
114.56	95TH	45.10
115.55	97TH	45.49
116.21	98TH	45.75
117.08	99TH	46.09

(120) WAIST HEIGHT, SITTING (NATURAL BENTFORWARD)

The vertical distance from a sitting surface to the landmark at the natural indentation of the right waist is measured with an anthropometer. The subject sits erect looking straight ahead. The knees are flexed 90 degrees. The measurement is made at the maximum point of quiet respiration.



VARIABLE NO. 120—WAIST HEIGHT, SITTING (NATURAL INDENTATION)

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
28.97	MEAN	11.41
0.11	SE(MEAN)	0.04
2.07	ST DEV	0.82
0.08	SE(SD)	0.03
23.00	MINIMUM	9.06
34.40	MAXIMUM	13.54
COEFF. OF VARIATION		7.2%
SYMMETRY—VETA I		-0.14
KURTOSIS—VETA II		2.76
NUMBER OF SUBJECTS		334

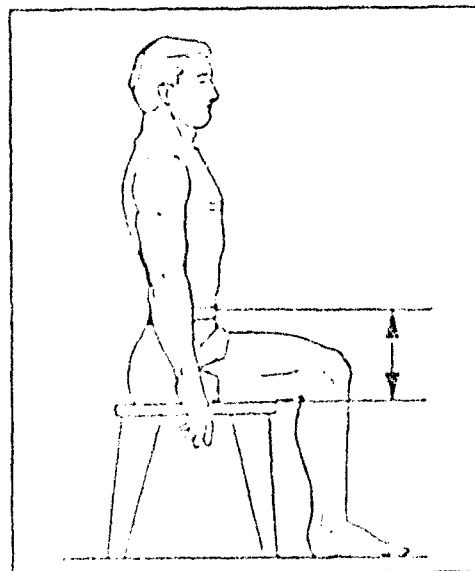
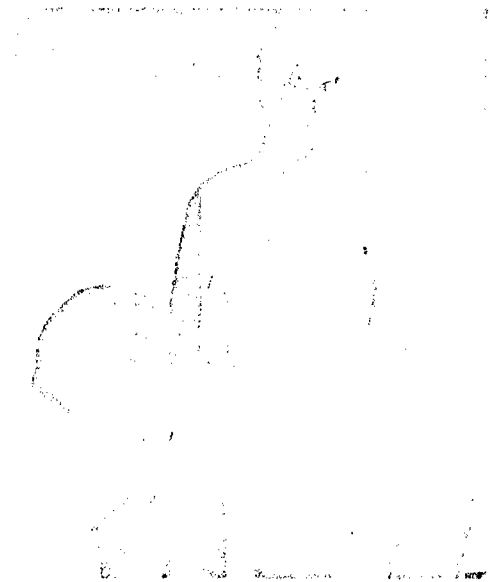
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
29.10	MEAN	11.46
0.07	SE(MEAN)	0.03
1.56	ST DEV	0.61
0.05	SE(SD)	0.02
23.10	MINIMUM	9.09
33.40	MAXIMUM	13.15
COEFF. OF VARIATION		5.3%
SYMMETRY—VETA I		-0.21
KURTOSIS—VETA II		3.35
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
23.73	1ST	9.34
24.49	2ND	9.64
24.93	3RD	9.82
25.49	5TH	10.04
26.30	10TH	10.36
26.83	15TH	10.56
27.23	20TH	10.72
27.58	25TH	10.86
27.89	30TH	10.98
28.18	35TH	11.10
28.46	40TH	11.20
28.73	45TH	11.31
28.99	50TH	11.41
29.26	55TH	11.52
29.53	60TH	11.63
29.81	65TH	11.74
30.11	70TH	11.85
30.43	75TH	11.98
30.78	80TH	12.12
31.18	85TH	12.28
31.67	90TH	12.47
32.32	95TH	12.73
32.69	97TH	12.87
32.91	98TH	12.96
33.18	99TH	13.06

PERCENTILES		
CENTIMETERS		INCHES
25.16	1ST	9.90
25.73	2ND	10.13
26.08	3RD	10.27
26.52	5TH	10.44
27.16	10TH	10.69
27.57	15TH	10.85
27.88	20TH	10.98
28.14	25TH	11.08
28.37	30TH	11.17
28.53	35TH	11.25
28.77	40TH	11.33
28.96	45TH	11.40
29.14	50TH	11.47
29.33	55TH	11.55
29.51	60TH	11.62
29.70	65TH	11.69
29.91	70TH	11.77
30.12	75TH	11.86
30.37	80TH	11.96
30.66	85TH	12.07
31.03	90TH	12.22
31.60	95TH	12.44
31.97	97TH	12.59
32.26	98TH	12.70
32.72	99TH	12.88

(121) WAIST HEIGHT, SITTING (CEPHALION)

The vertical distance from a sitting surface to the center of the navel (cephalion) is measured with an anthropometer. The subject sits erect looking straight ahead. The knees are flexed 90 degrees. The measurement is made at the maximum point of quiet respiration.



VARIABLE NO. 121—WAIST HEIGHT, SITTING (CIRCUMLIGN)

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
23.60	MEAN	9.29
0.08	SE(MEAN)	0.03
1.43	ST DEV	0.56
0.06	SE(SD)	0.02
20.00	MINIMUM	7.87
27.50	MAXIMUM	10.83
COEFF. OF VARIATION		6.0%
SYMMETRY-----VETA I		-0.01
KURTOSIS-----VETA II		2.73
NUMBER OF SUBJECTS		334

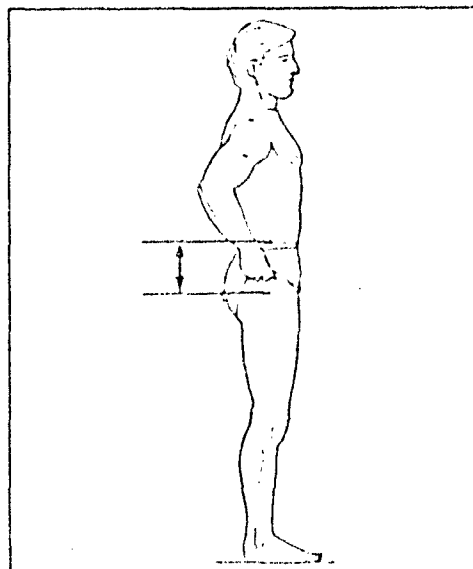
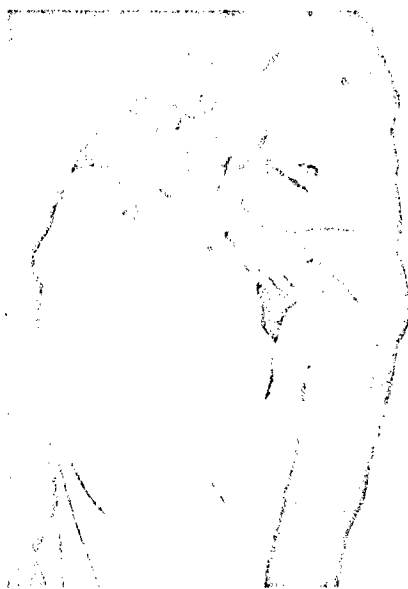
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
24.13	MEAN	9.50
0.07	SE(MEAN)	0.03
1.49	ST DEV	0.59
0.05	SE(SD)	0.02
19.50	MINIMUM	7.68
28.00	MAXIMUM	11.02
COEFF. OF VARIATION		6.2%
SYMMETRY-----VETA I		-0.23
KURTOSIS-----VETA II		3.09
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
20.30	1ST	7.99
20.61	2ND	8.11
20.83	3RD	8.20
21.15	5TH	8.33
21.67	10TH	8.53
22.04	15TH	8.68
22.34	20TH	8.79
22.59	25TH	8.90
22.82	30TH	8.99
23.04	35TH	9.07
23.24	40TH	9.15
23.43	45TH	9.22
23.62	50TH	9.30
23.80	55TH	9.37
23.99	60TH	9.45
24.18	65TH	9.52
24.38	70TH	9.60
24.60	75TH	9.68
24.83	80TH	9.78
25.10	85TH	9.88
25.44	90TH	10.01
25.93	95TH	10.21
26.26	97TH	10.34
26.50	98TH	10.43
26.89	99TH	10.59

PERCENTILES		
CENTIMETERS		INCHES
20.23	1ST	7.97
20.73	2ND	8.16
21.05	3RD	8.29
21.48	5TH	8.46
22.13	10TH	8.71
22.56	15TH	8.88
22.89	20TH	9.01
23.17	25TH	9.12
23.41	30TH	9.22
23.63	35TH	9.30
23.83	40TH	9.38
24.02	45TH	9.46
24.21	50TH	9.53
24.39	55TH	9.60
24.57	60TH	9.67
24.75	65TH	9.75
24.94	70TH	9.82
25.15	75TH	9.90
25.37	80TH	9.99
25.63	85TH	10.09
25.97	90TH	10.22
26.47	95TH	10.42
26.83	97TH	10.56
27.10	98TH	10.67
27.57	99TH	10.85

(122) WAIST-HIP LENGTH

The surface distance between the right waist (cephalion) landmark and the right lateral-buttock-point landmark on the side of the hip is measured with a tape. The subject stands erect looking straight ahead. The heels are together with the weight distributed equally on both feet.



VARIABLE NO. 122—WALST-HIP LENGTH

FEMALES

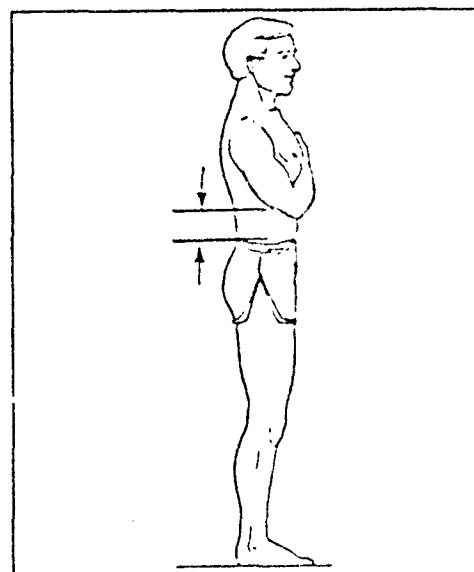
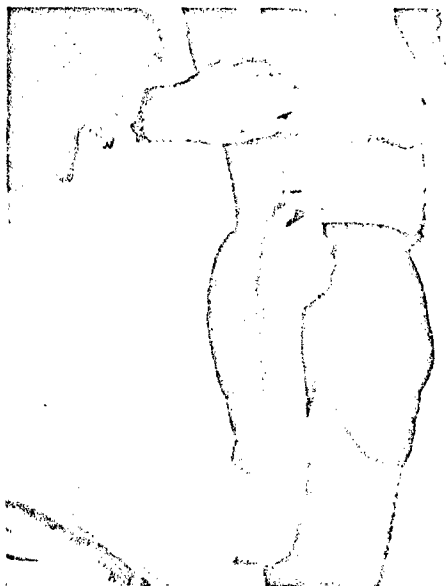
MALES

THE SUMMARY STATISTICS			THE SUMMARY STATISTICS		
CENTIMETERS		INCHES	CENTIMETERS		INCHES
16.05	MEAN	6.32	18.40	MEAN	7.24
0.11	SE(MEAN)	0.04	0.09	SE(MEAN)	0.03
2.01	ST DEV	0.79	1.96	ST DEV	0.77
0.08	SE(SD)	0.03	0.06	SE(SD)	0.02
9.90	MINIMUM	3.90	12.20	MINIMUM	4.80
21.00	MAXIMUM	8.27	24.00	MAXIMUM	9.45
COEFF. OF VARIATION		12.5%	COEFF. OF VARIATION		10.6%
SYMMETRY—VETA I		-0.29	SYMMETRY—VETA I		-0.14
KURTOSIS—VETA II		2.88	KURTOSIS—VETA II		3.04
NUMBER OF SUBJECTS		334	NUMBER OF SUBJECTS		487

PERCENTILES			PERCENTILES		
CENTIMETERS		INCHES	CENTIMETERS		INCHES
11.10	1ST	4.37	13.68	1ST	5.39
11.60	2ND	4.57	14.19	2ND	5.59
11.95	3RD	4.70	14.53	3RD	5.72
12.46	5TH	4.91	15.02	5TH	5.91
13.30	10TH	5.24	15.79	10TH	6.21
13.87	15TH	5.46	16.31	15TH	6.42
14.33	20TH	5.64	16.73	20TH	6.59
14.72	25TH	5.79	17.08	25TH	6.73
15.06	30TH	5.93	17.40	30TH	6.85
15.36	35TH	6.05	17.69	35TH	6.96
15.65	40TH	6.16	17.96	40TH	7.07
15.92	45TH	6.27	18.22	45TH	7.17
16.18	50TH	6.37	18.47	50TH	7.27
16.44	55TH	6.47	18.72	55TH	7.37
16.69	60TH	6.57	18.96	60TH	7.47
16.94	65TH	6.67	19.22	65TH	7.57
17.20	70TH	6.77	19.48	70TH	7.67
17.48	75TH	6.88	19.76	75TH	7.78
17.77	80TH	7.00	20.07	80TH	7.90
18.11	85TH	7.13	20.42	85TH	8.04
18.53	90TH	7.30	20.87	90TH	8.22
19.16	95TH	7.54	21.53	95TH	8.48
19.59	97TH	7.71	21.97	97TH	8.65
19.93	98TH	7.84	22.31	98TH	8.78
20.50	99TH	8.07	22.86	99TH	9.00

(123) WAIST (NATURAL INDENTATION) - WAIST (CEPHALIC) LENGTH

The surface distance between the right waist (natural indentation) and right waist (cephalic) landmarks is measured with a tape. The subject stands erect looking straight ahead. The heels are together with the weight distributed equally on both feet.



VARIABLE NO. 123—WAIST (NATURAL INDENTATION)—WAIST (CERPHALION)

FEMALES

MALES

THE SUMMARY STATISTICS
CENTIMETERS INCHES

7.60	MEAN	2.99
0.12	SE (MEAN)	0.05
2.15	ST DEV	0.85
0.08	SE (SD)	0.03
0.90	MINIMUM	0.35
14.90	MAXIMUM	5.87

COEFF. OF VARIATION	28.3%
SYMMETRY—VETA I	0.17
KURTOSIS—VETA II	3.50

NUMBER OF SUBJECTS 334

THE SUMMARY STATISTICS
CENTIMETERS INCHES

6.92	MEAN	2.72
0.08	SE (MEAN)	0.03
1.75	ST DEV	0.69
0.06	SE (SD)	0.02
1.80	MINIMUM	0.71
12.60	MAXIMUM	4.96

COEFF. OF VARIATION	25.3%
SYMMETRY—VETA I	0.09
KURTOSIS—VETA II	3.12

NUMBER OF SUBJECTS 487

PERCENTILES
CENTIMETERS INCHES

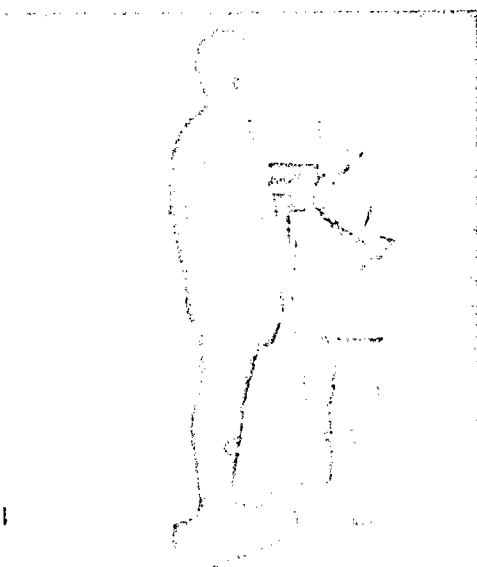
2.15	1ST	0.85
3.12	2ND	1.23
3.65	3RD	1.44
4.27	5TH	1.68
5.08	10TH	2.00
5.56	15TH	2.19
5.92	20TH	2.33
6.22	25TH	2.45
6.49	30TH	2.56
6.75	35TH	2.66
6.99	40TH	2.75
7.23	45TH	2.85
7.48	50TH	2.94
7.73	55TH	3.04
8.00	60TH	3.15
8.28	65TH	3.26
8.58	70TH	3.38
8.93	75TH	3.51
9.32	80TH	3.67
9.79	85TH	3.86
10.41	90TH	4.10
11.32	95TH	4.46
11.90	97TH	4.69
12.31	98TH	4.85
12.90	99TH	5.08

PERCENTILES
CENTIMETERS INCHES

2.70	1ST	1.06
3.33	2ND	1.31
3.69	3RD	1.45
4.14	5TH	1.63
4.77	10TH	1.88
5.17	15TH	2.03
5.48	20TH	2.16
5.74	25TH	2.26
5.98	30TH	2.36
6.21	35TH	2.44
6.42	40TH	2.53
6.64	45TH	2.61
6.85	50TH	2.70
7.07	55TH	2.78
7.30	60TH	2.87
7.53	65TH	2.97
7.79	70TH	3.07
8.06	75TH	3.18
8.38	80TH	3.30
8.75	85TH	3.44
9.21	90TH	3.63
9.87	95TH	3.88
10.26	97TH	4.04
10.53	98TH	4.14
10.89	99TH	4.29

(124) WEIGHT

The weight of the subject is taken to the nearest tenth of a kilogram.
The subject stands on the platform of a scale.



VARIABLE NO. 124—WEIGHT

FEMALES

THE SUMMARY STATISTICS		
KILOGRAMS		POUNDS
65.51	MEAN	144.12
0.47	SE (MEAN)	1.03
8.54	ST DEV	18.79
0.33	SE (SD)	0.73
46.40	MINIMUM	102.08
96.70	MAXIMUM	212.74
COEFF. OF VARIATION		13.0%
SYMMETRY—VETA I		0.54
KURTOSIS—VETA II		3.54
NUMBER OF SUBJECTS		334

MALES

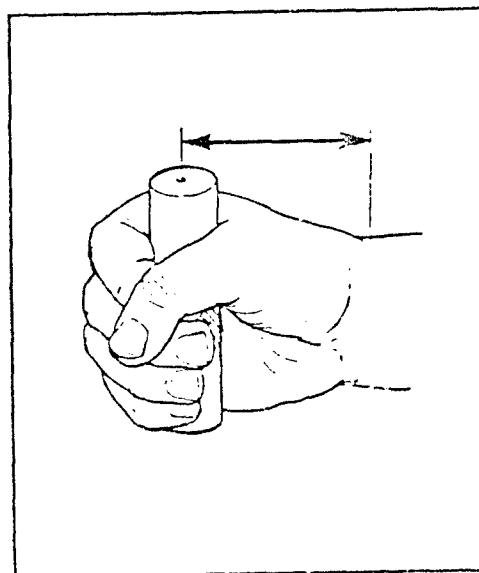
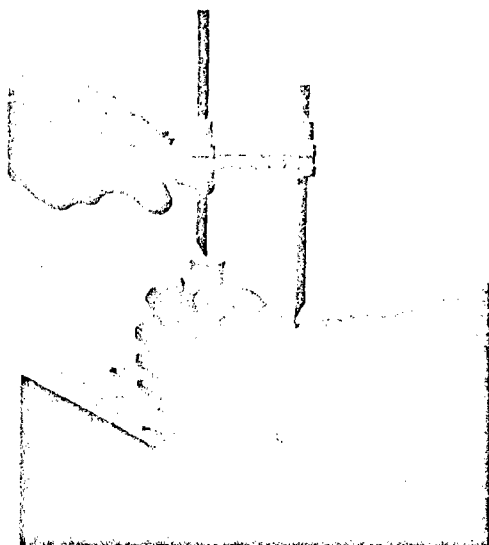
THE SUMMARY STATISTICS		
KILOGRAMS		POUNDS
79.97	MEAN	175.93
0.44	SE (MEAN)	0.97
9.63	ST DEV	21.19
0.31	SE (SD)	0.68
56.90	MINIMUM	125.18
113.60	MAXIMUM	249.92
COEFF. OF VARIATION		12.0%
SYMMETRY—VETA I		0.29
KURTOSIS—VETA II		2.84
NUMBER OF SUBJECTS		487

PERCENTILES		
KILOGRAMS		POUNDS
47.84	1ST	105.23
49.79	2ND	109.54
51.00	3RD	112.20
52.64	5TH	115.81
55.17	10TH	121.37
56.90	15TH	125.18
58.29	20TH	128.24
59.52	25TH	130.94
60.64	30TH	133.41
61.69	35TH	135.72
62.71	40TH	137.96
63.72	45TH	140.18
64.74	50TH	142.43
65.78	55TH	144.72
66.86	60TH	147.09
68.01	65TH	149.62
69.25	70TH	152.35
70.63	75TH	155.39
72.23	80TH	158.91
74.15	85TH	163.13
76.70	90TH	168.74
80.73	95TH	177.61
83.52	97TH	183.74
85.66	98TH	188.45
89.18	99TH	196.20

PERCENTILES		
KILOGRAMS		POUNDS
60.22	1ST	132.48
62.30	2ND	137.06
63.58	3RD	139.88
65.32	5TH	143.70
68.05	10TH	149.71
69.98	15TH	153.96
71.57	20TH	156.79
73.00	25TH	160.60
74.32	30TH	163.51
75.59	35TH	166.30
76.82	40TH	169.00
78.05	45TH	171.71
79.29	50TH	174.44
80.57	55TH	177.25
81.89	60TH	180.16
83.28	65TH	183.22
84.77	70TH	186.49
86.41	75TH	190.10
88.28	80TH	194.22
90.45	85TH	198.99
93.20	90TH	205.04
97.17	95TH	213.77
99.62	97TH	219.16
101.31	98TH	222.88
103.73	99TH	228.21

(125) WRIST-CENTER OF GRIP LENGTH

The horizontal distance between the stylium landmark on the right wrist and the center of a dowel (1-1/4" diameter) gripped in the right hand is measured with a Poech caliper. The subject sits grasping a dowel in the right hand. The base of the dowel is flush with the bottom of the fist. The subject puts the bottom of the fist on a flat surface in such a way that the base of the dowel rests on the surface. The fist is in line with the long axis of the forearm.



VARIABLE NO. 125—WRIST-CENTER OF GRIP LENGTH

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
6.70	MEAN	2.64
0.03	SE (MEAN)	0.01
0.50	ST DEV	0.20
0.02	SE (SD)	0.01
5.70	MINIMUM	2.24
8.10	MAXIMUM	3.19
COEFF. OF VARIATION		7.4%
SYMMETRY—VETA I		0.38
KURTOSIS—VETA II		2.71
NUMBER OF SUBJECTS		334

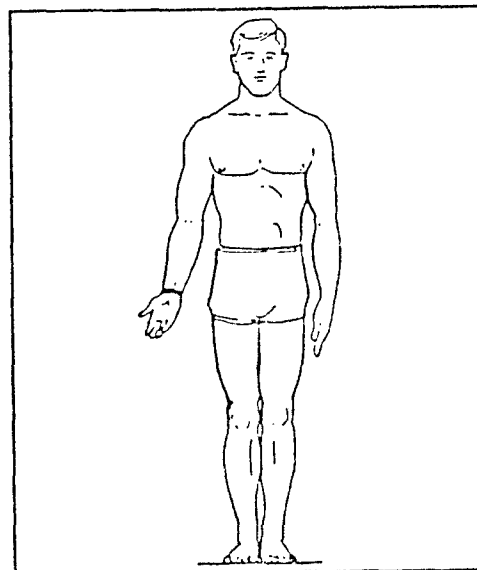
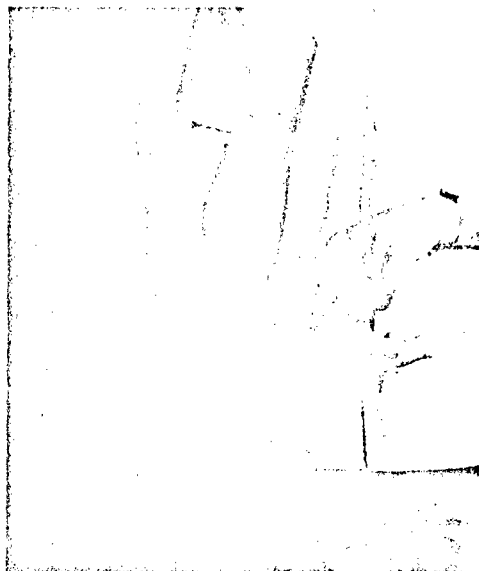
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
6.80	MEAN	2.68
0.02	SE (MEAN)	0.01
0.45	ST DEV	0.18
0.01	SE (SD)	0.01
5.70	MINIMUM	2.24
8.20	MAXIMUM	3.23
COEFF. OF VARIATION		6.7%
SYMMETRY—VETA I		0.26
KURTOSIS—VETA II		2.85
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
5.70	1ST	2.24
5.80	2ND	2.28
5.87	3RD	2.31
5.95	5TH	2.34
6.08	10TH	2.40
6.18	15TH	2.43
6.26	20TH	2.46
6.33	25TH	2.49
6.40	30TH	2.52
6.46	35TH	2.54
6.52	40TH	2.57
6.59	45TH	2.59
6.65	50TH	2.62
6.72	55TH	2.64
6.79	60TH	2.67
6.86	65TH	2.70
6.94	70TH	2.73
7.02	75TH	2.77
7.12	80TH	2.80
7.24	85TH	2.85
7.38	90TH	2.91
7.60	95TH	2.99
7.73	97TH	3.04
7.82	98TH	3.08
7.95	99TH	3.13

PERCENTILES		
CENTIMETERS		INCHES
5.90	1ST	2.32
5.96	2ND	2.34
6.00	3RD	2.36
6.08	5TH	2.39
6.22	10TH	2.45
6.32	15TH	2.49
6.40	20TH	2.52
6.47	25TH	2.55
6.54	30TH	2.58
6.60	35TH	2.60
6.67	40TH	2.62
6.72	45TH	2.65
6.78	50TH	2.67
6.84	55TH	2.69
6.90	60TH	2.72
6.96	65TH	2.74
7.03	70TH	2.77
7.10	75TH	2.80
7.18	80TH	2.83
7.28	85TH	2.87
7.40	90TH	2.91
7.59	95TH	2.99
7.72	97TH	3.04
7.82	98TH	3.08
7.99	99TH	3.14

(126) WRIST CIRCUMFERENCE

The circumference of the wrist perpendicular to the long axis of the forearm is measured with a tape passing over the stylium landmark on the wrist. The subject extends the right arm forward with the palm up.



VARIABLE NO. 126—WRIST CIRCUMFERENCE

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
15.33	MEAN	6.03
0.03	SE(MEAN)	0.01
0.62	ST DEV	0.25
0.02	SE(SD)	0.01
13.60	MINIMUM	5.35
17.40	MAXIMUM	6.85
COEFF. OF VARIATION		4.1%
SYMMETRY—VEIA I		0.12
KURTOSIS—VEIA II		2.82
NUMBER OF SUBJECTS		334

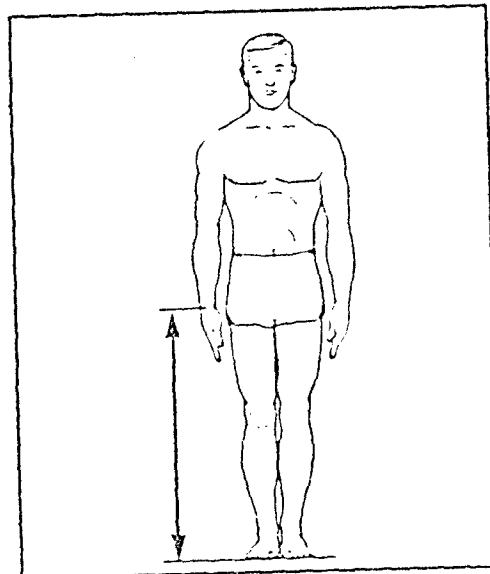
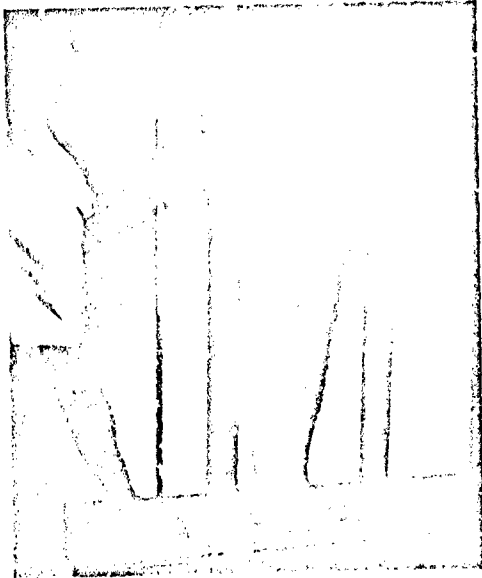
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
17.40	MEAN	6.85
0.03	SE(MEAN)	0.01
0.75	ST DEV	0.30
0.02	SE(SD)	0.01
14.80	MINIMUM	5.83
19.90	MAXIMUM	7.83
COEFF. OF VARIATION		4.3%
SYMMETRY—VEIA I		0.16
KURTOSIS—VEIA II		3.22
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
13.98	1ST	5.50
14.10	2ND	5.55
14.19	3RD	5.59
14.31	5TH	5.64
14.52	10TH	5.72
14.66	15TH	5.77
14.78	20TH	5.82
14.89	25TH	5.86
14.98	30TH	5.90
15.07	35TH	5.93
15.15	40TH	5.97
15.24	45TH	6.00
15.32	50TH	6.03
15.40	55TH	6.06
15.48	60TH	6.10
15.57	65TH	6.13
15.66	70TH	6.16
15.76	75TH	6.20
15.86	80TH	6.25
15.99	85TH	6.29
16.15	90TH	6.36
16.37	95TH	6.45
16.52	97TH	6.50
16.63	98TH	6.55
16.79	99TH	6.61

PERCENTILES		
CENTIMETERS		INCHES
15.78	1ST	6.21
15.94	2ND	6.27
16.05	3RD	6.32
16.20	5TH	6.38
16.45	10TH	6.48
16.63	15TH	6.55
16.77	20TH	6.60
16.89	25TH	6.65
17.00	30TH	6.69
17.10	35TH	6.73
17.20	40TH	6.77
17.30	45TH	6.81
17.39	50TH	6.85
17.48	55TH	6.88
17.58	60TH	6.92
17.68	65TH	6.96
17.78	70TH	7.00
17.90	75TH	7.05
18.03	80TH	7.10
18.18	85TH	7.16
18.38	90TH	7.24
18.69	95TH	7.36
18.90	97TH	7.44
19.06	98TH	7.50
19.33	99TH	7.61

(127) WRIST HEIGHT

The vertical distance between a standing surface and the stylic landmark on the right wrist is measured with an anthropometer. The subject stands erect looking straight ahead with the heels together and the weight distributed equally on both feet. The shoulders are relaxed and the arms are extended downwards with the elbow, wrist, and fingers held rigidly straight. The arms lightly touch the sides. The measurement is taken at the maximum point of quiet respiration.



VARIABLE NO. 127—WRIST HEIGHT

FEMALES

MALES

THE SUMMARY STATISTICS
CENTIMETERS INCHES

82.00 MEAN 32.28
0.18 SE(MEAN) 0.07
3.26 ST DEV 1.28
0.13 SE(SD) 0.05

72.20 MINIMUM 28.43
93.90 MAXIMUM 36.97

COEFF. OF VARIATION 4.0%
SYMMETRY—VETA I 0.02
KURTOSIS—VETA II 3.29

NUMBER OF SUBJECTS 334

THE SUMMARY STATISTICS
CENTIMETERS INCHES

85.71 MEAN 33.74
0.17 SE(MEAN) 0.07
3.84 ST DEV 1.51
0.12 SE(SD) 0.05

72.70 MINIMUM 28.62
97.30 MAXIMUM 38.31

COEFF. OF VARIATION 4.5%
SYMMETRY—VETA I -0.13
KURTOSIS—VETA II 3.15

NUMBER OF SUBJECTS 487

PERCENTILES
CENTIMETERS INCHES

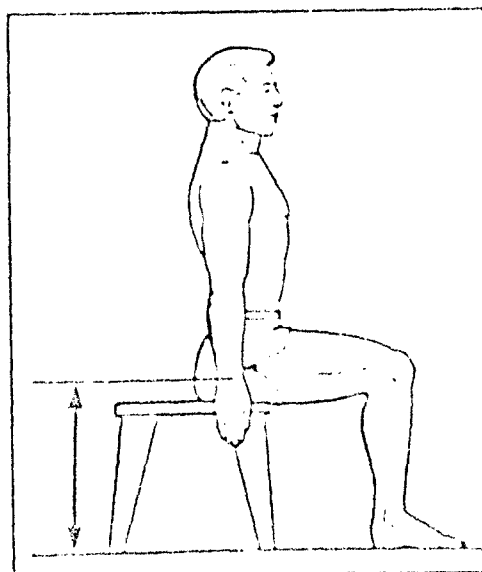
73.99 1ST 29.13
75.09 2ND 29.56
75.76 3RD 29.83
76.61 5TH 30.16
77.86 10TH 30.66
78.68 15TH 30.98
79.31 20TH 31.22
79.85 25TH 31.44
80.33 30TH 31.62
80.77 35TH 31.80
81.19 40TH 31.96
81.60 45TH 32.12
82.00 50TH 32.28
82.40 55TH 32.44
82.81 60TH 32.60
83.24 65TH 32.77
83.68 70TH 32.95
84.17 75TH 33.14
84.71 80TH 33.35
85.34 85TH 33.60
86.13 90TH 33.91
87.26 95TH 34.36
87.97 97TH 34.63
88.47 98TH 34.83
89.20 99TH 35.12

PERCENTILES
CENTIMETERS INCHES

75.99 1ST 29.92
77.37 2ND 30.46
78.21 3RD 30.79
79.29 5TH 31.22
80.86 10TH 31.83
81.86 15TH 32.23
82.63 20TH 32.53
83.28 25TH 32.79
83.86 30TH 33.01
84.38 35TH 33.22
84.87 40TH 33.41
85.34 45TH 33.60
85.81 50TH 33.78
86.27 55TH 33.97
86.74 60TH 34.15
87.23 65TH 34.34
87.74 70TH 34.54
88.29 75TH 34.76
88.91 80TH 35.01
89.64 85TH 35.29
90.56 90TH 35.65
91.95 95TH 36.20
92.86 97TH 36.56
93.54 98TH 36.82
94.61 99TH 37.25

(128) WRIST HEIGHT, SITTING

The vertical distance between the floor and the stylium landmark on the right wrist of a seated subject is measured with an anthropometer. The subject sits erect with the trochanter landmark on the hip lined up with a marker placed about 7 cm from the front edge of the seat. The subject looks straight ahead. The shoulders are relaxed and the arms are extended downwards with the elbow, wrist, and fingers held rigidly straight. The arms lightly touch the sides. The measurement is taken at the maximum point of quiet respiration with the subject holding his/her breath. Note: The height of the seat used in this measurement was 45.5 cm.



VARIABLE NO. 128—WRIST HEIGHT, SITTING

FEMALES

MALES

THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
48.13	MEAN	18.95	
0.14	SE (MEAN)	0.06	
2.58	ST DEV	1.02	
0.10	SE(SD)	0.04	
39.00	MINIMUM	15.35	
55.80	MAXIMUM	21.97	
COEFF. OF VARIATION		5.4%	
SYMMETRY—VETA I		-0.14	
KURTOSIS—VETA II		3.37	
NUMBER OF SUBJECTS		334	

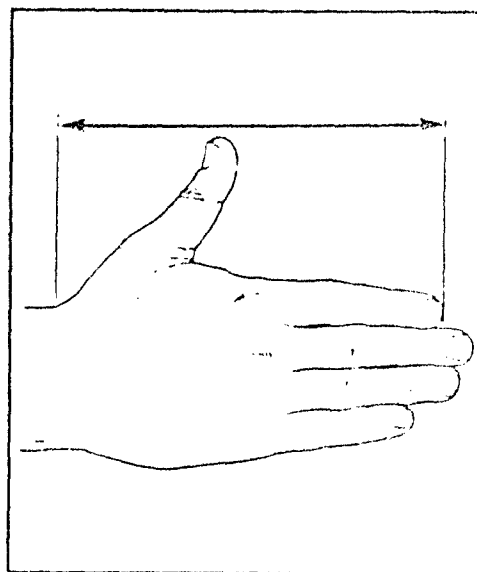
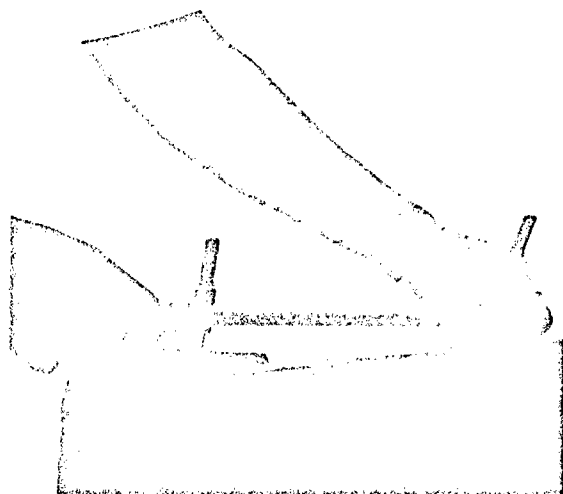
THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
47.19	MEAN	18.58	
0.14	SE (MEAN)	0.05	
3.06	ST DEV	1.21	
0.10	SE(SD)	0.04	
38.40	MINIMUM	15.12	
56.60	MAXIMUM	22.28	
COEFF. OF VARIATION		6.5%	
SYMMETRY—VETA I		-0.06	
KURTOSIS—VETA II		3.02	
NUMBER OF SUBJECTS		487	

PERCENTILES		
CENTIMETERS		INCHES
41.74	1ST	16.43
42.54	2ND	16.75
43.05	3RD	16.95
43.75	5TH	17.22
44.81	10TH	17.64
45.50	15TH	17.91
46.04	20TH	18.13
46.49	25TH	18.30
46.89	30TH	18.46
47.25	35TH	18.60
47.59	40TH	18.74
47.91	45TH	18.86
48.23	50TH	18.99
48.54	55TH	19.11
48.85	60TH	19.23
49.16	65TH	19.36
49.50	70TH	19.49
49.86	75TH	19.63
50.26	80TH	19.79
50.73	85TH	19.97
51.35	90TH	20.21
52.31	95TH	20.59
52.99	97TH	20.83
53.52	98TH	21.07
54.44	99TH	21.43

PERCENTILES		
CENTIMETERS		INCHES
39.32	1ST	15.48
40.52	2ND	15.95
41.22	3RD	16.23
42.10	5TH	16.57
43.33	10TH	17.06
44.11	15TH	17.37
44.71	20TH	17.60
45.21	25TH	17.80
45.65	30TH	17.97
46.06	35TH	18.14
46.45	40TH	18.29
46.83	45TH	18.44
47.20	50TH	18.58
47.57	55TH	18.73
47.95	60TH	18.88
48.35	65TH	19.04
48.77	70TH	19.20
49.23	75TH	19.38
49.74	80TH	19.58
50.34	85TH	19.82
51.09	90TH	20.11
52.19	95TH	20.55
52.87	97TH	20.82
53.36	98TH	21.01
54.07	99TH	21.29

(129) WRIST-INDEX FINGER LENGTH

The distance between the stylium landmark on the right wrist and the tip of the right index finger is measured with a Poech caliper. The subject places the palm on a table, the fingers together, and the thumb abducted. The middle finger is parallel to the long axis of the forearm. The two distal phalanges of the fingers lie on a flat surface 8 mm higher than the table.



VARIABLE NO. 129—WRIST-INDEX FINGER LENGTH

FEMALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
17.19	MEAN	6.77
0.04	SE (MEAN)	0.01
0.66	ST DEV	0.26
0.03	SE (SD)	0.01
15.60	MINIMUM	6.14
20.10	MAXIMUM	7.91
COEFF. OF VARIATION		3.8%
SYMMETRY—VETA I		0.51
KURTOSIS—VETA II		3.94
NUMBER OF SUBJECTS		334

PERCENTILES		
CENTIMETERS		INCHES
15.69	1ST	6.18
15.91	2ND	6.26
16.03	3RD	6.31
16.19	5TH	6.37
16.41	10TH	6.46
16.55	15TH	6.52
16.66	20TH	6.56
16.75	25TH	6.60
16.84	30TH	6.63
16.92	35TH	6.66
16.99	40TH	6.69
17.07	45TH	6.72
17.14	50TH	6.75
17.22	55TH	6.78
17.30	60TH	6.81
17.39	65TH	6.85
17.48	70TH	6.88
17.59	75TH	6.92
17.71	80TH	6.97
17.85	85TH	7.03
18.05	90TH	7.10
18.35	95TH	7.22
18.55	97TH	7.30
18.70	98TH	7.36
18.95	99TH	7.46

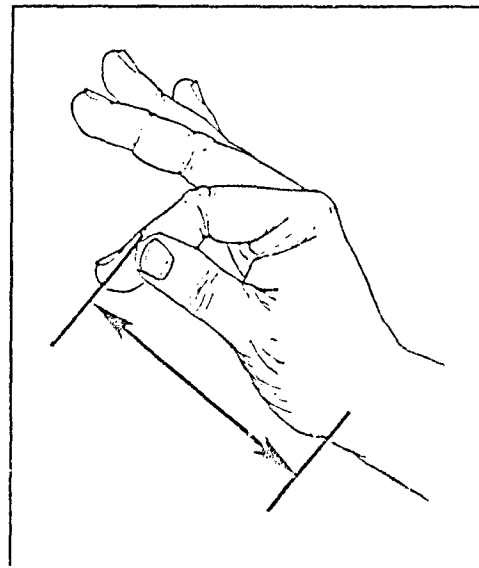
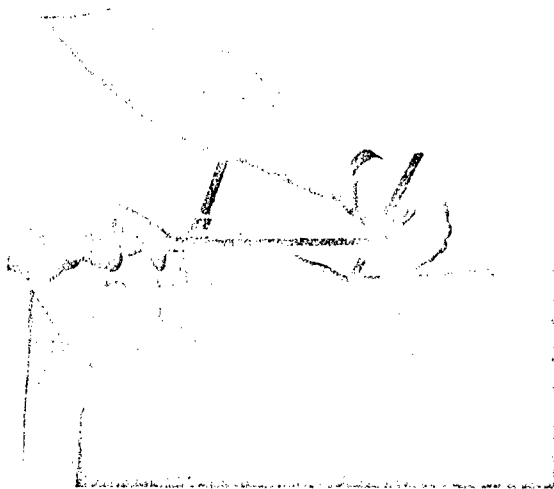
MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
18.14	MEAN	7.14
0.04	SE (MEAN)	0.01
0.83	ST DEV	0.33
0.03	SE (SD)	0.01
15.80	MINIMUM	6.22
20.20	MAXIMUM	7.95
COEFF. OF VARIATION		4.6%
SYMMETRY—VETA I		0.09
KURTOSIS—VETA II		2.61
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
16.46	1ST	6.48
16.59	2ND	6.53
16.69	3RD	6.57
16.83	5TH	6.63
17.07	10TH	6.72
17.26	15TH	6.79
17.41	20TH	6.85
17.54	25TH	6.91
17.67	30TH	6.95
17.78	35TH	7.00
17.90	40TH	7.05
18.01	45TH	7.09
18.12	50TH	7.13
18.23	55TH	7.18
18.34	60TH	7.22
18.46	65TH	7.27
18.59	70TH	7.32
18.72	75TH	7.37
18.87	80TH	7.43
19.04	85TH	7.50
19.25	90TH	7.58
19.55	95TH	7.70
19.73	97TH	7.77
19.86	98TH	7.82
20.04	99TH	7.89

(130) WRIST-THUMB TIP LENGTH

The horizontal distance between the stylium landmark on the right wrist and the tip of the right thumb is measured with a Pech caliper. The subject rests the little finger side of the hand on a flat surface. The thumb is held straight and in line with the long axis of the forearm. The thumb rests on the first knuckle of the curved index finger.



VARIABLE NO. 130—WRIST-THUMB TIP LENGTH

FEMALES

MALES

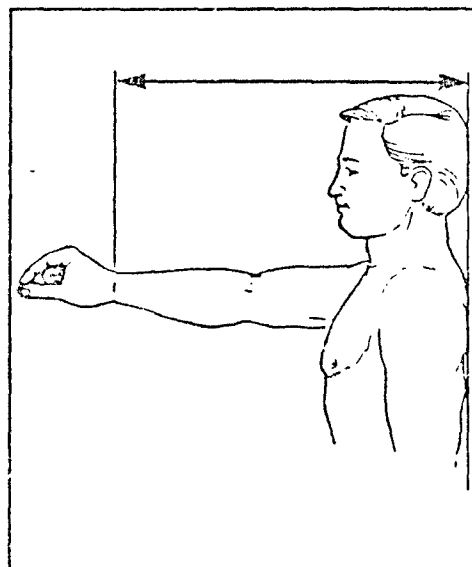
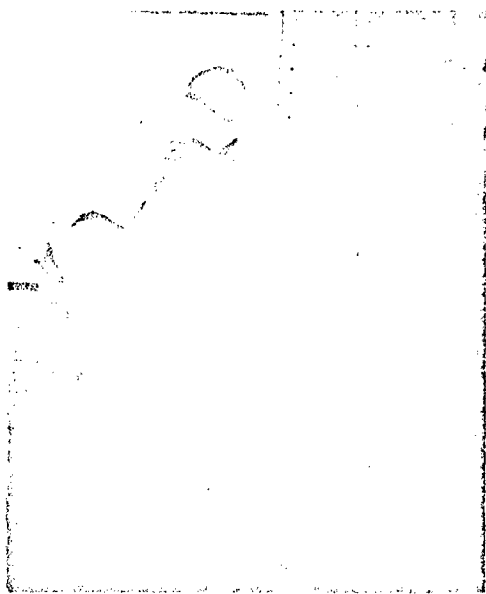
THE SUMMARY STATISTICS			THE SUMMARY STATISTICS		
CENTIMETERS		INCHES	CENTIMETERS		INCHES
11.91	MEAN	4.69	12.44	MEAN	4.90
0.03	SE (MEAN)	0.01	0.03	SE (MEAN)	0.01
0.52	ST DEV	0.20	0.62	ST DEV	0.25
0.02	SE (SD)	0.01	0.02	SE (SD)	0.01
10.50	MINIMUM	4.13	10.70	MINIMUM	4.21
13.80	MAXIMUM	5.43	14.10	MAXIMUM	5.55
COEFF. OF VARIATION		4.4%	COEFF. OF VARIATION		5.0%
SYMMETRY—VETA I		0.40	SYMMETRY—VETA I		0.02
KURTOSIS—VETA II		3.24	KURTOSIS—VETA II		2.78
NUMBER OF SUBJECTS		334	NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
10.85	1ST	4.27
10.98	2ND	4.32
11.06	3RD	4.35
11.15	5TH	4.39
11.29	10TH	4.45
11.39	15TH	4.48
11.46	20TH	4.51
11.54	25TH	4.54
11.60	30TH	4.57
11.67	35TH	4.59
11.73	40TH	4.62
11.79	45TH	4.64
11.86	50TH	4.67
11.93	55TH	4.69
12.00	60TH	4.72
12.07	65TH	4.75
12.15	70TH	4.78
12.24	75TH	4.82
12.34	80TH	4.86
12.46	85TH	4.91
12.61	90TH	4.97
12.82	95TH	5.05
12.94	97TH	5.10
13.02	98TH	5.13
13.12	99TH	5.16

PERCENTILES		
CENTIMETERS		INCHES
11.01	1ST	4.33
11.17	2ND	4.40
11.27	3RD	4.44
11.41	5TH	4.49
11.63	10TH	4.58
11.78	15TH	4.64
11.90	20TH	4.68
12.00	25TH	4.72
12.10	30TH	4.76
12.18	35TH	4.80
12.27	40TH	4.83
12.35	45TH	4.86
12.43	50TH	4.89
12.51	55TH	4.93
12.59	60TH	4.96
12.68	65TH	4.99
12.77	70TH	5.03
12.87	75TH	5.07
12.98	80TH	5.11
13.10	85TH	5.16
13.26	90TH	5.22
13.48	95TH	5.31
13.62	97TH	5.36
13.72	98TH	5.40
13.86	99TH	5.46

(131) WRIST-WALL LENGTH

The horizontal distance between a back wall and the styliion landmark on the right wrist of the outstretched arm is measured on a wall scale. The subject stands erect in a corner looking straight ahead with the feet together and the heels 20 cm from the back wall. The buttocks and shoulders are against the wall. The right arm and hand with the palm down are stretched forward horizontally against a scale on the side wall. The thumb continues the horizontal line of the arm and the index finger curves around to touch the pad at the end of the thumb. The subject's right shoulder is held against the rear wall.



VARIABLE NO. 131—WRIST-WALL LENGTH

FEMALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
63.39	MEAN	24.96
0.13	SE (MEAN)	0.05
2.32	ST DEV	0.91
0.09	SE (SD)	0.04
57.80	MINIMUM	22.76
70.90	MAXIMUM	27.91
COEFF. OF VARIATION		3.7%
SYMMETRY—VETA I		0.32
KURTOSIS—VETA II		2.96
NUMBER OF SUBJECTS		334

MALES

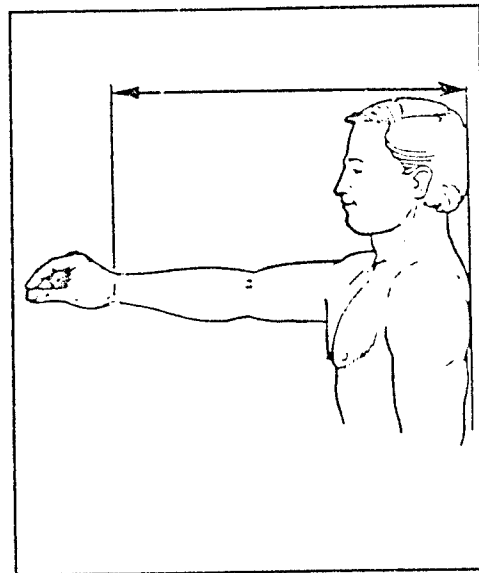
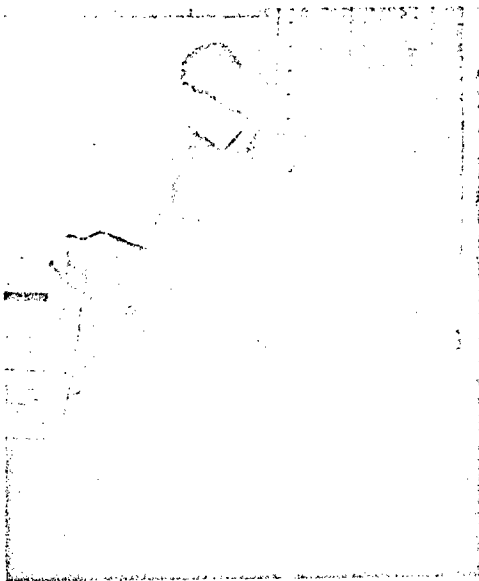
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
68.32	MEAN	26.90
0.15	SE (MEAN)	0.06
3.33	ST DEV	1.31
0.11	SE (SD)	0.04
59.50	MINIMUM	23.43
80.30	MAXIMUM	31.61
COEFF. OF VARIATION		4.9%
SYMMETRY—VETA I		0.21
KURTOSIS—VETA II		3.18
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
58.72	1ST	23.12
59.09	2ND	23.26
59.36	3RD	23.37
59.77	5TH	23.53
60.45	10TH	23.80
60.95	15TH	24.00
61.36	20TH	24.16
61.73	25TH	24.30
62.07	30TH	24.44
62.38	35TH	24.56
62.68	40TH	24.68
62.98	45TH	24.79
63.27	50TH	24.91
63.57	55TH	25.03
63.88	60TH	25.15
64.20	65TH	25.27
64.53	70TH	25.41
64.90	75TH	25.55
65.32	80TH	25.72
65.81	85TH	25.91
66.44	90TH	26.16
67.39	95TH	26.53
68.04	97TH	26.79
68.52	98TH	26.98
69.30	99TH	27.29

PERCENTILES		
CENTIMETERS		INCHES
61.56	1ST	24.24
61.86	2ND	24.36
62.20	3RD	24.49
62.80	5TH	24.73
63.94	10TH	25.17
64.80	15TH	25.51
65.49	20TH	25.78
66.09	25TH	26.02
66.62	30TH	26.23
67.10	35TH	26.42
67.55	40TH	26.59
67.98	45TH	26.76
68.39	50TH	26.92
68.79	55TH	27.08
69.19	60TH	27.24
69.59	65TH	27.40
70.00	70TH	27.56
70.45	75TH	27.74
70.95	80TH	27.93
71.54	85TH	28.17
72.33	90TH	28.48
73.67	95TH	29.00
74.71	97TH	29.41
75.60	98TH	29.76
77.27	99TH	30.42

(132) WRIST-WALL LENGTH, EXTENDED

The horizontal distance between a back wall and the stylium landmark on the right wrist of the maximally outstretched arm is measured on a wall scale. The subject stands erect in a corner looking straight ahead with the feet together and the heels 20 cm from the back wall. The buttocks and the left shoulder are against the wall. The right arm and hand with the palm down are stretched forward horizontally as far as possible against the side wall. The thumb continues the horizontal line of the arm and the index finger curves around to touch the pad at the end of the thumb. The subject's left shoulder is held against the rear wall.



VARIABLE NO. 132—WRIST-WALL LENGTH, EXTENDED

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
69.51	MEAN	27.36
0.13	SE(MEAN)	0.05
2.43	ST DEV	0.96
0.09	SE(SD)	0.04
64.00	MINIMUM	25.20
80.80	MAXIMUM	31.81
COEFF. OF VARIATION		3.5%
SYMMETRY—VETA I		0.44
KURTOSIS—VETA II		3.87
NUMBER OF SUBJECTS		334

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
73.90	MEAN	29.09
0.15	SE(MEAN)	0.06
3.42	ST DEV	1.34
0.11	SE(SD)	0.04
64.70	MINIMUM	25.47
85.30	MAXIMUM	33.58
COEFF. OF VARIATION		4.6%
SYMMETRY—VETA I		0.30
KURTOSIS—VETA II		3.32
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
64.89	1ST	25.55
65.10	2ND	25.63
65.31	3RD	25.71
65.69	5TH	25.86
66.39	10TH	26.14
66.94	15TH	26.35
67.39	20TH	26.53
67.80	25TH	26.69
68.16	30TH	26.84
68.51	35TH	26.97
68.83	40TH	27.10
69.14	45TH	27.22
69.45	50TH	27.34
69.76	55TH	27.47
70.08	60TH	27.59
70.40	65TH	27.71
70.73	70TH	27.85
71.09	75TH	27.99
71.50	80TH	28.15
71.97	85TH	28.34
72.58	90TH	28.57
73.53	95TH	28.95
74.19	97TH	29.21
74.71	98TH	29.41
75.61	99TH	29.77

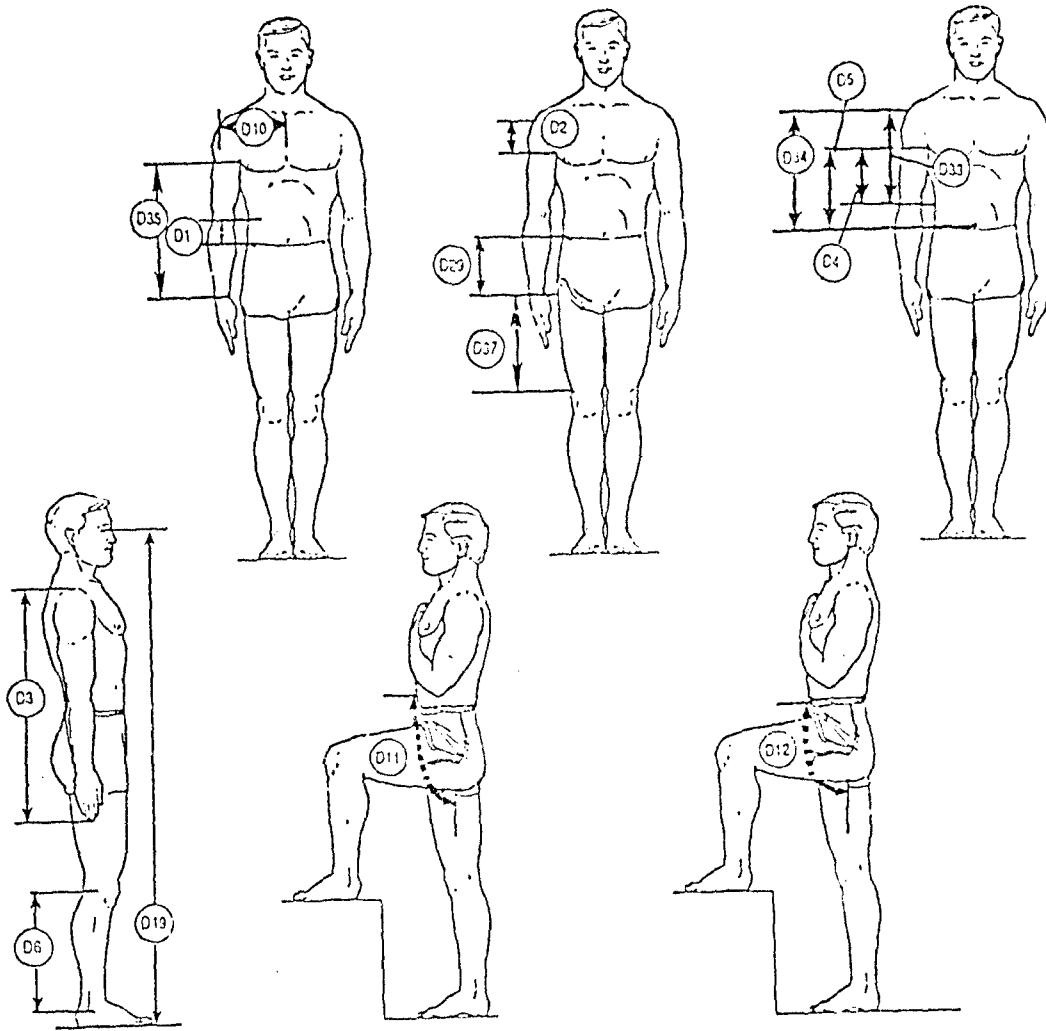
PERCENTILES		
CENTIMETERS		INCHES
66.69	1ST	26.26
67.38	2ND	26.53
67.85	3RD	26.71
68.52	5TH	26.98
69.62	10TH	27.41
70.39	15TH	27.71
71.01	20TH	27.96
71.55	25TH	28.17
72.04	30TH	28.36
72.50	35TH	28.54
72.94	40TH	28.71
73.36	45TH	28.88
73.78	50TH	29.05
74.20	55TH	29.21
74.63	60TH	29.38
75.08	65TH	29.56
75.56	70TH	29.75
76.08	75TH	29.95
76.68	80TH	30.19
77.37	85TH	30.46
78.29	90TH	30.82
79.72	95TH	31.38
80.70	97TH	31.77
81.47	98TH	32.08
82.76	99TH	32.58

CHAPTER V
THE DERIVED DIMENSIONS

While logistics demand a reasonable limit to the number of dimensions that can be measured in an anthropometric survey, there is an almost infinite number of additional dimensions that can be calculated from the measured data. Some 60 additional dimensions, concentrated in areas applicable to clothing, workspace, and analog design, were derived from the measured dimensions in this survey. These are intended to meet some of the more specialized needs of designers and engineers in these fields, though users should be cautioned that calculated data may not be as consistently reliable as data obtained by direct measurement. A discussion of estimated observer error for the derived dimensions can be found in chapter VII of NATICK/TR-89/044 1988 Anthropometric Survey of U.S. Army Personnel: Methods and Summary Statistics.¹¹

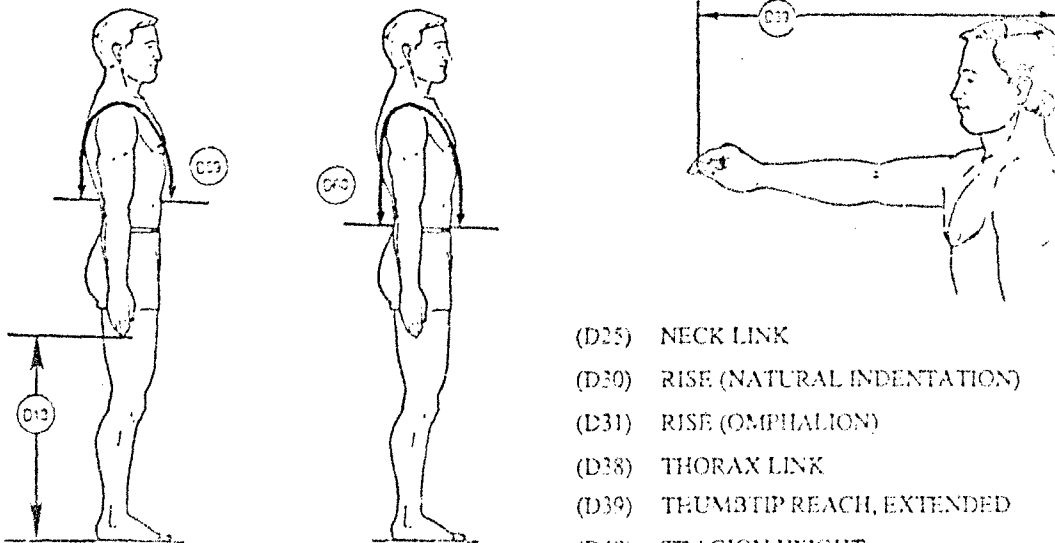
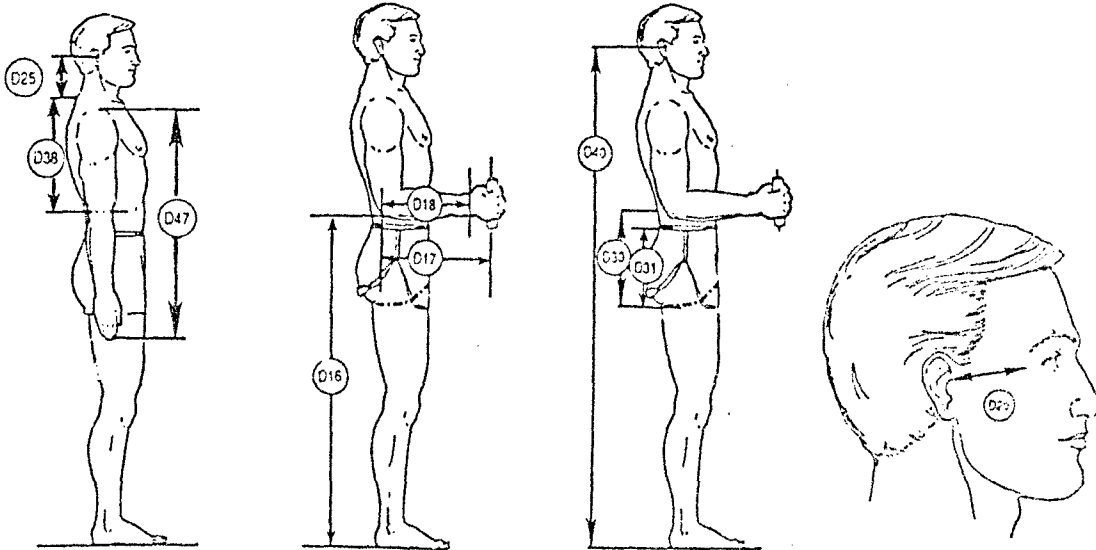
A visual index begins on the next page and is followed by the data pages, which include dimension descriptions, summary statistics and percentile tables.

VISUAL INDEX - DERIVED DIMENSIONS



- | | | | |
|-------|---|-------|---|
| (D1) | ABDOMINAL LINK | (D12) | CROTCH LENGTH ANTERIOR (OMPHALION) |
| (D2) | ACROMION-AXILLA LENGTH | (D19) | EYE HEIGHT |
| (D3) | ARM LENGTH | (D29) | PELVIC LINK |
| (D4) | AXILLA-WAIST LENGTH (NATURAL INDENTATION) | (D33) | SHOULDER-WAIST LENGTH (NATURAL INDENTATION) |
| (D5) | AXILLA-WAIST LENGTH (OMPHALION) | (D34) | SHOULDER-WAIST LENGTH (OMPHALION) |
| (D6) | CALF LINK | (D35) | SLEEVE INSEAM |
| (D10) | CLAVICLE LINK | (D37) | THIGH LINK |
| (D11) | CROTCH LENGTH, ANTERIOR (NATURAL INDENTATION) | | |

VISUAL INDEX - DERIVED DIMENSIONS (Continued)



(D13) DACTYLION HEIGHT

(D16) ELBOW REST HEIGHT, STANDING

(D17) ELBOW CENTER OF GRIP LENGTH

(D18) ELBOW-WRIST LENGTH

(D20) EYE-TRAGON LINK

(D25) NECK LINK

(D30) RISE (NATURAL INDENTATION)

(D31) RISE (OMPHALION)

(D38) THORAX LINK

(D39) THUMB TIP REACH, EXTENDED

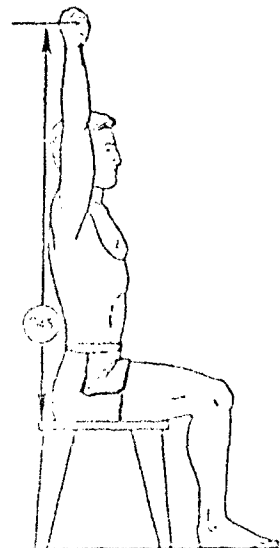
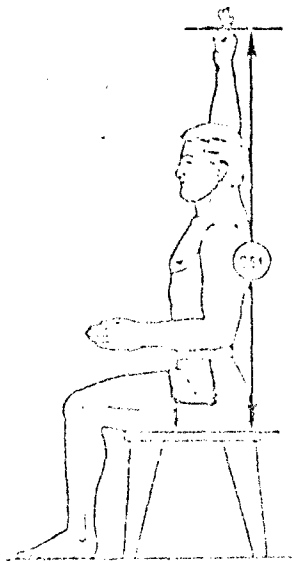
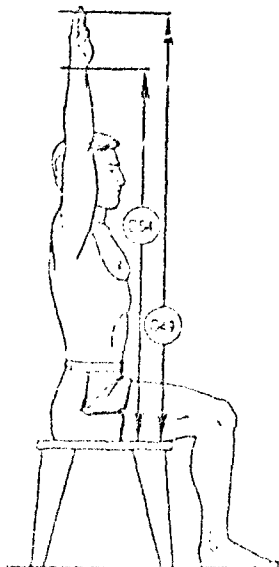
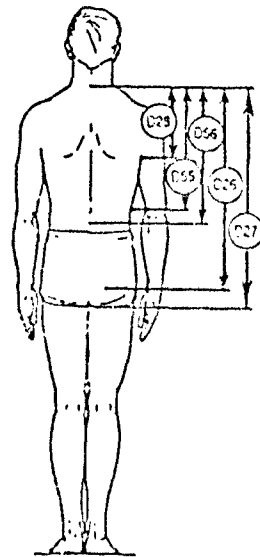
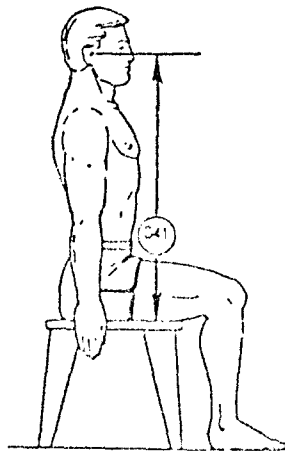
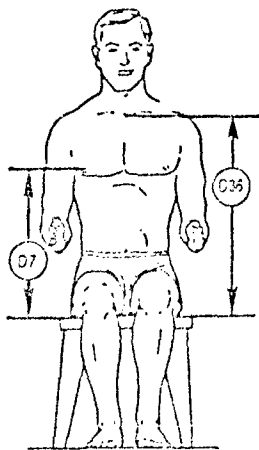
(D40) TRAGON HEIGHT

(D47) VERTICAL INDEX FINGERTIP REACH DOWN

(D59) WAIST-WAIST (NATURAL INDENTATION) OVER SHOULDER

(D60) WAIST-WAIST (OMPHALION) OVER SHOULDER

VISUAL INDEX - DERIVED DIMENSIONS (Continued)



(D7) CHEST HEIGHT, SITTING

(D26) NECK-BUTTOCK LENGTH

(D27) NECK-GLUTEAL FURROW LENGTH

(D28) NECK-EYEBROW LENGTH

(D19) SUPRASTERNALE HEIGHT, SITTING

(D41) TRAGON HEIGHT, SITTING

(D43) VERTICAL GRIP REACH, SITTING

(D44) VERTICAL INDEX FINGERTIP REACH, SITTING

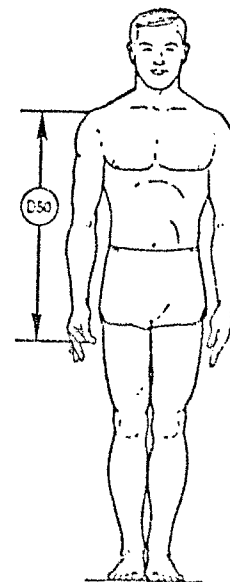
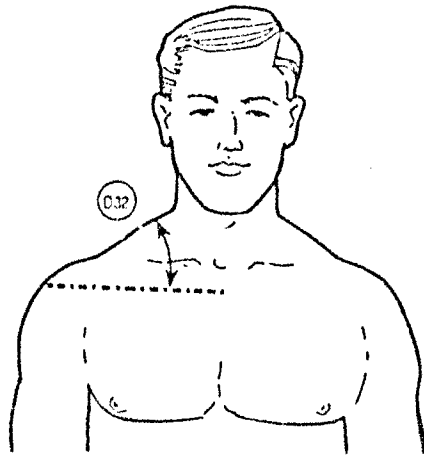
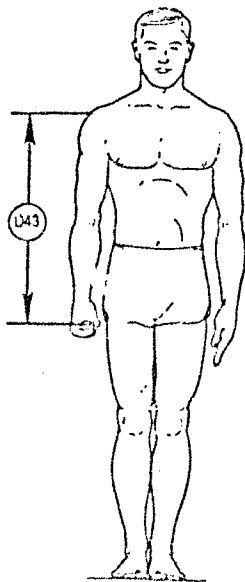
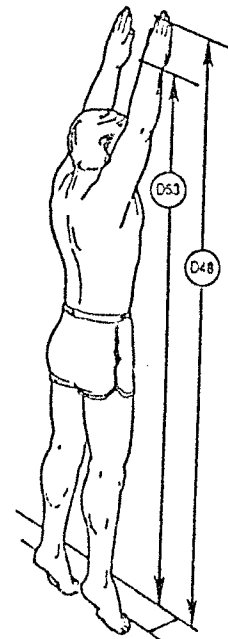
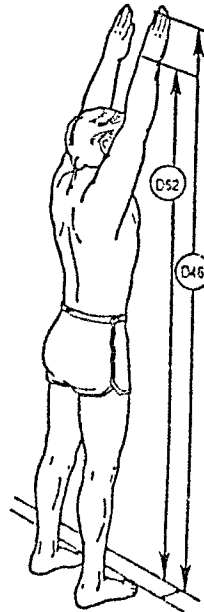
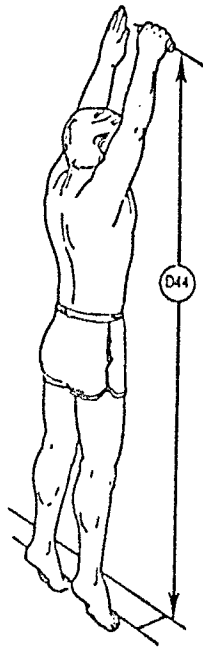
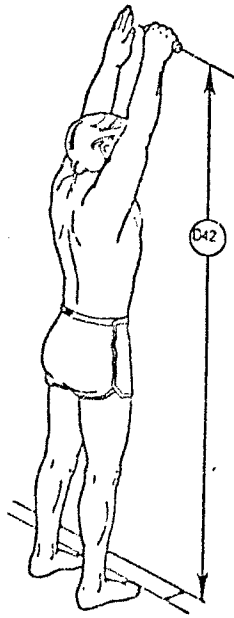
(D41) VERTICAL THUMB TIP REACH, SITTING

(D54) VERTICAL WRIST HEIGHT, SITTING

(D57) WAIST BACK, VERTICAL (NATURAL INFLEXION)

(D59) WAIST BACK, VERTICAL (OMPHALION)

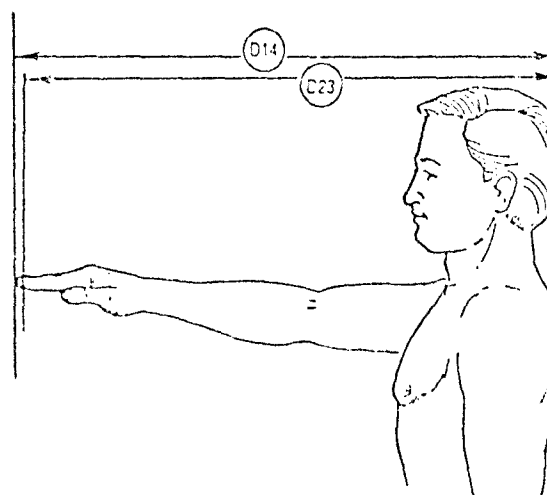
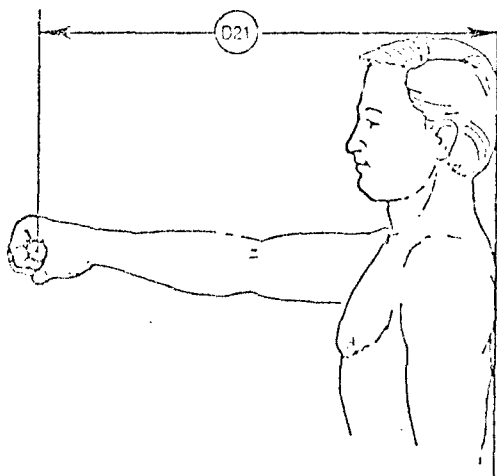
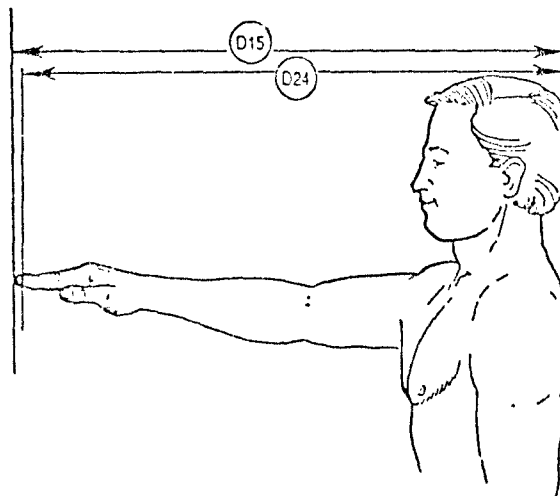
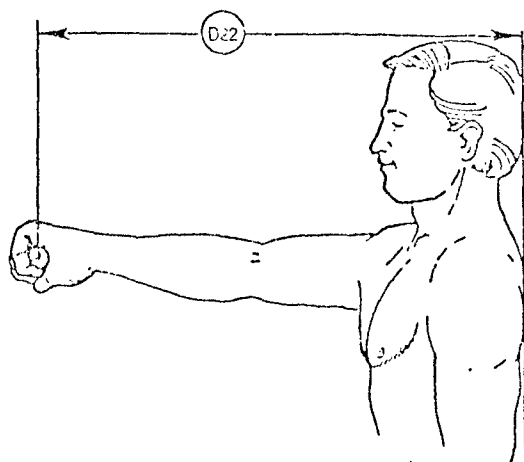
VISUAL INDEX - DERIVED DIMENSIONS (Continued)



- (D32) SHOULDER SLOPE
- (D42) VERTICAL GRIP REACH
- (D43) VERTICAL GRIP REACH DOWN
- (D44) VERTICAL GRIP REACH, EXTENDED
- (D46) VERTICAL INDEX FINGERTIP REACH

- (D48) VERTICAL INDEX FINGERTIP REACH, EXTENDED
- (D50) VERTICAL THUMB TIP REACH DOWN
- (D52) VERTICAL WRIST HEIGHT
- (D53) VERTICAL WRIST HEIGHT, EXTENDED

VISUAL INDEX - DERIVED DIMENSIONS (Continued)



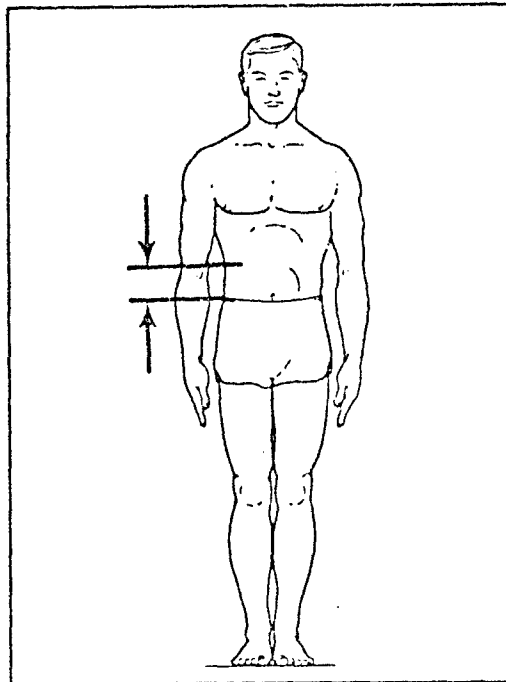
- (D14) DACTYLION REACH FROM WALL
- (D15) DACTYLION REACH FROM WALL, EXTENDED
- (D21) FUNCTIONAL GRIP REACH
- (D22) FUNCTIONAL GRIP REACH, EXTENDED
- (D23) INDEX FINGER REACH
- (D24) INDEX FINGER REACH, EXTENDED

DERIVED VALUES, NOT ILLUSTRATED:

- (D8) CHEST-WAIST DROP, NATURAL INDENTATION
- (D9) CHEST-WAIST DROP, OMPHALION
- (D57) WAIST-BUTTOCK DROP (NATURAL INDENTATION)
- (D58) WAIST-BUTTOCK DROP (OMPHALION)

(D1) AEDCERIAL LINK

The vertical distance between the inferior point of the right tenth rib and the iliacristale landmark on the top of the right side of the pelvis is calculated as follows: TENTH RIB HEIGHT minus ILIACRISTALE HEIGHT.



VARIABLE NO. (D1)—AEDC MINAL LINK

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
5.27	MEAN	2.07
0.09	SE (MEAN)	0.03
1.57	ST DEV	0.62
0.06	SE (SD)	0.02
0.90	MINIMUM	0.35
10.70	MAXIMUM	4.21
COEFF. OF VARIATION		29.8%
SYMMETRY—VETA I		0.05
KURTOSIS—VETA II		2.95
NUMBER OF SUBJECTS		334

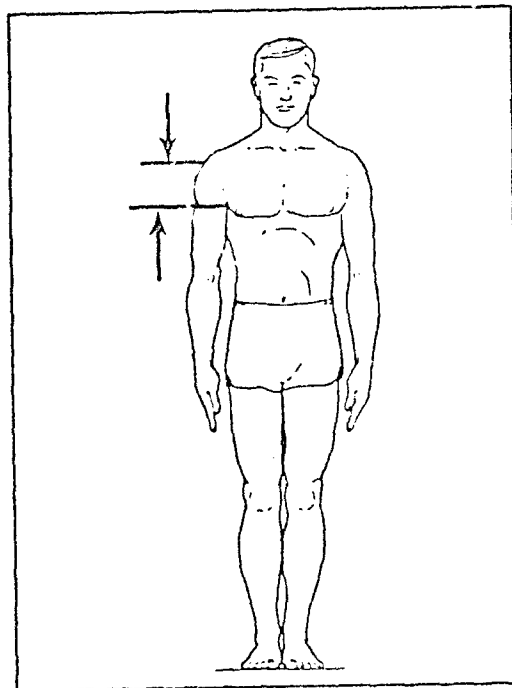
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
4.51	MEAN	1.77
0.06	SE (MEAN)	0.02
1.25	ST DEV	0.49
0.04	SE (SD)	0.02
-0.30	MINIMUM	-0.12
9.30	MAXIMUM	3.66
COEFF. OF VARIATION		27.7%
SYMMETRY—VETA I		0.16
KURTOSIS—VETA II		3.37
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
1.65	1ST	0.65
2.06	2ND	0.81
2.32	3RD	0.91
2.68	5TH	1.06
3.25	10TH	1.28
3.63	15TH	1.43
3.94	20TH	1.55
4.20	25TH	1.65
4.44	30TH	1.75
4.66	35TH	1.83
4.86	40TH	1.91
5.06	45TH	1.99
5.26	50TH	2.07
5.46	55TH	2.15
5.66	60TH	2.23
5.87	65TH	2.31
6.09	70TH	2.40
6.33	75TH	2.49
6.59	80TH	2.59
6.89	85TH	2.71
7.27	90TH	2.86
7.83	95TH	3.08
8.19	97TH	3.22
8.45	98TH	3.33
8.85	99TH	3.48

PERCENTILES		
CENTIMETERS		INCHES
1.79	1ST	0.70
2.09	2ND	0.82
2.29	3RD	0.90
2.55	5TH	1.00
2.95	10TH	1.16
3.23	15TH	1.27
3.46	20TH	1.36
3.65	25TH	1.44
3.83	30TH	1.51
4.00	35TH	1.57
4.15	40TH	1.64
4.31	45TH	1.70
4.47	50TH	1.76
4.62	55TH	1.82
4.78	60TH	1.88
4.95	65TH	1.95
5.13	70TH	2.02
5.32	75TH	2.10
5.54	80TH	2.18
5.80	85TH	2.28
6.12	90TH	2.41
6.60	95TH	2.60
6.91	97TH	2.72
7.13	98TH	2.81
7.47	99TH	2.94

(D2) ACROMION-AXILLA LENGTH

The vertical distance between the acromion landmark on the tip of the right shoulder and the anterior-scye-on-the-torso landmark of a subject standing erect with the arms relaxed at the sides is calculated as follows: ACROMIAL HEIGHT minus AXILLA HEIGHT.



VARIABLE NO. (D2)—ACROMION-AXILLA LENGTH

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
10.41	MEAN	4.10
0.05	SE (MEAN)	0.02
0.88	ST DEV	0.35
0.03	SE (SD)	0.01
7.90	MINIMUM	3.11
12.90	MAXIMUM	5.08
COEFF. OF VARIATION		8.5%
SYMMETRY—VETA I		0.11
KURTOSIS—VETA II		3.18
NUMBER OF SUBJECTS		334

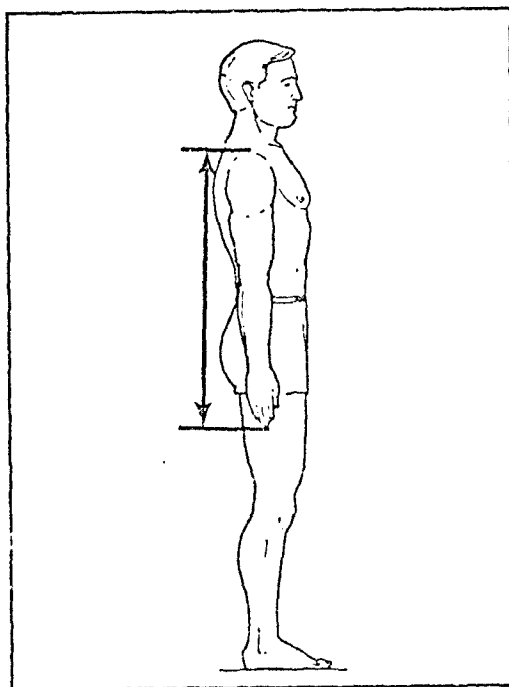
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
12.24	MEAN	4.82
0.04	SE (MEAN)	0.02
0.94	ST DEV	0.37
0.03	SE (SD)	0.01
9.50	MINIMUM	3.74
15.40	MAXIMUM	6.06
COEFF. OF VARIATION		7.7%
SYMMETRY—VETA I		0.16
KURTOSIS—VETA II		2.98
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
8.23	1ST	3.24
8.56	2ND	3.37
8.76	3RD	3.45
9.00	5TH	3.54
9.33	10TH	3.67
9.54	15TH	3.76
9.70	20TH	3.82
9.83	25TH	3.87
9.95	30TH	3.92
10.07	35TH	3.96
10.17	40TH	4.00
10.28	45TH	4.05
10.38	50TH	4.09
10.49	55TH	4.13
10.60	60TH	4.17
10.71	65TH	4.22
10.84	70TH	4.27
10.98	75TH	4.32
11.14	80TH	4.39
11.33	85TH	4.46
11.58	90TH	4.56
11.96	95TH	4.71
12.22	97TH	4.81
12.41	98TH	4.89
12.71	99TH	5.00

PERCENTILES		
CENTIMETERS		INCHES
10.19	1ST	4.01
10.40	2ND	4.09
10.53	3RD	4.15
10.72	5TH	4.22
11.03	10TH	4.34
11.25	15TH	4.43
11.42	20TH	4.50
11.57	25TH	4.56
11.71	30TH	4.61
11.84	35TH	4.66
11.97	40TH	4.71
12.09	45TH	4.76
12.21	50TH	4.81
12.33	55TH	4.85
12.45	60TH	4.90
12.58	65TH	4.95
12.72	70TH	5.01
12.87	75TH	5.07
13.04	80TH	5.13
13.23	85TH	5.21
13.48	90TH	5.31
13.84	95TH	5.45
14.08	97TH	5.54
14.25	98TH	5.61
14.52	99TH	5.72

(D3) ARM LENGTH

The vertical distance between the acromion landmark on the tip of the right shoulder and the tip of the middle finger of a subject standing erect with the arms straight at the sides is calculated as follows:
ACROMIAL HEIGHT minus WRIST HEIGHT plus HAND LENGTH.



VARIABLE NO. (D3)—ARM LENGTH

FEMALES

THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
73.98	MEAN	29.13	
0.13	SE(MEAN)	0.05	
2.45	ST DEV	0.96	
0.09	SE(SD)	0.04	
69.30	MINIMUM	27.28	
84.40	MAXIMUM	33.23	
COEFF. OF VARIATION		3.3%	
SYMMETRY—VETA I		0.82	
KURTOSIS—VETA II		4.11	
NUMBER OF SUBJECTS		334	

MALES

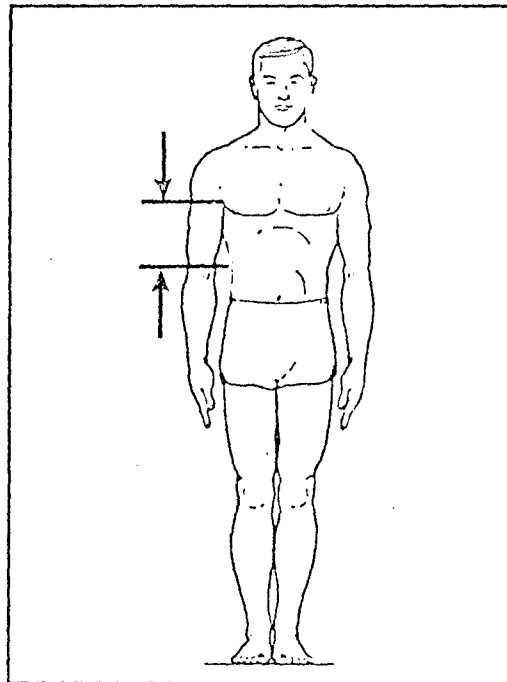
THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
79.20	MEAN	31.18	
0.16	SE(MEAN)	0.06	
3.62	ST DEV	1.43	
0.12	SE(SD)	0.05	
69.00	MINIMUM	27.17	
89.30	MAXIMUM	35.16	
COEFF. OF VARIATION		4.6%	
SYMMETRY—VETA I		0.13	
KURTOSIS—VETA II		2.74	
NUMBER OF SUBJECTS		487	

PERCENTILES		
CENTIMETERS		INCHES
69.71	1ST	27.45
70.04	2ND	27.57
70.26	3RD	27.66
70.57	5TH	27.79
71.12	10TH	28.00
71.53	15TH	28.16
71.88	20TH	28.30
72.20	25TH	28.42
72.50	30TH	28.54
72.79	35TH	28.66
73.09	40TH	28.77
73.38	45TH	28.89
73.68	50TH	29.01
73.99	55TH	29.13
74.31	60TH	29.26
74.65	65TH	29.39
75.03	70TH	29.54
75.44	75TH	29.70
75.93	80TH	29.89
76.50	85TH	30.12
77.25	90TH	30.41
78.39	95TH	30.86
79.15	97TH	31.16
79.71	98TH	31.38
80.59	99TH	31.73

PERCENTILES		
CENTIMETERS		INCHES
71.72	1ST	28.24
72.39	2ND	28.50
72.84	3RD	28.68
73.49	5TH	28.93
74.56	10TH	29.36
75.34	15TH	29.66
75.99	20TH	29.92
76.57	25TH	30.15
77.10	30TH	30.36
77.61	35TH	30.55
78.09	40TH	30.75
78.57	45TH	30.93
79.06	50TH	31.12
79.54	55TH	31.32
80.04	60TH	31.51
80.56	65TH	31.72
81.11	70TH	31.93
81.71	75TH	32.17
82.38	80TH	32.43
83.14	85TH	32.73
84.09	90TH	33.11
85.44	95TH	33.64
86.25	97TH	33.96
86.81	98TH	34.18
87.61	99TH	34.49

(D4) AXILLA-WAIST LENGTH (NATURAL INDENTATION)

The vertical distance between the right anterior-axilla-on-the-torso landmark and the level of the waist at its natural indentation is calculated as follows: AXILLA HEIGHT minus WAIST HEIGHT (NATURAL INDENTATION).



VARIABLE NO. (D4)—AXILIA-WAIST LENGTH (NATURAL INDENTATION)

FEMALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
18.56	MEAN	7.31
0.12	SE (MEAN)	0.05
2.15	ST DEV	0.85
0.08	SE (SD)	0.03
13.70	MINIMUM	5.39
25.80	MAXIMUM	10.16
COEFF. OF VARIATION		11.6%
SYMMETRY—VETA I		0.45
KURTOSIS—VETA II		3.35
NUMBER OF SUBJECTS		334

MALES

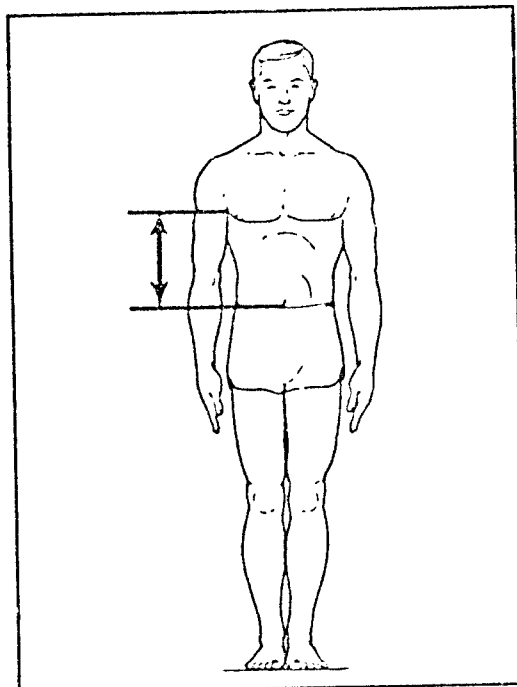
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
20.08	MEAN	7.90
0.08	SE (MEAN)	0.03
1.83	ST DEV	0.72
0.06	SE (SD)	0.02
14.40	MINIMUM	5.67
25.00	MAXIMUM	9.84
COEFF. OF VARIATION		9.1%
SYMMETRY—VETA I		0.10
KURTOSIS—VETA II		2.84
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
14.24	1ST	5.61
14.65	2ND	5.77
14.93	3RD	5.88
15.33	5TH	6.03
15.97	10TH	6.29
16.41	15TH	6.46
16.77	20TH	6.60
17.09	25TH	6.73
17.38	30TH	6.84
17.65	35TH	6.95
17.91	40TH	7.05
18.16	45TH	7.15
18.42	50TH	7.25
18.67	55TH	7.35
18.94	60TH	7.46
19.22	65TH	7.57
19.53	70TH	7.69
19.87	75TH	7.82
20.26	80TH	7.98
20.74	85TH	8.16
21.38	90TH	8.42
22.42	95TH	8.83
23.17	97TH	9.12
23.77	98TH	9.36
24.79	99TH	9.76

PERCENTILES		
CENTIMETERS		INCHES
16.08	1ST	6.33
16.49	2ND	6.49
16.76	3RD	6.60
17.13	5TH	6.74
17.73	10TH	6.98
18.15	15TH	7.15
18.49	20TH	7.28
18.79	25TH	7.40
19.06	30TH	7.50
19.31	35TH	7.60
19.56	40TH	7.70
19.79	45TH	7.79
20.03	50TH	7.89
20.27	55TH	7.98
20.52	60TH	8.08
20.77	65TH	8.18
21.04	70TH	8.28
21.33	75TH	8.40
21.66	80TH	8.53
22.04	85TH	8.68
22.52	90TH	8.87
23.22	95TH	9.14
23.67	97TH	9.32
24.00	98TH	9.45
24.50	99TH	9.65

(D5) AXILLA-WAIST LENGTH (CERHALICH)

The vertical distance between the anterior-axilla-on-the-torso landmark and the level of the waist at the navel (cephalic) is calculated as follows:
AXILLA HEIGHT minus WAIST HEIGHT (CERHALICH).



VARIABLE NO. (05)—AXILLA-WAIST LENGTH (CATHOLIC)

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
26.05	MEAN	10.25
0.10	SE (MEAN)	0.04
1.83	ST DEV	0.72
0.07	SE (SD)	0.03
20.10	MINIMUM	7.91
32.90	MAXIMUM	12.95
COEFF. OF VARIATION		7.0%
SYMMETRY—VETA I		0.14
KURTOSIS—VETA II		3.23
NUMBER OF SUBJECTS		334

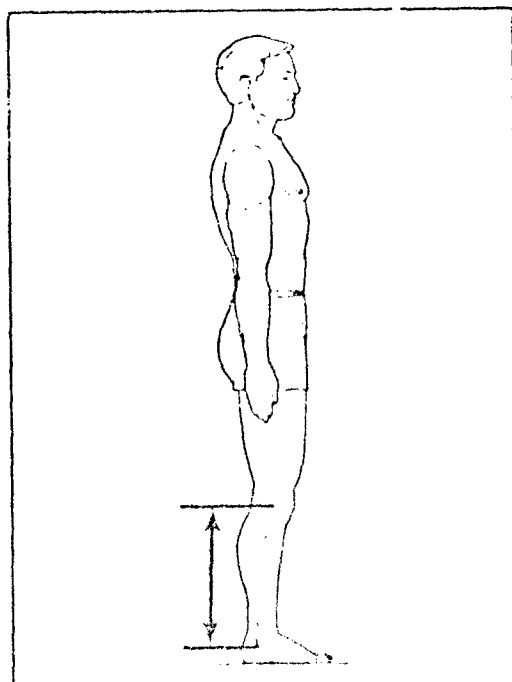
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
26.72	MEAN	10.52
0.09	SE (MEAN)	0.04
2.04	ST DEV	0.80
0.07	SE (SD)	0.03
21.00	MINIMUM	8.27
32.90	MAXIMUM	12.95
COEFF. OF VARIATION		7.6%
SYMMETRY—VETA I		0.14
KURTOSIS—VETA II		2.86
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
21.90	1ST	8.62
22.39	2ND	8.81
22.69	3RD	8.93
23.10	5TH	9.10
23.74	10TH	9.35
24.17	15TH	9.51
24.50	20TH	9.65
24.80	25TH	9.76
25.06	30TH	9.87
25.31	35TH	9.96
25.55	40TH	10.06
25.77	45TH	10.15
26.00	50TH	10.24
26.23	55TH	10.33
26.46	60TH	10.42
26.70	65TH	10.51
26.96	70TH	10.61
27.24	75TH	10.72
27.55	80TH	10.85
27.91	85TH	10.99
28.37	90TH	11.17
29.04	95TH	11.43
29.48	97TH	11.61
29.79	98TH	11.73
30.28	99TH	11.92

PERCENTILES		
CENTIMETERS		INCHES
22.06	1ST	8.68
22.63	2ND	8.91
22.98	3RD	9.05
23.45	5TH	9.23
24.15	10TH	9.51
24.62	15TH	9.69
24.99	20TH	9.84
25.31	25TH	9.97
25.61	30TH	10.08
25.88	35TH	10.19
26.14	40TH	10.29
26.40	45TH	10.39
26.66	50TH	10.49
26.92	55TH	10.60
27.18	60TH	10.70
27.46	65TH	10.81
27.75	70TH	10.93
28.08	75TH	11.05
28.44	80TH	11.20
28.86	85TH	11.36
29.40	90TH	11.57
30.18	95TH	11.88
30.68	97TH	12.03
31.04	98TH	12.22
31.57	99TH	12.43

(D6) CALF LINK

The vertical distance between the lateral femoral epicondyle landmark on the side of the right knee and the lateral malleolus landmark on the outside of the right ankle is calculated as follows: LATERAL FEMORAL EPICONDYLE HEIGHT minus LATERAL MALLEOLUS HEIGHT.



VARIABLE NO. (D6)—CALF LINK

FEMALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
40.94	MEAN	16.12
0.08	SE(MEAN)	0.03
1.51	ST DEV	0.59
0.06	SE(SD)	0.02
37.00	MINIMUM	14.57
46.40	MAXIMUM	18.27
COEFF. OF VARIATION		3.7%
SYMMETRY—VETA I		0.55
KURTOSIS—VETA II		3.60
NUMBER OF SUBJECTS		334

PERCENTILES		
CENTIMETERS		INCHES
37.89	1ST	14.92
38.21	2ND	15.04
38.41	3RD	15.12
38.69	5TH	15.23
39.13	10TH	15.41
39.43	15TH	15.52
39.68	20TH	15.62
39.89	25TH	15.70
40.09	30TH	15.78
40.27	35TH	15.85
40.45	40TH	15.92
40.62	45TH	15.99
40.80	50TH	16.06
40.98	55TH	16.13
41.17	60TH	16.21
41.37	65TH	16.29
41.58	70TH	16.37
41.83	75TH	16.47
42.11	80TH	16.58
42.45	85TH	16.71
42.91	90TH	16.89
43.65	95TH	17.19
44.18	97TH	17.39
44.59	98TH	17.56
45.29	99TH	17.83

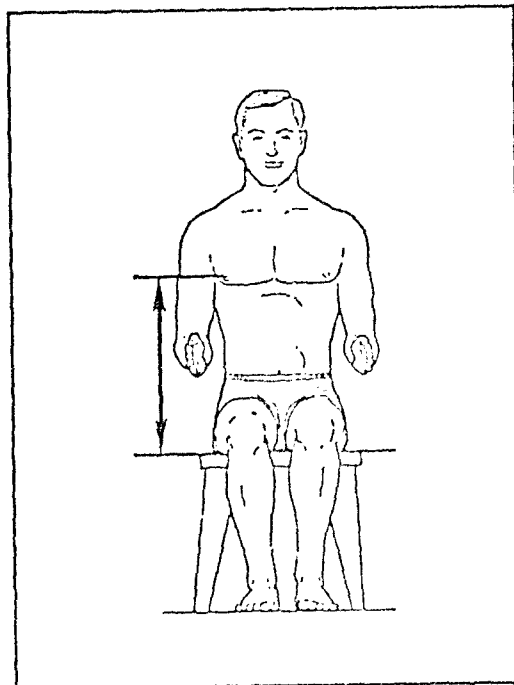
MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
43.50	MEAN	17.13
0.10	SE(MEAN)	0.04
2.22	ST DEV	0.87
0.07	SE(SD)	0.03
38.30	MINIMUM	15.08
49.70	MAXIMUM	19.57
COEFF. OF VARIATION		5.1%
SYMMETRY—VETA I		0.19
KURTOSIS—VETA II		2.66
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
38.96	1ST	15.34
39.31	2ND	15.48
39.57	3RD	15.58
39.96	5TH	15.73
40.62	10TH	15.99
41.11	15TH	16.19
41.52	20TH	16.35
41.88	25TH	16.49
42.21	30TH	16.62
42.52	35TH	16.74
42.82	40TH	16.86
43.12	45TH	16.98
43.41	50TH	17.09
43.71	55TH	17.21
44.01	60TH	17.33
44.32	65TH	17.45
44.66	70TH	17.58
45.01	75TH	17.72
45.41	80TH	17.88
45.88	85TH	18.06
46.45	90TH	18.29
47.29	95TH	18.62
47.82	97TH	18.83
48.19	98TH	18.97
48.77	99TH	19.20

(D7) CHEST HEIGHT, SITTING

The vertical distance between a sitting surface and the right nipple on men or the right bustpoint on women, sitting erect, is calculated as follows: SITTING HEIGHT minus (STATURE minus CHEST HEIGHT).



VARIABLE NO. (D7)—CHEST HEIGHT, SITTING

FEMALES

MALES

THE SUMMARY STATISTICS

CENTIMETERS		INCHES
46.93	MEAN	18.48
0.12	SE (MEAN)	0.05
2.16	ST DEV	0.85
0.08	SE (SD)	0.03
41.40	MINIMUM	16.30
53.10	MAXIMUM	20.91
COEFF. OF VARIATION		4.6%
SYMMETRY—VETA I		0.06
KURTOSIS—VETA II		2.86
NUMBER OF SUBJECTS		334

THE SUMMARY STATISTICS

CENTIMETERS		INCHES
48.87	MEAN	19.24
0.10	SE (MEAN)	0.04
2.19	ST DEV	0.86
0.07	SE (SD)	0.03
41.70	MINIMUM	16.42
55.50	MAXIMUM	21.85
COEFF. OF VARIATION		4.5%
SYMMETRY—VETA I		-0.04
KURTOSIS—VETA II		3.08
NUMBER OF SUBJECTS		487

PERCENTILES

CENTIMETERS		INCHES
41.90	1ST	16.49
42.51	2ND	16.74
42.89	3RD	16.88
43.39	5TH	17.08
44.16	10TH	17.38
44.67	15TH	17.59
45.08	20TH	17.75
45.43	25TH	17.89
45.75	30TH	18.01
46.05	35TH	18.13
46.33	40TH	18.24
46.61	45TH	18.35
46.89	50TH	18.46
47.16	55TH	18.57
47.45	60TH	18.68
47.74	65TH	18.80
48.05	70TH	18.92
48.39	75TH	19.05
48.77	80TH	19.20
49.21	85TH	19.38
49.77	90TH	19.60
50.59	95TH	19.92
51.12	97TH	20.12
51.49	98TH	20.27
52.06	99TH	20.49

PERCENTILES

CENTIMETERS		INCHES
43.45	1ST	17.11
44.22	2ND	17.41
44.67	3RD	17.59
45.25	5TH	17.81
46.09	10TH	18.14
46.62	15TH	18.36
47.04	20TH	18.52
47.40	25TH	18.66
47.72	30TH	18.79
48.02	35TH	18.90
48.30	40TH	19.02
48.57	45TH	19.12
48.85	50TH	19.23
49.12	55TH	19.34
49.40	60TH	19.45
49.69	65TH	19.56
50.00	70TH	19.68
50.33	75TH	19.82
50.71	80TH	19.96
51.14	85TH	20.13
51.69	90TH	20.35
52.47	95TH	20.66
52.95	97TH	20.84
53.28	98TH	20.98
53.75	99TH	21.16

(D8) CHEST-WAIST DROP (NATURAL INDENTATION)

The difference between the circumference of the chest and the circumference of the waist at the level of its natural indentation is calculated as follows: CHEST CIRCUMFERENCE minus WAIST CIRCUMFERENCE (NATURAL INDENTATION).

VARIABLE NO. (D3)—CHEST-WAIST DROP, NATURAL INDENTATION

FEMALES

MALES

THE SUMMARY STATISTICS			THE SUMMARY STATISTICS		
CENTIMETERS		INCHES	CENTIMETERS		INCHES
18.33	MEAN	7.21	15.28	MEAN	6.02
0.19	SE (MEAN)	0.07	0.16	SE (MEAN)	0.06
3.42	ST DEV	1.34	3.51	ST DEV	1.38
0.13	SE (SD)	0.05	0.11	SE (SD)	0.04
8.60	MINIMUM	3.39	3.00	MINIMUM	1.18
31.00	MAXIMUM	12.20	29.70	MAXIMUM	11.69
COEFF. OF VARIATION		18.6%	COEFF. OF VARIATION		23.0%
SYMMETRY—VETA I		0.03	SYMMETRY—VETA I		0.15
KURTOSIS—VETA II		3.34	KURTOSIS—VETA II		3.59
NUMBER OF SUBJECTS		334	NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
10.18	1ST	4.01
11.10	2ND	4.37
11.72	3RD	4.61
12.57	5TH	4.95
13.89	10TH	5.47
14.79	15TH	5.82
15.48	20TH	6.10
16.08	25TH	6.33
16.61	30TH	6.54
17.09	35TH	6.73
17.54	40TH	6.90
17.97	45TH	7.07
18.39	50TH	7.24
18.80	55TH	7.40
19.22	60TH	7.57
19.65	65TH	7.74
20.10	70TH	7.91
20.59	75TH	8.10
21.13	80TH	8.32
21.76	85TH	8.57
22.58	90TH	8.89
23.85	95TH	9.39
24.74	97TH	9.74
25.43	98TH	10.01
26.61	99TH	10.48

PERCENTILES		
CENTIMETERS		INCHES
7.14	1ST	2.81
8.20	2ND	3.23
8.84	3RD	3.48
9.68	5TH	3.81
10.93	10TH	4.30
11.75	15TH	4.63
12.39	20TH	4.88
12.95	25TH	5.10
13.44	30TH	5.29
13.90	35TH	5.47
14.34	40TH	5.64
14.76	45TH	5.81
15.19	50TH	5.98
15.61	55TH	6.15
16.05	60TH	6.32
16.51	65TH	6.50
17.00	70TH	6.69
17.54	75TH	6.90
18.15	80TH	7.15
18.87	85TH	7.43
19.81	90TH	7.80
21.26	95TH	8.37
22.23	97TH	8.75
22.97	98TH	9.04
24.15	99TH	9.51

(D9) CHEST-WAIST DROP (CEPHALION)

The difference between the circumference of the chest and the circumference of the waist at the level of the navel (cephalion) is calculated as follows: CHEST CIRCUMFERENCE minus WAIST CIRCUMFERENCE (CEPHALION).

VARIABLE NO. (D9)—CHEST-WAIST DROP, CAPHALICN

FEMALES

MALES

THE SUMMARY STATISTICS
CENTIMETERS INCHES

10.83 MEAN 4.26
0.28 SE(MEAN) 0.11
5.19 ST DEV 2.04
0.20 SE(SD) 0.08

-5.90 MINIMUM -2.32
25.40 MAXIMUM 10.00

COEFF. OF VARIATION 48.0%
SYMMETRY—VETA I -0.44
KURTOSIS—VETA II 3.08

NUMBER OF SUBJECTS 334

THE SUMMARY STATISTICS
CENTIMETERS INCHES

12.08 MEAN 4.76
0.21 SE(MEAN) 0.08
4.70 ST DEV 1.85
0.15 SE(SD) 0.06

-2.10 MINIMUM -0.83
27.50 MAXIMUM 10.83

COEFF. OF VARIATION 38.9%
SYMMETRY—VETA I 0.06
KURTOSIS—VETA II 3.05

NUMBER OF SUBJECTS 487

PERCENTILES
CENTIMETERS INCHES

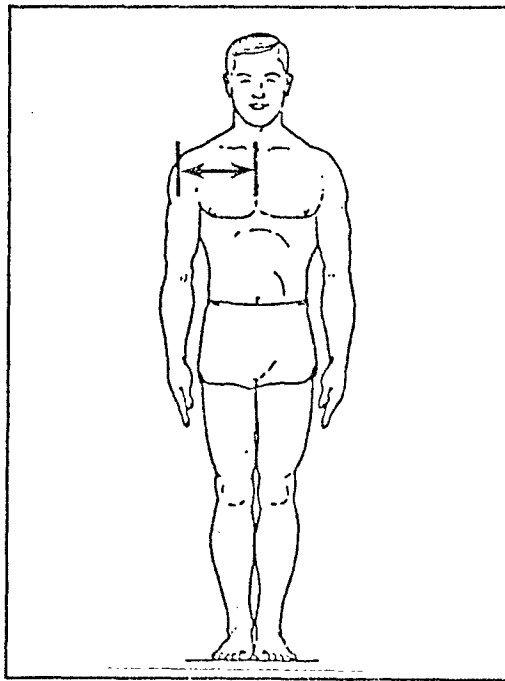
-2.74 1ST -1.08
-1.19 2ND -0.47
-0.14 3RD -0.06
1.34 5TH 0.53
3.69 10TH 1.45
5.27 15TH 2.07
6.49 20TH 2.56
7.53 25TH 2.96
8.43 30TH 3.32
9.24 35TH 3.64
9.98 40TH 3.93
10.68 45TH 4.21
11.36 50TH 4.47
12.00 55TH 4.73
12.64 60TH 4.98
13.27 65TH 5.22
13.91 70TH 5.48
14.57 75TH 5.74
15.29 80TH 6.02
16.08 85TH 6.33
17.04 90TH 6.71
18.41 95TH 7.25
19.32 97TH 7.61
20.01 98TH 7.88
21.17 99TH 8.34

PERCENTILES
CENTIMETERS INCHES

1.87 1ST 0.74
2.71 2ND 1.07
3.34 3RD 1.32
4.31 5TH 1.70
5.95 10TH 2.34
7.13 15TH 2.81
8.07 20TH 3.18
8.90 25TH 3.50
9.63 30TH 3.79
10.31 35TH 4.06
10.95 40TH 4.31
11.56 45TH 4.55
12.15 50TH 4.79
12.75 55TH 5.02
13.34 60TH 5.25
13.94 65TH 5.49
14.58 70TH 5.74
15.26 75TH 6.01
16.02 80TH 6.31
16.90 85TH 6.65
18.03 90TH 7.10
19.80 95TH 7.80
21.05 97TH 8.29
22.03 98TH 8.67
23.74 99TH 9.35

(D10) CLAVICLE LINK

The distance between the midline of the body and the acromion landmark on the tip of the right shoulder is calculated as one-half of BIACROMIAL BREADTH.



VARIABLE NO. (D10)—CLAVICLE LINK

FEMALES

MALES

THE SUMMARY STATISTICS
CENTIMETERS INCHES

18.46 MEAN 7.27
0.04 SE (MEAN) 0.02
0.75 ST DEV 0.30
0.03 SE (SD) 0.01

16.30 MINIMUM 6.42
20.60 MAXIMUM 8.11

COEFF. OF VARIATION 4.1%
SYMMETRY—VETA I -0.13
KURTOSIS—VETA II 2.65

NUMBER OF SUBJECTS 334

THE SUMMARY STATISTICS
CENTIMETERS INCHES

20.03 MEAN 7.89
0.04 SE (MEAN) 0.02
0.87 ST DEV 0.34
0.03 SE (SD) 0.01

17.40 MINIMUM 6.85
22.60 MAXIMUM 8.90

COEFF. OF VARIATION 4.4%
SYMMETRY—VETA I -0.13
KURTOSIS—VETA II 2.99

NUMBER OF SUBJECTS 487

PERCENTILES
CENTIMETERS INCHES

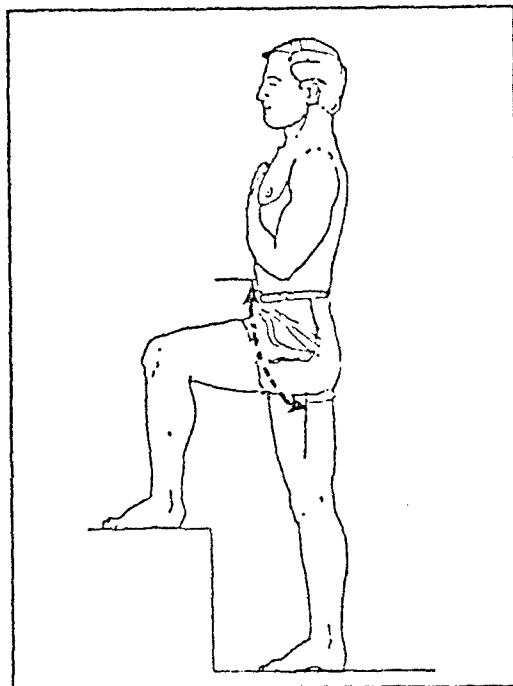
16.84 1ST 6.63
16.97 2ND 6.68
17.07 3RD 6.72
17.22 5TH 6.78
17.48 10TH 6.88
17.67 15TH 6.96
17.83 20TH 7.02
17.96 25TH 7.07
18.08 30TH 7.12
18.20 35TH 7.16
18.31 40TH 7.21
18.41 45TH 7.25
18.51 50TH 7.29
18.61 55TH 7.33
18.71 60TH 7.37
18.81 65TH 7.41
18.91 70TH 7.45
19.02 75TH 7.49
19.14 80TH 7.54
19.28 85TH 7.59
19.44 90TH 7.65
19.67 95TH 7.74
19.81 97TH 7.80
19.90 98TH 7.84
20.05 99TH 7.89

PERCENTILES
CENTIMETERS INCHES

17.86 1ST 7.03
18.15 2ND 7.15
18.33 3RD 7.22
18.57 5TH 7.31
18.92 10TH 7.45
19.15 15TH 7.54
19.33 20TH 7.61
19.48 25TH 7.67
19.61 30TH 7.72
19.74 35TH 7.77
19.85 40TH 7.82
19.96 45TH 7.86
20.07 50TH 7.90
20.18 55TH 7.94
20.28 60TH 7.99
20.39 65TH 8.03
20.51 70TH 8.08
20.64 75TH 8.12
20.78 80TH 8.18
20.94 85TH 8.24
21.14 90TH 8.32
21.45 95TH 8.44
21.65 97TH 8.52
21.79 98TH 8.58
22.03 99TH 8.67

(D11) CROTCH LENGTH, ANTERIOR (NATURAL INDENTATION)

The surface distance between the inner thigh landmark and the abdomen at the level of the waist at its natural indentation of a subject standing with one leg on a step is calculated as follows: CROTCH LENGTH (NATURAL INDENTATION) minus CROTCH LENGTH, POSTERIOR (NATURAL INDENTATION).



VARIABLE NO. (D11)—CROTCH LENGTH, ANTERIOR (NATURAL INDENTATION)

FEMALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
38.07	MEAN	14.99
0.18	SE(MEAN)	0.07
3.28	ST DEV	1.29
0.13	SE(SD)	0.05
29.50	MINIMUM	11.61
50.00	MAXIMUM	19.69
COEFF. OF VARIATION		8.6%
SYMMETRY—VETA I		0.33
KURIOSIS—VETA II		3.38
NUMBER OF SUBJECTS		334

PERCENTILES		
CENTIMETERS		INCHES
31.13	1ST	12.25
31.80	2ND	12.52
32.26	3RD	12.70
32.90	5TH	12.95
33.95	10TH	13.37
34.69	15TH	13.66
35.28	20TH	13.89
35.79	25TH	14.09
36.26	30TH	14.28
36.69	35TH	14.45
37.11	40TH	14.61
37.51	45TH	14.77
37.91	50TH	14.93
38.32	55TH	15.09
38.73	60TH	15.25
39.16	65TH	15.42
39.62	70TH	15.60
40.13	75TH	15.80
40.70	80TH	16.03
41.38	85TH	16.29
42.27	90TH	16.64
43.67	95TH	17.19
44.65	97TH	17.58
45.40	98TH	17.87
46.67	99TH	18.37

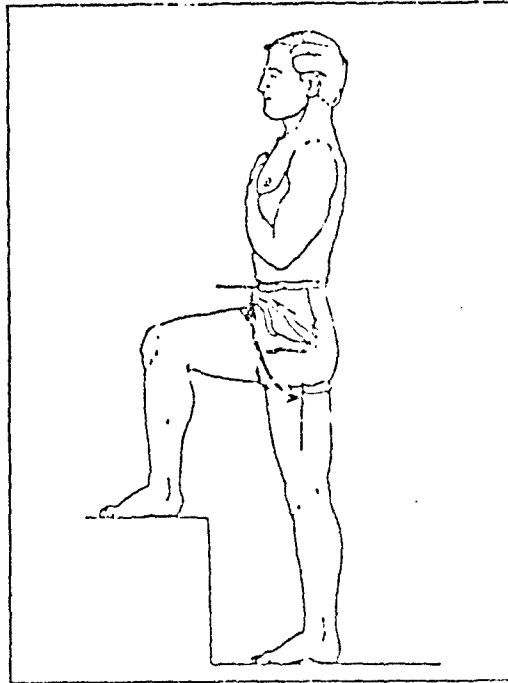
MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
38.59	MEAN	15.19
0.14	SE(MEAN)	0.06
3.11	ST DEV	1.22
0.10	SE(SD)	0.04
26.70	MINIMUM	10.51
49.60	MAXIMUM	19.53
COEFF. OF VARIATION		8.1%
SYMMETRY—VETA I		-0.01
KURIOSIS—VETA II		3.51
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
30.78	1ST	12.12
31.94	2ND	12.58
32.63	3RD	12.85
33.51	5TH	13.19
34.75	10TH	13.68
35.53	15TH	13.99
36.13	20TH	14.22
36.63	25TH	14.42
37.07	30TH	14.59
37.47	35TH	14.75
37.85	40TH	14.90
38.22	45TH	15.05
38.58	50TH	15.19
38.94	55TH	15.33
39.31	60TH	15.48
39.69	65TH	15.63
40.10	70TH	15.79
40.55	75TH	15.97
41.06	80TH	16.17
41.67	85TH	16.41
42.47	90TH	16.72
43.71	95TH	17.21
44.56	97TH	17.54
45.20	98TH	17.80
46.27	99TH	18.22

(D12) CROTCH LENGTH ANTERIOR (CAPHALION)

The surface distance between the inner thigh landmark and the abdomen at the level of the waist at the navel (cephalion) of a subject standing with one leg on a step is calculated as follows: CROTCH LENGTH (CAPHALION) minus CROTCH LENGTH POSTERIOR (CAPHALION).



VARIABLE NO. (D12)--CROTCH LENGTH ANTERIOR (CM/IALION)

FEMALES

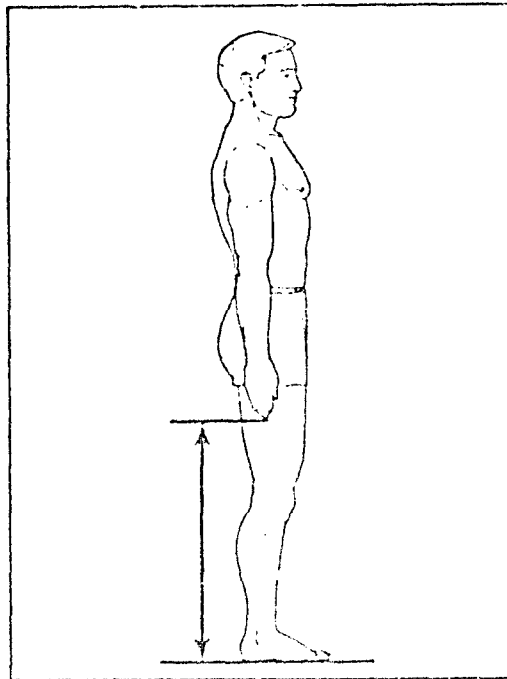
MALES

THE SUMMARY STATISTICS			THE SUMMARY STATISTICS		
CENTIMETERS		INCHES	CENTIMETERS		INCHES
31.02	MEAN	12.21	32.71	MEAN	12.88
0.14	SE(MEAN)	0.05	0.12	SE(MEAN)	0.05
2.48	ST DEV	0.97	2.65	ST DEV	1.04
0.10	SE(SD)	0.04	0.09	SE(SD)	0.03
25.30	MINIMUM	9.96	24.40	MINIMUM	9.61
42.60	MAXIMUM	16.77	41.90	MAXIMUM	16.50
COEFF. OF VARIATION		8.0%	COEFF. OF VARIATION		8.1%
SYMMETRY----VETA I		0.39	SYMMETRY----VETA I		0.12
KURTOSIS----VETA II		4.04	KURTOSIS----VETA II		2.99
NUMBER OF SUBJECTS		334	NUMBER OF SUBJECTS		467

PERCENTILES			PERCENTILES		
CENTIMETERS		INCHES	CENTIMETERS		INCHES
25.46	1ST	10.02	27.23	1ST	10.72
26.03	2ND	10.25	27.72	2ND	10.91
26.43	3RD	10.40	28.06	3RD	11.05
26.98	5TH	10.62	28.55	5TH	11.24
27.86	10TH	10.97	29.36	10TH	11.56
28.47	15TH	11.21	29.94	15TH	11.79
28.95	20TH	11.40	30.42	20TH	11.98
29.36	25TH	11.56	30.85	25TH	12.15
29.72	30TH	11.70	31.24	30TH	12.30
30.06	35TH	11.83	31.61	35TH	12.44
30.38	40TH	11.96	31.96	40TH	12.58
30.68	45TH	12.08	32.30	45TH	12.72
30.98	50TH	12.20	32.65	50TH	12.85
31.28	55TH	12.31	32.99	55TH	12.99
31.58	60TH	12.43	33.35	60TH	13.13
31.89	65TH	12.56	33.71	65TH	13.27
32.22	70TH	12.69	34.10	70TH	13.41
32.58	75TH	12.83	34.52	75TH	13.56
32.98	80TH	12.99	34.99	80TH	13.73
33.46	85TH	13.17	35.53	85TH	13.99
34.09	90TH	13.42	36.20	90TH	14.25
35.09	95TH	13.81	37.18	95TH	14.64
35.80	97TH	14.09	37.79	97TH	14.88
36.36	98TH	14.32	38.22	98TH	15.05
37.33	99TH	14.70	38.87	99TH	15.30

(D13) DACTYLION HEIGHT

The vertical distance between a standing surface and the tip of the right middle finger (dactylion) of a subject standing erect with the arms and hands straight at the sides is calculated as follows: WRIST HEIGHT minus HAND LENGTH.



VARIABLE NO. (D13)—DACTYLICN HEIGHT

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
63.75	MEAN	25.10
0.17	SE(MEAN)	0.07
3.10	ST DEV	1.22
0.12	SE(SD)	0.05
54.50	MINIMUM	21.46
73.10	MAXIMUM	28.78
COEFF. OF VARIATION		4.9%
SYMMETRY----VETA I		-0.16
KURTOSIS----VETA II		3.29
NUMBER OF SUBJECTS		334

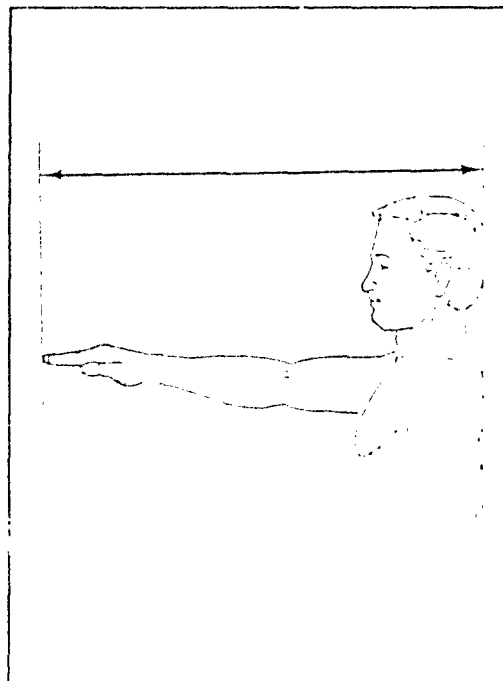
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
66.26	MEAN	26.09
0.16	SE(MEAN)	0.06
3.50	ST DEV	1.38
0.11	SE(SD)	0.04
54.90	MINIMUM	21.61
76.00	MAXIMUM	29.92
COEFF. OF VARIATION		5.3%
SYMMETRY----VETA I		-0.09
KURTOSIS----VETA II		3.19
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
55.64	1ST	21.91
56.73	2ND	22.33
57.42	3RD	22.61
58.35	5TH	22.97
59.72	10TH	23.51
60.61	15TH	23.86
61.28	20TH	24.13
61.84	25TH	24.35
62.32	30TH	24.54
62.75	35TH	24.71
63.15	40TH	24.86
63.53	45TH	25.01
63.89	50TH	25.16
64.25	55TH	25.30
64.61	60TH	25.44
64.97	65TH	25.58
65.34	70TH	25.72
65.75	75TH	25.88
66.20	80TH	26.06
66.73	85TH	26.27
67.44	90TH	26.55
68.57	95TH	27.00
69.40	97TH	27.32
70.07	98TH	27.59
71.25	99TH	28.05

PERCENTILES		
CENTIMETERS		INCHES
57.51	1ST	22.64
58.66	2ND	23.09
59.38	3RD	23.38
60.33	5TH	23.75
61.76	10TH	24.32
62.69	15TH	24.68
63.41	20TH	24.96
64.02	25TH	25.20
64.55	30TH	25.41
65.03	35TH	25.60
65.48	40TH	25.78
65.92	45TH	25.95
66.34	50TH	26.12
66.76	55TH	26.28
67.18	60TH	26.45
67.62	65TH	26.62
68.07	70TH	26.80
68.57	75TH	27.00
69.13	80TH	27.22
69.79	85TH	27.48
70.64	90TH	27.81
71.99	95TH	28.34
72.92	97TH	28.71
73.66	98TH	29.00
74.90	99TH	29.49

(D14) DACTYLION REACH FROM WALL

The horizontal distance between the plane of the back and the tip of the right middle finger of a subject standing erect with the back against a wall and the arm, hand, and fingers extended forward horizontally is calculated as follows: WRIST-WALL LENGTH plus HAND LENGTH.



VARIABLE NO. (D14)—DACTYLION REACH FROM WALL

FEMALES

MALES

THE SUMMARY STATISTICS
CENTIMETERS INCHES

THE SUMMARY STATISTICS
CENTIMETERS INCHES

81.64	MEAN	32.14
0.15	SE (MEAN)	0.06
2.72	ST DEV	1.07
0.11	SE (SD)	0.04
75.90	MINIMUM	29.88
91.10	MAXIMUM	35.87
COEFF. OF VARIATION		3.3%
SYMMETRY----VETA I		0.51
KURTOSIS----VETA II		3.24
NUMBER OF SUBJECTS		334

87.77	MEAN	34.56
0.18	SE (MEAN)	0.07
3.93	ST DEV	1.55
0.13	SE (SD)	0.05
77.70	MINIMUM	30.59
99.90	MAXIMUM	39.33
COEFF. OF VARIATION		4.5%
SYMMETRY----VETA I		0.16
KURTOSIS----VETA II		2.97
NUMBER OF SUBJECTS		487

PERCENTILES
CENTIMETERS INCHES

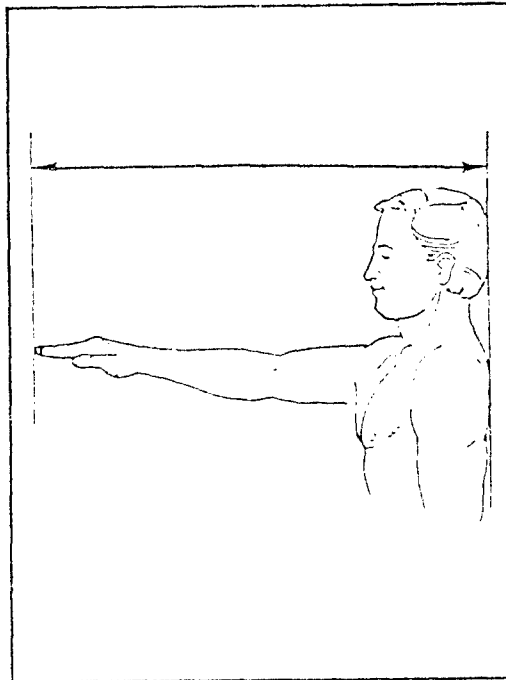
PERCENTILES
CENTIMETERS INCHES

76.54	1ST	30.13
76.85	2ND	30.26
77.10	3RD	30.36
77.51	5TH	30.52
78.25	10TH	30.81
78.80	15TH	31.02
79.27	20TH	31.21
79.68	25TH	31.37
80.06	30TH	31.52
80.42	35TH	31.66
80.76	40TH	31.79
81.10	45TH	31.93
81.43	50TH	32.06
81.77	55TH	32.19
82.12	60TH	32.33
82.49	65TH	32.48
82.88	70TH	32.63
83.31	75TH	32.80
83.80	80TH	32.99
84.39	85TH	33.23
85.17	90TH	33.53
86.41	95TH	34.02
87.29	97TH	34.37
87.99	98TH	34.64
89.18	99TH	35.11

79.81	1ST	31.42
80.19	2ND	31.57
80.58	3RD	31.73
81.28	5TH	32.00
82.58	10TH	32.51
83.57	15TH	32.90
84.37	20TH	33.22
85.07	25TH	33.49
85.70	30TH	33.74
86.27	35TH	33.96
86.81	40TH	34.18
87.32	45TH	34.38
87.82	50TH	34.57
88.30	55TH	34.77
88.79	60TH	34.96
89.28	65TH	35.15
89.80	70TH	35.35
90.35	75TH	35.57
90.97	80TH	35.81
91.69	85TH	36.10
92.65	90TH	36.48
94.22	95TH	37.10
95.41	97TH	37.56
96.40	98TH	37.95
98.22	99TH	38.67

(D15) DACTYLIC REACH FROM WALL, EXTENDED

The horizontal distance between the plane of the back and the tip of the right middle finger of a subject standing erect with the left shoulder against a wall and the right shoulder, arm, hand, and fingers extended forward horizontally as far as possible is calculated as follows:
WRIST-WALL LENGTH, EXTENDED plus HAND LENGTH.



VARIABLE NO. (D15)—DACTYLIQ^N REACH FROM WALL, EXTENDED

FEMALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
87.75	MEAN	34.55
0.15	SE(MEAN)	0.06
2.78	ST DEV	1.09
0.11	SE(SD)	0.04
81.80	MINIMUM	32.20
100.10	MAXIMUM	39.41
COEFF. OF VARIATION		3.2%
SYMMETRY—VETA I		0.57
KURTOSIS—VETA II		3.93
NUMBER OF SUBJECTS		334

PERCENTILES		
CENTIMETERS		INCHES
82.35	1ST	32.42
82.70	2ND	32.56
82.99	3RD	32.67
83.44	5TH	32.85
84.26	10TH	33.17
84.87	15TH	33.41
85.37	20TH	33.61
85.81	25TH	33.78
86.20	30TH	33.94
86.57	35TH	34.08
86.93	40TH	34.22
87.27	45TH	34.36
87.61	50TH	34.49
87.95	55TH	34.63
88.30	60TH	34.76
88.66	65TH	34.90
89.04	70TH	35.06
89.47	75TH	35.22
89.95	80TH	35.41
90.53	85TH	35.64
91.29	90TH	35.94
92.55	95TH	36.44
93.47	97TH	36.80
94.21	98TH	37.09
95.51	99TH	37.60

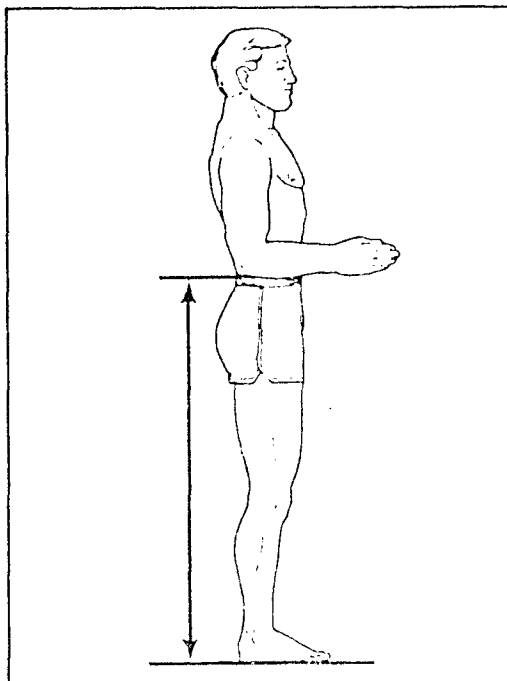
MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
93.35	MEAN	36.75
0.18	SE(MEAN)	0.07
4.01	ST DEV	1.58
0.13	SE(SD)	0.05
82.90	MINIMUM	32.64
106.90	MAXIMUM	42.09
COEFF. OF VARIATION		4.3%
SYMMETRY—VETA I		0.23
KURTOSIS—VETA II		3.17
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
84.29	1ST	33.19
85.37	2ND	33.61
86.04	3RD	33.87
86.94	5TH	34.23
88.32	10TH	34.77
89.25	15TH	35.14
89.99	20TH	35.43
90.63	25TH	35.68
91.20	30TH	35.90
91.73	35TH	36.11
92.24	40TH	36.31
92.73	45TH	36.51
93.23	50TH	36.70
93.72	55TH	36.90
94.23	60TH	37.10
94.76	65TH	37.31
95.33	70TH	37.53
95.95	75TH	37.77
96.65	80TH	38.05
97.48	85TH	38.38
98.56	90TH	38.80
100.20	95TH	39.45
101.31	97TH	39.89
102.14	98TH	40.21
103.49	99TH	40.74

(D16) ELBOW REST HEIGHT, STANDING

The vertical distance between a standing surface and the lowest point of the right elbow of a subject standing erect with the right elbow flexed 90 degrees is calculated as follows: ELBOW REST HEIGHT plus STATURE minus SITTING HEIGHT.



VARIABLE NO. (D16)—ELBOW REST HEIGHT, STANDING

FEMALES

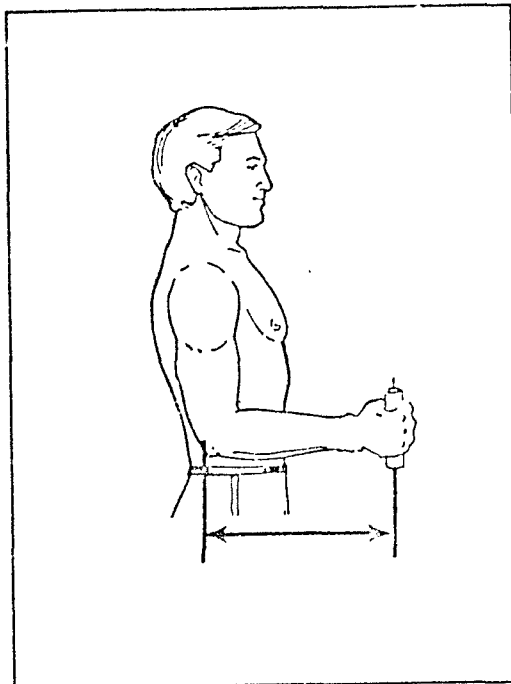
MALES

THE SUMMARY STATISTICS				THE SUMMARY STATISTICS			
CENTIMETERS		INCHES		CENTIMETERS		INCHES	
103.01	MEAN	40.55		108.36	MEAN	42.66	
0.19	SE(MEAN)	0.07		0.21	SE(MEAN)	0.08	
3.47	ST DEV	1.37		4.57	ST DEV	1.80	
0.13	SE(SD)	0.05		0.15	SE(SD)	0.06	
93.80	MINIMUM	36.93		93.30	MINIMUM	36.73	
118.50	MAXIMUM	46.65		120.60	MAXIMUM	47.48	
COEFF. OF VARIATION		3.4%		COEFF. OF VARIATION		4.2%	
SYMMETRY-----VETA I		0.29		SYMMETRY-----VETA I		-0.01	
KURTOSIS-----VETA II		3.67		KURTOSIS-----VETA II		2.95	
NUMBER OF SUBJECTS		334		NUMBER OF SUBJECTS		487	

PERCENTILES			PERCENTILES		
CENTIMETERS		INCHES	CENTIMETERS		INCHES
95.36	1ST	37.54	97.37	1ST	38.34
96.24	2ND	37.89	98.81	2ND	38.90
96.79	3RD	38.11	99.68	3RD	39.25
97.53	5TH	38.40	100.83	5TH	39.70
98.67	10TH	38.85	102.53	10TH	40.36
99.45	15TH	39.15	103.65	15TH	40.81
100.07	20TH	39.40	104.52	20TH	41.15
100.62	25TH	39.61	105.28	25TH	41.45
101.11	30TH	39.81	105.95	30TH	41.71
101.57	35TH	39.99	106.58	35TH	41.96
102.02	40TH	40.16	107.17	40TH	42.19
102.45	45TH	40.33	107.75	45TH	42.42
102.88	50TH	40.50	108.32	50TH	42.65
103.32	55TH	40.68	108.90	55TH	42.87
103.77	60TH	40.85	109.48	60TH	43.10
104.23	65TH	41.04	110.09	65TH	43.34
104.73	70TH	41.23	110.74	70TH	43.60
105.27	75TH	41.44	111.44	75TH	43.88
105.88	80TH	41.68	112.23	80TH	44.19
106.58	85TH	41.96	113.15	85TH	44.55
107.48	90TH	42.31	114.31	90TH	45.00
108.79	95TH	42.83	116.02	95TH	45.68
109.61	97TH	43.15	117.10	97TH	46.10
110.20	98TH	43.39	117.89	98TH	46.41
111.09	99TH	43.74	119.03	99TH	46.88

(D17) ELBOW-CENTER OF GRIP LENGTH

The horizontal distance between the posterior point of the right elbow flexed 90 degrees and the center of a 1-1/4" diameter dowel gripped vertically in the right hand is calculated as follows: FOREARM-HAND LENGTH minus HAND LENGTH plus WRIST-CENTER OF GRIP LENGTH.



VARIABLE NO. (D17)—ELBOW-CENTER OF GRIP LENGTH

FEMALES

MALES

THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
33.36	MEAN	13.13	
0.06	SE (MEAN)	0.02	
1.13	ST DEV	0.44	
0.04	SE (SD)	0.02	
30.10	MINIMUM	11.85	
37.20	MAXIMUM	14.65	
COEFF. OF VARIATION		3.4%	
SYMMETRY-----VETA I		0.54	
KURTOSIS-----VETA II		3.72	
NUMBER OF SUBJECTS		334	

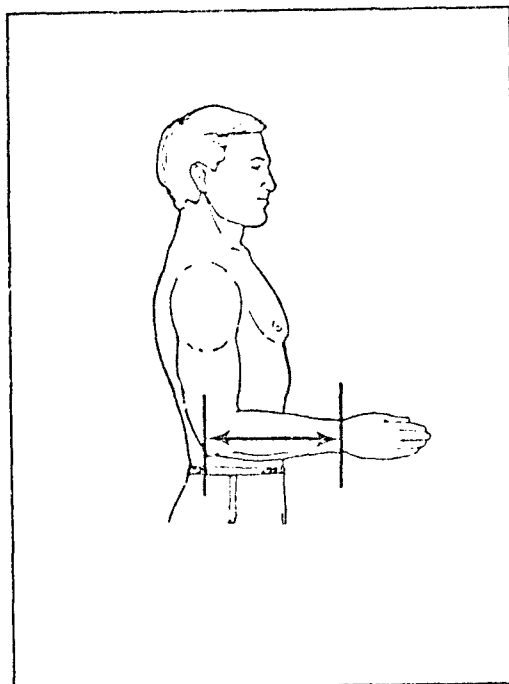
THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
35.75	MEAN	14.07	
0.07	SE (MEAN)	0.03	
1.58	ST DEV	0.62	
0.05	SE (SD)	0.02	
31.40	MINIMUM	12.36	
40.40	MAXIMUM	15.91	
COEFF. OF VARIATION		4.4%	
SYMMETRY-----VETA I		0.20	
KURTOSIS-----VETA II		2.81	
NUMBER OF SUBJECTS		487	

PERCENTILES		
CENTIMETERS		INCHES
30.94	1ST	12.18
31.26	2ND	12.31
31.45	3RD	12.38
31.69	5TH	12.48
32.05	10TH	12.62
32.28	15TH	12.71
32.45	20TH	12.78
32.61	25TH	12.84
32.75	30TH	12.89
32.88	35TH	12.94
33.00	40TH	12.99
33.13	45TH	13.04
33.25	50TH	13.09
33.38	55TH	13.14
33.51	60TH	13.19
33.66	65TH	13.25
33.82	70TH	13.31
34.00	75TH	13.38
34.21	80TH	13.47
34.47	85TH	13.57
34.83	90TH	13.71
35.44	95TH	13.95
35.88	97TH	14.13
36.23	98TH	14.26
36.84	99TH	14.50

PERCENTILES		
CENTIMETERS		INCHES
32.50	1ST	12.80
32.78	2ND	12.90
32.97	3RD	12.98
33.25	5TH	13.09
33.73	10TH	13.28
34.08	15TH	13.42
34.36	20TH	13.53
34.62	25TH	13.63
34.85	30TH	13.72
35.07	35TH	13.81
35.28	40TH	13.89
35.48	45TH	13.97
35.69	50TH	14.05
35.89	55TH	14.13
36.10	60TH	14.21
36.32	65TH	14.30
36.55	70TH	14.39
36.80	75TH	14.49
37.08	80TH	14.60
37.41	85TH	14.73
37.82	90TH	14.89
38.43	95TH	15.13
38.82	97TH	15.28
39.11	98TH	15.40
39.56	99TH	15.57

(D18) ELBOW-WRIST LENGTH

The horizontal distance between the posterior point of the right elbow flexed 90 degrees and the styliion landmark on the right wrist of a subject standing with the forearm and hand held horizontally is calculated as follows: FOREARM-HAND LENGTH minus HAND LENGTH.



VARIABLE NO. (D18)—ELBOW-WRIST LENGTH

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
26.66	MEAN	10.50
0.05	SE(MEAN)	0.02
0.97	ST DEV	0.38
0.04	SE(SL)	0.01
24.20	MINIMUM	9.53
30.00	MAXIMUM	11.81
COEFF. OF VARIATION		3.6%
SYMMETRY----VETA I		0.45
KURTOSIS----VETA II		3.39
NUMBER OF SUBJECTS		334

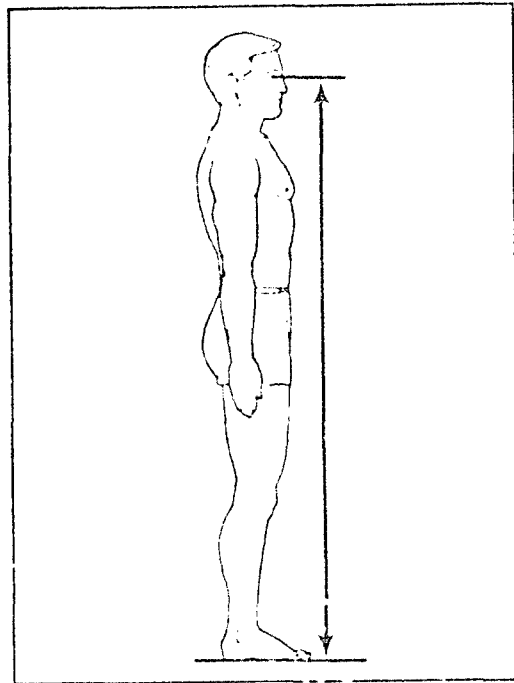
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
28.95	MEAN	11.40
0.06	SE(MEAN)	0.02
1.35	ST DEV	0.53
0.04	SE(SD)	0.02
25.70	MINIMUM	10.12
33.10	MAXIMUM	13.03
COEFF. OF VARIATION		4.7%
SYMMETRY----VETA I		0.20
KURTOSIS----VETA II		2.77
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
24.58	1ST	9.68
24.84	2ND	9.78
25.00	3RD	9.84
25.21	5TH	9.92
25.51	10TH	10.04
25.70	15TH	10.12
25.86	20TH	10.18
26.00	25TH	10.24
26.12	30TH	10.29
26.24	35TH	10.33
26.36	40TH	10.38
26.47	45TH	10.42
26.59	50TH	10.47
26.70	55TH	10.51
26.82	60TH	10.56
26.95	65TH	10.61
27.10	70TH	10.67
27.25	75TH	10.73
27.44	80TH	10.80
27.65	85TH	10.89
27.94	90TH	11.00
28.40	95TH	11.18
28.70	97TH	11.30
28.94	98TH	11.39
29.31	99TH	11.54

PERCENTILES		
CENTIMETERS		INCHES
26.16	1ST	10.30
26.35	2ND	10.38
26.51	3RD	10.44
26.75	5TH	10.53
27.18	10TH	10.70
27.50	15TH	10.83
27.76	20TH	10.93
27.99	25TH	11.02
28.19	30TH	11.10
28.38	35TH	11.18
28.57	40TH	11.25
28.74	45TH	11.32
28.92	50TH	11.39
29.09	55TH	11.45
29.27	60TH	11.52
29.45	65TH	11.60
29.64	70TH	11.67
29.85	75TH	11.75
30.08	80TH	11.84
30.35	85TH	11.95
30.70	90TH	12.09
31.23	95TH	12.29
31.59	97TH	12.44
31.87	98TH	12.55
32.35	99TH	12.74

(D19) EYE HEIGHT

The vertical distance between a standing surface and the outer corner of the right eye of a subject standing erect with the head in the Frankfort plane is calculated as follows: EYE HEIGHT, SITTING plus STATURE minus SITTING HEIGHT.



VARIABLE NO. (D19)—EYE HEIGHT

FEMALES

MALES

THE SUMMARY STATISTICS
CENTIMETERS INCHES

THE SUMMARY STATISTICS
CENTIMETERS INCHES

156.59	MEAN	61.65
0.24	SE (MEAN)	0.09
4.35	ST DEV	1.71
0.17	SE (SD)	0.07
145.60	MINIMUM	57.32
175.30	MAXIMUM	69.02
COEFF. OF VARIATION		2.8%
SYMMETRY---VETA I		0.43
KURTOSIS---VETA II		3.75
NUMBER OF SUBJECTS		334

165.14	MEAN	65.02
0.29	SE (MEAN)	0.11
6.36	ST DEV	2.50
0.20	SE (SD)	0.08
146.50	MINIMUM	57.68
181.50	MAXIMUM	71.46
COEFF. OF VARIATION		3.9%
SYMMETRY---VETA I		-0.06
KURTOSIS---VETA II		2.79
NUMBER OF SUBJECTS		487

PERCENTILES
CENTIMETERS INCHES

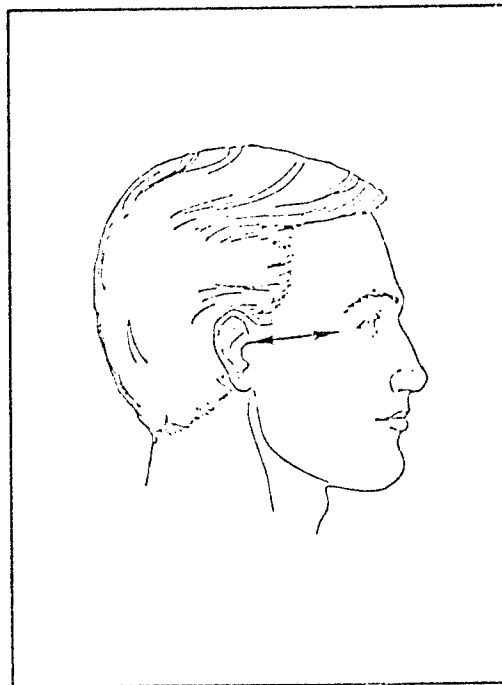
PERCENTILES
CENTIMETERS INCHES

146.59	1ST	57.71
148.19	2ND	58.34
149.06	3RD	58.69
150.11	5TH	59.10
151.52	10TH	59.65
152.40	15TH	60.00
153.08	20TH	60.27
153.67	25TH	60.50
154.21	30TH	60.71
154.72	35TH	60.91
155.22	40TH	61.11
155.72	45TH	61.31
156.23	50TH	61.51
156.76	55TH	61.72
157.32	60TH	61.94
157.91	65TH	62.17
158.55	70TH	62.42
159.27	75TH	62.71
160.10	80TH	63.03
161.09	85TH	63.42
162.35	90TH	63.92
164.20	95TH	64.64
165.33	97TH	65.09
166.10	98TH	65.39
167.17	99TH	65.81

150.07	1ST	59.08
151.83	2ND	59.80
153.01	3RD	60.24
154.53	5TH	60.84
156.86	10TH	61.76
153.43	15TH	62.37
159.68	20TH	62.87
160.76	25TH	63.29
161.74	30TH	63.68
162.64	35TH	64.03
163.50	40TH	64.37
164.34	45TH	64.70
165.17	50TH	65.03
166.00	55TH	65.35
166.83	60TH	65.68
167.70	65TH	66.02
168.61	70TH	66.38
169.59	75TH	66.77
170.63	80TH	67.20
171.92	85TH	67.69
173.45	90TH	68.29
175.61	95TH	69.14
176.90	97TH	69.65
177.78	98TH	69.99
179.04	99TH	70.49

(D20) EYE-TRAGION LINK

The distance between the ectoorbitale landmark near the outer corner of the eye and the tragon landmark on the cartilaginous flap of flesh in front of the earhole is calculated using the distance formula for the points: ECTOORBITALE and TRAGION.



VARIABLE NO. (D20)—EYE-TRACION LINK

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
5.79	MEAN	2.28
0.02	SE (MEAN)	0.01
0.35	ST DEV	0.14
0.01	SE (SD)	0.01
4.80	MINIMUM	1.89
6.70	MAXIMUM	2.64
COEFF. OF VARIATION		6.0%
SYMMETRY—VETA I		-0.17
KURTOSIS—VETA II		2.82
NUMBER OF SUBJECTS		334

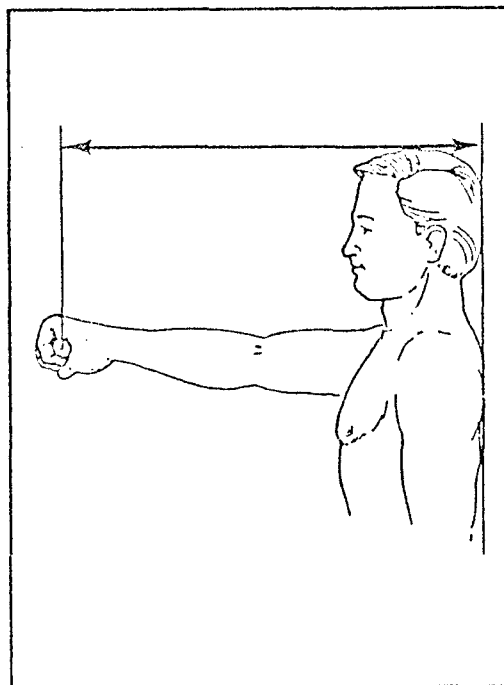
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
6.28	MEAN	2.47
0.02	SE (MEAN)	0.01
0.33	ST DEV	0.13
0.01	SE (SD)	0.00
5.00	MINIMUM	1.97
7.20	MAXIMUM	2.83
COEFF. OF VARIATION		5.3%
SYMMETRY—VETA I		-0.06
KURTOSIS—VETA II		3.24
NUMBER OF SUBJECTS		483

PERCENTILES		
CENTIMETERS		INCHES
4.96	1ST	1.95
5.05	2ND	1.99
5.11	3RD	2.01
5.19	5TH	2.04
5.32	10TH	2.10
5.42	15TH	2.13
5.49	20TH	2.16
5.56	25TH	2.19
5.61	30TH	2.21
5.67	35TH	2.23
5.72	40TH	2.25
5.76	45TH	2.27
5.81	50TH	2.29
5.85	55TH	2.30
5.90	60TH	2.32
5.94	65TH	2.34
5.99	70TH	2.36
6.04	75TH	2.38
6.10	80TH	2.40
6.16	85TH	2.42
6.24	90TH	2.46
6.35	95TH	2.50
6.42	97TH	2.53
6.47	98TH	2.55
6.56	99TH	2.58

PERCENTILES		
CENTIMETERS		INCHES
5.43	1ST	2.14
5.57	2ND	2.19
5.65	3RD	2.23
5.75	5TH	2.26
5.88	10TH	2.31
5.96	15TH	2.34
6.01	20TH	2.37
6.06	25TH	2.39
6.11	30TH	2.41
6.15	35TH	2.42
6.19	40TH	2.44
6.23	45TH	2.45
6.27	50TH	2.47
6.31	55TH	2.48
6.35	60TH	2.50
6.40	65TH	2.52
6.44	70TH	2.54
6.50	75TH	2.56
6.56	80TH	2.58
6.63	85TH	2.61
6.72	90TH	2.65
6.85	95TH	2.70
6.93	97TH	2.73
6.98	98TH	2.75
7.05	99TH	2.77

(D21) FUNCTIONAL GRIP REACH

The horizontal distance between the vertical plane of the back and the center of a 1-1/4" diameter dowel gripped in the right hand of a subject standing erect with the back against a wall and the arm and hand extended forward horizontally is calculated as follows: WRIST-WALL LENGTH plus WRIST-CENTER OF GRIP LENGTH.



VARIABLE NO. (D21)—FUNCTIONAL GRIP REACH

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
70.08	MEAN	27.59
0.13	SE (MEAN)	0.05
2.42	ST DEV	0.95
0.09	SE (SD)	0.04
64.10	MINIMUM	25.24
78.50	MAXIMUM	30.91
COEFF. OF VARIATION		3.5%
SYMMETRY—VETA I		0.39
KURIOSIS—VETA II		3.07
NUMBER OF SUBJECTS		334

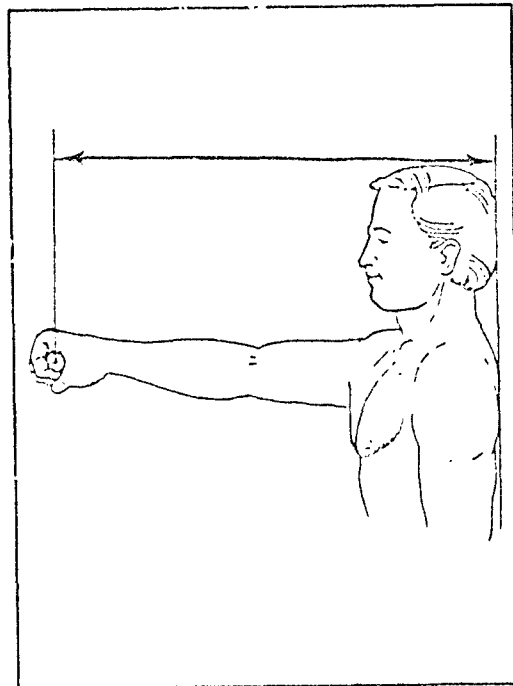
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
75.12	MEAN	29.58
0.16	SE (MEAN)	0.06
3.50	ST DEV	1.38
0.11	SE (SD)	0.04
66.00	MINIMUM	25.98
87.30	MAXIMUM	34.37
COEFF. OF VARIATION		4.7%
SYMMETRY—VETA I		0.21
KURIOSIS—VETA II		3.11
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
65.25	1ST	25.69
65.67	2ND	25.86
65.96	3RD	25.97
66.38	5TH	26.13
67.07	10TH	26.41
67.57	15TH	26.60
67.98	20TH	26.76
68.35	25TH	26.91
68.69	30TH	27.04
69.00	35TH	27.17
69.31	40TH	27.29
69.62	45TH	27.41
69.92	50TH	27.53
70.23	55TH	27.65
70.55	60TH	27.78
70.88	65TH	27.91
71.24	70TH	28.05
71.63	75TH	28.20
72.08	80TH	28.38
72.61	85TH	28.59
73.29	90TH	28.85
74.32	95TH	29.26
75.01	97TH	29.53
75.53	98TH	29.74
76.35	99TH	30.06

PERCENTILES		
CENTIMETERS		INCHES
68.16	1ST	26.83
68.39	2ND	26.92
68.70	3RD	27.05
69.29	5TH	27.28
70.45	10TH	27.74
71.33	15TH	28.08
72.06	20TH	28.37
72.70	25TH	28.62
73.27	30TH	28.85
73.79	35TH	29.05
74.27	40TH	29.24
74.73	45TH	29.42
75.17	50TH	29.60
75.61	55TH	29.77
76.04	60TH	29.94
76.47	65TH	30.11
76.93	70TH	30.29
77.41	75TH	30.48
77.94	80TH	30.69
78.57	85TH	30.93
79.41	90TH	31.26
80.79	95TH	31.81
81.86	97TH	32.23
82.77	98TH	32.58
84.45	99TH	33.25

(D22) FUNCTIONAL GRIP REACH, EXTENDED

The horizontal distance between the vertical plane of the back and the center of a 1-1/4" diameter dowel gripped in the right hand of a subject standing erect with the left shoulder against a wall and the right shoulder, arm, and hand extended forward horizontally as far as possible is calculated as follows: WRIST-WALL LENGTH, EXTENDED plus WRIST-CENTER OF GRIP LENGTH.



VARIABLE NO. (D22)—FUNCTIONAL GRIP REACH, EXTENDED

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
76.20	MEAN	30.00
0.14	SE(MEAN)	0.05
2.53	ST DEV	1.00
0.10	SE(SD)	0.04
70.30	MINIMUM	27.68
87.60	MAXIMUM	34.49
COEFF. OF VARIATION		3.3%
SYMMETRY---VETA I		0.47
KURTOSIS---VETA II		3.71
NUMBER OF SUBJECTS		334

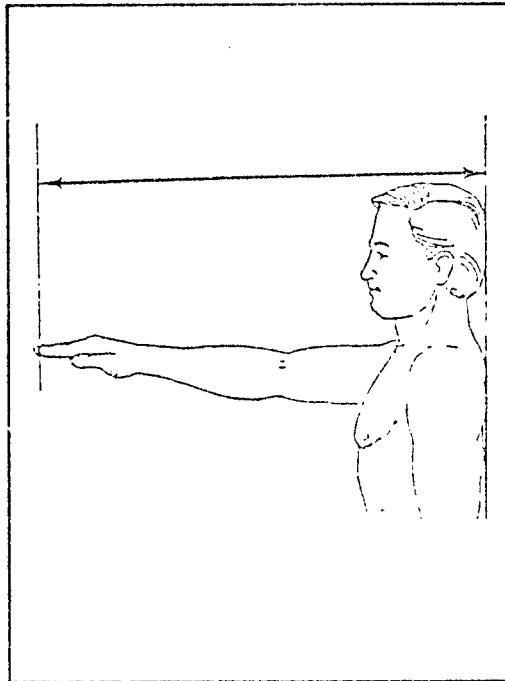
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
80.70	MEAN	31.77
0.16	SE(MEAN)	0.06
3.61	ST DEV	1.42
0.12	SE(SD)	0.05
71.20	MINIMUM	28.03
92.80	MAXIMUM	36.54
COEFF. OF VARIATION		4.5%
SYMMETRY---VETA I		0.30
KURTOSIS---VETA II		3.25
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
71.57	1ST	28.18
71.73	2ND	28.24
71.92	3RD	28.32
72.27	5TH	28.45
72.97	10TH	28.73
73.51	15TH	28.94
73.97	20TH	29.12
74.38	25TH	29.28
74.76	30TH	29.43
75.11	35TH	29.57
75.45	40TH	29.70
75.78	45TH	29.83
76.10	50TH	29.96
76.42	55TH	30.09
76.75	60TH	30.22
77.09	65TH	30.35
77.45	70TH	30.49
77.83	75TH	30.64
78.27	80TH	30.81
78.77	85TH	31.01
79.43	90TH	31.27
80.46	95TH	31.63
81.19	97TH	31.96
81.76	98TH	32.19
82.76	99TH	32.58

PERCENTILES		
CENTIMETERS		INCHES
72.96	1ST	28.73
73.78	2ND	29.05
74.32	3RD	29.26
75.05	5TH	29.55
76.21	10TH	30.00
77.01	15TH	30.32
77.65	20TH	30.57
78.22	25TH	30.79
78.73	30TH	30.99
79.20	35TH	31.18
79.66	40TH	31.36
80.10	45TH	31.54
80.55	50TH	31.71
81.00	55TH	31.89
81.46	60TH	32.07
81.94	65TH	32.26
82.45	70TH	32.46
83.02	75TH	32.68
83.66	80TH	32.94
84.42	85TH	33.24
85.41	90TH	33.63
86.93	95TH	34.22
87.96	97TH	34.63
88.75	98TH	34.94
90.03	99TH	35.45

(D23) INDEX FINGER REACH

The horizontal distance between the vertical plane of the back and the tip of the right index finger of a subject standing erect with the back against a wall and the arm, hand, and fingers extended forward horizontally is calculated as follows: WRIST-WALL LENGTH plus WRIST-INDEX FINGER LENGTH.



VARIABLE NO. (D23)—INDEX FINGER REACH

FEMALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
80.58	MEAN	31.72
0.15	SE(MEAN)	0.06
2.68	ST DEV	1.05
0.10	SE(SD)	0.04
74.80	MINIMUM	29.45
89.90	MAXIMUM	35.39
COEFF. OF VARIATION		3.3%
SYMMETRY—VETA I		0.47
KURTOSIS—VETA II		3.18
NUMBER OF SUBJECTS		334

MALES

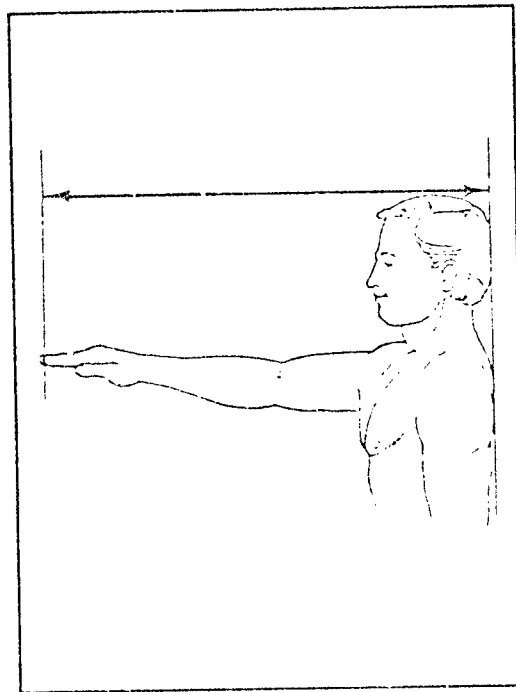
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
86.46	MEAN	34.04
0.18	SE(MEAN)	0.07
3.93	ST DEV	1.55
0.13	SE(SD)	0.05
77.00	MINIMUM	30.31
99.20	MAXIMUM	39.06
COEFF. OF VARIATION		4.5%
SYMMETRY—VETA I		0.19
KURTOSIS—VETA II		2.99
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
75.73	1ST	29.81
75.92	2ND	29.89
76.13	3RD	29.97
76.50	5TH	30.12
77.22	10TH	30.40
77.78	15TH	30.62
78.25	20TH	30.81
78.67	25TH	30.97
79.05	30TH	31.12
79.41	35TH	31.26
79.75	40TH	31.40
80.09	45TH	31.53
80.42	50TH	31.66
80.76	55TH	31.79
81.10	60TH	31.93
81.45	65TH	32.07
81.83	70TH	32.22
82.24	75TH	32.38
82.72	80TH	32.57
83.28	85TH	32.79
84.03	90TH	33.08
85.25	95TH	33.56
86.14	97TH	33.91
86.85	98TH	34.19
88.12	99TH	34.69

PERCENTILES		
CENTIMETERS		INCHES
78.54	1ST	30.92
78.95	2ND	31.08
79.35	3RD	31.24
80.04	5TH	31.51
81.33	10TH	32.02
82.30	15TH	32.40
83.08	20TH	32.71
83.77	25TH	32.98
84.39	30TH	33.22
84.95	35TH	33.45
85.48	40TH	33.65
85.99	45TH	33.85
86.48	50TH	34.05
86.97	55TH	34.24
87.45	60TH	34.43
87.94	65TH	34.62
88.46	70TH	34.83
89.01	75TH	35.04
89.64	80TH	35.29
90.36	85TH	35.58
91.32	90TH	35.95
92.90	95TH	36.57
94.07	97TH	37.03
95.04	98TH	37.42
96.80	99TH	38.11

(D24) INDEX FINGER REACH, EXTENDED

The horizontal distance between the vertical plane of the back and the tip of the right index finger of a subject standing erect with the left shoulder against a wall and the right shoulder, arm, hand, and fingers extended forward horizontally as far as possible is calculated as follows: WRIST-WALL LENGTH, EXTENDED plus WRIST-INDEX FINGER LENGTH.



VARIABLE NO. (D24)—INDEX FINGER REACH, EXTENDED

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
86.70	MEAN	34.13
0.15	SE(MEAN)	0.06
2.75	ST DEV	1.08
0.11	SE(SD)	0.04
81.20	MINIMUM	31.97
98.70	MAXIMUM	38.86
COEFF. OF VARIATION		3.2%
SYMMETRY----VETA I		0.55
KURTOSIS----VETA II		3.82
NUMBER OF SUBJECTS		334

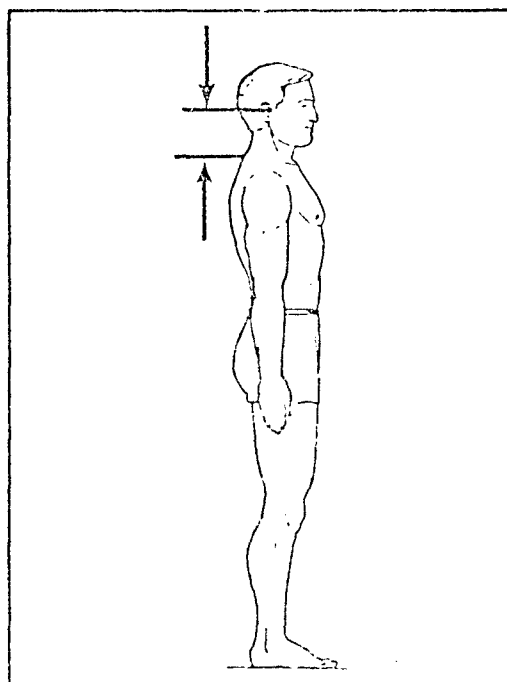
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
92.04	MEAN	36.24
0.18	SE(MEAN)	0.07
4.00	ST DEV	1.58
0.13	SE(SD)	0.05
82.20	MINIMUM	32.36
105.20	MAXIMUM	41.42
COEFF. OF VARIATION		4.3%
SYMMETRY----VETA I		0.26
KURTOSIS----VETA II		3.14
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
81.56	1ST	32.11
81.73	2ND	32.18
81.95	3RD	32.26
82.36	5TH	32.43
83.16	10TH	32.74
83.78	15TH	32.99
84.30	20TH	33.19
84.75	25TH	33.37
85.16	30TH	33.53
85.53	35TH	33.68
85.89	40TH	33.82
86.23	45TH	33.95
86.57	50TH	34.08
86.90	55TH	34.21
87.24	60TH	34.34
87.58	65TH	34.48
87.94	70TH	34.62
88.34	75TH	34.78
88.79	80TH	34.96
89.33	85TH	35.17
90.06	90TH	35.46
91.29	95TH	35.94
92.23	97TH	36.31
93.02	98TH	36.62
94.46	99TH	37.19

PERCENTILES		
CENTIMETERS		INCHES
83.34	1ST	32.81
84.18	2ND	33.14
84.75	3RD	33.37
85.58	5TH	33.69
86.92	10TH	34.22
87.86	15TH	34.59
88.61	20TH	34.89
89.27	25TH	35.14
89.86	30TH	35.38
90.40	35TH	35.59
90.92	40TH	35.80
91.42	45TH	35.99
91.92	50TH	36.19
92.42	55TH	36.39
92.92	60TH	36.58
93.45	65TH	36.79
94.01	70TH	37.01
94.62	75TH	37.25
95.20	80TH	37.52
96.12	85TH	37.84
97.18	90TH	38.26
98.34	95TH	38.91
99.99	97TH	39.37
100.90	98TH	39.72
102.42	99TH	40.32

(D25) NECK LINK

The vertical distance between the cervicale landmark at the base of the back of the neck and the tragion landmark on the cartilaginous flap of flesh in front of the earhole is calculated as follows: STATURE minus TRAGION-TOP OF HEAD minus CERVICALE HEIGHT.



VARIABLE NO. (D25)—NECK LINE

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
10.21	MEAN	4.02
0.05	SE (MEAN)	0.02
1.03	ST DEV	0.41
0.04	SE (SD)	0.02
7.10	MINIMUM	2.80
13.30	MAXIMUM	5.24
COEFF. OF VARIATION		10.1%
SYMMETRY—VETA I		0.06
KURTOSIS—VETA II		2.86
NUMBER OF SUBJECTS		334

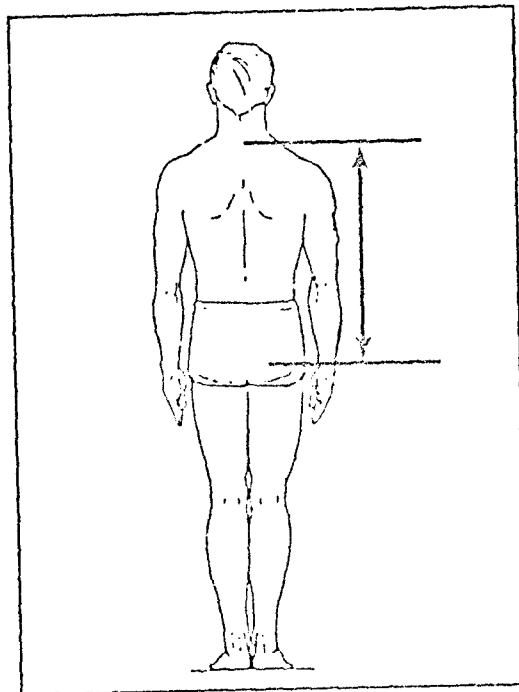
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
10.88	MEAN	4.28
0.05	SE (MEAN)	0.02
1.10	ST DEV	0.43
0.04	SE (SD)	0.01
7.10	MINIMUM	2.80
14.60	MAXIMUM	5.75
COEFF. OF VARIATION		10.1%
SYMMETRY—VETA I		0.05
KURTOSIS—VETA II		3.21
NUMBER OF SUBJECTS		483

PERCENTILES		
CENTIMETERS		INCHES
7.93	1ST	3.12
8.17	2ND	3.21
8.32	3RD	3.28
8.53	5TH	3.36
8.88	10TH	3.49
9.12	15TH	3.59
9.31	20TH	3.67
9.48	25TH	3.73
9.64	30TH	3.80
9.79	35TH	3.85
9.92	40TH	3.91
10.06	45TH	3.96
10.20	50TH	4.01
10.33	55TH	4.07
10.47	60TH	4.12
10.61	65TH	4.18
10.76	70TH	4.24
10.93	75TH	4.30
11.11	80TH	4.37
11.32	85TH	4.46
11.58	90TH	4.56
11.94	95TH	4.70
12.17	97TH	4.79
12.33	98TH	4.85
12.56	99TH	4.94

PERCENTILES		
CENTIMETERS		INCHES
8.21	1ST	3.23
8.60	2ND	3.39
8.82	3RD	3.47
9.11	5TH	3.59
9.51	10TH	3.74
9.77	15TH	3.85
9.97	20TH	3.92
10.14	25TH	3.99
10.30	30TH	4.05
10.44	35TH	4.11
10.58	40TH	4.17
10.71	45TH	4.22
10.85	50TH	4.27
10.99	55TH	4.33
11.13	60TH	4.38
11.28	65TH	4.44
11.43	70TH	4.50
11.61	75TH	4.57
11.80	80TH	4.65
12.03	85TH	4.74
12.32	90TH	4.85
12.73	95TH	5.01
12.98	97TH	5.11
13.16	98TH	5.18
13.41	99TH	5.28

(D26) NECK-BUTTOCK LENGTH

The vertical distance between the cervicale landmark at the base of the back of the neck and the level of the maximum protrusion of the right buttock is calculated as follows: CERVICALE HEIGHT minus BUTTOCK HEIGHT.



VARIABLE NO. (D26)—NECK-BUTTOCK LENGTH

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
59.62	MEAN	23.47
0.14	SE (MEAN)	0.06
2.62	ST DEV	1.03
0.10	SE (SD)	0.04
51.50	MINIMUM	20.28
67.30	MAXIMUM	26.50
COEFF. OF VARIATION		4.4%
SYMMETRY—VETA I		-0.03
KURTOSIS—VETA II		3.00
NUMBER OF SUBJECTS		334

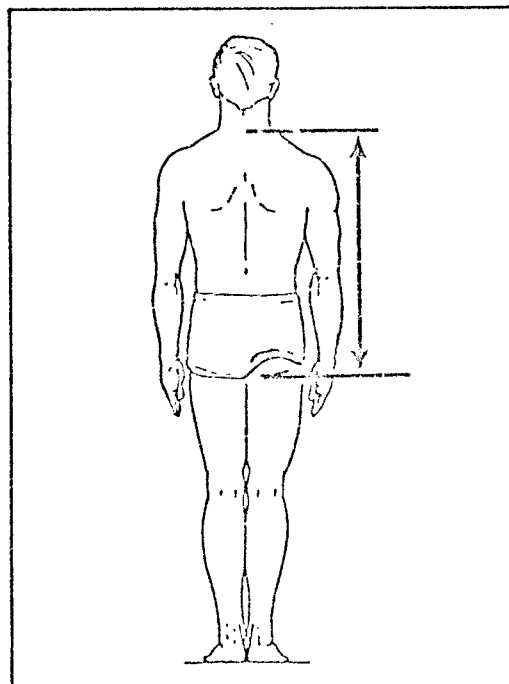
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
64.67	MEAN	25.46
0.13	SE (MEAN)	0.05
2.98	ST DEV	1.17
0.10	SE (SD)	0.04
54.00	MINIMUM	21.26
75.10	MAXIMUM	29.57
COEFF. OF VARIATION		4.6%
SYMMETRY—VETA I		-0.11
KURTOSIS—VETA II		3.20
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
53.46	1ST	21.05
54.23	2ND	21.35
54.71	3RD	21.54
55.34	5TH	21.79
56.29	10TH	22.16
56.93	15TH	22.41
57.44	20TH	22.61
57.87	25TH	22.78
58.26	30TH	22.94
58.62	35TH	23.08
58.97	40TH	23.22
59.30	45TH	23.35
59.63	50TH	23.48
59.97	55TH	23.61
60.30	60TH	23.74
60.65	65TH	23.88
61.02	70TH	24.02
61.42	75TH	24.18
61.86	80TH	24.36
62.37	85TH	24.56
63.01	90TH	24.81
63.92	95TH	25.17
64.49	97TH	25.39
64.88	98TH	25.54
65.46	99TH	25.77

PERCENTILES		
CENTIMETERS		INCHES
57.38	1ST	22.59
58.34	2ND	22.97
58.93	3RD	23.20
59.70	5TH	23.50
60.84	10TH	23.95
61.60	15TH	24.25
62.19	20TH	24.48
62.70	25TH	24.68
63.15	30TH	24.86
63.57	35TH	25.03
63.96	40TH	25.12
64.35	45TH	25.33
64.72	50TH	25.48
65.10	55TH	25.63
65.48	60TH	25.78
65.87	65TH	25.93
66.28	70TH	26.10
66.72	75TH	26.27
67.21	80TH	26.46
67.77	85TH	26.68
68.46	90TH	26.95
69.42	95TH	27.33
70.00	97TH	27.56
70.40	98TH	27.71
70.95	99TH	27.93

(147) NECK-GLUTEAL FURROW LENGTH

The vertical distance between the cervicale landmark at the base of the back of the neck and the gluteal furrow landmark at the juncture of the right buttock with the back of the thigh is calculated as follows:
CERVICALE HEIGHT minus GLUTEAL FURROW HEIGHT.



VARIABLE NO. (D27)—NECK-GLUTEAL FURROW LENGTH

FEMALES

MALES

THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
68.98	MEAN	27.16	
0.14	SE (MEAN)	0.06	
2.65	ST DEV	1.04	
0.10	SE (SD)	0.04	
61.80	MINIMUM	24.33	
76.80	MAXIMUM	30.24	
COEFF. OF VARIATION		3.8%	
SYMMETRY—VEIA I		0.07	
KURTOSIS—VEIA II		2.91	
NUMBER OF SUBJECTS		334	

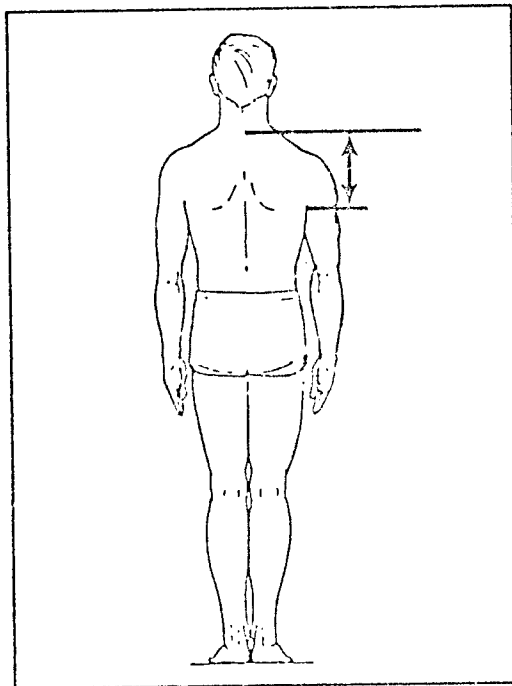
THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
71.81	MEAN	28.27	
0.14	SE (MEAN)	0.05	
3.02	ST DEV	1.19	
0.10	SE (SD)	0.04	
61.20	MINIMUM	24.09	
81.30	MAXIMUM	32.01	
COEFF. OF VARIATION		4.2%	
SYMMETRY—VEIA I		-0.03	
KURTOSIS—VEIA II		3.11	
NUMBER OF SUBJECTS		487	

PERCENTILES		
CENTIMETERS		INCHES
63.03	1ST	24.82
63.71	2ND	25.08
64.14	3RD	25.25
64.73	5TH	25.48
65.64	10TH	25.84
66.27	15TH	26.09
66.77	20TH	26.29
67.20	25TH	26.46
67.59	30TH	26.61
67.95	35TH	26.75
68.29	40TH	26.89
68.62	45TH	27.02
68.96	50TH	27.15
69.29	55TH	27.28
69.63	60TH	27.41
69.98	65TH	27.55
70.35	70TH	27.70
70.76	75TH	27.86
71.22	80TH	28.04
71.75	85TH	28.25
72.42	90TH	28.51
73.44	95TH	28.91
74.10	97TH	29.18
74.60	98TH	29.37
75.38	99TH	29.68

PERCENTILES		
CENTIMETERS		INCHES
64.84	1ST	25.53
65.71	2ND	25.87
66.24	3RD	26.08
66.95	5TH	26.36
68.01	10TH	26.78
68.73	15TH	27.06
69.29	20TH	27.28
69.78	25TH	27.47
70.23	30TH	27.65
70.63	35TH	27.81
71.03	40TH	27.96
71.41	45TH	28.11
71.79	50TH	28.26
72.17	55TH	28.41
72.56	60TH	28.57
72.96	65TH	28.72
73.39	70TH	28.89
73.86	75TH	29.08
74.38	80TH	29.28
74.99	85TH	29.52
75.75	90TH	29.82
76.87	95TH	30.26
77.58	97TH	30.54
78.09	98TH	30.74
78.86	99TH	31.05

(D28) NECK-SCYE LENGTH

The vertical distance between the cervicale landmark at the base of the back of the neck and the anterior scye landmark at the bottom of the axillary fold is calculated as follows: CERVICALE HEIGHT minus AXILLA HEIGHT.



VARIABLE NO. (D28)—NECK-SCYE LENGTH

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
18.01	MEAN	7.09
0.07	SE (MEAN)	0.03
1.26	ST DEV	0.50
0.05	SE (SD)	0.02
14.60	MINIMUM	5.75
21.20	MAXIMUM	8.35
COEFF. OF VARIATION		7.0%
SYMMETRY—VETA I		0.09
KURTOSIS—VETA II		2.70
NUMBER OF SUBJECTS		334

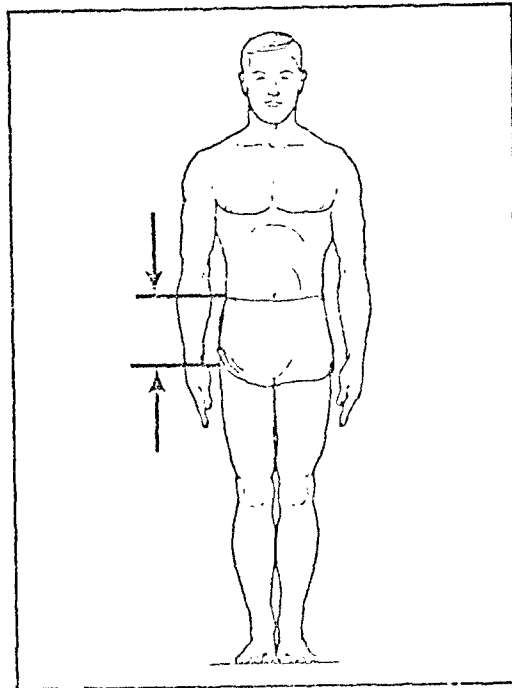
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
19.96	MEAN	7.86
0.06	SE (MEAN)	0.02
1.30	ST DEV	0.51
0.04	SE (SD)	0.02
16.10	MINIMUM	6.34
23.50	MAXIMUM	9.25
COEFF. OF VARIATION		6.5%
SYMMETRY—VETA I		0.01
KURTOSIS—VETA II		2.91
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
15.32	1ST	6.03
15.57	2ND	6.13
15.75	3RD	6.20
15.99	5TH	6.30
16.40	10TH	6.46
16.68	15TH	6.57
16.92	20TH	6.66
17.13	25TH	6.74
17.31	30TH	6.82
17.49	35TH	6.89
17.66	40TH	6.95
17.82	45TH	7.02
17.99	50TH	7.08
18.15	55TH	7.15
18.32	60TH	7.21
18.49	65TH	7.28
18.68	70TH	7.35
18.88	75TH	7.43
19.10	80TH	7.52
19.36	85TH	7.62
19.68	90TH	7.75
20.15	95TH	7.93
20.45	97TH	8.05
20.67	98TH	8.14
21.01	99TH	8.27

PERCENTILES		
CENTIMETERS		INCHES
17.01	1ST	6.70
17.33	2ND	6.82
17.54	3RD	6.91
17.83	5TH	7.02
18.29	10TH	7.20
18.61	15TH	7.33
18.86	20TH	7.42
19.08	25TH	7.51
19.27	30TH	7.59
19.45	35TH	7.66
19.63	40TH	7.73
19.79	45TH	7.79
19.96	50TH	7.86
20.17	55TH	7.92
20.29	60TH	7.99
20.46	65TH	8.06
20.64	70TH	8.13
20.84	75TH	8.21
21.06	80TH	8.29
21.31	85TH	8.39
21.63	90TH	8.52
22.11	95TH	8.70
22.41	97TH	8.82
22.64	98TH	8.91
22.99	99TH	9.05

(D29) PELVIC LEAK

The vertical distance between the iliocrestale landmark on the right side of the pelvis and the level of the trochanterion landmark on the right hip is calculated as follows: ILIOCRISTALE HEIGHT minus TROCHANTERION HEIGHT.



VARIABLE NO. (D29)—PELVIC LINK

FEMALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
13.81	MEAN	5.44
0.08	SE(MEAN)	0.03
1.39	ST DEV	0.55
0.05	SE(SD)	0.02
9.60	MINIMUM	3.78
18.10	MAXIMUM	7.13
COEFF. OF VARIATION		10.1%
SYMMETRY—VETA I		0.04
KURIOSIS—VETA II		3.35
NUMBER OF SUBJECTS		334

PERCENTILES		
CENTIMETERS		INCHES
10.29	1ST	4.05
10.84	2ND	4.27
11.16	3RD	4.40
11.56	5TH	4.55
12.11	10TH	4.77
12.45	15TH	4.90
12.71	20TH	5.00
12.92	25TH	5.09
13.11	30TH	5.16
13.29	35TH	5.23
13.46	40TH	5.30
13.62	45TH	5.36
13.78	50TH	5.43
13.94	55TH	5.49
14.11	60TH	5.56
14.29	65TH	5.63
14.48	70TH	5.70
14.69	75TH	5.78
14.93	80TH	5.88
15.21	85TH	5.99
15.58	90TH	6.14
16.15	95TH	6.36
16.54	97TH	6.51
16.82	98TH	6.62
17.27	99TH	6.80

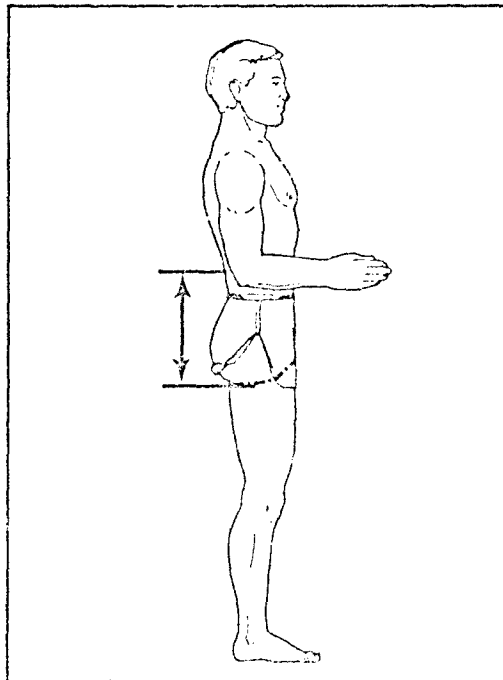
MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
15.45	MEAN	6.08
0.06	SE(MEAN)	0.02
1.37	ST DEV	0.54
0.04	SE(SD)	0.02
12.20	MINIMUM	4.80
20.40	MAXIMUM	8.03
COEFF. OF VARIATION		8.9%
SYMMETRY—VETA I		0.17
KURIOSIS—VETA II		2.91
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
12.41	1ST	4.89
12.73	2ND	5.01
12.94	3RD	5.09
13.23	5TH	5.21
13.69	10TH	5.39
14.01	15TH	5.51
14.26	20TH	5.62
14.49	25TH	5.70
14.69	30TH	5.78
14.88	35TH	5.86
15.06	40TH	5.93
15.24	45TH	6.00
15.41	50TH	6.07
15.59	55TH	6.14
15.77	60TH	6.21
15.95	65TH	6.28
16.15	70TH	6.36
16.36	75TH	6.44
16.60	80TH	6.54
16.88	85TH	6.65
17.24	90TH	6.79
17.77	95TH	6.99
18.11	97TH	7.13
18.36	98TH	7.23
18.76	99TH	7.39

(D30) RISE (NATURAL INDENTATION)

The vertical distance between the level of the waist at its natural indentation and the crotch of a subject standing erect is calculated as follows: WAIST HEIGHT (NATURAL INDENTATION) minus CROTCH HEIGHT.



VARIABLE NO. (D30)—RISE (NATURAL INDENTATION)

FEMALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
29.59	MEAN	11.65
0.13	SE (MEAN)	0.05
2.39	ST DEV	0.94
0.09	SE (SD)	0.04
22.50	MINIMUM	8.86
36.60	MAXIMUM	14.41
COEFF. OF VARIATION		8.1%
SYMMETRY---VETA I		0.03
KURTOSIS---VETA II		2.95
NUMBER OF SUBJECTS		334

MALES

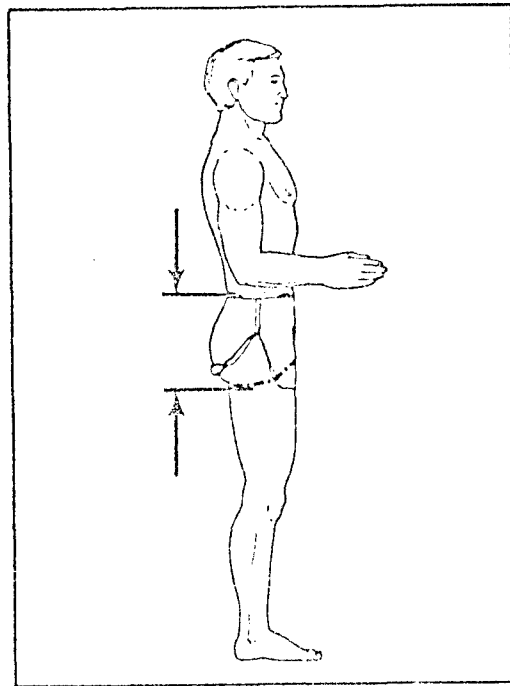
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
28.97	MEAN	11.40
0.09	SE (MEAN)	0.03
1.90	ST DEV	0.75
0.06	SE (SD)	0.02
22.00	MINIMUM	8.66
35.20	MAXIMUM	13.86
COEFF. OF VARIATION		6.6%
SYMMETRY---VETA I		-0.07
KURTOSIS---VETA II		3.57
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
23.93	1ST	9.42
24.78	2ND	9.75
25.25	3RD	9.94
25.84	5TH	10.17
26.67	10TH	10.50
27.19	15TH	10.71
27.61	20TH	10.87
27.97	25TH	11.01
28.29	30TH	11.14
28.60	35TH	11.26
28.90	40TH	11.38
29.20	45TH	11.50
29.50	50TH	11.61
29.80	55TH	11.73
30.12	60TH	11.86
30.45	65TH	11.99
30.81	70TH	12.13
31.20	75TH	12.28
31.64	80TH	12.46
32.14	85TH	12.66
32.77	90TH	12.90
33.64	95TH	13.25
34.13	97TH	13.44
34.44	98TH	13.56
34.81	99TH	13.71

PERCENTILES		
CENTIMETERS		INCHES
24.33	1ST	9.58
24.99	2ND	9.84
25.39	3RD	9.99
25.90	5TH	10.20
26.63	10TH	10.48
27.09	15TH	10.67
27.45	20TH	10.81
27.76	25TH	10.93
28.03	30TH	11.03
28.27	35TH	11.13
28.51	40TH	11.22
28.73	45TH	11.31
28.96	50TH	11.40
29.18	55TH	11.49
29.41	60TH	11.58
29.65	65TH	11.67
29.90	70TH	11.77
30.18	75TH	11.88
30.50	80TH	12.01
30.87	85TH	12.15
31.36	90TH	12.35
32.10	95TH	12.64
32.60	97TH	12.84
32.98	98TH	12.99
33.59	99TH	13.22

(D31) RISE (CEPHALIC)

The vertical distance between the level of the waist at the navel (cephalic) and the crotch of a subject standing erect is calculated as follows: WAIST HEIGHT (CEPHALIC) minus CROTCH HEIGHT



VARIABLE NO. (D31)—RICE (CERIALICN)

FEMALES

MALES

THE SUMMARY STATISTICS
CENTIMETERS INCHES

22.11 MEAN 8.70
0.09 SE(MEAN) 0.04
1.72 ST DEV 0.68
0.07 SE(SD) 0.03

16.80 MINIMUM 6.61
27.60 MAXIMUM 10.87

COEFF. OF VARIATION 7.8%
SYMMETRY—VETA I -0.18
KURTOSIS—VETA II 3.17

NUMBER OF SUBJECTS 334

THE SUMMARY STATISTICS
CENTIMETERS INCHES

22.32 MEAN 8.79
0.08 SE(MEAN) 0.03
1.66 ST DEV 0.65
0.05 SE(SD) 0.02

16.40 MINIMUM 6.46
27.60 MAXIMUM 10.87

COEFF. OF VARIATION 7.4%
SYMMETRY—VETA I -0.04
KURTOSIS—VETA II 3.37

NUMBER OF SUBJECTS 487

PERCENTILES
CENTIMETERS INCHES

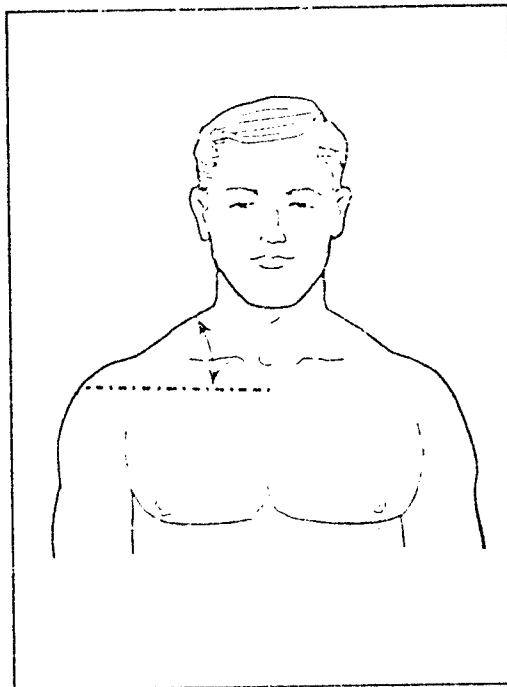
17.57 1ST 6.92
18.18 2ND 7.16
18.56 3RD 7.31
19.07 5TH 7.51
19.82 10TH 7.80
20.31 15TH 8.00
20.69 20TH 8.14
21.00 25TH 8.27
21.28 30TH 8.38
21.53 35TH 8.48
21.76 40TH 8.57
21.98 45TH 8.66
22.20 50TH 8.74
22.41 55TH 8.82
22.62 60TH 8.91
22.84 65TH 8.99
23.06 70TH 9.08
23.30 75TH 9.17
23.56 80TH 9.27
23.86 85TH 9.39
24.23 90TH 9.54
24.77 95TH 9.75
25.12 97TH 9.89
25.38 98TH 9.99
25.79 99TH 10.15

PERCENTILES
CENTIMETERS INCHES

18.36 1ST 7.23
18.85 2ND 7.42
19.16 3RD 7.54
19.58 5TH 7.71
20.23 10TH 7.96
20.65 15TH 8.13
20.98 20TH 8.26
21.26 25TH 8.37
21.51 30TH 8.47
21.73 35TH 8.56
21.94 40TH 8.64
22.14 45TH 8.72
22.34 50TH 8.79
22.53 55TH 8.87
22.73 60TH 8.95
22.93 65TH 9.03
23.14 70TH 9.11
23.37 75TH 9.20
23.64 80TH 9.31
23.95 85TH 9.43
24.36 90TH 9.59
25.02 95TH 9.85
25.50 97TH 10.04
25.86 98TH 10.19
26.55 99TH 10.45

(032) SHOULDER SLOPE

The degree of the slope of the right shoulder of a subject standing erect with the arms relaxed at the sides is calculated as follows: Arcsin of the quotient: (NECK HEIGHT, LATERAL minus ACROMIAL HEIGHT) divided by SHOULDER LENGTH.



VARIABLE NO. (D32)—SHOULDER SLOPE

FEMALES

MALES

THE SUMMARY STATISTICS		
DEGREES		RADIANS
25.78	MEAN	0.45
0.08	SE (MEAN)	0.00
4.01	ST DEV	0.07
0.06	SE (SD)	0.00
14.90	MINIMUM	0.26
36.67	MAXIMUM	0.64
COEFF. OF VARIATION		15.7%
SYMMETRY-----VETA I		-0.05
KURTOSIS-----VETA II		2.98
NUMBER OF SUBJECTS		334

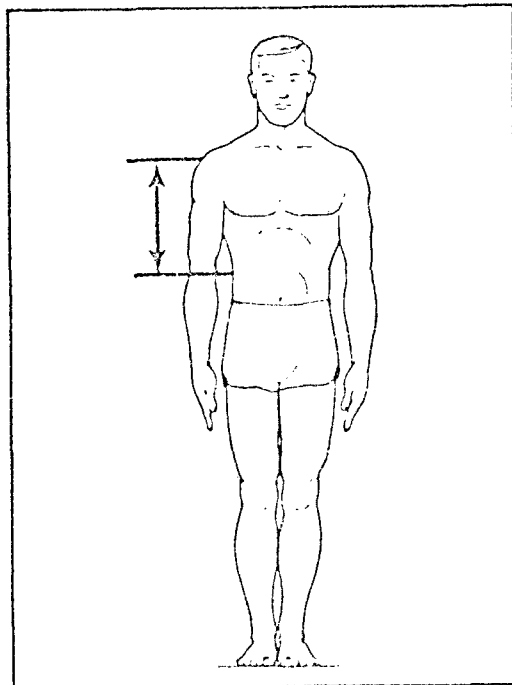
THE SUMMARY STATISTICS		
DEGREES		RADIANS
26.36	MEAN	0.46
0.09	SE (MEAN)	0.00
4.01	ST DEV	0.07
0.07	SE (SD)	0.00
17.19	MINIMUM	0.30
36.10	MAXIMUM	0.63
COEFF. OF VARIATION		14.2%
SYMMETRY-----VETA I		0.03
KURTOSIS-----VETA II		2.71
NUMBER OF SUBJECTS		487

PERCENTILES		
DEGREES		RADIANS
15.58	1ST	.27
16.79	2ND	.29
17.76	3RD	.31
18.91	5TH	.33
20.05	10TH	.35
21.20	15TH	.37
22.35	20TH	.39
22.92	25TH	.40
23.55	30TH	.41
24.12	35TH	.42
24.64	40TH	.43
25.15	45TH	.44
25.61	50TH	.45
26.13	55TH	.46
26.59	60TH	.46
27.10	65TH	.47
27.62	70TH	.48
28.13	75TH	.49
28.76	80TH	.50
29.51	85TH	.52
30.42	90TH	.53
31.91	95TH	.56
33.00	97TH	.58
33.80	98TH	.59
35.24	99TH	.62

PERCENTILES		
DEGREES		RADIANS
17.59	1ST	.31
18.45	2ND	.32
19.02	3RD	.33
19.82	5TH	.35
21.14	10TH	.37
22.06	15TH	.39
22.80	20TH	.40
23.49	25TH	.41
24.06	30TH	.42
24.58	35TH	.43
25.10	40TH	.44
25.55	45TH	.45
26.36	50TH	.46
26.53	55TH	.46
27.04	60TH	.47
27.50	65TH	.48
28.07	70TH	.49
28.59	75TH	.50
29.22	80TH	.51
29.97	85TH	.52
30.88	90TH	.54
32.20	95TH	.56
33.06	97TH	.58
33.69	98TH	.59
34.72	99TH	.61

(D33) SHOULDER-WAIST LENGTH (NATURAL INDENTATION)

The vertical distance between the acromion landmark on the tip of the right shoulder and the level of the waist at its natural indentation of a subject standing erect is calculated as follows: ACROMIAL HEIGHT minus WAIST HEIGHT (NATURAL INDENTATION)



VARIABLE NO. (D33)—SHOULDER-WAIST LENGTH (NATURAL INDENTATION)

FEMALES

MALES

THE SUMMARY STATISTICS
CENTIMETERS INCHES

THE SUMMARY STATISTICS
CENTIMETERS INCHES

28.98	MEAN	11.41
0.12	SE(MEAN)	0.05
2.26	ST DEV	0.89
0.09	SE(SD)	0.03
23.40	MINIMUM	9.21
37.00	MAXIMUM	14.57
COEFF. OF VARIATION		7.8%
SYMMETRY—VETA I		0.52
KURTOSIS—VETA II		3.52
NUMBER OF SUBJECTS		334

32.31	MEAN	12.72
0.10	SE(MEAN)	0.04
2.10	ST DEV	0.83
0.07	SE(SD)	0.03
26.40	MINIMUM	10.39
38.70	MAXIMUM	15.24
COEFF. OF VARIATION		6.5%
SYMMETRY—VETA I		0.05
KURTOSIS—VETA II		2.80
NUMBER OF SUBJECTS		487

PERCENTILES
CENTIMETERS INCHES

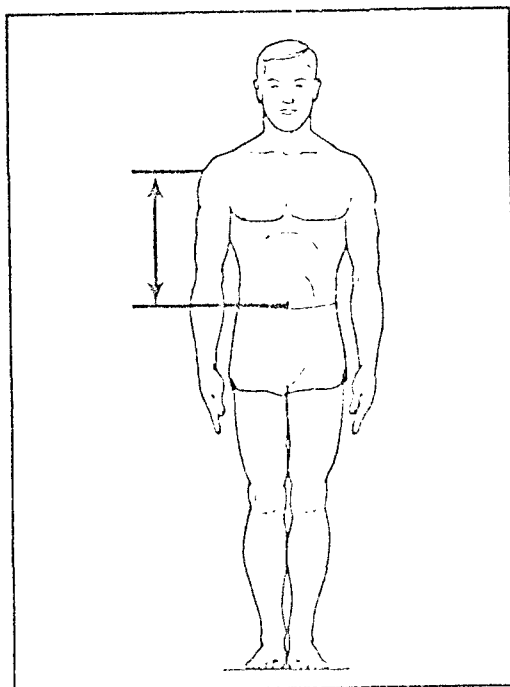
PERCENTILES
CENTIMETERS INCHES

24.48	1ST	9.64
24.86	2ND	9.79
25.13	3RD	9.90
25.53	5TH	10.05
26.20	10TH	10.32
26.68	15TH	10.50
27.06	20TH	10.65
27.40	25TH	10.79
27.71	30TH	10.91
27.99	35TH	11.02
28.27	40TH	11.13
28.54	45TH	11.24
28.81	50TH	11.34
29.08	55TH	11.45
29.36	60TH	11.56
29.66	65TH	11.68
29.98	70TH	11.80
30.33	75TH	11.94
30.74	80TH	12.10
31.24	85TH	12.30
31.91	90TH	12.56
33.01	95TH	13.00
33.82	97TH	13.32
34.47	98TH	13.57
35.60	99TH	14.02

27.58	1ST	10.86
28.09	2ND	11.06
28.42	3RD	11.19
28.87	5TH	11.37
29.60	10TH	11.65
30.10	15TH	11.85
30.50	20TH	12.01
30.85	25TH	12.15
31.17	30TH	12.27
31.47	35TH	12.39
31.75	40TH	12.50
32.02	45TH	12.61
32.29	50TH	12.71
32.57	55TH	12.82
32.84	60TH	12.93
33.13	65TH	13.04
33.43	70TH	13.16
33.76	75TH	13.29
34.12	80TH	13.43
34.54	85TH	13.60
35.07	90TH	13.81
35.84	95TH	14.11
36.33	97TH	14.30
36.68	98TH	14.44
37.23	99TH	14.66

(D34) SHOULDER-WAIST LENGTH (CEPHALIC)

The vertical distance between the acromion landmark on the tip of the right shoulder and the level of the waist at the navel (cephalic) of a subject standing erect is calculated as follows: ACROMIAL HEIGHT minus WAIST HEIGHT (CEPHALIC).



VARIABLE NO. (D34)—SHOULDER-WAIST LENGTH (CNPHALION)

FEMALES

MALES

THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
36.46	MEAN	14.35	
0.12	SE (MEAN)	0.05	
2.15	ST DEV	0.85	
0.08	SE (SD)	0.03	
31.00	MINIMUM	12.20	
44.20	MAXIMUM	17.40	
COEFF. OF VARIATION		5.9%	
SYMMETRY----	VETA I	0.18	
KURTOSIS----	VETA II	3.25	
NUMBER OF SUBJECTS		334	

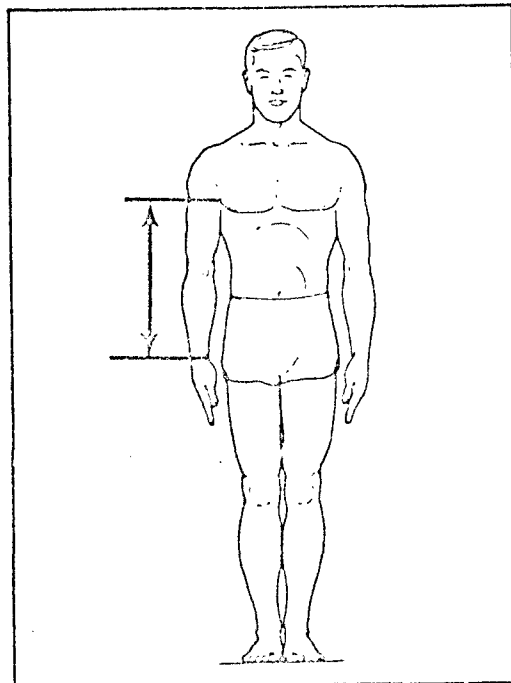
THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
38.96	MEAN	15.34	
0.11	SE (MEAN)	0.04	
2.40	ST DEV	0.94	
0.08	SE (SD)	0.03	
31.30	MINIMUM	12.32	
46.10	MAXIMUM	18.15	
COEFF. OF VARIATION		6.2%	
SYMMETRY----	VETA I	0.11	
KURTOSIS----	VETA II	2.87	
NUMBER OF SUBJECTS		487	

PERCENTILES		
CENTIMETERS		INCHES
31.42	1ST	12.37
32.10	2ND	12.64
32.50	3RD	12.80
33.02	5TH	13.00
33.79	10TH	13.30
34.29	15TH	13.50
34.68	20TH	13.65
35.01	25TH	13.79
35.32	30TH	13.90
35.60	35TH	14.02
35.87	40TH	14.12
36.13	45TH	14.23
36.39	50TH	14.33
36.66	55TH	14.43
36.93	60TH	14.54
37.21	65TH	14.65
37.52	70TH	14.77
37.85	75TH	14.90
38.22	80TH	15.05
38.66	85TH	15.22
39.21	90TH	15.44
40.03	95TH	15.76
40.55	97TH	15.96
40.92	98TH	16.11
41.48	99TH	16.33

PERCENTILES		
CENTIMETERS		INCHES
33.66	1ST	13.25
34.28	2ND	13.50
34.66	3RD	13.65
35.18	5TH	13.85
35.96	10TH	14.16
36.50	15TH	14.37
36.92	20TH	14.54
37.30	25TH	14.68
37.64	30TH	14.82
37.96	35TH	14.95
38.27	40TH	15.07
38.57	45TH	15.19
38.88	50TH	15.31
39.18	55TH	15.43
39.50	60TH	15.55
39.82	65TH	15.68
40.17	70TH	15.82
40.56	75TH	15.97
40.99	80TH	16.14
41.48	85TH	16.33
42.12	90TH	16.58
43.03	95TH	16.94
43.61	97TH	17.17
44.02	98TH	17.33
44.62	99TH	17.57

(D35) SLEEVE INSERT

The vertical distance between the right anterior-shoulder-on-the-torso landmark and the styliion landmark on the right wrist of a subject standing erect with the arms straight at the sides is calculated as follows:
AXILLA HEIGHT minus WRIST HEIGHT.



VARIABLE NO. (D35)—SLEEVE INSEAM

FEMALES

MALES

THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
45.32	MEAN	17.84	
0.11	SE (MEAN)	0.04	
2.06	ST DEV	0.81	
0.08	SE (SD)	0.03	
37.50	MINIMUM	14.76	
53.70	MAXIMUM	21.14	
COEFF. OF VARIATION		4.5%	
SYMMETRY—VETA I		0.39	
KURTOSIS—VETA II		3.99	
NUMBER OF SUBJECTS		334	

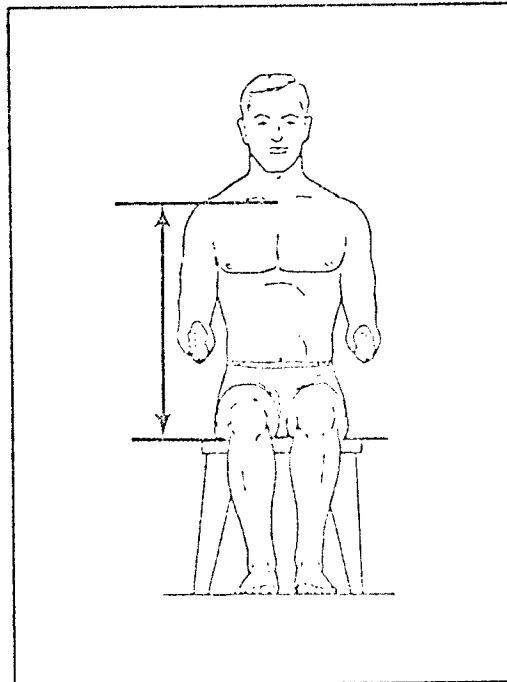
THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
47.51	MEAN	18.70	
0.13	SE (MEAN)	0.05	
2.83	ST DEV	1.11	
0.09	SE (SD)	0.04	
39.80	MINIMUM	15.67	
54.70	MAXIMUM	21.54	
COEFF. OF VARIATION		6.0%	
SYMMETRY—VETA I		0.00	
KURTOSIS—VETA II		2.77	
NUMBER OF SUBJECTS		487	

PERCENTILES		
CENTIMETERS		INCHES
40.81	1ST	16.07
41.53	2ND	16.35
41.92	3RD	16.50
42.38	5TH	16.68
42.99	10TH	16.93
43.37	15TH	17.07
43.67	20TH	17.19
43.93	25TH	17.29
44.17	30TH	17.39
44.40	35TH	17.48
44.63	40TH	17.57
44.86	45TH	17.66
45.10	50TH	17.76
45.35	55TH	17.86
45.62	60TH	17.96
45.90	65TH	18.07
46.21	70TH	18.19
46.57	75TH	18.33
46.97	80TH	18.49
47.46	85TH	18.68
48.09	90TH	18.93
49.02	95TH	19.30
49.59	97TH	19.53
49.99	98TH	19.68
50.53	99TH	19.89

PERCENTILES		
CENTIMETERS		INCHES
40.78	1ST	16.05
41.68	2ND	16.41
42.21	3RD	16.62
42.90	5TH	16.89
43.90	10TH	17.28
44.56	15TH	17.54
45.09	20TH	17.75
45.54	25TH	17.93
45.96	30TH	18.09
46.34	35TH	18.24
46.71	40TH	18.39
47.08	45TH	18.53
47.44	50TH	18.68
47.81	55TH	18.82
48.19	60TH	18.97
48.58	65TH	19.13
49.00	70TH	19.29
49.46	75TH	19.47
49.97	80TH	19.67
50.55	85TH	19.90
51.28	90TH	20.19
52.28	95TH	20.58
52.87	97TH	20.81
53.25	98TH	20.96
53.75	99TH	21.16

(D36) SUPRASTERNALE HEIGHT, SITTING

The vertical distance between a sitting surface and the suprasternale landmark on the lowest point of the notch at the top of the breastbone of a subject sitting erect is calculated as follows: SUPRASTERNALE HEIGHT minus (STATURE minus SITTING HEIGHT).



VARIABLE NO. (D36) - SUPRASTERNAL HEIGHT, SITTING

FEMALES

MALES

THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
57.29	MEAN	22.55	
0.12	SE(MEAN)	0.05	
2.22	ST DEV	0.88	
0.09	SE(SD)	0.03	
50.20	MINIMUM	19.76	
64.10	MAXIMUM	25.24	
COEFF. OF VARIATION		3.9%	
SYMMETRY-----VETA I		-0.11	
KURTOSIS-----VETA II		3.14	
NUMBER OF SUBJECTS		334	

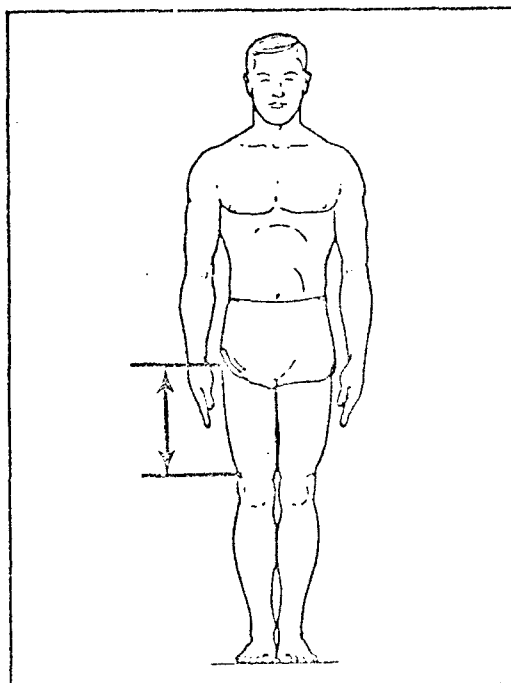
THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
60.73	MEAN	23.91	
0.11	SE(MEAN)	0.04	
2.50	ST DEV	0.98	
0.08	SE(SD)	0.03	
50.70	MINIMUM	19.96	
68.40	MAXIMUM	26.93	
COEFF. OF VARIATION		4.1%	
SYMMETRY-----VETA I		-0.30	
KURTOSIS-----VETA II		3.44	
NUMBER OF SUBJECTS		487	

PERCENTILES		
CENTIMETERS		INCHES
51.99	1ST	20.47
52.63	2ND	20.72
53.04	3RD	20.88
53.59	5TH	21.10
54.43	10TH	21.43
55.00	15TH	21.65
55.45	20TH	21.83
55.83	25TH	21.98
56.17	30TH	22.11
56.48	35TH	22.24
56.78	40TH	22.35
57.06	45TH	22.47
57.34	50TH	22.58
57.62	55TH	22.68
57.90	60TH	22.79
58.19	65TH	22.91
58.49	70TH	23.03
58.81	75TH	23.15
59.17	80TH	23.30
59.58	85TH	23.46
60.10	90TH	23.66
60.85	95TH	23.96
61.33	97TH	24.15
61.68	98TH	24.28
62.23	99TH	24.50

PERCENTILES		
CENTIMETERS		INCHES
53.85	1ST	21.20
55.06	2ND	21.68
55.72	3RD	21.94
56.53	5TH	22.26
57.61	10TH	22.68
58.27	15TH	22.94
58.75	20TH	23.13
59.16	25TH	23.29
59.52	30TH	23.43
59.85	35TH	23.56
60.17	40TH	23.69
60.47	45TH	23.81
60.77	50TH	23.93
61.08	55TH	24.05
61.39	60TH	24.17
61.71	65TH	24.30
62.06	70TH	24.43
62.43	75TH	24.58
62.85	80TH	24.74
63.33	85TH	24.93
63.93	90TH	25.17
64.75	95TH	25.49
65.22	97TH	25.68
65.51	98TH	25.79
65.87	99TH	25.93

(D7) THIGH LINK

The vertical distance between the trochanterion landmark on the right thigh and the lateral femoral epicondyle landmark on the right side of the knee is calculated as follows: TROCHANTERICON HEIGHT minus LATERAL FEMORAL EPICONDYLE HEIGHT.



VARIABLE NO. (D37)—THIGH LINK

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
40.94	MEAN	16.12
0.09	SE (MEAN)	0.04
1.65	ST DEV	0.65
0.06	SE (SD)	0.03
36.20	MINIMUM	14.25
47.60	MAXIMUM	18.74
COEFF. OF VARIATION		4.0%
SYMMETRY—VEIA I		0.17
KURTOSIS—VEIA II		3.53
NUMBER OF SUBJECTS		334

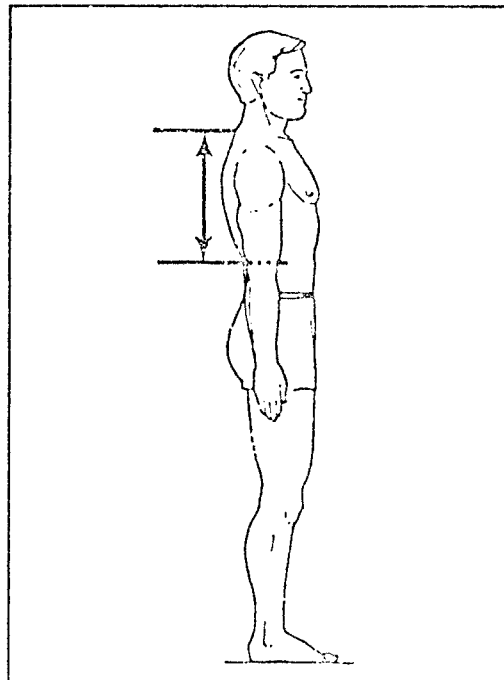
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
41.73	MEAN	16.43
0.10	SE (MEAN)	0.04
2.25	ST DEV	0.89
0.07	SE (SD)	0.03
36.60	MINIMUM	14.41
48.40	MAXIMUM	19.06
COEFF. OF VARIATION		5.4%
SYMMETRY—VEIA I		0.33
KURTOSIS—VEIA II		2.76
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
36.87	1ST	14.52
37.54	2ND	14.78
37.91	3RD	14.92
38.35	5TH	15.10
38.95	10TH	15.33
39.32	15TH	15.48
39.60	20TH	15.59
39.84	25TH	15.69
40.06	30TH	15.77
40.27	35TH	15.85
40.47	40TH	15.93
40.67	45TH	16.01
40.87	50TH	16.09
41.07	55TH	16.17
41.28	60TH	16.25
41.50	65TH	16.34
41.74	70TH	16.43
42.01	75TH	16.54
42.31	80TH	16.66
42.66	85TH	16.80
43.11	90TH	16.97
43.73	95TH	17.22
44.10	97TH	17.36
44.34	98TH	17.46
44.65	99TH	17.58

PERCENTILES		
CENTIMETERS		INCHES
37.11	1ST	14.61
37.62	2ND	14.81
37.92	3RD	14.93
38.33	5TH	15.09
38.95	10TH	15.34
39.39	15TH	15.51
39.75	20TH	15.65
40.08	25TH	15.78
40.38	30TH	15.90
40.68	35TH	16.01
40.96	40TH	16.13
41.25	45TH	16.24
41.54	50TH	16.36
41.85	55TH	16.47
42.16	60TH	16.60
42.49	65TH	16.73
42.84	70TH	16.87
43.24	75TH	17.02
43.68	80TH	17.20
44.19	85TH	17.40
44.84	90TH	17.65
45.76	95TH	18.01
46.30	97TH	18.23
46.66	98TH	18.37
47.14	99TH	18.56

(D38) TACRAX LINK

The vertical distance between the cervicale landmark at the base of the back of the neck and the level of the inferior point of the right tenth rib is calculated as follows: CERVICAL HEIGHT minus TENTH RIB HEIGHT.



VARIABLE NO. (D38)---THORAX LINK

FEMALES

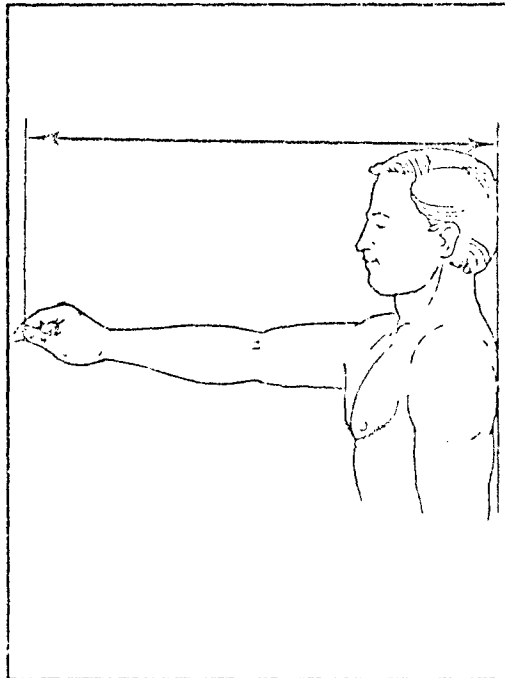
MALES

THE SUMMARY STATISTICS			THE SUMMARY STATISTICS		
CENTIMETERS		INCHES	CENTIMETERS		INCHES
38.02	MEAN	14.97	41.05	MEAN	16.16
0.10	SE (MEAN)	0.04	0.10	SE (MEAN)	0.04
1.87	ST DEV	0.74	2.10	ST DEV	0.83
0.07	SE (SD)	0.03	0.07	SE (SD)	0.03
31.30	MINIMUM	12.32	32.90	MINIMUM	12.95
44.60	MAXIMUM	17.56	46.80	MAXIMUM	18.43
COEFF. OF VARIATION		4.9%	COEFF. OF VARIATION		5.1%
SYMMETRY---VETA I		0.16	SYMMETRY---VETA I		-0.10
KURTOSIS---VETA II		3.40	KURTOSIS---VETA II		3.18
NUMBER OF SUBJECTS		334	NUMBER OF SUBJECTS		487

PERCENTILES			PERCENTILES		
CENTIMETERS		INCHES	CENTIMETERS		INCHES
34.15	1ST	13.45	35.85	1ST	14.11
34.48	2ND	13.57	36.71	2ND	14.45
34.72	3RD	13.67	37.19	3RD	14.64
35.07	5TH	13.81	37.76	5TH	14.86
35.67	10TH	14.04	38.52	10TH	15.17
36.10	15TH	14.21	38.99	15TH	15.35
36.44	20TH	14.35	39.36	20TH	15.49
36.75	25TH	14.47	39.67	25TH	15.62
37.02	30TH	14.57	39.95	30TH	15.73
37.27	35TH	14.67	40.22	35TH	15.83
37.51	40TH	14.77	40.47	40TH	15.93
37.75	45TH	14.86	40.73	45TH	16.04
37.98	50TH	14.95	40.99	50TH	16.14
38.21	55TH	15.04	41.25	55TH	16.24
38.44	60TH	15.14	41.53	60TH	16.35
38.69	65TH	15.23	41.81	65TH	16.46
38.94	70TH	15.33	42.13	70TH	16.59
39.22	75TH	15.44	42.47	75TH	16.72
39.54	80TH	15.57	42.86	80TH	16.87
39.92	85TH	15.71	43.31	85TH	17.05
40.40	90TH	15.91	43.88	90TH	17.28
41.17	95TH	16.21	44.67	95TH	17.59
41.71	97TH	16.42	45.12	97TH	17.76
42.13	98TH	16.59	45.41	98TH	17.88
42.85	99TH	16.87	45.76	99TH	18.01

(D39) THUMB TIP REACH, EXTENDED

The horizontal distance between the vertical plane of the back and the tip of the right thumb of a subject standing erect with the left shoulder against a wall and the right shoulder, arm, and hand extended forward horizontally as far as possible with the thumb lying on the first knuckle of the forefinger is calculated as follows: WRIST-WALL LENGTH, EXTENDED plus WRIST-THUMB TIP LENGTH.



VARIABLE NO. (D39)—THUMB TIP REACH, EXTENDED

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
81.41	MEAN	32.05
0.14	SE (MEAN)	0.06
2.63	ST DEV	1.04
0.10	SE (SD)	0.04
75.70	MINIMUM	29.80
92.40	MAXIMUM	36.38
COEFF. OF VARIATION		3.2%
SYMMETRY—VETA I		0.48
KURTOSIS—VETA II		3.56
NUMBER OF SUBJECTS		334

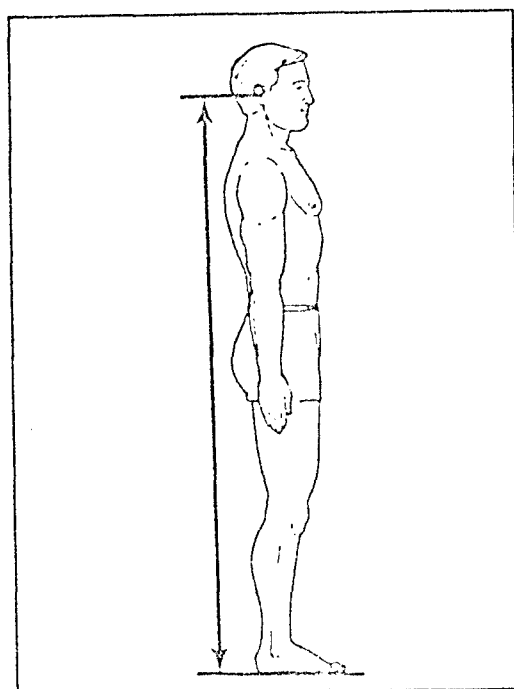
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
86.34	MEAN	33.99
0.17	SE (MEAN)	0.07
3.82	ST DEV	1.50
0.12	SE (SD)	0.05
76.60	MINIMUM	30.16
99.10	MAXIMUM	39.02
COEFF. OF VARIATION		4.4%
SYMMETRY—VETA I		0.27
KURTOSIS—VETA II		3.20
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
76.47	1ST	30.11
76.84	2ND	30.25
77.03	3RD	30.33
77.35	5TH	30.45
77.92	10TH	30.68
78.55	15TH	30.93
79.13	20TH	31.15
79.52	25TH	31.31
79.87	30TH	31.45
80.21	35TH	31.58
80.80	40TH	31.81
81.11	45TH	31.93
81.42	50TH	32.05
81.73	55TH	32.18
82.03	60TH	32.29
82.34	65TH	32.42
82.70	70TH	32.56
83.07	75TH	32.70
83.43	80TH	32.85
83.82	85TH	33.00
84.65	90TH	33.33
85.99	95TH	33.85
87.00	97TH	34.25
87.48	98TH	34.44
88.92	99TH	35.01

PERCENTILES		
CENTIMETERS		INCHES
78.08	1ST	30.74
78.89	2ND	31.06
79.44	3RD	31.28
80.23	5TH	31.59
81.50	10TH	32.09
82.38	15TH	32.43
83.09	20TH	32.71
83.71	25TH	32.96
84.26	30TH	33.17
84.78	35TH	33.38
85.27	40TH	33.57
85.74	45TH	33.76
86.21	50TH	33.94
86.68	55TH	34.13
87.16	60TH	34.32
87.66	65TH	34.51
88.19	70TH	34.72
88.77	75TH	34.95
89.43	80TH	35.21
90.21	85TH	35.52
91.23	90TH	35.92
92.84	95TH	36.55
93.97	97TH	37.00
94.85	98TH	37.34
96.35	99TH	37.93

(D40) TRAGION HEIGHT

The vertical distance between a standing surface and the tragion landmark on the cartilaginous flap of flesh in front of the right earhole of a subject standing erect with the head in the Frankfort plane is calculated as follows: STATURE minus TRAGION-TOP OF HEAD.



VARIABLE NO. (D40)—TRACION HEIGHT

FEMALES

MALES

THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
155.54	MEAN	61.24	
0.24	SE (MEAN)	0.09	
4.36	ST DEV	1.72	
0.17	SE (SD)	0.07	
144.00	MINIMUM	56.69	
173.90	MAXIMUM	68.46	
COEFF. OF VARIATION		2.8%	
SYMMETRY----VETA I		0.43	
KURTOSIS----VETA II		3.66	
NUMBER OF SUBJECTS		334	

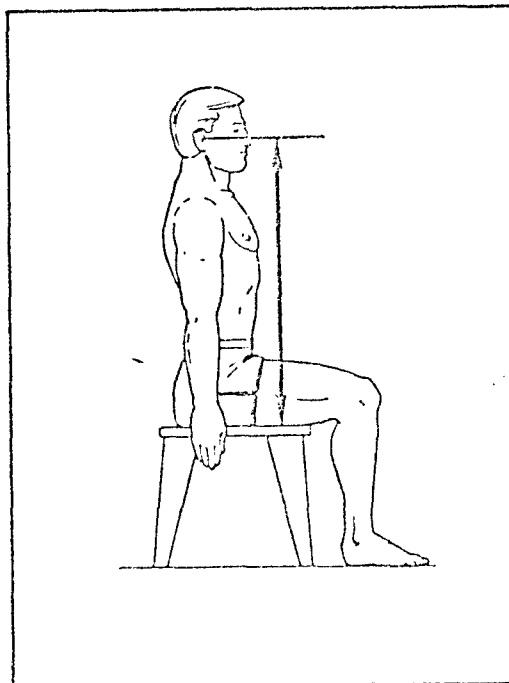
THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
164.02	MEAN	64.57	
0.29	SE (MEAN)	0.11	
6.35	ST DEV	2.50	
0.20	SE (SD)	0.08	
145.40	MINIMUM	57.24	
180.70	MAXIMUM	71.14	
COEFF. OF VARIATION		3.9%	
SYMMETRY----VETA I		-0.06	
KURTOSIS----VETA II		2.80	
NUMBER OF SUBJECTS		483	

PERCENTILES		
CENTIMETERS		INCHES
145.87	1ST	57.43
147.17	2ND	57.94
147.92	3RD	58.24
148.88	5TH	58.61
150.25	10TH	59.15
151.15	15TH	59.51
151.87	20TH	59.79
152.50	25TH	60.04
153.08	30TH	60.27
153.63	35TH	60.48
154.16	40TH	60.69
154.69	45TH	60.90
155.22	50TH	61.11
155.77	55TH	61.33
156.34	60TH	61.55
156.94	65TH	61.79
157.59	70TH	62.04
158.31	75TH	62.33
159.13	80TH	62.65
160.09	85TH	63.03
161.32	90TH	63.51
163.11	95TH	64.22
164.22	97TH	64.65
164.99	98TH	64.96
166.08	99TH	65.39

PERCENTILES		
CENTIMETERS		INCHES
148.82	1ST	58.59
150.75	2ND	59.35
151.93	3RD	59.81
153.48	5TH	60.43
155.81	10TH	61.34
157.37	15TH	61.96
158.60	20TH	62.44
159.66	25TH	62.86
160.62	30TH	63.24
161.51	35TH	63.59
162.36	40TH	63.92
163.19	45TH	64.25
164.01	50TH	64.57
164.83	55TH	64.89
165.67	60TH	65.22
166.53	65TH	65.56
167.45	70TH	65.92
168.43	75TH	66.31
169.53	80TH	66.74
170.78	85TH	67.23
172.32	90TH	67.84
174.47	95TH	68.69
175.75	97TH	69.19
176.61	98TH	69.53
177.79	99TH	69.99

(D41) TRAGION HEIGHT, SITTING

The vertical distance between a sitting surface and the tragon landmark on the cartilaginous flap of flesh in front of the right earhole of a subject sitting erect with the head in the Frankfort plane is calculated as follows: SITTING HEIGHT minus TRAGION-TOP OF HEAD.



VARIABLE NO. (D41)—TRACION HEIGHT, SITTING

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
75.80	MEAN	29.84
0.15	SE (MEAN)	0.06
2.66	ST DEV	1.05
0.10	SE (SD)	0.04
67.80	MINIMUM	26.69
84.00	MAXIMUM	33.07
COEFF. OF VARIATION		3.5%
SYMMETRY—VETA I		-0.06
KURIOSIS—VETA II		2.90
NUMBER OF SUBJECTS		334

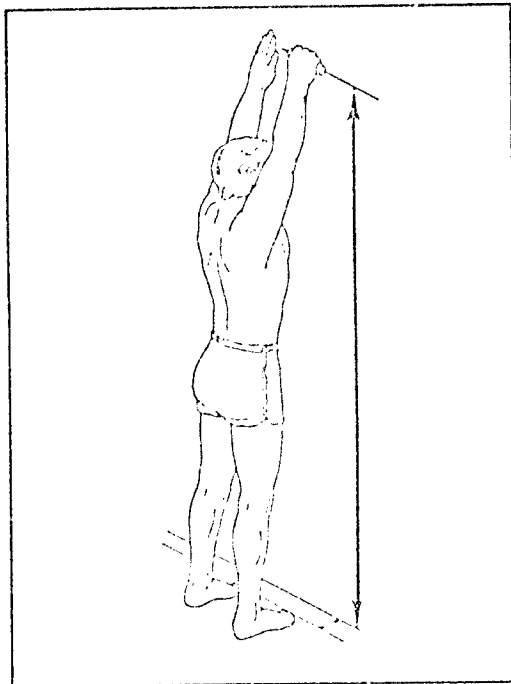
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
79.90	MEAN	31.46
0.15	SE (MEAN)	0.06
3.23	ST DEV	1.27
0.10	SE (SD)	0.04
69.50	MINIMUM	27.36
89.00	MAXIMUM	35.04
COEFF. OF VARIATION		4.0%
SYMMETRY—VETA I		-0.26
KURIOSIS—VETA II		3.21
NUMBER OF SUBJECTS		483

PERCENTILES		
CENTIMETERS		INCHES
69.78	1ST	27.47
70.31	2ND	27.68
70.70	3RD	27.84
71.28	5TH	28.06
72.26	10TH	28.45
72.95	15TH	28.72
73.50	20TH	28.94
73.99	25TH	29.13
74.41	30TH	29.30
74.81	35TH	29.45
75.18	40TH	29.60
75.53	45TH	29.74
75.87	50TH	29.87
76.21	55TH	30.01
76.55	60TH	30.14
76.90	65TH	30.27
77.26	70TH	30.42
77.64	75TH	30.57
78.06	80TH	30.73
78.55	85TH	30.92
79.16	90TH	31.16
80.08	95TH	31.53
80.71	97TH	31.78
81.20	98TH	31.97
82.02	99TH	32.29

PERCENTILES		
CENTIMETERS		INCHES
71.00	1ST	27.95
72.53	2ND	28.56
73.39	3RD	28.89
74.45	5TH	29.31
75.89	10TH	29.88
76.76	15TH	30.22
77.41	20TH	30.48
77.94	25TH	30.69
78.41	30TH	30.87
78.84	35TH	31.04
79.24	40TH	31.20
79.62	45TH	31.35
80.00	50TH	31.50
80.38	55TH	31.65
80.76	60TH	31.80
81.16	65TH	31.95
81.59	70TH	32.12
82.04	75TH	32.30
82.56	80TH	32.50
83.16	85TH	32.74
83.92	90TH	33.04
85.02	95TH	33.47
85.70	97TH	33.74
86.18	98TH	33.93
86.88	99TH	34.20

(D42) VERTICAL GRIP REACH

The vertical distance between a standing surface and the center of a 1-1/4" diameter dowel gripped horizontally in the right hand of a subject standing erect with the shoulder, arm, and hand held straight overhead is calculated as follows: OVERHEAD FINGERTIP REACH minus HAND LENGTH plus WRIST-CENTER OF GRIP LENGTH.



VARIABLE NO. (D42)—VERTICAL GRIP REACH

FEMALES

MALES

THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
200.68	MEAN	79.01	
0.32	SE (MEAN)	0.13	
5.84	ST DEV	2.30	
0.23	SE (SD)	0.09	
186.30	MINIMUM	73.35	
223.60	MAXIMUM	88.03	
COEFF. OF VARIATION		2.9%	
SYMMETRY----	VETA I	0.55	
KURTOSIS----	VETA II	3.58	
NUMBER OF SUBJECTS		334	

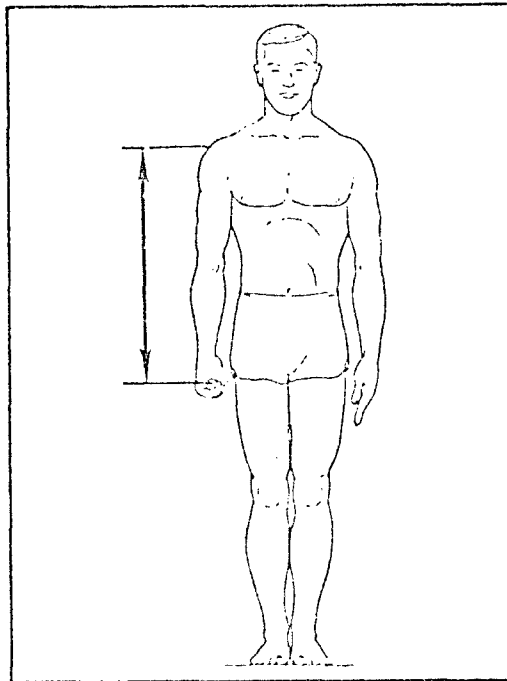
THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
211.61	MEAN	83.31	
0.39	SE (MEAN)	0.15	
8.68	ST DEV	3.42	
0.28	SE (SD)	0.11	
189.70	MINIMUM	74.69	
236.50	MAXIMUM	93.11	
COEFF. OF VARIATION		4.1%	
SYMMETRY----	VETA I	0.08	
KURTOSIS----	VETA II	2.77	
NUMBER OF SUBJECTS		487	

PERCENTILES		
CENTIMETERS		INCHES
189.39	1ST	74.56
190.40	2ND	74.96
191.07	3RD	75.23
192.03	5TH	75.60
193.61	10TH	76.22
194.75	15TH	76.67
195.69	20TH	77.04
196.54	25TH	77.38
197.32	30TH	77.69
198.07	35TH	77.98
198.79	40TH	78.26
199.50	45TH	78.54
200.23	50TH	78.83
200.96	55TH	79.12
201.72	60TH	79.42
202.52	65TH	79.73
203.38	70TH	80.07
204.32	75TH	80.44
205.39	80TH	80.86
206.65	85TH	81.36
208.28	90TH	82.00
210.71	95TH	82.96
212.31	97TH	83.58
213.47	98TH	84.04
215.29	99TH	84.76

PERCENTILES		
CENTIMETERS		INCHES
191.62	1ST	75.44
194.14	2ND	76.43
195.66	3RD	77.03
197.63	5TH	77.81
200.59	10TH	78.97
202.57	15TH	79.75
204.16	20TH	80.38
205.55	25TH	80.92
206.81	30TH	81.42
208.00	35TH	81.89
209.14	40TH	82.34
210.26	45TH	82.78
211.39	50TH	83.22
212.53	55TH	83.67
213.70	60TH	84.13
214.92	65TH	84.61
216.21	70TH	85.12
217.62	75TH	85.68
219.20	80TH	86.30
221.01	85TH	87.01
223.26	90TH	87.90
226.39	95TH	89.13
228.22	97TH	89.85
229.43	98TH	90.33
231.04	99TH	90.96

(D43) VERTICAL GRIP REACH DOWN

The vertical distance between the acromion landmark on the tip of the right shoulder and the center of a 1-1/4" diameter dowel gripped perpendicularly in the right hand of a subject standing erect with the arms held straight at the sides is calculated as follows: ACROMIAL HEIGHT minus WRIST HEIGHT plus WRIST-CENTER OF GRIP LENGTH.



VARIABLE NO. (D13)—VERTICAL GRIP REACH DOWN

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
62.43	MEAN	24.58
0.12	SE (MEAN)	0.05
2.19	ST DEV	0.86
0.08	SE (SD)	0.03
57.00	MINIMUM	22.44
71.90	MAXIMUM	28.31
COEFF. OF VARIATION		3.5%
SYMMETRY—VETA I		0.67
KURTOSIS—VETA II		3.97
NUMBER OF SUBJECTS		334

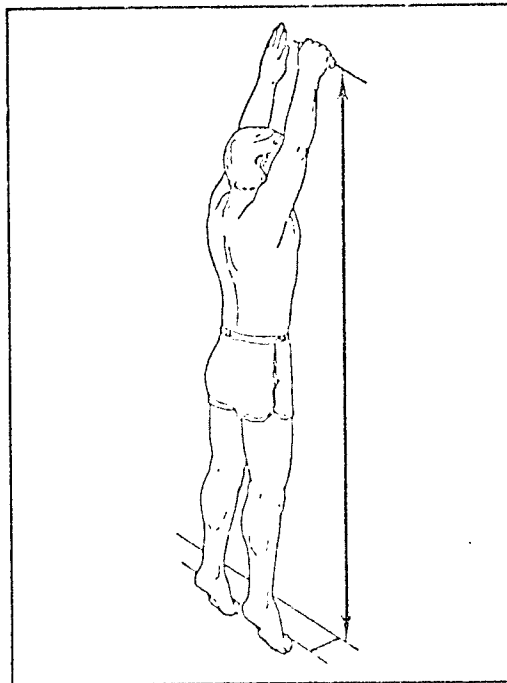
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
66.55	MEAN	26.20
0.14	SE (MEAN)	0.06
3.19	ST DEV	1.26
0.10	SE (SD)	0.04
57.60	MINIMUM	22.68
75.00	MAXIMUM	29.53
COEFF. OF VARIATION		4.8%
SYMMETRY—VETA I		0.14
KURTOSIS—VETA II		2.78
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
58.44	1ST	23.01
58.74	2ND	23.13
58.96	3RD	23.21
59.28	5TH	23.34
59.82	10TH	23.55
60.23	15TH	23.71
60.56	20TH	23.84
60.86	25TH	23.96
61.15	30TH	24.07
61.42	35TH	24.18
61.68	40TH	24.28
61.94	45TH	24.39
62.20	50TH	24.49
62.47	55TH	24.60
62.76	60TH	24.71
63.06	65TH	24.82
63.38	70TH	24.95
63.74	75TH	25.09
64.15	80TH	25.26
64.65	85TH	25.45
65.31	90TH	25.71
66.34	95TH	26.12
67.06	97TH	26.40
67.60	98TH	26.62
68.50	99TH	26.97

PERCENTILES		
CENTIMETERS		INCHES
59.60	1ST	23.46
60.37	2ND	23.77
60.85	3RD	23.96
61.50	5TH	24.21
62.51	10TH	24.61
63.21	15TH	24.89
63.78	20TH	25.11
64.28	25TH	25.31
64.74	30TH	25.49
65.17	35TH	25.66
65.59	40TH	25.82
66.00	45TH	25.99
66.42	50TH	26.15
66.84	55TH	26.31
67.27	60TH	26.48
67.72	65TH	26.66
68.20	70TH	26.85
68.72	75TH	27.06
69.31	80TH	27.29
70.00	85TH	27.56
70.86	90TH	27.90
72.09	95TH	28.38
72.86	97TH	28.68
73.39	98TH	28.89
74.15	99TH	29.19

(D44) VERTICAL GRIP REACH, EXTENDED

The vertical distance between a standing surface and the center of a 1-1/4" diameter dowel gripped horizontally in the right hand of a subject standing on the toes and reaching straight overhead as far as possible is calculated as follows: OVERHEAD FINGERTIP REACH, EXTENDED minus HAND LENGTH plus WRIST-CENTER OF GRIP LENGTH.



VARIABLE NO. (D44)—VERTICAL GRIP REACH, EXTENDED

FEMALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
210.09	MEAN	82.71
0.32	SE(MEAN)	0.13
5.94	ST DEV	2.34
0.23	SE(SD)	0.09
197.80	MINIMUM	77.87
233.90	MAXIMUM	92.09
COEFF. OF VARIATION		2.8%
SYMMETRY-----VETA I		0.59
KURTOSIS-----VETA II		3.42
NUMBER OF SUBJECTS		334

PERCENTILES		
CENTIMETERS		INCHES
198.61	1ST	78.19
199.66	2ND	78.61
200.35	3RD	78.88
201.31	5TH	79.26
202.89	10TH	79.88
204.02	15TH	80.32
204.96	20TH	80.69
205.81	25TH	81.03
206.59	30TH	81.34
207.34	35TH	81.63
208.08	40TH	81.92
208.80	45TH	82.21
209.54	50TH	82.50
210.30	55TH	82.79
211.08	60TH	83.10
211.91	65TH	83.43
212.80	70TH	83.78
213.78	75TH	84.17
214.91	80TH	84.61
216.24	85TH	85.14
217.97	90TH	85.81
220.57	95TH	86.84
222.27	97TH	87.51
223.52	98TH	88.00
225.46	99TH	88.76

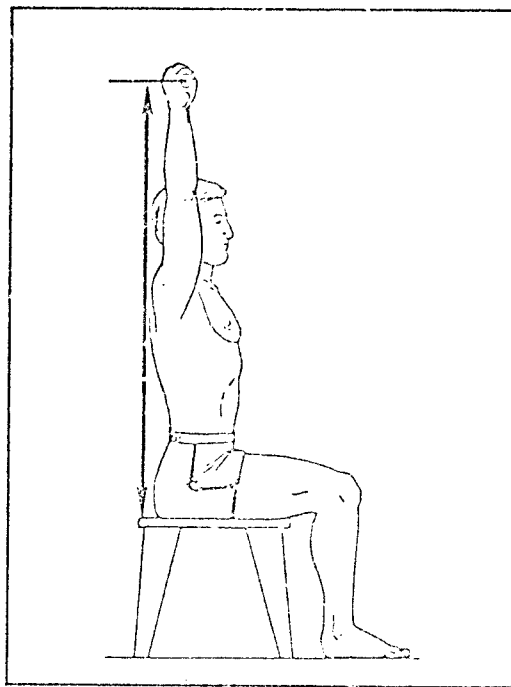
MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
221.52	MEAN	87.21
0.40	SE(MEAN)	0.16
8.88	ST DEV	3.50
0.28	SE(SD)	0.11
198.10	MINIMUM	77.99
247.80	MAXIMUM	97.56
COEFF. OF VARIATION		4.0%
SYMMETRY-----VETA I		0.07
KURTOSIS-----VETA II		2.76
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
201.50	1ST	79.33
203.78	2ND	80.23
205.21	3RD	80.79
207.14	5TH	81.55
210.14	10TH	82.73
212.20	15TH	83.54
213.85	20TH	84.19
215.31	25TH	84.77
216.63	30TH	85.29
217.86	35TH	85.77
219.05	40TH	86.24
220.21	45TH	86.70
221.37	50TH	87.15
222.53	55TH	87.61
223.72	60TH	88.08
224.96	65TH	88.57
226.27	70TH	89.08
227.68	75TH	89.64
229.27	80TH	90.26
231.08	85TH	90.98
233.34	90TH	91.87
236.54	95TH	93.13
238.47	97TH	93.89
239.80	98TH	94.41
241.67	99TH	95.15

(D45) VERTICAL GRIP REACH, SITTING

The vertical distance between a sitting surface and the center of a 1-1/4" diameter dowel gripped horizontally in the right hand of a subject sitting erect with the arm held straight overhead is calculated as follows:
OVERHEAD FINGERTIP REACH, SITTING minus HAND LENGTH plus WRIST-CENTER OF GRIP LENGTH.



VARIABLE NO. (D15)—VERTICAL GRIP REACH, SITTING

FEMALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
124.70	MEAN	49.10
0.21	SE (MEAN)	0.08
3.87	ST DEV	1.52
0.15	SE (SD)	0.06
111.90	MINIMUM	44.06
136.20	MAXIMUM	53.62
COEFF. OF VARIATION		3.1%
SYMMETRY—VETA I		0.15
KURTOSIS—VETA II		3.15
NUMBER OF SUBJECTS		334

MALES

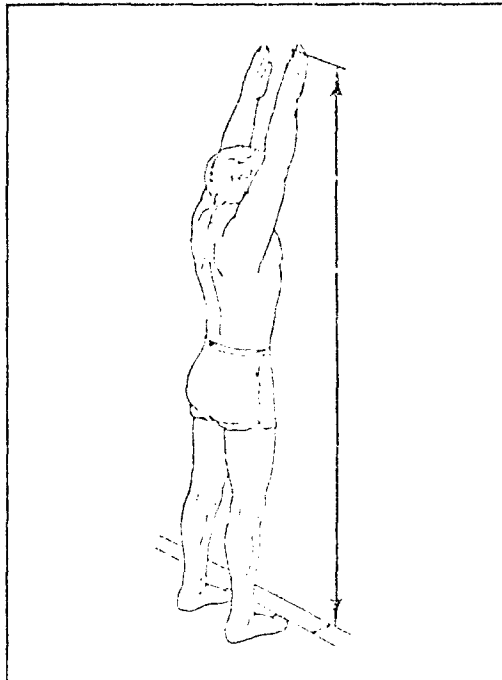
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
131.34	MEAN	51.71
0.24	SE (MEAN)	0.09
5.22	ST DEV	2.05
0.17	SE (SD)	0.07
117.10	MINIMUM	46.10
145.90	MAXIMUM	57.44
COEFF. OF VARIATION		4.0%
SYMMETRY—VETA I		0.04
KURTOSIS—VETA II		2.86
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
115.79	1ST	45.59
117.01	2ND	46.07
117.74	3RD	46.35
118.66	5TH	46.72
119.99	10TH	47.24
120.85	15TH	47.58
121.52	20TH	47.84
122.11	25TH	48.07
122.63	30TH	48.28
123.12	35TH	48.47
123.59	40TH	48.66
124.06	45TH	48.84
124.52	50TH	49.02
125.00	55TH	49.21
125.49	60TH	49.40
126.00	65TH	49.61
126.56	70TH	49.83
127.17	75TH	50.07
127.88	80TH	50.35
128.72	85TH	50.68
129.81	90TH	51.10
131.47	95TH	51.76
132.57	97TH	52.19
133.38	98TH	52.51
134.66	99TH	53.01

PERCENTILES		
CENTIMETERS		INCHES
118.86	1ST	46.80
120.55	2ND	47.46
121.55	3RD	47.85
122.85	5TH	48.37
124.74	10TH	49.11
125.98	15TH	49.60
126.96	20TH	49.98
127.80	25TH	50.31
128.55	30TH	50.61
129.25	35TH	50.89
129.92	40TH	51.15
130.58	45TH	51.41
131.23	50TH	51.67
131.89	55TH	51.93
132.57	60TH	52.19
133.27	65TH	52.47
134.02	70TH	52.76
134.84	75TH	53.09
135.77	80TH	53.45
136.85	85TH	53.88
138.21	90TH	54.41
140.21	95TH	55.20
141.47	97TH	55.70
142.36	98TH	56.05
143.69	99TH	56.57

(D16) VERTICAL INDEX FINGERTIP REACH

The vertical distance between a standing surface and the tip of the right index finger of a subject standing erect with the right shoulder, arm, and fingers stretched straight overhead is calculated as follows: OVERHEAD FINGERTIP REACH minus HAND LENGTH plus WRIST-INDEX FINGER LENGTH.



VARIABLE NO. (D46)—VERTICAL INDEX FINGERFIP REACH

FEMALES

THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
211.17	MEAN	83.14	
0.33	SE (MEAN)	0.13	
6.10	ST DEV	2.40	
0.24	SE (SD)	0.09	
197.00	MINIMUM	77.56	
236.20	MAXIMUM	92.99	
COEFF. OF VARIATION		2.9%	
SYMMETRY—VETA I		0.59	
KURTOSIS—VETA II		3.64	
NUMBER OF SUBJECTS		334	

MALES

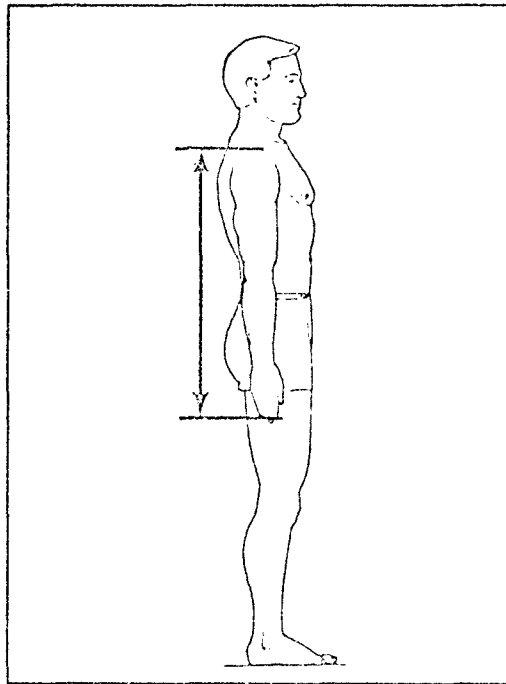
THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
222.95	MEAN	87.78	
0.41	SE (MEAN)	0.16	
9.09	ST DEV	2.58	
0.29	SE (SD)	0.11	
199.40	MINIMUM	78.50	
249.10	MAXIMUM	93.07	
COEFF. OF VARIATION		4.1%	
SYMMETRY—VETA I		0.06	
KURTOSIS—VETA II		2.78	
NUMBER OF SUBJECTS		487	

PERCENTILES		
CENTIMETERS		INCHES
199.56	1ST	78.57
200.52	2ND	78.94
201.17	3RD	79.20
202.13	5TH	79.58
203.74	10TH	80.21
204.92	15TH	80.68
205.90	20TH	81.06
206.79	25TH	81.41
207.61	30TH	81.74
208.39	35TH	82.04
209.14	40TH	82.34
209.89	45TH	82.63
210.64	50TH	82.93
211.42	55TH	83.23
212.21	60TH	83.55
213.04	65TH	83.88
213.94	70TH	84.23
214.93	75TH	84.62
216.05	80TH	85.06
217.37	85TH	85.58
219.08	90TH	86.25
221.67	95TH	87.27
223.38	97TH	87.94
224.64	98TH	88.44
226.64	99TH	89.23

PERCENTILES		
CENTIMETERS		INCHES
202.06	1ST	79.55
204.50	2ND	80.51
206.03	3RD	81.11
208.10	5TH	81.93
211.28	10TH	83.18
213.45	15TH	84.03
215.17	20TH	84.71
216.67	25TH	85.30
218.02	30TH	85.84
219.28	35TH	86.33
220.49	40TH	86.81
221.66	45TH	87.27
222.82	50TH	87.73
223.99	55TH	88.19
225.19	60TH	88.66
226.42	65TH	89.14
227.73	70TH	89.66
229.16	75TH	90.22
230.75	80TH	90.85
232.60	85TH	91.57
234.92	90TH	92.49
238.31	95TH	93.82
240.44	97TH	94.66
241.98	98TH	95.27
244.30	99TH	96.18

(D17) VERTICAL INDEX FINGER TIP REACH DOWN

The vertical distance between the acromion landmark on the tip of the right shoulder and the tip of the right index finger of a subject standing erect with the arms, hands, and fingers held straight down at the sides is calculated as follows: ACROMIAL HEIGHT minus WRIST HEIGHT plus WRIST-INDEX FINGER LENGTH.



VARIABLE NO. (D47)—VERTICAL INDEX FINGERKIP REACH DOWN

FEMALES

MALES

THE SUMMARY STATISTICS
CENTIMETERS INCHES

THE SUMMARY STATISTICS
CENTIMETERS INCHES

72.93	MEAN	28.71
0.13	SE (MEAN)	0.05
2.43	ST DEV	0.96
0.09	SE (SD)	0.04
68.30	MINIMUM	26.89
83.00	MAXIMUM	32.68
COEFF. OF VARIATION		3.3%
SYMMETRY—VETA I		0.78
KURTOSIS—VETA II		3.98
NUMBER OF SUBJECTS		334

77.89	MEAN	30.66
0.16	SE (MEAN)	0.06
3.60	ST DEV	1.42
0.12	SE (SD)	0.05
67.70	MINIMUM	26.65
87.60	MAXIMUM	34.49
COEFF. OF VARIATION		4.6%
SYMMETRY—VETA I		0.14
KURTOSIS—VETA II		2.73
NUMBER OF SUBJECTS		487

PERCENTILES
CENTIMETERS INCHES

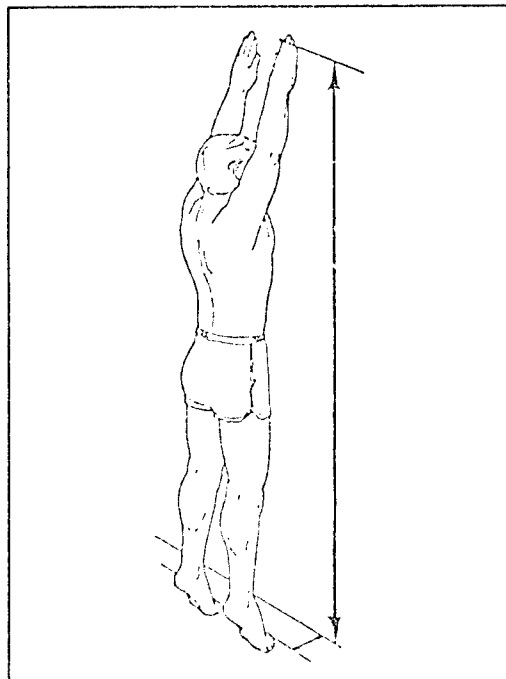
PERCENTILES
CENTIMETERS INCHES

68.55	1ST	26.99
68.93	2ND	27.14
69.17	3RD	27.23
69.52	5TH	27.37
70.09	10TH	27.59
70.50	15TH	27.76
70.85	20TH	27.89
71.17	25TH	28.02
71.47	30TH	28.14
71.76	35TH	28.25
72.04	40TH	28.36
72.33	45TH	28.48
72.62	50TH	28.59
72.92	55TH	28.71
73.24	60TH	28.83
73.58	65TH	28.97
73.94	70TH	29.11
74.35	75TH	29.27
74.83	80TH	29.46
75.39	85TH	29.68
76.14	90TH	29.98
77.29	95TH	30.43
78.06	97TH	30.73
78.63	98TH	30.96
79.54	99TH	31.32

70.41	1ST	27.72
71.14	2ND	28.01
71.62	3RD	28.19
72.27	5TH	28.45
73.33	10TH	28.87
74.09	15TH	29.17
74.71	20TH	29.41
75.28	25TH	29.64
75.80	30TH	29.84
76.29	35TH	30.04
76.77	40TH	30.22
77.24	45TH	30.41
77.72	50TH	30.60
78.21	55TH	30.79
78.71	60TH	30.99
79.23	65TH	31.19
79.79	70TH	31.41
80.39	75TH	31.65
81.07	80TH	31.92
81.84	85TH	32.22
82.81	90TH	32.60
84.16	95TH	33.14
84.96	97TH	33.45
85.50	98TH	33.66
86.23	99TH	33.95

(D48) VERTICAL INDEX FINGERTIP REACH, EXTENDED

The vertical distance between a standing surface and the tip of the right index finger of a subject standing on the tips of the toes and reaching overhead as far as possible with the arms, hands, and fingers straight and parallel is calculated as follows: OVERHEAD FINGERTIP REACH, EXTENDED minus HAND LENGTH plus WRIST-INDEX FINGER LENGTH



VARIABLE NO. (D48)—VERTICAL INDEX FINGER TIP REACH, EXTENDED

FEMALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
220.58	MEAN	86.84
0.34	SE(MEAN)	0.13
6.21	ST DEV	2.45
0.24	SE(SD)	0.09
208.10	MINIMUM	81.93
245.00	MAXIMUM	96.46
COEFF. OF VARIATION		2.8%
SYMMETRY-----VETA I		0.61
KURTOSIS-----VETA II		3.52
NUMBER OF SUBJECTS		334

PERCENTILES		
CENTIMETERS		INCHES
208.44	1ST	82.06
209.73	2ND	82.57
210.51	3RD	82.88
211.54	5TH	83.28
213.16	10TH	83.92
214.29	15TH	84.37
215.24	20TH	84.74
216.09	25TH	85.07
216.88	30TH	85.39
217.65	35TH	85.69
218.40	40TH	85.99
219.16	45TH	86.28
219.93	50TH	86.59
220.72	55TH	86.90
221.55	60TH	87.22
222.43	65TH	87.57
223.38	70TH	87.94
224.43	75TH	88.36
225.63	80TH	88.83
227.05	85TH	89.39
228.86	90TH	90.10
231.53	95TH	91.15
233.19	97TH	91.81
234.35	98TH	92.27
236.04	99TH	92.93

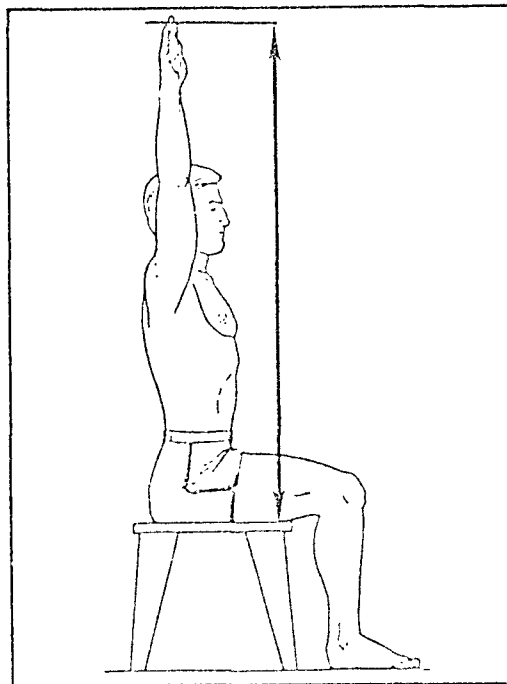
MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
232.86	MEAN	91.68
0.42	SE(MEAN)	0.17
9.29	ST DEV	3.66
0.30	SE(SD)	0.12
207.80	MINIMUM	81.81
260.40	MAXIMUM	102.52
COEFF. OF VARIATION		4.0%
SYMMETRY-----VETA I		0.06
KURTOSIS-----VETA II		2.77
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
211.68	1ST	83.34
214.13	2ND	84.30
215.65	3RD	84.90
217.70	5TH	85.71
220.86	10TH	86.95
223.02	15TH	87.80
224.76	20TH	88.49
226.29	25TH	89.09
227.68	30TH	89.64
228.98	35TH	90.15
230.23	40TH	90.64
231.45	45TH	91.12
232.67	50TH	91.60
233.90	55TH	92.09
235.16	60TH	92.58
236.46	65TH	93.10
237.84	70TH	93.64
239.33	75TH	94.23
241.00	80TH	94.88
242.90	85TH	95.63
245.25	90TH	96.55
248.53	95TH	97.85
250.47	97TH	98.61
251.77	98TH	99.12
253.54	99TH	99.82

(D49) VERTICAL INDEX FINGERTIP REACH, SITTING

The vertical distance between a sitting surface and the tip of the right index finger of a subject sitting erect and raising the right shoulder, arm, and fingers straight overhead is calculated as follows: OVERHEAD FINGERTIP REACH, SITTING minus HAND LENGTH plus WRIST-INDEX FINGER LENGTH.



VARIABLE NO. (D49)—VERTICAL INDEX FINGERTIP REACH, SITTING

FEMALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
135.20	MEAN	53.23
0.22	SE(MEAN)	0.09
4.09	ST DEV	1.61
0.16	SE(SD)	0.06
122.60	MINIMUM	48.27
14.70	MAXIMUM	58.11
COEFF. OF VARIATION		3.0%
SYMMETRY—VETA I		0.21
KURTOSIS—VETA II		3.11
NUMBER OF SUBJECTS		334

PERCENTILES		
CENTIMETERS		INCHES
126.10	1ST	49.64
127.21	2ND	50.08
127.89	3RD	50.35
128.79	5TH	50.70
130.14	10TH	51.23
131.04	15TH	51.59
131.76	20TH	51.87
132.38	25TH	52.12
132.95	30TH	52.34
133.48	35TH	52.55
133.99	40TH	52.75
134.49	45TH	52.95
134.99	50TH	53.15
135.50	55TH	53.35
136.03	60TH	53.55
136.58	65TH	53.77
137.18	70TH	54.01
137.83	75TH	54.27
138.59	80TH	54.56
139.48	85TH	54.91
140.64	90TH	55.37
142.41	95TH	56.07
143.60	97TH	56.53
144.48	98TH	56.88
145.89	99TH	57.44

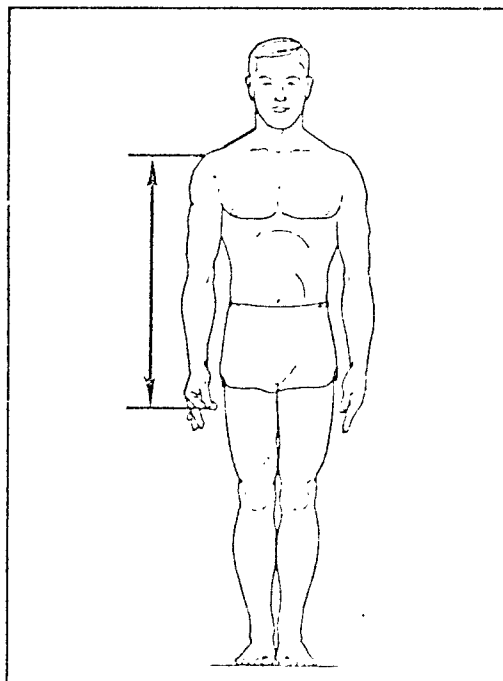
MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
142.68	MEAN	56.17
0.25	SE(MEAN)	0.10
5.58	ST DEV	2.20
0.18	SE(SD)	0.07
126.80	MINIMUM	49.92
157.50	MAXIMUM	62.01
COEFF. OF VARIATION		3.9%
SYMMETRY—VETA I		0.00
KURTOSIS—VETA II		2.86
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
129.38	1ST	50.94
131.05	2ND	51.59
132.07	3RD	52.00
133.43	5TH	52.53
135.47	10TH	53.33
136.83	15TH	53.87
137.90	20TH	54.29
138.84	25TH	54.66
139.67	30TH	54.99
140.45	35TH	55.29
141.19	40TH	55.59
141.91	45TH	55.87
142.63	50TH	56.15
143.35	55TH	56.44
144.08	60TH	56.72
144.84	65TH	57.02
145.64	70TH	57.34
146.52	75TH	57.68
147.50	80TH	58.07
148.63	85TH	58.52
150.06	90TH	59.08
152.14	95TH	59.90
153.45	97TH	60.41
154.38	98TH	60.78
155.77	99TH	61.33

(D50) VERTICAL THUMB TIP REACH DOWN

The vertical distance between the acromion landmark on the tip of the right shoulder and the tip of the right thumb of a subject standing erect with the arms held straight down and the thumb lying on the first knuckle of the index finger is calculated as follows: ACROMIAL HEIGHT minus WRIST HEIGHT plus WRIST-THUMB TIP LENGTH.



VARIABLE NO. (D50)—VERTICAL THUMB TIP REACH DOWN

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
67.64	MEAN	26.63
0.13	SE (MEAN)	0.05
2.33	ST DEV	0.92
0.09	SE (SD)	0.04
62.50	MINIMUM	2.46
76.70	MAXIMUM	30.20
COEFF. OF VARIATION		3.4%
SYMMETRY—VETA I		0.69
KURTOSIS—VETA II		3.80
NUMBER OF SUBJECTS		334

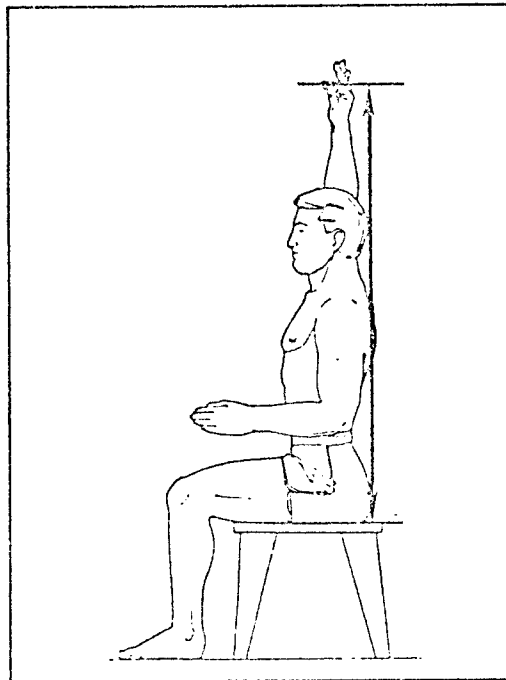
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
72.18	MEAN	28.42
0.16	SE (MEAN)	0.06
3.43	ST DEV	1.35
0.11	SE (SD)	0.04
62.60	MINIMUM	24.65
81.50	MAXIMUM	32.09
COEFF. OF VARIATION		4.7%
SYMMETRY—VETA I		0.13
KURTOSIS—VETA II		2.80
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
63.13	1ST	24.86
63.59	2ND	25.03
63.88	3RD	25.15
64.27	5TH	25.30
64.90	10TH	25.55
65.34	15TH	25.72
65.69	20TH	25.86
66.01	25TH	25.99
66.30	30TH	26.10
66.58	35TH	26.21
66.85	40TH	26.32
67.11	45TH	26.42
67.39	50TH	26.53
67.67	55TH	26.64
67.96	60TH	26.76
68.27	65TH	26.88
68.61	70TH	27.01
68.99	75TH	27.16
69.43	80TH	27.33
69.97	85TH	27.55
70.68	90TH	27.83
71.83	95TH	28.28
72.64	97TH	28.60
73.27	98TH	28.85
74.31	99TH	29.26

PERCENTILES		
CENTIMETERS		INCHES
64.70	1ST	25.47
65.53	2ND	25.80
66.05	3RD	26.00
66.75	5TH	26.28
67.83	10TH	26.71
68.59	15TH	27.00
69.19	20TH	27.24
69.73	25TH	27.45
70.23	30TH	27.65
70.69	35TH	27.83
71.14	40TH	28.01
71.59	45TH	28.18
72.03	50TH	28.36
72.48	55TH	28.54
72.95	60TH	28.72
73.43	65TH	28.91
73.95	70TH	29.11
74.51	75TH	29.34
75.15	80TH	29.59
75.88	85TH	29.88
76.81	90TH	30.24
78.13	95TH	30.76
78.94	97TH	31.08
79.50	98TH	31.30
80.30	99TH	31.62

(D51) VERTICAL THUMB TIP REACH, SITTING

The vertical distance between a sitting surface and the tip of the right thumb of a subject sitting erect with the right shoulder, arm, and hand held straight overhead with the thumb lying on the first knuckle of the index finger is calculated as follows: OVERHEAD FINGERTIP REACH, SITTING minus HAND LENGTH plus WRIST-THUMB TIP LENGTH.



VARIABLE NO. (D51)—VERTICAL THUMBIP REACH, SITTING

FEMALES

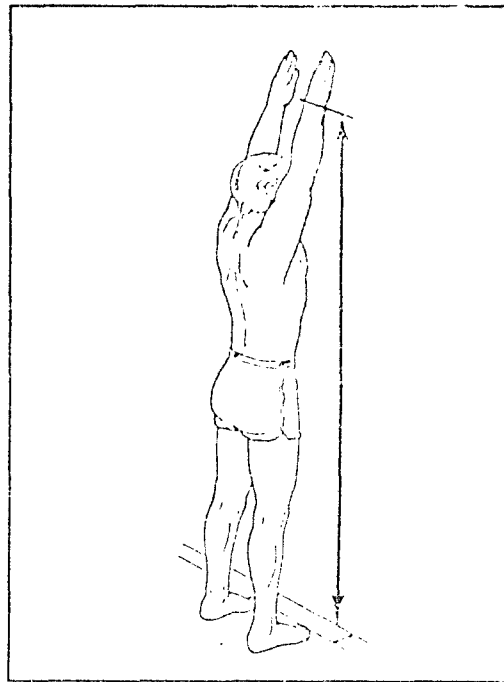
MALES

THE SUMMARY STATISTICS				THE SUMMARY STATISTICS			
CENTIMETERS		INCHES		CENTIMETERS		INCHES	
129.92	MEAN	51.15		136.98	MEAN	53.93	
0.22	SE (MEAN)	0.09		0.25	SE (MEAN)	0.10	
4.01	ST DEV	1.58		5.42	ST DEV	2.13	
0.16	SE (SD)	0.06		0.17	SE (SD)	0.07	
117.20	MINIMUM	75.28		121.50	MINIMUM	47.83	
141.30	MAXIMUM	89.41		151.40	MAXIMUM	59.61	
COEFF. OF VARIATION		3.1%		COEFF. OF VARIATION		4.0%	
SYMMETRY—VETA I		0.15		SYMMETRY—VETA I		0.02	
KURTOSIS—VETA II		3.10		KURTOSIS—VETA II		2.88	
NUMBER OF SUBJECTS		334		NUMBER OF SUBJECTS		487	

PERCENTILES			PERCENTILES		
CENTIMETERS		INCHES	CENTIMETERS		INCHES
120.63	1ST	47.49	124.36	1ST	48.96
121.81	2ND	47.96	125.83	2ND	49.54
122.53	3RD	48.24	126.77	3RD	49.91
123.47	5TH	48.61	128.04	5TH	50.41
124.88	10TH	49.16	130.00	10TH	51.18
125.81	15TH	49.53	131.33	15TH	51.71
126.54	20TH	49.82	132.38	20TH	52.12
127.17	25TH	50.07	133.30	25TH	52.48
127.74	30TH	50.29	134.11	30TH	52.80
128.27	35TH	50.50	134.87	35TH	53.10
128.78	40TH	50.70	135.58	40TH	53.38
129.28	45TH	50.90	136.28	45TH	53.65
129.77	50TH	51.09	136.97	50TH	53.92
130.27	55TH	51.29	137.66	55TH	54.20
130.79	60TH	51.49	138.35	60TH	54.47
131.32	65TH	51.70	139.08	65TH	54.76
131.90	70TH	51.93	139.84	70TH	55.06
132.53	75TH	52.18	140.67	75TH	55.38
133.25	80TH	52.46	141.61	80TH	55.75
134.10	85TH	52.80	142.69	85TH	56.18
135.20	90TH	53.23	144.06	90TH	56.72
136.89	95TH	53.89	146.11	95TH	57.52
138.01	97TH	54.33	147.45	97TH	58.05
138.85	98TH	54.66	148.44	98TH	58.44
140.18	99TH	55.19	150.01	99TH	59.06

(D52) VERTICAL WRIST HEIGHT

The vertical distance between a standing surface and the stylium landmark on the right wrist of a subject standing erect with the shoulder, arm, and hand held straight overhead is calculated as follows: OVERHEAD FINGERTIP REACH minus HAND LENGTH.



VARIABLE NO. (D52)—VERTICAL WRIST HEIGHT

FEMALES

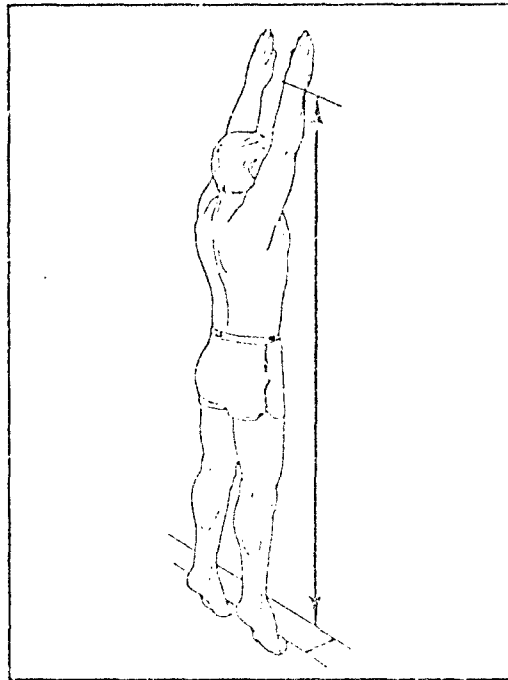
MALES

THE SUMMARY STATISTICS			THE SUMMARY STATISTICS		
CENTIMETERS		INCHES	CENTIMETERS		INCHES
193.98	MEAN	76.37	204.81	MEAN	80.63
0.32	SE (MEAN)	0.12	0.39	SE (MEAN)	0.15
5.77	ST DEV	2.27	8.52	ST DEV	3.35
0.22	SE (SD)	0.09	0.27	SE (SD)	0.11
180.00	MINIMUM	41.57	182.60	MINIMUM	71.89
216.50	MAXIMUM	50.94	229.00	MAXIMUM	90.16
COEFF. OF VARIATION		3.0%	COEFF. OF VARIATION		4.2%
SYMMETRY----VETA I		0.55	SYMMETRY----VETA I		0.08
KURTOSIS----VETA II		3.56	KURTOSIS----VETA II		2.77
NUMBER OF SUBJECTS		334	NUMBER OF SUBJECTS		487

PERCENTILES			PERCENTILES		
CENTIMETERS		INCHES	CENTIMETERS		INCHES
182.73	1ST	71.94	185.49	1ST	73.03
183.73	2ND	72.33	187.78	2ND	73.93
184.40	3RD	72.60	189.19	3RD	74.49
185.36	5TH	72.93	191.09	5TH	75.23
186.94	10TH	73.60	193.98	10TH	76.37
188.08	15TH	74.05	195.94	15TH	77.14
189.02	20TH	74.42	197.51	20TH	77.76
189.87	25TH	74.75	198.88	25TH	78.30
190.64	30TH	75.06	200.13	30TH	78.79
191.37	35TH	75.34	201.29	35TH	79.25
192.09	40TH	75.62	202.40	40TH	79.69
192.79	45TH	75.90	203.49	45TH	80.12
193.50	50TH	76.18	204.59	50TH	80.55
194.22	55TH	76.47	205.69	55TH	80.98
194.97	60TH	76.76	206.81	60TH	81.42
195.75	65TH	77.07	207.98	65TH	81.88
196.59	70TH	77.40	209.23	70TH	82.37
197.52	75TH	77.76	210.58	75TH	82.91
198.57	80TH	78.18	212.11	80TH	83.51
199.81	85TH	78.67	213.87	85TH	84.20
201.42	90TH	79.30	216.10	90TH	85.08
203.86	95TH	80.26	219.32	95TH	86.35
205.47	97TH	80.89	221.33	97TH	87.14
206.67	98TH	81.37	222.75	98TH	87.70
208.57	99TH	82.11	224.84	99TH	88.52

(153) VERTICAL WRIST HEIGHT, EXTENDED

The vertical distance between a standing surface and the stylium landmark on the right wrist of a subject standing on the toes and reaching straight overhead as far as possible is calculated as follows: OVERHEAD FINGER TIP REACH, EXTENDED minus HAND LENGTH.



VARIABLE NO. (D53)—VERTICAL WRIST HEIGHT, EXTENDED

FEMALES

MALES

THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
203.39	MEAN	80.07	
0.32	SE (MEAN)	0.13	
5.87	ST DEV	2.31	
0.23	SE (SD)	0.09	
191.20	MINIMUM	75.28	
227.10	MAXIMUM	89.41	
COEFF. OF VARIATION		2.9%	
SYMMETRY—VETA I		0.57	
KURTOSIS—VETA II		3.47	
NUMBER OF SUBJECTS		334	

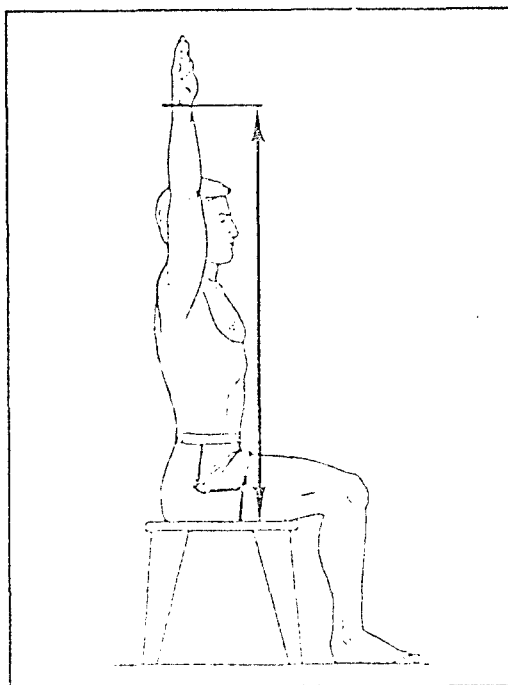
THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
214.72	MEAN	84.53	
0.40	SE (MEAN)	0.16	
8.72	ST DEV	3.43	
0.28	SE (SD)	0.11	
191.00	MINIMUM	75.20	
240.30	MAXIMUM	94.61	
COEFF. OF VARIATION		4.1%	
SYMMETRY—VETA I		0.07	
KURTOSIS—VETA II		2.75	
NUMBER OF SUBJECTS		487	

PERCENTILES		
CENTIMETERS		INCHES
192.00	1ST	75.59
193.09	2ND	76.02
193.79	3RD	76.29
194.75	5TH	76.67
196.30	10TH	77.28
197.41	15TH	77.72
198.33	20TH	78.08
199.16	25TH	78.41
199.93	30TH	78.71
200.66	35TH	79.00
201.38	40TH	79.28
202.10	45TH	79.57
202.83	50TH	79.85
203.57	55TH	80.15
204.35	60TH	80.45
205.17	65TH	80.77
206.05	70TH	81.12
207.03	75TH	81.51
208.15	80TH	81.95
209.47	85TH	82.47
211.18	90TH	83.14
213.74	95TH	84.15
215.40	97TH	84.80
216.60	98TH	85.28
218.45	99TH	86.00

PERCENTILES		
CENTIMETERS		INCHES
195.25	1ST	76.87
197.42	2ND	77.73
198.79	3RD	78.26
200.64	5TH	78.99
203.53	10TH	80.13
205.53	15TH	80.92
207.15	20TH	81.55
208.57	25TH	82.11
209.87	30TH	82.62
211.08	35TH	83.10
212.25	40TH	83.56
213.39	45TH	84.01
214.54	50TH	84.46
215.69	55TH	84.92
216.87	60TH	85.38
218.09	65TH	85.86
219.39	70TH	86.37
220.79	75TH	86.93
222.36	80TH	87.54
224.16	85TH	88.25
226.39	90TH	89.13
229.53	95TH	90.36
231.41	97TH	91.11
232.69	98TH	91.61
234.49	99TH	92.32

(D54) VERTICAL WRIST REICH, SITTING

The vertical distance between a sitting surface and the styliion landmark on the right wrist of a subject sitting erect reaching straight overhead is calculated as follows: OVERHEAD FINGER TIP REACH, SITTING minus HAND LENGTH.



VARIABLE NO. (D54)—VERTICAL WRIST HEIGHT, SITTING

FEMALES

THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
118.01	MEAN	46.46	
0.21	SE (MEAN)	0.08	
3.80	ST DEV	1.50	
0.15	SE (SD)	0.06	
105.60	MINIMUM	41.57	
129.40	MAXIMUM	50.94	
COEFF. OF VARIATION		3.2%	
SYMMETRY—VETA I		0.13	
KURTOSIS—VETA II		3.10	
NUMBER OF SUBJECTS		334	

MALES

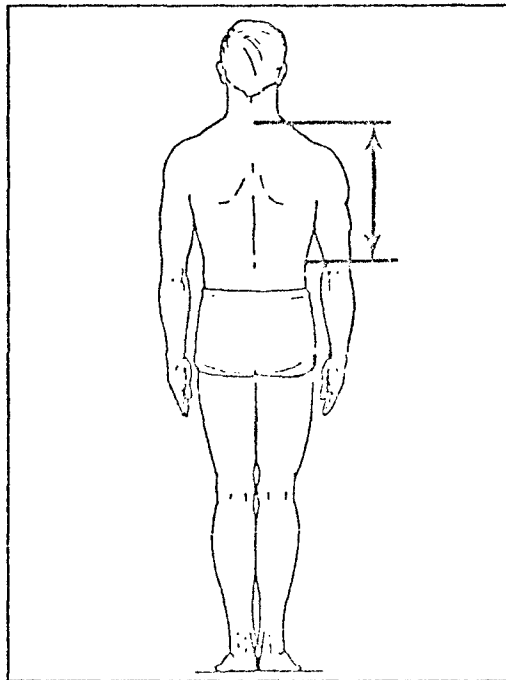
THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
124.54	MEAN	49.03	
0.23	SE (MEAN)	0.09	
5.05	ST DEV	1.99	
0.16	SE (SD)	0.06	
110.20	MINIMUM	43.39	
138.60	MAXIMUM	54.57	
COEFF. OF VARIATION		4.1%	
SYMMETRY—VETA I		0.03	
KURTOSIS—VETA II		2.88	
NUMBER OF SUBJECTS		487	

PERCENTILES		
CENTIMETERS		INCHES
109.30	1ST	43.03
110.40	2ND	43.46
111.07	3RD	43.73
111.95	5TH	44.07
113.26	10TH	44.59
114.13	15TH	44.93
114.81	20TH	45.20
115.41	25TH	45.44
115.94	30TH	45.65
116.44	35TH	45.84
116.92	40TH	46.03
117.39	45TH	46.22
117.86	50TH	46.40
118.33	55TH	46.59
118.82	60TH	46.78
119.33	65TH	46.98
119.87	70TH	47.19
120.47	75TH	47.43
121.15	80TH	47.70
121.95	85TH	48.01
122.99	90TH	48.42
124.54	95TH	49.03
125.57	97TH	49.44
126.32	98TH	49.73
127.51	99TH	50.20

PERCENTILES		
CENTIMETERS		INCHES
112.35	1ST	44.23
114.00	2ND	44.88
114.98	3RD	45.27
116.25	5TH	45.77
118.10	10TH	46.50
119.32	15TH	46.98
120.27	20TH	47.35
121.09	25TH	47.67
121.82	30TH	47.96
122.51	35TH	48.23
123.16	40TH	48.49
123.79	45TH	48.74
124.43	50TH	48.99
125.07	55TH	49.24
125.72	60TH	49.50
126.41	65TH	49.77
127.13	70TH	50.05
127.92	75TH	50.36
128.81	80TH	50.71
129.85	85TH	51.12
131.16	90TH	51.64
133.08	95TH	52.39
134.29	97TH	52.87
135.14	98TH	53.20
136.40	99TH	53.70

(D55) WAIST BACK, VERTICAL (SPIRUAL INDENTATION)

The vertical distance between the cervicale landmark at the base of the back of the neck and the level of the waist at its natural indentation is calculated as follows: CERVICALE HEIGHT minus WAIST HEIGHT (NATURAL INDENTATION).



VARIABLE NO. (D55)—WAIST BACK, VERTICAL (NATURAL INDENTATION)

FEMALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
36.58	MEAN	14.40
0.12	SE(MEAN)	0.05
2.13	ST DEV	0.84
0.08	SE(SD)	0.03
30.10	MINIMUM	11.85
43.80	MAXIMUM	17.24
COEFF. OF VARIATION		5.8%
SYMMETRY—VETA I		0.36
KURTOSIS—VETA II		3.34
NUMBER OF SUBJECTS		334

MALES

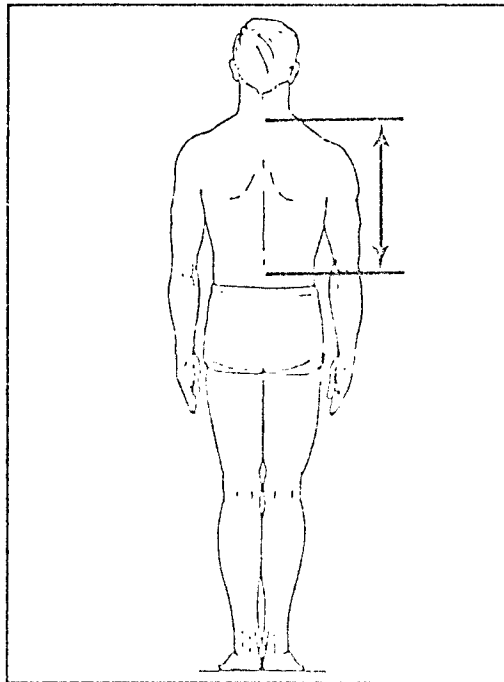
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
40.04	MEAN	15.76
0.09	SE(MEAN)	0.04
2.06	ST DEV	0.81
0.07	SE(SD)	0.03
34.00	MINIMUM	13.39
45.90	MAXIMUM	18.07
COEFF. OF VARIATION		5.2%
SYMMETRY—VETA I		0.05
KURTOSIS—VETA II		2.86
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
31.93	1ST	12.57
32.60	2ND	12.83
32.98	3RD	12.98
33.44	5TH	13.17
34.09	10TH	13.42
34.51	15TH	13.59
34.84	20TH	13.72
35.13	25TH	13.83
35.39	30TH	13.93
35.64	35TH	14.03
35.89	40TH	14.13
36.14	45TH	14.23
36.39	50TH	14.33
36.66	55TH	14.43
36.93	60TH	14.54
37.22	65TH	14.66
37.55	70TH	14.78
37.90	75TH	14.92
38.32	80TH	15.09
38.81	85TH	15.28
39.46	90TH	15.53
40.43	95TH	15.92
41.05	97TH	16.16
41.50	98TH	16.34
42.15	99TH	16.60

PERCENTILES		
CENTIMETERS		INCHES
35.30	1ST	13.90
35.88	2ND	14.13
36.24	3RD	14.27
36.72	5TH	14.46
37.44	10TH	14.74
37.92	15TH	14.93
38.30	20TH	15.08
38.63	25TH	15.21
38.93	30TH	15.33
39.21	35TH	15.44
39.48	40TH	15.54
39.73	45TH	15.64
39.99	50TH	15.75
40.25	55TH	15.85
40.52	60TH	15.95
40.80	65TH	16.06
41.09	70TH	16.18
41.41	75TH	16.30
41.77	80TH	16.45
42.19	85TH	16.61
42.73	90TH	16.82
43.52	95TH	17.13
44.02	97TH	17.33
44.38	98TH	17.47
44.94	99TH	17.69

(D56) WAIST BACK, VERTICAL (CERVICAL)

The vertical distance between the cervicale landmark at the base of the back of the neck and the waist at the level of the navel (omphalion) is calculated as follows: CERVICALE HEIGHT minus WAIST HEIGHT (OMPHALION).



VARIABLE NO. (D56)—WAIST BACK, VERTICAL (COPHALION)

FEMALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
44.06	MEAN	17.35
0.11	SE(MEAN)	0.04
2.05	ST DEV	0.81
0.08	SE(SD)	0.03
37.60	MINIMUM	14.80
52.00	MAXIMUM	20.47
COEFF. OF VARIATION		4.6%
SYMMETRY----VETA I		0.23
KURTOSIS----VETA II		3.69
NUMBER OF SUBJECTS		334

PERCENTILES		
CENTIMETERS		INCHES
39.49	1ST	15.55
40.00	2ND	15.75
40.33	3RD	15.88
40.79	5TH	16.06
41.51	10TH	16.34
41.99	15TH	16.53
42.38	20TH	16.68
42.70	25TH	16.81
43.00	30TH	16.93
43.27	35TH	17.03
43.52	40TH	17.14
43.77	45TH	17.23
44.02	50TH	17.33
44.26	55TH	17.43
44.51	60TH	17.52
44.77	65TH	17.63
45.04	70TH	17.73
45.34	75TH	17.85
45.68	80TH	17.99
46.09	85TH	18.14
46.62	90TH	18.35
47.46	95TH	18.69
48.05	97TH	18.92
48.52	98TH	19.10
49.31	99TH	19.41

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
46.68	MEAN	18.38
0.10	SE(MEAN)	0.04
2.30	ST DEV	0.91
0.07	SE(SD)	0.03
38.80	MINIMUM	15.28
53.10	MAXIMUM	20.91
COEFF. OF VARIATION		4.9%
SYMMETRY----VETA I		-0.02
KURTOSIS----VETA II		2.99
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
41.15	1ST	16.20
41.87	2ND	16.49
42.31	3RD	16.66
42.88	5TH	16.88
43.73	10TH	17.22
44.29	15TH	17.44
44.73	20TH	17.61
45.11	25TH	17.76
45.46	30TH	17.90
45.77	35TH	18.02
46.07	40TH	18.14
46.37	45TH	18.26
46.66	50TH	18.37
46.95	55TH	18.49
47.25	60TH	18.60
47.56	65TH	18.73
47.89	70TH	18.85
48.25	75TH	19.00
48.65	80TH	19.15
49.11	85TH	19.33
49.69	90TH	19.56
50.53	95TH	19.89
51.05	97TH	20.10
51.41	98TH	20.24
51.95	99TH	20.45

(D57) WAIST-BUTTOCK DROP (NATURAL INDENTATION)

The difference between the circumference of the waist at the level of its natural indentation and the torso circumference at the level of the maximum protrusion of the right buttock is calculated as follows: BUTTOCK CIRCUMFERENCE minus WAIST CIRCUMFERENCE (NATURAL INDENTATION).

VARIABLE NO. (D57)—WALST-EUTOCK DROP (NATURAL INDENTATION)

FEMALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
24.75	MEAN	9.74
0.27	SE(MEAN)	0.11
4.96	ST DEV	1.95
0.19	SE(SD)	0.08
11.60	MINIMUM	4.57
37.50	MAXIMUM	14.76
COEFF. OF VARIATION		20.1%
SYMMETRY—VETA I		-0.13
KURTOSIS—VETA II		2.88
NUMBER OF SUBJECTS		334

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
13.51	MEAN	5.32
0.20	SE(MEAN)	0.08
4.32	ST DEV	1.70
0.14	SE(SD)	0.05
-3.10	MINIMUM	-1.22
26.90	MAXIMUM	10.59
COEFF. OF VARIATION		32.0%
SYMMETRY—VETA I		-0.27
KURTOSIS—VETA II		3.26
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
12.41	1ST	4.89
13.86	2ND	5.46
14.80	3RD	5.83
16.10	5TH	6.34
18.11	10TH	7.13
19.46	15TH	7.66
20.51	20TH	8.07
21.41	25TH	8.43
22.20	30TH	8.74
22.93	35TH	9.03
23.61	40TH	9.29
24.25	45TH	9.55
24.89	50TH	9.80
25.51	55TH	10.04
26.14	60TH	10.29
26.78	65TH	10.54
27.44	70TH	10.80
28.16	75TH	11.08
28.95	80TH	11.40
29.86	85TH	11.76
31.02	90TH	12.21
32.77	95TH	12.90
33.94	97TH	13.36
34.84	98TH	13.72
36.32	99TH	14.30

PERCENTILES		
CENTIMETERS		INCHES
2.37	1ST	0.93
4.08	2ND	1.61
5.07	3RD	2.00
6.31	5TH	2.48
8.06	10TH	3.17
9.16	15TH	3.61
10.01	20TH	3.94
10.73	25TH	4.22
11.37	30TH	4.48
11.96	35TH	4.71
12.52	40TH	4.93
13.07	45TH	5.14
13.61	50TH	5.36
14.15	55TH	5.57
14.70	60TH	5.79
15.27	65TH	6.01
15.87	70TH	6.25
16.51	75TH	6.50
17.23	80TH	6.79
18.05	85TH	7.11
19.06	90TH	7.50
20.44	95TH	8.05
21.22	97TH	8.35
21.72	98TH	8.55
22.35	99TH	8.80

(D58) WAIST-BUTTOCK DROP (OMPHALION)

The difference between the circumference of the waist at the level of the navel (omphalion) and the torso circumference at the level of the maximum protrusion of the right buttock is calculated as follows: BUTTOCK CIRCUMFERENCE minus WAIST CIRCUMFERENCE (OMPHALION).

VARIABLE NO. (D53)—WAIST-BUTTOCK DROP (CEPHALION)

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
17.25	MEAN	6.79
0.33	SE(MEAN)	0.13
6.06	ST DEV	2.38
0.23	SE(SD)	0.09
0.40	MINIMUM	0.16
34.00	MAXIMUM	13.39
COEFF. OF VARIATION		35.1%
SYMMETRY---VETA I		-0.28
KURTOSIS---VETA II		3.10
NUMBER OF SUBJECTS		334

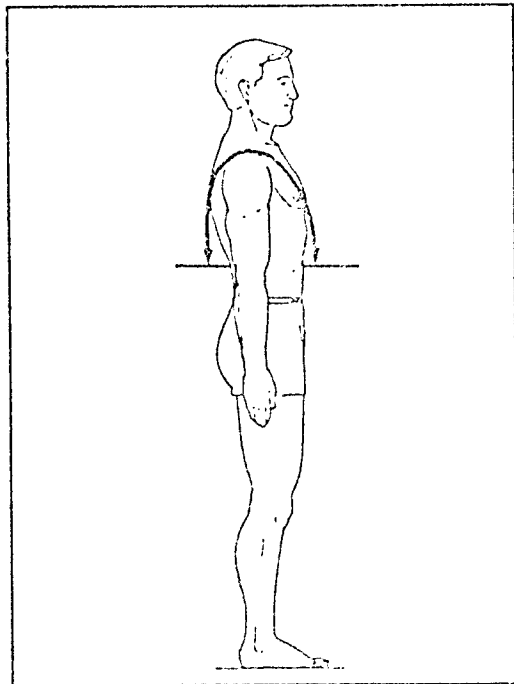
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
10.31	MEAN	4.06
0.20	SE(MEAN)	0.03
4.51	ST DEV	1.78
0.14	SE(SD)	0.06
-4.40	MINIMUM	-1.73
21.40	MAXIMUM	8.43
COEFF. OF VARIATION		43.8%
SYMMETRY---VETA I		-0.07
KURTOSIS---VETA II		2.70
NUMBER OF SUBJECTS		487

PERCENTILES		
CENTIMETERS		INCHES
1.30	1ST	0.51
3.07	2ND	1.21
4.31	3RD	1.70
6.11	5TH	2.40
8.95	10TH	3.52
10.85	15TH	4.27
12.31	20TH	4.85
13.52	25TH	5.32
14.56	30TH	5.73
15.48	35TH	6.09
16.32	40TH	6.42
17.09	45TH	6.73
17.83	50TH	7.02
18.53	55TH	7.29
19.21	60TH	7.56
19.89	65TH	7.83
20.57	70TH	8.10
21.29	75TH	8.38
22.08	80TH	8.69
23.00	85TH	9.05
24.19	90TH	9.52
26.18	95TH	10.31
27.73	97TH	10.92
29.05	98TH	11.44
31.54	99TH	12.42

PERCENTILES		
CENTIMETERS		INCHES
-0.44	1ST	-0.17
0.98	2ND	0.39
1.82	3RD	0.71
2.89	5TH	1.14
4.49	10TH	1.77
5.55	15TH	2.18
6.39	20TH	2.52
7.13	25TH	2.81
7.81	30TH	3.07
8.44	35TH	3.32
9.05	40TH	3.56
9.64	45TH	3.80
10.24	50TH	4.03
10.85	55TH	4.27
11.47	60TH	4.51
12.11	65TH	4.77
12.79	70TH	5.04
13.52	75TH	5.32
14.34	80TH	5.64
15.26	85TH	6.01
16.37	90TH	6.44
17.83	95TH	7.02
18.61	97TH	7.33
19.07	98TH	7.51
19.54	99TH	7.69

(D59) WAIST-WAIST (NATURAL INDENTATION) OVER SHOULDER

The vertical circumference of the upper torso between the front of the waist at its natural indentation passing up over the right nipple on men or the right bustpoint on women, over the shoulder and down the back to the waist at the level of its natural indentation is calculated as follows: VERTICAL TRUNK CIRCUMFERENCE (USA) minus CROTCH LENGTH (NATURAL INDENTATION).



VARIABLE NO. (D69)—WAIST-WAIST (NATURAL INDENTATION) OVER SHOULDER

FEMALES

MALES

THE SUMMARY STATISTICS

CENTIMETERS		INCHES
80.28	MEAN	31.60
0.25	SE (MEAN)	0.10
4.57	ST DEV	1.80
0.18	SE (SD)	0.07
68.90	MINIMUM	27.13
97.30	MAXIMUM	38.31
COEFF. OF VARIATION		5.7%
SYMMETRY—VETA I		0.35
KURTOSIS—VETA II		3.65
NUMBER OF SUBJECTS		334

THE SUMMARY STATISTICS

CENTIMETERS		INCHES
88.40	MEAN	34.80
0.19	SE (MEAN)	0.07
4.19	ST DEV	1.65
0.13	SE (SD)	0.05
73.50	MINIMUM	28.94
102.40	MAXIMUM	40.31
COEFF. OF VARIATION		4.7%
SYMMETRY—VETA I		0.04
KURTOSIS—VETA II		3.42
NUMBER OF SUBJECTS		487

PERCENTILES

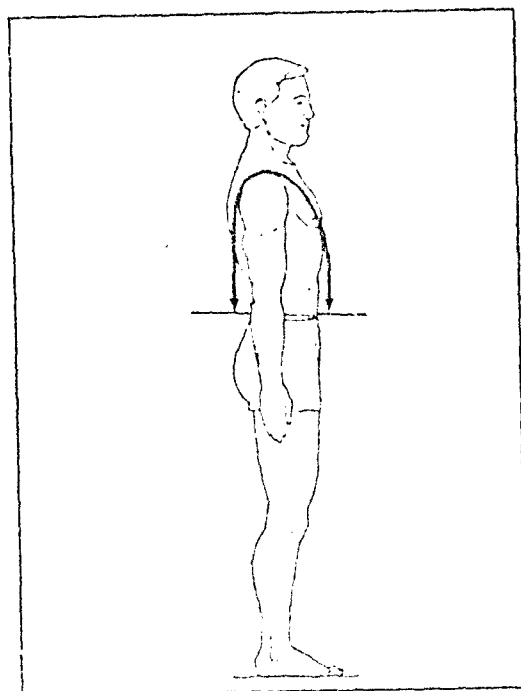
CENTIMETERS		INCHES
69.40	1ST	27.32
71.04	2ND	27.97
71.98	3RD	28.34
73.15	5TH	28.80
74.78	10TH	29.44
75.80	15TH	29.84
76.58	20TH	30.15
77.25	25TH	30.41
77.86	30TH	30.65
78.42	35TH	30.87
78.95	40TH	31.08
79.48	45TH	31.29
80.02	50TH	31.50
80.56	55TH	31.72
81.12	60TH	31.94
81.72	65TH	32.17
82.37	70TH	32.43
83.08	75TH	32.71
83.91	80TH	33.04
84.90	85TH	33.43
86.20	90TH	33.94
88.20	95TH	34.73
89.54	97TH	35.25
90.53	98TH	35.64
92.08	99TH	36.25

PERCENTILES

CENTIMETERS		INCHES
78.22	1ST	30.80
79.61	2ND	31.34
80.46	3RD	31.68
81.57	5TH	32.12
83.20	10TH	32.75
84.24	15TH	33.17
85.04	20TH	33.48
85.72	25TH	33.75
86.32	30TH	33.98
86.86	35TH	34.20
87.38	40TH	34.40
87.87	45TH	34.60
88.36	50TH	34.79
88.85	55TH	34.98
89.35	60TH	35.18
89.86	65TH	35.38
90.41	70TH	35.60
91.02	75TH	35.83
91.71	80TH	36.11
92.53	85TH	36.43
93.62	90TH	36.86
95.35	95TH	37.54
96.56	97TH	38.02
97.51	98TH	38.39
99.11	99TH	39.02

(D60) WAIST-WAIST (CEPHALIC) OVER SHOULDER

The vertical circumference of the upper torso between the front of the waist at the navel (cephalic) passing up over the right nipple on men or the right bustpoint on women, over the shoulder and down the back to the waist at the level of the navel is calculated as follows: VERTICAL TRUNK CIRCUMFERENCE (USA) minus CROTCH LENGTH (CEPHALIC).



VARIABLE NO. (D60)—WAIST—WAIST (CAPHALION) OVER SHOULDER

FEMALES

MALES

THE SUMMARY STATISTICS				THE SUMMARY STATISTICS			
CENTIMETERS		INCHES		CENTIMETERS		INCHES	
95.12	MEAN	37.45		101.26	MEAN	39.86	
0.26	SE (MEAN)	0.10		0.22	SE (MEAN)	0.08	
4.68	ST DEV	1.84		4.75	ST DEV	1.87	
0.18	SE (SD)	0.07		0.15	SE (SD)	0.06	
82.80	MINIMUM	26.00		82.10	MINIMUM	32.32	
110.00	MAXIMUM	433.14		114.70	MAXIMUM	45.16	
COEFF. OF VARIATION		4.9%		COEFF. OF VARIATION		4.7%	
SYMMETRY—VETA I		0.27		SYMMETRY—VETA I		0.00	
KURTOSIS—VETA II		3.27		KURTOSIS—VETA II		3.23	
NUMBER OF SUBJECTS		334		NUMBER OF SUBJECTS		487	

PERCENTILES			PERCENTILES		
CENTIMETERS		INCHES	CENTIMETERS		INCHES
84.83	1ST	33.40	90.78	1ST	35.74
85.91	2ND	33.82	92.01	2ND	36.23
86.64	3RD	34.11	92.76	3RD	36.52
87.66	5TH	34.51	93.76	5TH	36.92
89.29	10TH	35.15	95.29	10TH	37.52
90.39	15TH	35.59	96.34	15TH	37.93
91.27	20TH	35.93	97.18	20TH	38.26
92.02	25TH	36.23	97.93	25TH	38.56
92.70	30TH	36.49	98.61	30TH	38.82
93.31	35TH	36.74	99.25	35TH	39.08
93.90	40TH	36.97	99.88	40TH	39.32
94.46	45TH	37.19	100.49	45TH	39.56
95.02	50TH	37.41	101.10	50TH	39.80
95.58	55TH	37.63	101.73	55TH	40.05
96.14	60TH	37.85	102.36	60TH	40.30
96.73	65TH	38.08	103.03	65TH	40.56
97.36	70TH	38.33	103.74	70TH	40.84
98.04	75TH	38.60	104.52	75TH	41.15
98.83	80TH	38.91	105.38	80TH	41.49
99.77	85TH	39.28	106.38	85TH	41.88
101.02	90TH	39.77	107.61	90TH	42.37
103.06	95TH	40.57	109.35	95TH	43.05
104.53	97TH	41.16	110.37	97TH	43.45
105.72	98TH	41.62	111.05	98TH	43.72
107.79	99TH	42.44	111.96	99TH	44.08

CHAPTER VI

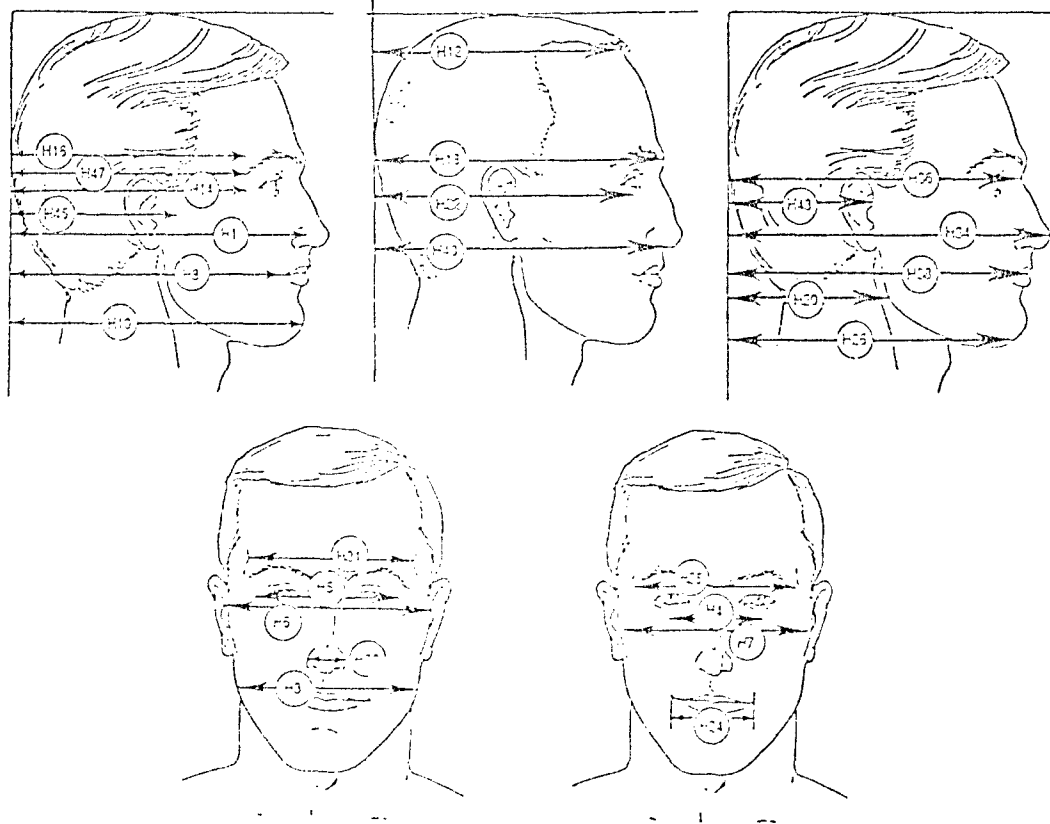
THE HEADBOARD MEASUREMENTS

The head and face are perhaps the most difficult body parts to be adequately described by traditional linear measurement techniques because of the great variability of head and facial dimensions, their associated poor correlations, and the difficulty of maintaining the subject's head in the required position. A special automated headboard device (AHD) for measuring three-dimensional coordinates of landmark locations on the head and face was developed for use in the 1988 Anthropometric Survey¹⁰. The device was programmed to locate 26 head and face landmarks in three dimensional space. The points were selected on the basis of their usefulness in the design and construction of helmets, respirators, goggles, and other personal protective equipment.

Sixteen head and face dimensions were measured by traditional means and are reported in Chapter III. These are supplemented by the data obtained from the AHD, in which points were located in three-dimensional space by the simultaneous determination of distances along the Z-axis (height), the X-axis (depth), and the Y-axis (breadth). For ease of reporting, and to facilitate comparison with previously reported headboard data, these data are given for each axis separately, using the same standard statistics as are used in reporting the standard and derived dimensions.

A visual index for the 48 head and face dimensions appears on the following pages. Data pages which include measurement descriptions, summary statistics, and percentile tables follow.

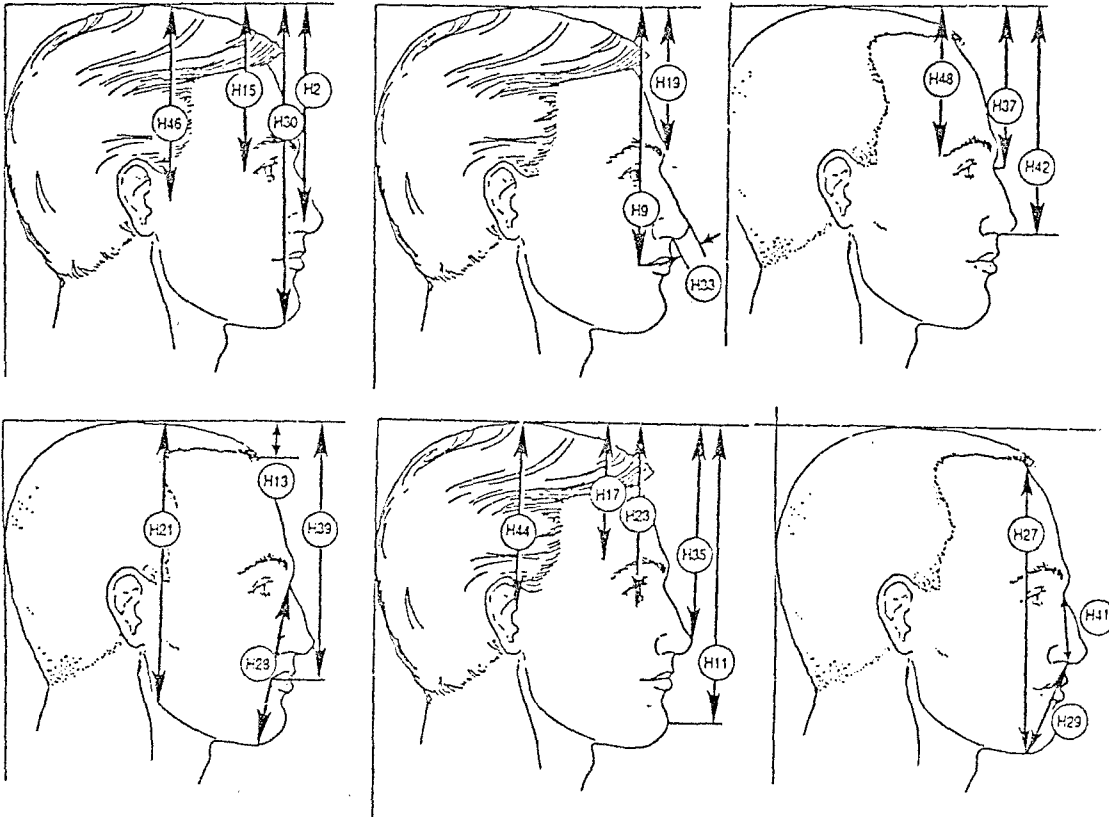
VISUAL INDEX - HEAD MEASUREMENTS



(H1) ALARE-BACK OF HEAD
 (H3) BIGONIAL BREADTH
 (H4) BINFRAORBITALE BREADTH
 (H5) BIGOCULAR BREADTH, MAXIMUM
 (H6) BITRAGION BREADTH
 (H7) BIZYGOMATIC BREADTH
 (H8) CHELION-BACK OF HEAD
 (H9) CHIN-BACK OF HEAD
 (H12) CRINION-BACK OF HEAD
 (H14) ECTOCORBITALE-BACK OF HEAD
 (H16) FRONTOTENTORALE-BACK OF HEAD
 (H18) GLABELLA-BACK OF HEAD
 (H20) GONION-BACK OF HEAD

(H22) INFRAORBITALE-BACK OF HEAD
 (H24) LIP LENGTH
 (H25) MAXIMUM FRONTAL BREADTH
 (H26) MENTON-BACK OF HEAD
 (H31) MINIMUM FRONTAL BREADTH
 (H32) NOSE BREADTH
 (H34) PRONASALE-BACK OF HEAD
 (H36) SELLION-BACK OF HEAD
 (H38) STOMION-BACK OF HEAD
 (H39) SUBNASALE-BACK OF HEAD
 (H43) TRAGION-BACK OF HEAD
 (H45) ZYGION-BACK OF HEAD
 (H47) ZYGOFRONTALE-BACK OF HEAD

VISUAL INDEX - HEAD MEASUREMENTS (Continued)



(H2) ALARE-TOP OF HEAD

(H9) CHEILION-TOP OF HEAD

(H11) CHIN-TOP OF HEAD

(H13) CRINION-TOP OF HEAD

(H15) ECTOORBITALE-TOP OF HEAD

(H17) FRONTOTEMPORALE-TOP OF HEAD

(H19) GLABELLA-TOP OF HEAD

(H21) GONION-TOP OF HEAD

(H23) INFRAORBITALE-TOP OF HEAD

(H27) MENTON-CRINION LENGTH

(H28) MENTON-SELLION LENGTH

(H29) MENTON-SUBNASALE LENGTH

(H30) MENTON-TOP OF HEAD

(H33) NOSE PROTRUSION

(H35) PRONASALE-TOP OF HEAD

(H37) SELLION-TOP OF HEAD

(H39) STOMION-TOP OF HEAD

(H41) SUBNASALE-SELLION LENGTH

(H42) SUBNASALE-TOP OF HEAD

(H44) TRAGION-TOP OF HEAD

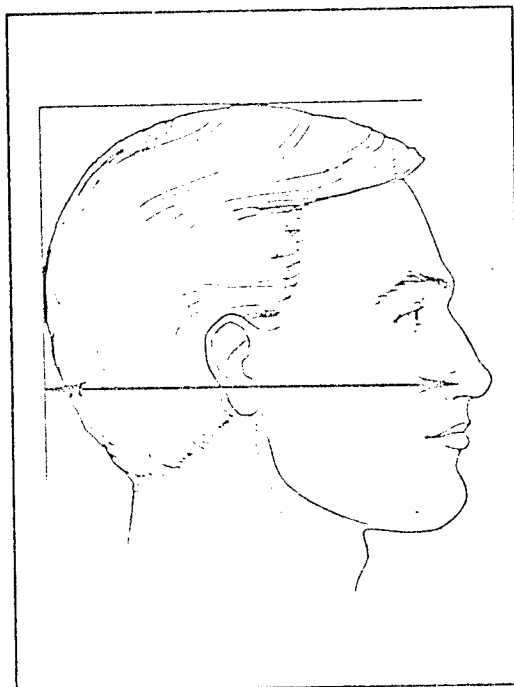
(H46) ZYGION-TOP OF HEAD

(H48) ZYGOFRONTALE-TOP OF HEAD

HEADBOARD MEASUREMENT DESCRIPTIONS AND PILOT SUMMARY STATISTICS

(H1) ALARE-BACK OF HEAD

The horizontal distance between the alare landmark on the side of each nostril and the vertical plane tangent to the back of the head is measured. The values of the right and left dimensions are averaged.



VARIABLE NO. (H1)---ALARE-BACK OF HEAD

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
19.04	MEAN	7.50
0.04	SE (MEAN)	0.02
0.71	ST DEV	0.28
0.03	SE (SD)	0.01
16.21	MINIMUM	6.38
20.77	MAXIMUM	8.18
COEFF. OF VARIATION		3.7%
SYMMETRY---VEIA I	-0.32	
KURTOSIS---VEIA II	3.81	
NUMBER OF SUBJECTS		334

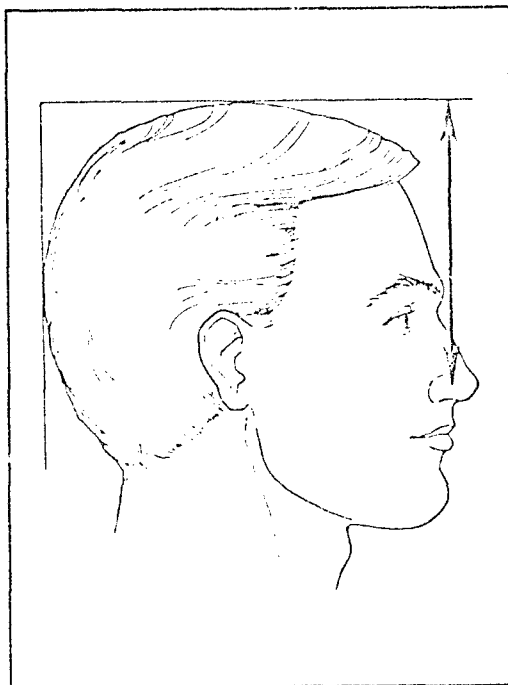
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
19.91	MEAN	7.84
0.03	SE (MEAN)	0.01
0.68	ST DEV	0.27
0.02	SE (SD)	0.01
17.79	MINIMUM	7.00
21.67	MAXIMUM	8.53
COEFF. OF VARIATION		3.4%
SYMMETRY---VEIA I	-0.01	
KURTOSIS---VEIA II	3.06	
NUMBER OF SUBJECTS		474

PERCENTILES		
CENTIMETERS		INCHES
17.21	1ST	6.78
17.52	2ND	6.90
17.69	3RD	6.97
17.90	5TH	7.05
18.19	10TH	7.16
18.37	15TH	7.23
18.50	20TH	7.28
18.61	25TH	7.33
18.71	30TH	7.36
18.80	35TH	7.40
18.88	40TH	7.43
18.96	45TH	7.47
19.05	50TH	7.50
19.13	55TH	7.53
19.22	60TH	7.57
19.31	65TH	7.60
19.40	70TH	7.64
19.51	75TH	7.68
19.63	80TH	7.73
19.76	85TH	7.78
19.94	90TH	7.85
20.20	95TH	7.95
20.35	97TH	8.01
20.46	98TH	8.06
20.62	99TH	8.12

PERCENTILES		
CENTIMETERS		INCHES
18.22	1ST	7.17
18.48	2ND	7.27
18.62	3RD	7.33
18.81	5TH	7.40
19.07	10TH	7.51
19.23	15TH	7.57
19.36	20TH	7.62
19.47	25TH	7.66
19.56	30TH	7.70
19.65	35TH	7.74
19.74	40TH	7.77
19.82	45TH	7.80
19.90	50TH	7.84
19.99	55TH	7.87
20.08	60TH	7.90
20.17	65TH	7.94
20.26	70TH	7.98
20.37	75TH	8.02
20.49	80TH	8.07
20.63	85TH	8.12
20.81	90TH	8.19
21.07	95TH	8.30
21.23	97TH	8.36
21.35	98TH	8.40
21.52	99TH	8.47

(H2) ALARE-TOP OF HEAD

The vertical distance between the alare landmark on the side of the nostril and the horizontal plane tangent to the top of the head is measured. The values of the right and left dimensions are averaged.



VARIABLE NO. (H2)—ALARE-TOP OF HEAD

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
14.84	MEAN	5.84
0.04	SE (MEAN)	0.02
0.69	ST DEV	0.27
0.03	SE (SD)	0.01
12.56	MINIMUM	4.94
16.75	MAXIMUM	6.59
COEFF. OF VARIATION		4.7%
SYMMETRY—VETA I		0.07
KURTOSIS—VETA II		3.33
NUMBER OF SUBJECTS		334

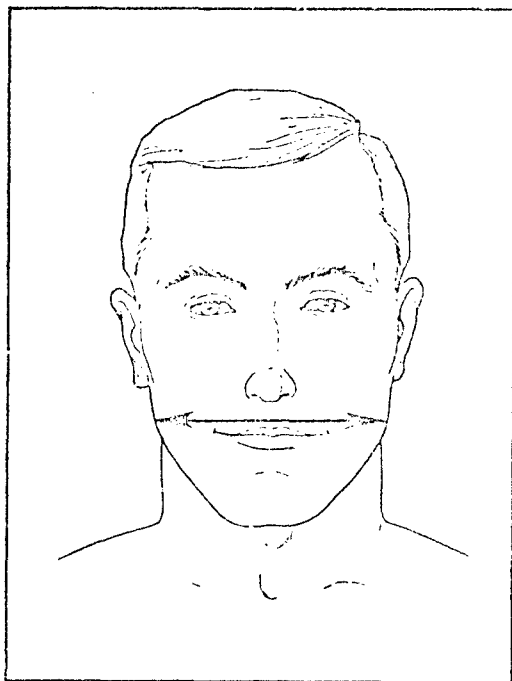
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
15.54	MEAN	6.12
0.03	SE (MEAN)	0.01
0.65	ST DEV	0.26
0.02	SE (SD)	0.01
13.76	MINIMUM	5.42
17.95	MAXIMUM	7.07
COEFF. OF VARIATION		4.2%
SYMMETRY—VETA I		0.17
KURTOSIS—VETA II		3.03
NUMBER OF SUBJECTS		474

PERCENTILES		
CENTIMETERS		INCHES
13.12	1ST	5.16
13.39	2ND	5.27
13.54	3RD	5.33
13.73	5TH	5.41
14.00	10TH	5.51
14.16	15TH	5.57
14.28	20TH	5.62
14.39	25TH	5.66
14.48	30TH	5.70
14.57	35TH	5.74
14.65	40TH	5.77
14.73	45TH	5.80
14.81	50TH	5.83
14.90	55TH	5.87
14.98	60TH	5.90
15.07	65TH	5.94
15.17	70TH	5.97
15.28	75TH	6.02
15.40	80TH	6.06
15.55	85TH	6.12
15.74	90TH	6.20
16.02	95TH	6.31
16.20	97TH	6.38
16.34	98TH	6.43
16.53	99TH	6.51

PERCENTILES		
CENTIMETERS		INCHES
14.16	1ST	5.58
14.27	2ND	5.62
14.35	3RD	5.65
14.48	5TH	5.70
14.69	10TH	5.78
14.85	15TH	5.85
14.98	20TH	5.90
15.09	25TH	5.94
15.19	30TH	5.98
15.28	35TH	6.02
15.37	40TH	6.05
15.46	45TH	6.09
15.54	50TH	6.12
15.62	55TH	6.15
15.71	60TH	6.18
15.79	65TH	6.22
15.88	70TH	6.25
15.98	75TH	6.29
16.09	80TH	6.34
16.22	85TH	6.39
16.38	90TH	6.45
16.63	95TH	6.55
16.80	97TH	6.61
16.93	98TH	6.67
17.16	99TH	6.76

(13) BICCNIAL FRENDER

The straight-line distance between the right and left gonion landmarks on the corners of the jaw is measured.



VARIABLE NO. (H3)—BIGNIAL BREADTH

FEMALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
10.81	MEAN	4.26
0.04	SE (MEAN)	0.02
0.69	ST DEV	0.27
0.03	SE (SD)	0.01
8.74	MINIMUM	3.44
14.42	MAXIMUM	5.68
COEFF. OF VARIATION		6.4%
SYMMETRY—VETA I		0.32
KURTOSIS—VETA II		4.79
NUMBER OF SUBJECTS		334

MALES

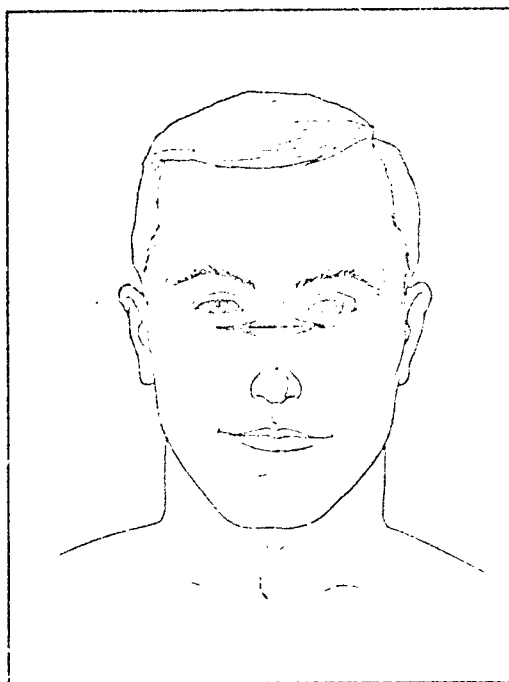
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
12.04	MEAN	4.74
0.04	SE (MEAN)	0.01
0.78	ST DEV	0.31
0.03	SE (SD)	0.01
9.80	MINIMUM	3.86
14.50	MAXIMUM	5.71
COEFF. OF VARIATION		6.5%
SYMMETRY—VETA I		0.20
KURTOSIS—VETA II		2.96
NUMBER OF SUBJECTS		474

PERCENTILES		
CENTIMETERS		INCHES
9.16	1ST	3.61
9.39	2ND	3.69
9.52	3RD	3.75
9.70	5TH	3.82
9.96	10TH	3.92
10.13	15TH	3.99
10.26	20TH	4.04
10.37	25TH	4.08
10.47	30TH	4.12
10.56	35TH	4.16
10.64	40TH	4.19
10.72	45TH	4.22
10.80	50TH	4.25
10.89	55TH	4.29
10.97	60TH	4.32
11.05	65TH	4.35
11.14	70TH	4.39
11.24	75TH	4.43
11.35	80TH	4.47
11.48	85TH	4.52
11.65	90TH	4.59
11.91	95TH	4.69
12.08	97TH	4.76
12.21	98TH	4.81
12.42	99TH	4.89

PERCENTILES		
CENTIMETERS		INCHES
10.30	1ST	4.06
10.51	2ND	4.14
10.64	3RD	4.19
10.81	5TH	4.26
11.07	10TH	4.36
11.24	15TH	4.43
11.38	20TH	4.48
11.51	25TH	4.53
11.61	30TH	4.57
11.72	35TH	4.61
11.82	40TH	4.65
11.91	45TH	4.69
12.01	50TH	4.73
12.10	55TH	4.77
12.20	60TH	4.81
12.31	65TH	4.85
12.42	70TH	4.89
12.55	75TH	4.94
12.69	80TH	4.99
12.85	85TH	5.06
13.07	90TH	5.15
13.40	95TH	5.28
13.62	97TH	5.36
13.79	98TH	5.43
14.06	99TH	5.53

(H4) BIINFRAORBITALE BREADTH

The straight-line distance between the right and left infraorbitale landmarks on the bottom edge of the bony eye sockets under the eyes is measured.



VARIABLE NO. (114)—BIINFRAORBITALE BREADTH

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
6.59	MEAN	2.59
0.03	SE (MEAN)	0.01
0.47	ST DEV	0.19
0.02	SE(SD)	0.01
5.13	MINIMUM	2.02
7.82	MAXIMUM	3.08
COEFF. OF VARIATION		7.1%
SYMMETRY—VETA I		0.02
KURTOSIS—VETA II		2.92
NUMBER OF SUBJECTS		334

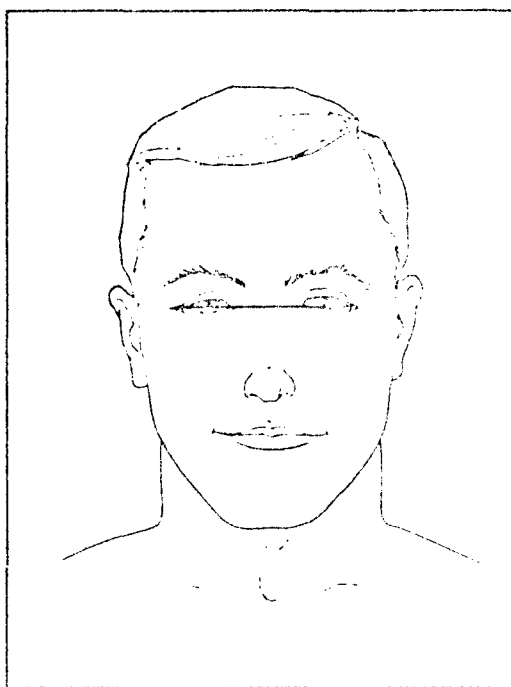
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
6.84	MEAN	2.69
0.02	SE (MEAN)	0.01
0.42	ST DEV	0.17
0.01	SE(SD)	0.01
5.81	MINIMUM	2.29
8.08	MAXIMUM	3.18
COEFF. OF VARIATION		6.1%
SYMMETRY—VETA I		0.30
KURTOSIS—VETA II		3.04
NUMBER OF SUBJECTS		474

PERCENTILES		
CENTIMETERS		INCHES
5.44	1ST	2.14
5.61	2ND	2.21
5.71	3RD	2.25
5.84	5TH	2.30
6.01	10TH	2.36
6.11	15TH	2.41
6.19	20TH	2.44
6.27	25TH	2.47
6.33	30TH	2.49
6.39	35TH	2.52
6.45	40TH	2.54
6.51	45TH	2.56
6.57	50TH	2.59
6.63	55TH	2.61
6.69	60TH	2.64
6.76	65TH	2.66
6.83	70TH	2.69
6.91	75TH	2.72
6.99	80TH	2.75
7.10	85TH	2.79
7.22	90TH	2.84
7.40	95TH	2.91
7.50	97TH	2.95
7.57	98TH	2.98
7.65	99TH	3.01

PERCENTILES		
CENTIMETERS		INCHES
5.87	1ST	2.31
6.01	2ND	2.37
6.10	3RD	2.40
6.19	5TH	2.44
6.33	10TH	2.49
6.42	15TH	2.53
6.49	20TH	2.55
6.55	25TH	2.58
6.60	30TH	2.60
6.65	35TH	2.62
6.70	40TH	2.64
6.75	45TH	2.66
6.80	50TH	2.68
6.86	55TH	2.70
6.91	60TH	2.72
6.97	65TH	2.74
7.04	70TH	2.77
7.11	75TH	2.80
7.19	80TH	2.83
7.29	85TH	2.87
7.41	90TH	2.92
7.60	95TH	2.99
7.71	97TH	3.04
7.80	98TH	3.07
7.91	99TH	3.11

(E5) BICULAR BREADTH, MAXILLARY

The straight-line distance between the right and left ectoorbitale landmarks just behind each bony eye socket at the level of the outer corners of the eyes is measured.



VARIABLE NO. (15) — BICCUJAR BREADTH, MAXIMUM

FEMALES

MALES

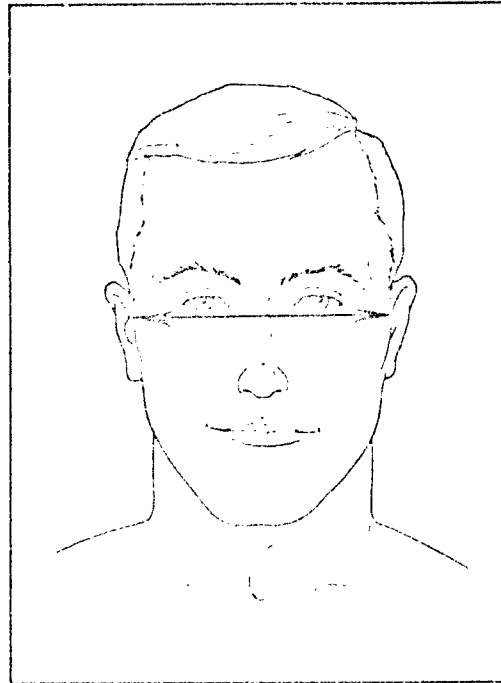
THE SUMMARY STATISTICS				THE SUMMARY STATISTICS			
CENTIMETERS		INCHES		CENTIMETERS		INCHES	
11.87	MEAN	4.67		12.16	MEAN	4.79	
0.03	SE (MEAN)	0.01		0.02	SE (MEAN)	0.01	
0.51	ST DEV	0.20		0.49	ST DEV	0.19	
0.02	SE (SD)	0.01		0.02	SE (SD)	0.01	
10.43	MINIMUM	4.11		11.01	MINIMUM	4.33	
13.37	MAXIMUM	5.26		13.63	MAXIMUM	5.37	
COEFF. OF VARIATION		4.3%		COEFF. OF VARIATION		4.0%	
SYMMETRY—VETA I		-0.02		SYMMETRY—VETA I		0.20	
KURTOSIS—VETA II		2.93		KURTOSIS—VETA II		2.75	
NUMBER OF SUBJECTS		334		NUMBER OF SUBJECTS		474	

PERCENTILES		
CENTIMETERS		INCHES
10.60	1ST	4.18
10.78	2ND	4.25
10.89	3RD	4.29
11.02	5TH	4.34
11.22	10TH	4.42
11.34	15TH	4.47
11.44	20TH	4.50
11.52	25TH	4.54
11.60	30TH	4.57
11.67	35TH	4.59
11.73	40TH	4.62
11.80	45TH	4.65
11.86	50TH	4.67
11.93	55TH	4.70
11.99	60TH	4.72
12.06	65TH	4.75
12.14	70TH	4.78
12.22	75TH	4.81
12.31	80TH	4.85
12.41	85TH	4.89
12.54	90TH	4.94
12.73	95TH	5.01
12.84	97TH	5.05
12.91	98TH	5.08
13.01	99TH	5.12

PERCENTILES		
CENTIMETERS		INCHES
11.12	1ST	4.38
11.22	2ND	4.42
11.28	3RD	4.44
11.38	5TH	4.48
11.53	10TH	4.54
11.64	15TH	4.58
11.73	20TH	4.62
11.81	25TH	4.65
11.88	30TH	4.68
11.95	35TH	4.70
12.02	40TH	4.73
12.08	45TH	4.76
12.14	50TH	4.78
12.21	55TH	4.81
12.28	60TH	4.83
12.35	65TH	4.86
12.42	70TH	4.89
12.50	75TH	4.92
12.59	80TH	4.96
12.69	85TH	5.00
12.82	90TH	5.05
13.00	95TH	5.12
13.12	97TH	5.16
13.19	98TH	5.19
13.31	99TH	5.24

(H6) TRAGION BREADTH

The straight-line distance between the right and left tragon landmarks on the cartilaginous flaps in front of each earhole is measured.



VARIABLE NO. (H6)—BITERMINAL BREADTH

FEMALES

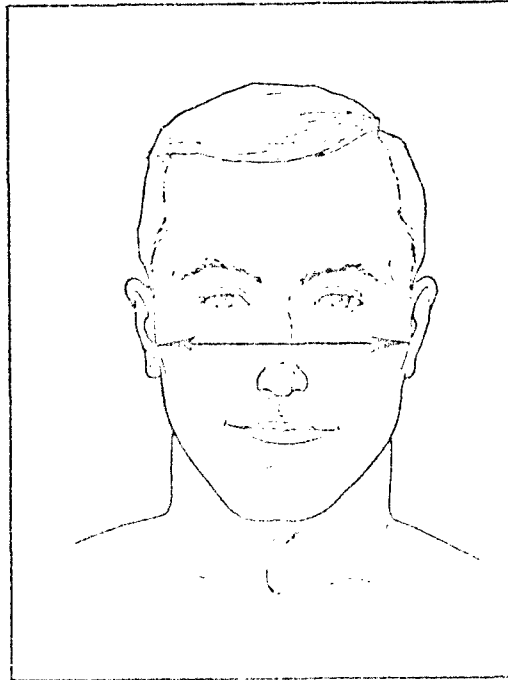
MALES

THE SUMMARY STATISTICS			THE SUMMARY STATISTICS		
CENTIMETERS		INCHES	CENTIMETERS		INCHES
13.65	MEAN	5.38	14.43	MEAN	5.68
0.03	SE (MEAN)	0.01	0.03	SE (MEAN)	0.01
0.51	ST DEV	0.20	0.58	ST DEV	0.23
0.02	SE (SD)	0.01	0.02	SE (SD)	0.01
12.19	MINIMUM	4.80	12.60	MINIMUM	4.96
15.68	MAXIMUM	6.17	16.24	MAXIMUM	6.39
COEFF. OF VARIATION		3.8%	COEFF. OF VARIATION		4.0%
SYMMETRY—VETA I		0.12	SYMMETRY—VETA I		0.13
KURTOSIS—VETA II		3.45	KURTOSIS—VETA II		3.12
NUMBER OF SUBJECTS		334	NUMBER OF SUBJECTS		474

PERCENTILES			PERCENTILES		
CENTIMETERS		INCHES	CENTIMETERS		INCHES
12.54	1ST	4.94	13.14	1ST	5.17
12.63	2ND	4.97	13.30	2ND	5.24
12.69	3RD	5.00	13.40	3RD	5.27
12.80	5TH	5.04	13.53	5TH	5.32
12.99	10TH	5.11	13.72	10TH	5.40
13.12	15TH	5.16	13.85	15TH	5.45
13.23	20TH	5.21	13.95	20TH	5.49
13.32	25TH	5.24	14.04	25TH	5.53
13.40	30TH	5.27	14.12	30TH	5.56
13.47	35TH	5.30	14.20	35TH	5.59
13.54	40TH	5.33	14.27	40TH	5.62
13.60	45TH	5.35	14.34	45TH	5.65
13.66	50TH	5.38	14.41	50TH	5.67
13.73	55TH	5.40	14.48	55TH	5.70
13.79	60TH	5.43	14.56	60TH	5.73
13.85	65TH	5.45	14.63	65TH	5.76
13.91	70TH	5.48	14.72	70TH	5.79
13.98	75TH	5.51	14.81	75TH	5.83
14.06	80TH	5.54	14.91	80TH	5.87
14.15	85TH	5.57	15.03	85TH	5.92
14.27	90TH	5.62	15.19	90TH	5.98
14.46	95TH	5.69	15.42	95TH	6.07
14.60	97TH	5.75	15.57	97TH	6.13
14.71	98TH	5.79	15.69	98TH	6.18
14.92	99TH	5.88	15.86	99TH	6.24

(17) ZYGOMATIC BREADTH

The straight-line distance between the right and left zygion landmarks on the zygomatic arches, or upper cheekbones, is measured.



VARIABLE NO. (H7) — ALZYGOMATIC BREADTH

FEMALES

MALES

THE SUMMARY STATISTICS			THE SUMMARY STATISTICS		
CENTIMETERS		INCHES	CENTIMETERS		INCHES
13.55	MEAN	5.33	14.28	MEAN	5.62
0.03	SE(MEAN)	0.01	0.03	SE(MEAN)	0.01
0.56	ST DEV	0.22	0.58	ST DEV	0.23
0.02	SE(SD)	0.01	0.02	SE(SD)	0.01
11.97	MINIMUM	4.71	12.34	MINIMUM	4.86
15.43	MAXIMUM	6.07	16.06	MAXIMUM	6.32
COEFF. OF VARIATION		4.1%	COEFF. OF VARIATION		4.1%
SYMMETRY—VEIA I		0.26	SYMMETRY—VEIA I		0.14
KURTOSIS—VEIA II		3.31	KURTOSIS—VEIA II		3.22
NUMBER OF SUBJECTS		334	NUMBER OF SUBJECTS		474

PERCENTILES

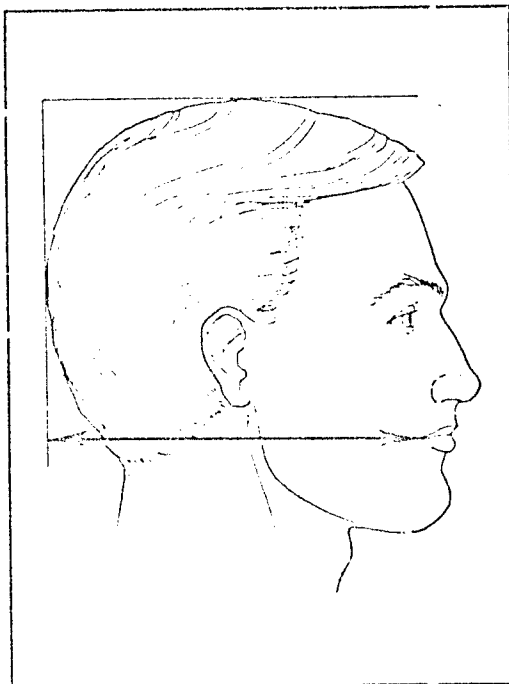
CENTIMETERS		INCHES
12.28	1ST	4.84
12.45	2ND	4.90
12.55	3RD	4.94
12.68	5TH	4.99
12.87	10TH	5.07
12.99	15TH	5.12
13.09	20TH	5.15
13.18	25TH	5.19
13.25	30TH	5.22
13.32	35TH	5.24
13.39	40TH	5.27
13.45	45TH	5.30
13.52	50TH	5.32
13.59	55TH	5.35
13.66	60TH	5.38
13.73	65TH	5.41
13.81	70TH	5.44
13.90	75TH	5.47
14.01	80TH	5.51
14.13	85TH	5.56
14.28	90TH	5.62
14.53	95TH	5.72
14.70	97TH	5.79
14.82	98TH	5.84
15.02	99TH	5.91

PERCENTILES

CENTIMETERS		INCHES
13.03	1ST	5.13
13.17	2ND	5.19
13.26	3RD	5.22
13.38	5TH	5.27
13.56	10TH	5.34
13.69	15TH	5.39
13.79	20TH	5.43
13.88	25TH	5.47
13.97	30TH	5.50
14.04	35TH	5.53
14.11	40TH	5.56
14.19	45TH	5.59
14.26	50TH	5.61
14.33	55TH	5.64
14.40	60TH	5.67
14.48	65TH	5.70
14.57	70TH	5.73
14.66	75TH	5.77
14.76	80TH	5.81
14.89	85TH	5.86
15.04	90TH	5.92
15.28	95TH	6.02
15.43	97TH	6.08
15.55	98TH	6.12
15.73	99TH	6.19

(HB) CHEILION-BACK OF HEAD

The horizontal distance between the cheilion landmark at the corner of the closed mouth and the vertical plane tangent to the back of the head is measured. The values of the right and left dimensions are averaged.



VARIABLE NO. (HB) — CHEILION-BACK OF HEAD

FEMALES

MALES

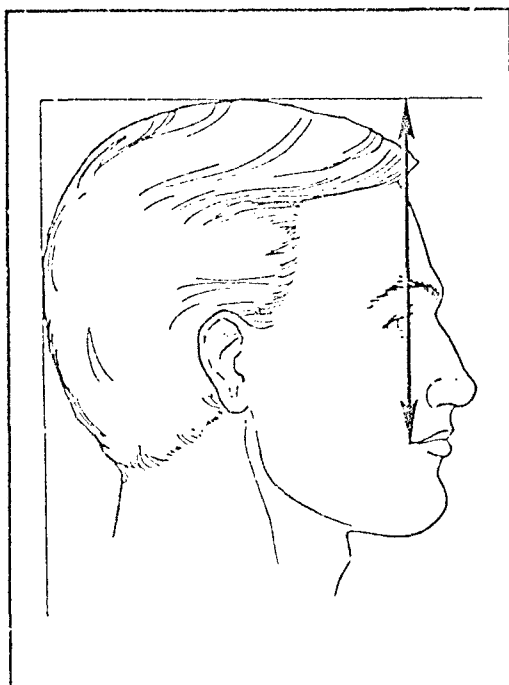
THE SUMMARY STATISTICS			THE SUMMARY STATISTICS		
CENTIMETERS		INCHES	CENTIMETERS		INCHES
17.65	MEAN	6.95	18.30	MEAN	7.21
0.04	SE (MEAN)	0.02	0.03	SE (MEAN)	0.01
0.78	ST DEV	0.31	0.74	ST DEV	0.29
0.03	SE (SD)	0.01	0.02	SE (SD)	0.01
14.79	MINIMUM	5.82	16.21	MINIMUM	6.38
19.79	MAXIMUM	7.79	20.71	MAXIMUM	8.15
COEFF. OF VARIATION		4.4%	COEFF. OF VARIATION		4.1%
SYMMETRY—VETA I		-0.01	SYMMETRY—VETA I		0.13
KURTOSIS—VETA II		3.31	KURTOSIS—VETA II		3.23
NUMBER OF SUBJECTS		334	NUMBER OF SUBJECTS		474

PERCENTILES		
CENTIMETERS		INCHES
15.72	1ST	6.19
16.04	2ND	5.31
16.21	3RD	6.38
16.43	5TH	6.47
16.72	10TH	6.58
16.89	15TH	6.65
17.03	20TH	6.70
17.14	25TH	6.75
17.25	30TH	6.79
17.34	35TH	6.83
17.44	40TH	6.86
17.53	45TH	6.90
17.52	50TH	6.94
17.71	55TH	6.97
17.81	60TH	7.01
17.92	65TH	7.05
18.03	70TH	7.10
18.15	75TH	7.15
18.30	80TH	7.20
18.46	85TH	7.27
18.68	90TH	7.35
18.99	95TH	7.48
19.19	97TH	7.56
19.32	98TH	7.61
19.51	99TH	7.68

PERCENTILES		
CENTIMETERS		INCHES
16.55	1ST	6.52
16.78	2ND	6.61
16.92	3RD	6.66
17.10	5TH	6.73
17.37	10TH	6.84
17.55	15TH	6.91
17.69	20TH	6.96
17.81	25TH	7.01
17.91	30TH	7.05
18.01	35TH	7.09
18.11	40TH	7.13
18.20	45TH	7.16
18.29	50TH	7.20
18.38	55TH	7.24
18.47	60TH	7.27
18.57	65TH	7.31
18.67	70TH	7.35
18.79	75TH	7.40
18.91	80TH	7.45
19.06	85TH	7.51
19.26	90TH	7.58
19.56	95TH	7.70
19.76	97TH	7.78
19.91	98TH	7.84
20.15	99TH	7.93

(R9) CHEILION-TOP OF HEAD

The vertical distance between the cheilion landmark at the corner of the closed mouth and the horizontal plane tangent to the top of the head is measured. The values of the right and left dimensions are averaged.



VARIABLE NO. (19) — CHEILION-TOP OF HEAD

FEMALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
17.84	MEAN	7.03
0.04	SE (MEAN)	0.02
0.74	ST DEV	0.29
0.03	SE (SD)	0.01
15.66	MINIMUM	6.17
20.01	MAXIMUM	7.88
COEFF. OF VARIATION		4.1%
SYMMETRY—VETA I		0.13
KURTOSIS—VETA II		3.17
NUMBER OF SUBJECTS		334

MALES

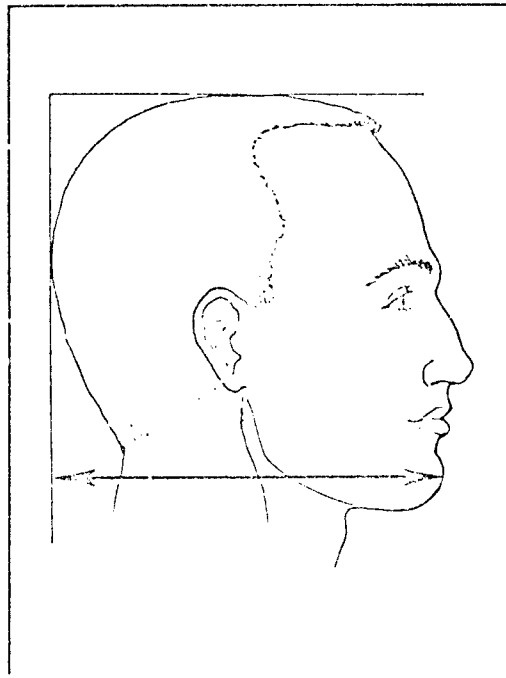
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
18.72	MEAN	7.37
0.03	SE (MEAN)	0.01
0.68	ST DEV	0.27
0.02	SE (SD)	0.01
16.64	MINIMUM	6.55
20.79	MAXIMUM	8.19
COEFF. OF VARIATION		3.6%
SYMMETRY—VETA I		0.00
KURTOSIS—VETA II		2.89
NUMBER OF SUBJECTS		474

PERCENTILES		
CENTIMETERS		INCHES
16.04	1ST	6.31
16.33	2ND	6.43
16.49	3RD	6.49
16.69	5TH	6.57
16.96	10TH	6.68
17.12	15TH	6.74
17.25	20TH	6.79
17.35	25TH	6.83
17.45	30TH	6.87
17.54	35TH	6.91
17.63	40TH	6.94
17.72	45TH	6.98
17.80	50TH	7.01
17.89	55TH	7.05
17.99	60TH	7.08
18.09	65TH	7.12
18.19	70TH	7.16
18.31	75TH	7.21
18.44	80TH	7.26
18.60	85TH	7.32
18.81	90TH	7.40
19.11	95TH	7.52
19.30	97TH	7.60
19.43	98TH	7.65
19.62	99TH	7.72

PERCENTILES		
CENTIMETERS		INCHES
17.24	1ST	6.79
17.36	2ND	6.84
17.46	3RD	6.87
17.59	5TH	6.93
17.83	10TH	7.02
18.00	15TH	7.09
18.14	20TH	7.14
18.26	25TH	7.19
18.36	30TH	7.23
18.46	35TH	7.27
18.55	40TH	7.30
18.64	45TH	7.34
18.73	50TH	7.37
18.82	55TH	7.41
18.90	60TH	7.44
18.99	65TH	7.48
19.08	70TH	7.51
19.18	75TH	7.55
19.29	80TH	7.60
19.42	85TH	7.65
19.58	90TH	7.71
19.82	95TH	7.80
19.99	97TH	7.87
20.11	98TH	7.92
20.32	99TH	8.00

(HLC) CHIN-BACK OF HEAD

The horizontal distance between the prominent landmark on the front of the chin and the vertical plane tangent to the back of the head is measured.



VARIABLE NO. (H10)—CHIN-BACK OF HEAD

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
18.60	MEAN	7.32
0.05	SE(MEAN)	0.02
0.93	ST DEV	0.37
0.04	SE(SD)	0.01
15.21	MINIMUM	5.99
21.17	MAXIMUM	8.33
COEFF. OF VARIATION		5.0%
SYMMETRY—VEIA I		0.01
KURTOSIS—VEIA II		3.18
NUMBER OF SUBJECTS		334

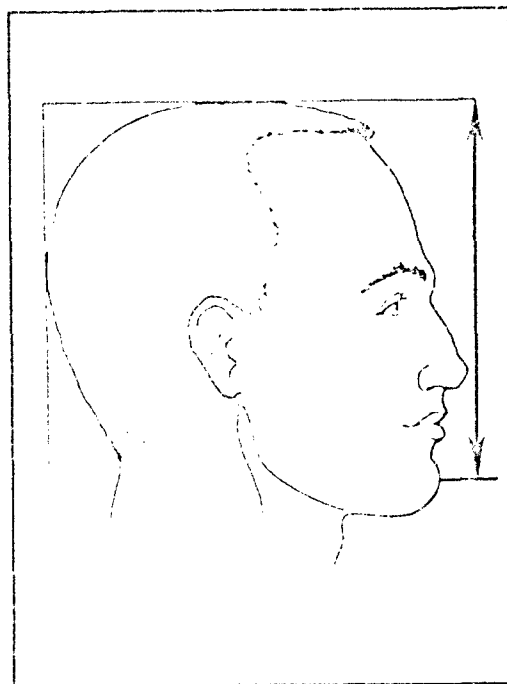
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
19.44	MEAN	7.65
0.04	SE(MEAN)	0.02
0.91	ST DEV	0.36
0.03	SE(SD)	0.01
16.35	MINIMUM	6.44
21.82	MAXIMUM	8.59
COEFF. OF VARIATION		4.7%
SYMMETRY—VEIA I		-0.07
KURTOSIS—VEIA II		3.22
NUMBER OF SUBJECTS		474

PERCENTILES		
CENTIMETERS		INCHES
16.56	1ST	6.52
16.77	2ND	6.60
16.90	3RD	6.66
17.10	5TH	6.73
17.41	10TH	6.86
17.63	15TH	6.94
17.81	20TH	7.01
17.96	25TH	7.07
18.10	30TH	7.13
18.23	35TH	7.18
18.35	40TH	7.23
18.47	45TH	7.27
18.59	50TH	7.32
18.71	55TH	7.37
18.83	60TH	7.41
18.96	65TH	7.46
19.09	70TH	7.52
19.23	75TH	7.57
19.39	80TH	7.63
19.57	85TH	7.71
19.81	90TH	7.80
20.16	95TH	7.94
20.40	97TH	8.03
20.57	98TH	8.10
20.85	99TH	8.21

PERCENTILES		
CENTIMETERS		INCHES
17.15	1ST	6.75
17.50	2ND	6.89
17.70	3RD	6.97
17.95	5TH	7.07
18.32	10TH	7.21
18.54	15TH	7.30
18.72	20TH	7.37
18.86	25TH	7.43
18.99	30TH	7.48
19.11	35TH	7.52
19.22	40TH	7.57
19.33	45TH	7.61
19.44	50TH	7.65
19.55	55TH	7.70
19.66	60TH	7.74
19.78	65TH	7.79
19.90	70TH	7.83
20.03	75TH	7.89
20.19	80TH	7.95
20.37	85TH	8.02
20.60	90TH	8.11
20.95	95TH	8.25
21.19	97TH	8.34
21.36	98TH	8.41
21.63	99TH	8.52

(III) CHIN-TO-TOPI OF HEAD

The vertical distance between the projection landmark on the front of the chin and the horizontal plane tangent to the top of the head is measured.



VARIABLE NO. (H11)—CHIN-TOP OF HEAD

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
20.44	MEAN	8.05
0.05	SE (MEAN)	0.02
0.84	ST DEV	0.33
0.03	SE (SD)	0.01
17.69	MINIMUM	6.96
23.01	MAXIMUM	9.06
COEFF. OF VARIATION		4.1%
SYMMETRY—VEIA I		0.07
KURTOSIS—VEIA II		3.28
NUMBER OF SUBJECTS		334

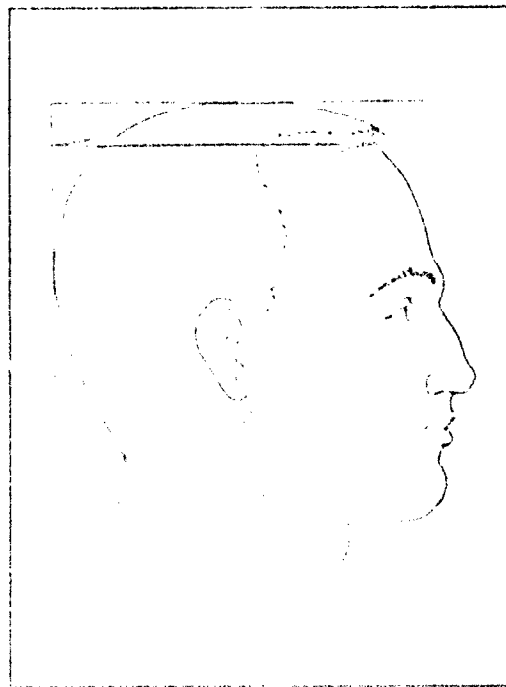
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
21.65	MEAN	8.52
0.04	SE (MEAN)	0.02
0.82	ST DEV	0.32
0.03	SE (SD)	0.01
19.29	MINIMUM	7.59
23.81	MAXIMUM	9.37
COEFF. OF VARIATION		3.8%
SYMMETRY—VEIA I		-0.08
KURTOSIS—VEIA II		2.88
NUMBER OF SUBJECTS		474

PERCENTILES		
CENTIMETERS		INCHES
18.51	1ST	7.29
18.79	2ND	7.40
18.95	3RD	7.46
19.15	5TH	7.54
19.43	10TH	7.65
19.61	15TH	7.72
19.76	20TH	7.78
19.88	25TH	7.83
19.99	30TH	7.87
20.10	35TH	7.91
20.20	40TH	7.95
20.30	45TH	7.99
20.40	50TH	8.03
20.50	55TH	8.07
20.61	60TH	8.11
20.72	65TH	8.16
20.84	70TH	8.20
20.97	75TH	8.26
21.13	80TH	8.32
21.30	85TH	8.39
21.53	90TH	8.48
21.87	95TH	8.61
22.09	97TH	8.69
22.24	98TH	8.76
22.46	99TH	8.84

PERCENTILES		
CENTIMETERS		INCHES
19.68	1ST	7.75
19.93	2ND	7.85
20.09	3RD	7.91
20.30	5TH	7.99
20.60	10TH	8.11
20.81	15TH	8.19
20.97	20TH	8.26
21.11	25TH	8.31
21.23	30TH	8.36
21.34	35TH	8.40
21.45	40TH	8.44
21.55	45TH	8.48
21.65	50TH	8.52
21.76	55TH	8.57
21.86	60TH	8.61
21.97	65TH	8.65
22.08	70TH	8.69
22.20	75TH	8.74
22.34	80TH	8.80
22.50	85TH	8.86
22.70	90TH	8.94
22.99	95TH	9.05
23.17	97TH	9.12
23.30	98TH	9.17
23.50	99TH	9.25

(HL2) CRIBION-INDEX OF HEAD

The horizontal distance between the cribion landmark on the lowest point of the hairline on the forehead and the vertical plane tangent to the back of the head is measured.



VARIABLE NO. (HL2)—CRINI—BACK OF HEAD

FEMALES

MALES

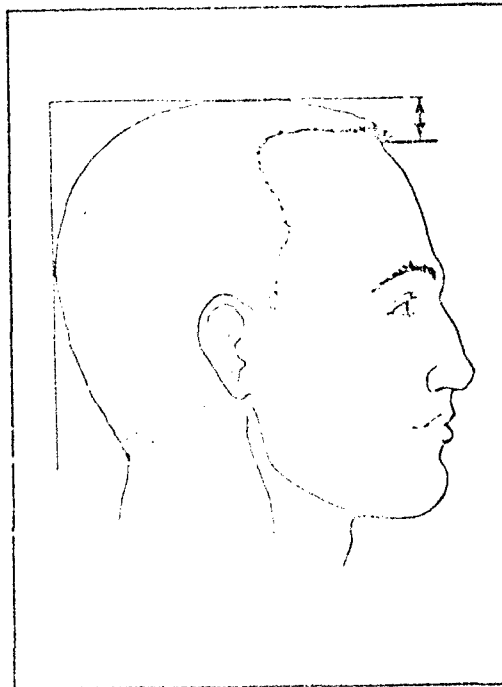
THE SUMMARY STATISTICS			THE SUMMARY STATISTICS		
CENTIMETERS		INCHES	CENTIMETERS		INCHES
18.07	MEAN	7.11	18.43	MEAN	7.26
0.05	SE(MEAN)	0.02	0.04	SE(MEAN)	0.02
0.87	ST DEV	0.34	0.88	ST DEV	0.35
0.03	SE(SD)	0.01	0.03	SE(SD)	0.01
15.69	MINIMUM	6.18	15.41	MINIMUM	6.07
20.46	MAXIMUM	8.06	20.77	MAXIMUM	8.18
COEFF. OF VARIATION		4.8%	COEFF. OF VARIATION		4.8%
SYMMETRY---VETA I		-0.09	SYMMETRY---VETA I		-0.16
KURTOSIS---VETA II		2.86	KURTOSIS---VETA II		3.11
NUMBER OF SUBJECTS		334	NUMBER OF SUBJECTS		469

PERCENTILES		
CENTIMETERS		INCHES
15.88	1ST	6.25
16.19	2ND	6.37
16.37	3RD	6.45
16.61	5TH	6.54
16.95	10TH	6.67
17.17	15TH	6.76
17.34	20TH	6.83
17.43	25TH	6.88
17.62	30TH	6.94
17.74	35TH	6.98
17.85	40TH	7.03
17.96	45TH	7.07
18.07	50TH	7.11
18.13	55TH	7.16
18.30	60TH	7.20
18.41	65TH	7.25
18.54	70TH	7.30
18.67	75TH	7.35
18.82	80TH	7.41
18.99	85TH	7.47
19.19	90TH	7.56
19.43	95TH	7.67
19.64	97TH	7.73
19.75	98TH	7.78
19.89	99TH	7.83

PERCENTILES		
CENTIMETERS		INCHES
16.16	1ST	6.36
16.54	2ND	6.51
16.75	3RD	6.59
17.00	5TH	6.69
17.35	10TH	6.83
17.56	15TH	6.91
17.72	20TH	6.98
17.85	25TH	7.03
17.98	30TH	7.08
18.09	35TH	7.12
18.20	40TH	7.16
18.31	45TH	7.21
18.41	50TH	7.25
18.52	55TH	7.29
18.64	60TH	7.34
18.76	65TH	7.38
18.83	70TH	7.43
19.02	75TH	7.49
19.13	80TH	7.55
19.36	85TH	7.62
19.59	90TH	7.71
19.90	95TH	7.83
20.07	97TH	7.90
20.13	98TH	7.95
20.31	99TH	8.00

(113) CRUCIAL-TOP OF HEAD

The vertical distance between the crinion landmark on the lowest point of the hairline on the forehead and the horizontal plane tangent to the top of the head is measured.



VARIABLE NO. (HL3) — CRINION-TOP OF HEAL

FEMALES

MALES

THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
4.23	MEAN	1.67	
0.05	SE (MEAN)	0.02	
0.88	ST DEV	0.35	
0.03	SE (SD)	0.01	
2.32	MINIMUM	0.91	
6.78	MAXIMUM	2.67	
COEFF. OF VARIATION		20.7%	
SYMMETRY—VEVA I		0.22	
KURTOSIS—VEVA II		2.78	
NUMBER OF SUBJECTS		334	

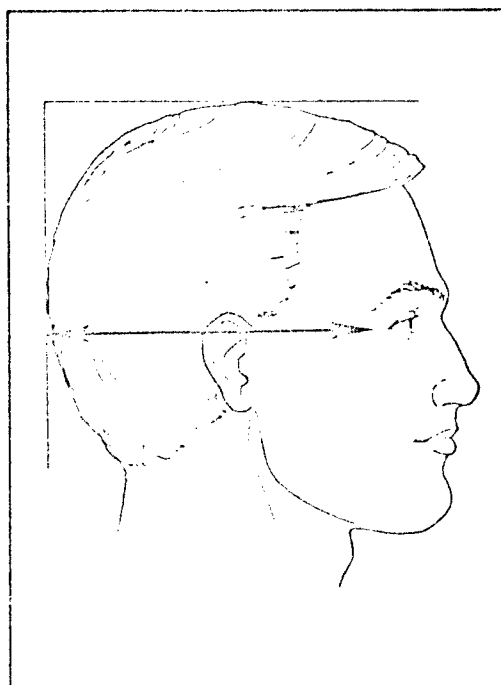
THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
4.18	MEAN	1.65	
0.05	SE (MEAN)	0.02	
0.98	ST DEV	0.39	
0.03	SE (SD)	0.01	
1.65	MINIMUM	0.65	
8.67	MAXIMUM	3.41	
COEFF. OF VARIATION		23.4%	
SYMMETRY—VEVA I		0.44	
KURTOSIS—VEVA II		3.75	
NUMBER OF SUBJECTS		469	

PERCENTILES		
CENTIMETERS		INCHES
2.48	1ST	0.98
2.58	2ND	1.02
2.67	3RD	1.05
2.81	5TH	1.11
3.08	10TH	1.21
3.28	15TH	1.29
3.45	20TH	1.36
3.60	25TH	1.42
3.73	30TH	1.47
3.86	35TH	1.52
3.98	40TH	1.57
4.10	45TH	1.61
4.21	50TH	1.66
4.32	55TH	1.70
4.44	60TH	1.75
4.56	65TH	1.79
4.68	70TH	1.84
4.82	75TH	1.90
4.97	80TH	1.96
5.15	85TH	2.03
5.38	90TH	2.12
5.73	95TH	2.26
5.98	97TH	2.35
6.17	98TH	2.43
6.51	99TH	2.56

PERCENTILES		
CENTIMETERS		INCHES
2.04	1ST	0.80
2.30	2ND	0.91
2.46	3RD	0.97
2.67	5TH	1.05
2.99	10TH	1.18
3.20	15TH	1.26
3.37	20TH	1.33
3.52	25TH	1.39
3.65	30TH	1.44
3.77	35TH	1.49
3.89	40TH	1.53
4.01	45TH	1.58
4.12	50TH	1.62
4.24	55TH	1.67
4.36	60TH	1.72
4.49	65TH	1.77
4.63	70TH	1.82
4.78	75TH	1.88
4.95	80TH	1.95
5.16	85TH	2.03
5.44	90TH	2.14
5.88	95TH	2.31
6.18	97TH	2.43
6.41	98TH	2.52
6.79	99TH	2.67

(HL4) ECTOCORBITALE-BACK OF HEAD

The horizontal distance between the ectocorbitale landmark just behind the bony eye socket at the level of the outer corner of the eye and the vertical plane tangent to the back of the head is measured. The values of the right and left dimensions are averaged.



VARIABLE NO. (HL4)—ECTOCORBITALE—BACK OF HEAD

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
15.36	MEAN	6.05
0.03	SE (MEAN)	0.01
0.58	ST DEV	0.23
0.02	SE (SD)	0.01
13.17	MINIMUM	5.19
16.93	MAXIMUM	6.67
COEFF. OF VARIATION		3.8%
SYMMETRY—VETA I	-0.19	
KURTOSIS—VETA II	3.53	
NUMBER OF SUBJECTS		334

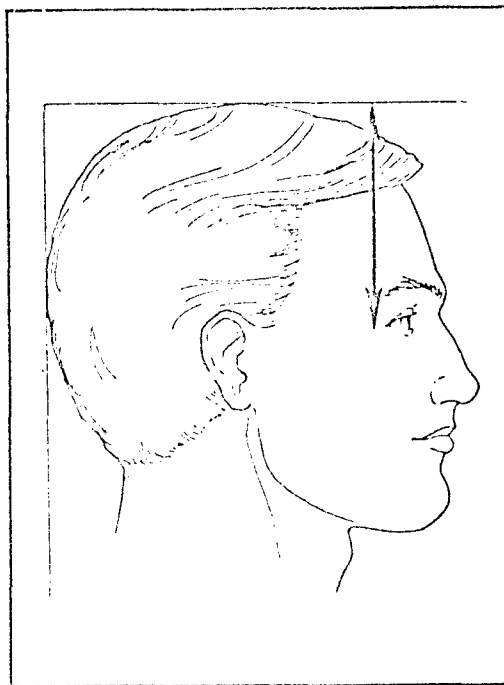
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
16.01	MEAN	6.30
0.03	SE (MEAN)	0.01
0.56	ST DEV	0.22
0.02	SE (SD)	0.01
14.03	MINIMUM	5.52
17.51	MAXIMUM	6.89
COEFF. OF VARIATION		3.5%
SYMMETRY—VETA I	0.06	
KURTOSIS—VETA II	3.01	
NUMBER OF SUBJECTS		474

PERCENTILES		
CENTIMETERS		INCHES
13.78	1ST	5.43
14.06	2ND	5.54
14.22	3RD	5.60
14.40	5TH	5.67
14.65	10TH	5.77
14.79	15TH	5.82
14.90	20TH	5.86
14.99	25TH	5.90
15.07	30TH	5.93
15.14	35TH	5.96
15.21	40TH	5.99
15.28	45TH	6.02
15.35	50TH	6.04
15.42	55TH	6.07
15.49	60TH	6.10
15.57	65TH	6.13
15.65	70TH	6.16
15.74	75TH	6.20
15.84	80TH	6.24
15.96	85TH	6.28
16.11	90TH	6.34
16.32	95TH	6.43
16.45	97TH	6.48
16.54	98TH	6.51
16.65	99TH	6.55

PERCENTILES		
CENTIMETERS		INCHES
14.71	1ST	5.79
14.89	2ND	5.86
15.00	3RD	5.90
15.13	5TH	5.96
15.32	10TH	6.03
15.44	15TH	6.08
15.54	20TH	6.12
15.62	25TH	6.15
15.70	30TH	6.18
15.77	35TH	6.21
15.84	40TH	6.24
15.91	45TH	6.26
15.98	50TH	6.29
16.05	55TH	6.32
16.13	60TH	6.35
16.20	65TH	6.38
16.29	70TH	6.41
16.38	75TH	6.45
16.48	80TH	6.49
16.60	85TH	6.54
16.76	90TH	6.60
16.97	95TH	6.68
17.10	97TH	6.73
17.19	98TH	6.77
17.31	99TH	6.82

(HL5) ECTOCORBITALE-TOP OF HEAD

The vertical distance between the ectocorbitale landmark just behind the bony eye socket at the level of the outer corner of the eye and the horizontal plane tangent to the top of the head is measured. The values of the right and left dimensions are averaged.



VARIABLE NO. (HL5)—ECTOCRANIALE—TOP OF HEAD

FEMALES

MALES

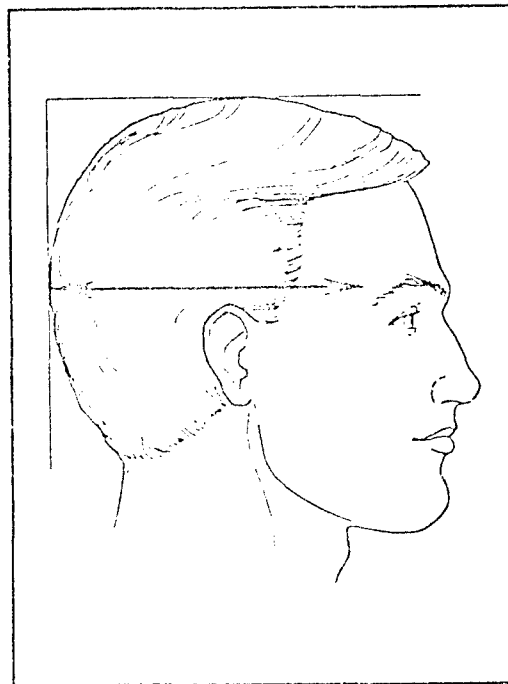
THE SUMMARY STATISTICS			THE SUMMARY STATISTICS		
CENTIMETERS		INCHES	CENTIMETERS		INCHES
11.23	MEAN	4.42	11.79	MEAN	4.64
0.03	SE(MEAN)	0.01	0.03	SE(MEAN)	0.01
0.58	ST DEV	0.23	0.56	ST DEV	0.22
0.02	SE(SD)	0.01	0.02	SE(SD)	0.01
9.69	MINIMUM	3.81	10.15	MINIMUM	4.00
13.05	MAXIMUM	5.14	13.64	MAXIMUM	5.37
COEFF. OF VARIATION		5.1%	COEFF. OF VARIATION		4.7%
SYMMETRY—VETA I		0.24	SYMMETRY—VETA I		0.11
KURTOSIS—VETA II		3.13	KURTOSIS—VETA II		3.08
NUMBER OF SUBJECTS		334	NUMBER OF SUBJECTS		474

PERCENTILES		
CENTIMETERS		INCHES
9.81	1ST	3.86
10.07	2ND	3.97
10.21	3RD	4.02
10.37	5TH	4.08
10.57	10TH	4.16
10.69	15TH	4.21
10.77	20TH	4.24
10.85	25TH	4.27
10.92	30TH	4.30
10.98	35TH	4.32
11.05	40TH	4.35
11.11	45TH	4.38
11.18	50TH	4.40
11.25	55TH	4.43
11.33	60TH	4.46
11.41	65TH	4.49
11.50	70TH	4.53
11.60	75TH	4.57
11.71	80TH	4.61
11.85	85TH	4.66
12.02	90TH	4.73
12.27	95TH	4.83
12.41	97TH	4.89
12.50	98TH	4.92
12.60	99TH	4.96

PERCENTILES		
CENTIMETERS		INCHES
10.46	1ST	4.12
10.65	2ND	4.19
10.76	3RD	4.24
10.90	5TH	4.29
11.10	10TH	4.37
11.23	15TH	4.42
11.33	20TH	4.46
11.42	25TH	4.50
11.50	30TH	4.53
11.57	35TH	4.56
11.64	40TH	4.58
11.71	45TH	4.61
11.77	50TH	4.64
11.84	55TH	4.66
11.91	60TH	4.69
11.99	65TH	4.72
12.07	70TH	4.75
12.15	75TH	4.78
12.25	80TH	4.82
12.37	85TH	4.87
12.52	90TH	4.93
12.74	95TH	5.02
12.89	97TH	5.07
12.99	98TH	5.12
13.16	99TH	5.18

(HL6) FRONTOTEMPORALE-BACK OF HEAD

The horizontal distance between the frontotemporale landmark on the temporal crest at the side of the forehead and the vertical plane tangent to the back of the head is measured. The values of the right and left dimensions are averaged.



VARIABLE NO. (HL6) — FRONTOTEMPORALE-BACK OF HEAD

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
16.66	MEAN	6.56
0.03	SE (MEAN)	0.01
0.59	ST DEV	0.23
0.02	SE (SD)	0.01
14.27	MINIMUM	5.62
18.20	MAXIMUM	7.17
COEFF. OF VARIATION		3.5%
SYMMETRY—VETA I		-0.35
KURTOSIS—VETA II		3.70
NUMBER OF SUBJECTS		334

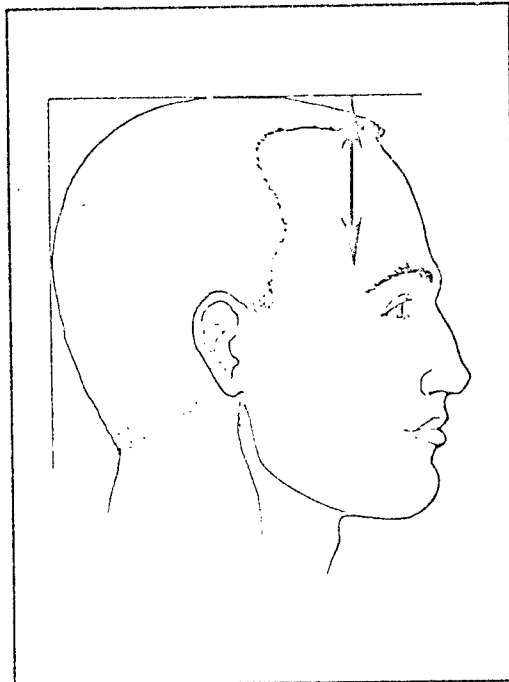
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
17.45	MEAN	6.87
0.03	SE (MEAN)	0.01
0.56	ST DEV	0.22
0.02	SE (SD)	0.01
15.87	MINIMUM	6.25
19.29	MAXIMUM	7.59
COEFF. OF VARIATION		3.2%
SYMMETRY—VETA I		0.10
KURTOSIS—VETA II		2.94
NUMBER OF SUBJECTS		474

PERCENTILES		
CENTIMETERS		INCHES
15.04	1ST	5.92
15.31	2ND	6.03
15.46	3RD	6.09
15.65	5TH	6.16
15.91	10TH	6.27
16.07	15TH	6.33
16.19	20TH	6.38
16.29	25TH	6.41
16.38	30TH	6.45
16.46	35TH	6.48
16.54	40TH	6.51
16.61	45TH	6.54
16.68	50TH	6.56
16.74	55TH	6.59
16.82	60TH	6.62
16.89	65TH	6.65
16.96	70TH	6.68
17.05	75TH	6.71
17.14	80TH	6.75
17.25	85TH	6.79
17.39	90TH	6.85
17.59	95TH	6.92
17.71	97TH	6.97
17.81	98TH	7.01
17.95	99TH	7.06

PERCENTILES		
CENTIMETERS		INCHES
16.12	1ST	6.35
16.30	2ND	6.42
16.41	3RD	6.46
16.55	5TH	6.52
16.75	10TH	6.59
16.88	15TH	6.65
16.98	20TH	6.69
17.07	25TH	6.72
17.15	30TH	6.75
17.22	35TH	6.78
17.29	40TH	6.81
17.36	45TH	6.84
17.43	50TH	6.86
17.50	55TH	6.89
17.58	60TH	6.92
17.65	65TH	6.95
17.74	70TH	6.98
17.83	75TH	7.02
17.93	80TH	7.06
18.04	85TH	7.10
18.19	90TH	7.16
18.40	95TH	7.24
18.53	97TH	7.30
18.62	98TH	7.33
18.74	99TH	7.38

(HL7) FRONTOTEMPORALE-TO-P TOP OF HEAD

The vertical distance between the frontotemporale landmark on the temporal crest at the side of the frontal, or forehead, bone above the browridges and the horizontal plane tangent to the top of the head is measured. The values of the right and left dimensions are averaged.



VARIABLE NO. (H17)—FRONTOTEMPERALE-TOP OF HEAD

FEMALES

MALES

THE SUMMARY STATISTICS
CENTIMETERS INCHES

8.55 MEAN 3.37
0.03 SE(MEAN) 0.01
0.60 ST DEV 0.24
0.02 SE(SD) 0.01

6.79 MINIMUM 2.67
10.23 MAXIMUM 4.03

COEFF. OF VARIATION 7.0%
SYMMETRY—VETA I 0.17
KURTOSIS—VETA II 3.18

NUMBER OF SUBJECTS 334

THE SUMMARY STATISTICS
CENTIMETERS INCHES

8.91 MEAN 3.51
0.03 SE(MEAN) 0.01
0.61 ST DEV 0.24
0.02 SE(SD) 0.01

7.34 MINIMUM 2.89
10.97 MAXIMUM 4.32

COEFF. OF VARIATION 6.9%
SYMMETRY—VETA I 0.20
KURTOSIS—VETA II 2.98

NUMBER OF SUBJECTS 474

PERCENTILES
CENTIMETERS INCHES

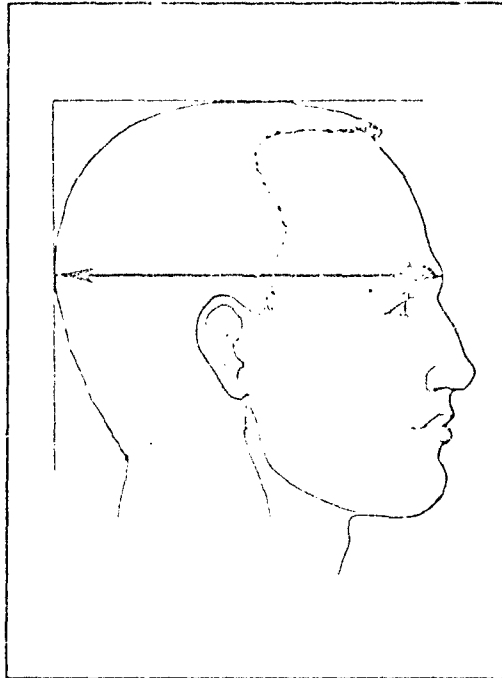
7.19 1ST 2.83
7.37 2ND 2.90
7.48 3RD 2.94
7.62 5TH 3.00
7.82 10TH 3.08
7.95 15TH 3.13
8.06 20TH 3.17
8.15 25TH 3.21
8.23 30TH 3.24
8.31 35TH 3.27
8.38 40TH 3.30
8.45 45TH 3.33
8.52 50TH 3.35
8.60 55TH 3.38
8.67 60TH 3.41
8.75 65TH 3.44
8.84 70TH 3.48
8.93 75TH 3.52
9.04 80TH 3.56
9.17 85TH 3.61
9.34 90TH 3.68
9.60 95TH 3.78
9.78 97TH 3.85
9.91 98TH 3.90
10.12 99TH 3.98

PERCENTILES
CENTIMETERS INCHES

7.60 1ST 2.99
7.72 2ND 3.04
7.81 3RD 3.07
7.93 5TH 3.12
8.13 10TH 3.20
8.28 15TH 3.26
8.40 20TH 3.31
8.50 25TH 3.35
8.59 30TH 3.38
8.67 35TH 3.41
8.75 40TH 3.44
8.83 45TH 3.48
8.90 50TH 3.50
8.98 55TH 3.53
9.05 60TH 3.56
9.13 65TH 3.60
9.22 70TH 3.63
9.31 75TH 3.66
9.41 80TH 3.71
9.54 85TH 3.76
9.70 90TH 3.82
9.95 95TH 3.92
10.14 97TH 3.99
10.28 98TH 4.05
10.53 99TH 4.14

(H13) GLABELLA-DECK OF HEAD

The horizontal distance between the glabella landmark on the forehead between the eyebrows and the vertical plane tangent to the back of the head is measured.



VARIABLE NO. (HLS)—GLABELLA—BACK OF HEAD

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
19.15	MEAN	7.54
0.04	SE (MEAN)	0.01
0.64	ST DEV	0.25
0.03	SF (SD)	0.01
16.67	MINIMUM	6.56
20.68	MAXIMUM	8.14
COEFF. OF VARIATION		3.4%
SYMMETRY—VETA I		-0.39
KURTOSIS—VETA II		3.43
NUMBER OF SUBJECTS		334

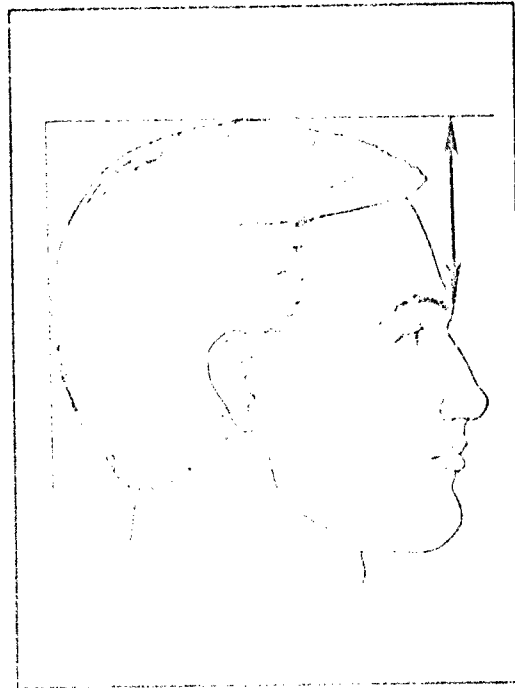
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
20.04	MEAN	7.89
0.03	SE (MEAN)	0.01
0.64	ST DEV	0.25
0.02	SE (SD)	0.01
17.91	MINIMUM	7.05
22.18	MAXIMUM	8.73
COEFF. OF VARIATION		3.2%
SYMMETRY—VETA I		-0.03
KURTOSIS—VETA II		3.19
NUMBER OF SUBJECTS		474

PERCENTILES		
CENTIMETERS		INCHES
17.37	1ST	6.84
17.69	2ND	6.96
17.86	3RD	7.03
18.07	5TH	7.11
18.35	10TH	7.22
18.52	15TH	7.29
18.65	20TH	7.34
18.75	25TH	7.38
18.85	30TH	7.42
18.93	35TH	7.45
19.01	40TH	7.48
19.09	45TH	7.52
19.17	50TH	7.55
19.25	55TH	7.58
19.33	60TH	7.61
19.41	65TH	7.64
19.50	70TH	7.68
19.59	75TH	7.71
19.70	80TH	7.76
19.82	85TH	7.81
19.98	90TH	7.86
20.19	95TH	7.95
20.31	97TH	7.99
20.38	98TH	8.02
20.47	99TH	8.06

PERCENTILES		
CENTIMETERS		INCHES
18.56	1ST	7.31
18.73	2ND	7.37
18.84	3RD	7.42
18.99	5TH	7.48
19.22	10TH	7.57
19.38	15TH	7.63
19.51	20TH	7.68
19.61	25TH	7.72
19.71	30TH	7.76
19.80	35TH	7.80
19.88	40TH	7.83
19.96	45TH	7.86
20.04	50TH	7.89
20.13	55TH	7.92
20.21	60TH	7.95
20.29	65TH	7.99
20.38	70TH	8.02
20.47	75TH	8.06
20.57	80TH	8.10
20.70	85TH	8.15
20.85	90TH	8.21
21.07	95TH	8.30
21.22	97TH	8.35
21.33	98TH	8.40
21.49	99TH	8.46

(M19) GAMBIA-TOP OF HEAD

The vertical distance between the glabella landmark on the forehead and the horizontal plane tangent to the top of the head is measured.



VARIABLE NO. (219)—GLABELLA—TOP OF HEAD

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
8.86	MEAN	3.49
0.04	SE (MEAN)	0.02
0.67	ST DEV	0.27
0.03	SE (SD)	0.01
7.25	MINIMUM	2.85
11.00	MAXIMUM	4.33
COEFF. OF VARIATION		7.6%
SYMMETRY—VEITA I		0.33
KURTOSIS—VEITA II		3.10
NUMBER OF SUBJECTS		334

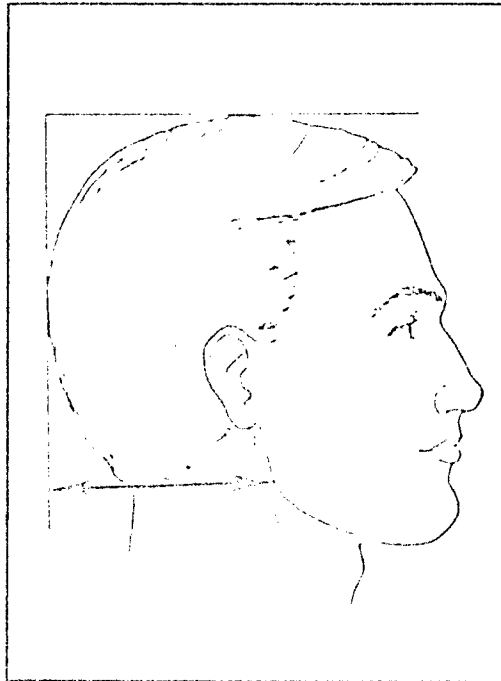
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
9.72	MEAN	3.83
0.03	SE (MEAN)	0.01
0.66	ST DEV	0.26
0.02	SE (SD)	0.01
7.90	MINIMUM	3.11
12.10	MAXIMUM	4.76
COEFF. OF VARIATION		6.8%
SYMMETRY—VEITA I		0.15
KURTOSIS—VEITA II		3.11
NUMBER OF SUBJECTS		474

PERCENTILES		
CENTIMETERS		INCHES
7.39	1ST	2.91
7.56	2ND	2.98
7.67	3RD	3.02
7.81	5TH	3.07
8.03	10TH	3.16
8.17	15TH	3.22
8.29	20TH	3.26
8.39	25TH	3.30
8.48	30TH	3.34
8.57	35TH	3.37
8.65	40TH	3.41
8.73	45TH	3.44
8.82	50TH	3.47
8.90	55TH	3.50
8.99	60TH	3.54
9.08	65TH	3.57
9.17	70TH	3.61
9.28	75TH	3.65
9.41	80TH	3.70
9.55	85TH	3.76
9.75	90TH	3.84
10.05	95TH	3.95
10.25	97TH	4.03
10.40	98TH	4.10
10.65	99TH	4.19

PERCENTILES		
CENTIMETERS		INCHES
8.20	1ST	3.23
8.39	2ND	3.30
8.50	3RD	3.35
8.66	5TH	3.41
8.89	10TH	3.50
9.04	15TH	3.56
9.16	20TH	3.61
9.27	25TH	3.65
9.36	30TH	3.69
9.45	35TH	3.72
9.54	40TH	3.76
9.62	45TH	3.79
9.70	50TH	3.82
9.78	55TH	3.85
9.87	60TH	3.89
9.96	65TH	3.92
10.05	70TH	3.96
10.15	75TH	4.00
10.27	80TH	4.04
10.41	85TH	4.10
10.53	90TH	4.16
10.84	95TH	4.27
11.00	97TH	4.33
11.12	98TH	4.33
11.30	99TH	4.45

(H20) CONICH-BACK OF HEAD

The horizontal distance between the gonion landmark on the corner of the jaw and the vertical plane tangent to the back of the head is measured. The values of the right and left dimensions are averaged.



VARIABLE NO. (H20) --- CONIC-BACK OF HEAD

FEMALES

MALES

THE SUMMARY STATISTICS

CENTIMETERS		INCHES
10.63	MEAN	4.19
0.04	SE (MEAN)	0.02
0.73	ST DEV	0.29
0.03	SE (SD)	0.01
8.35	MINIMUM	3.29
13.14	MAXIMUM	5.17
COEFF. OF VARIATION		6.9%
SYMMETRY---VEIA I		-0.01
KURIOSIS---VEIA II		3.33
NUMBER OF SUBJECTS		334

THE SUMMARY STATISTICS

CENTIMETERS		INCHES
11.50	MEAN	4.53
0.03	SE (MEAN)	0.01
0.63	ST DEV	0.27
0.02	SE (SD)	0.01
9.75	MINIMUM	3.84
14.03	MAXIMUM	5.52
COEFF. OF VARIATION		5.9%
SYMMETRY---VEIA I		0.35
KURIOSIS---VEIA II		3.34
NUMBER OF SUBJECTS		474

PERCENTILES

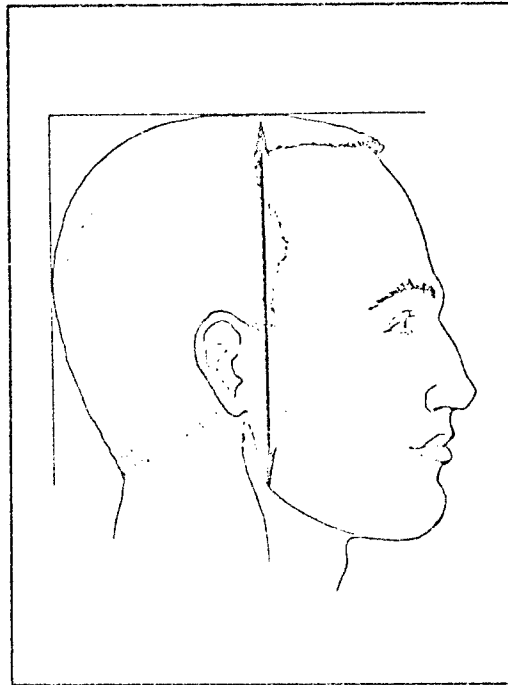
CENTIMETERS		INCHES
8.93	1ST	3.52
9.12	2ND	3.59
9.24	3RD	3.64
9.42	5TH	3.71
9.69	10TH	3.82
9.88	15TH	3.89
10.03	20TH	3.95
10.15	25TH	4.00
10.27	30TH	4.04
10.37	35TH	4.08
10.46	40TH	4.12
10.56	45TH	4.15
10.64	50TH	4.19
10.73	55TH	4.23
10.82	60TH	4.26
10.91	65TH	4.30
11.01	70TH	4.34
11.11	75TH	4.38
11.23	80TH	4.42
11.36	85TH	4.47
11.54	90TH	4.54
11.81	95TH	4.65
11.99	97TH	4.72
12.14	98TH	4.78
12.38	99TH	4.87

PERCENTILES

CENTIMETERS		INCHES
10.06	1ST	3.96
10.19	2ND	4.01
10.28	3RD	4.05
10.41	5TH	4.10
10.64	10TH	4.19
10.80	15TH	4.25
10.93	20TH	4.30
11.04	25TH	4.35
11.14	30TH	4.39
11.23	35TH	4.42
11.32	40TH	4.46
11.40	45TH	4.49
11.48	50TH	4.52
11.57	55TH	4.55
11.65	60TH	4.59
11.74	65TH	4.62
11.83	70TH	4.66
11.93	75TH	4.70
12.04	80TH	4.74
12.13	85TH	4.80
12.36	90TH	4.87
12.66	95TH	4.98
12.88	97TH	5.07
13.06	98TH	5.14
13.38	99TH	5.27

(H21) GONION-TO- TOP OF HEAD

The vertical distance between the gonion landmark on the corner of the jaw and the horizontal plane tangent to the top of the head is measured. The values of the right and left dimensions are averaged.



VARIABLE NO. (H21)--CONIC-TOP OF HEAD

FEMALES

MALES

THE SUMMARY STATISTICS

CENTIMETERS		INCHES
18.29	MEAN	7.20
0.04	SE (MEAN)	0.02
0.67	ST DEV	0.27
0.03	SE (SD)	0.01
16.61	MINIMUM	6.54
20.78	MAXIMUM	8.18
COEFF. OF VARIATION		3.7%
SYMMETRY---VETA I		0.37
KURTOSIS---VETA II		3.28
NUMBER OF SUBJECTS		334

THE SUMMARY STATISTICS

CENTIMETERS		INCHES
19.73	MEAN	7.77
0.03	SE (MEAN)	0.01
0.70	ST DEV	0.27
0.02	SE (SD)	0.01
17.78	MINIMUM	7.00
22.72	MAXIMUM	8.94
COEFF. OF VARIATION		3.5%
SYMMETRY---VETA I		0.22
KURTOSIS---VETA II		3.37
NUMBER OF SUBJECTS		474

PERCENTILES

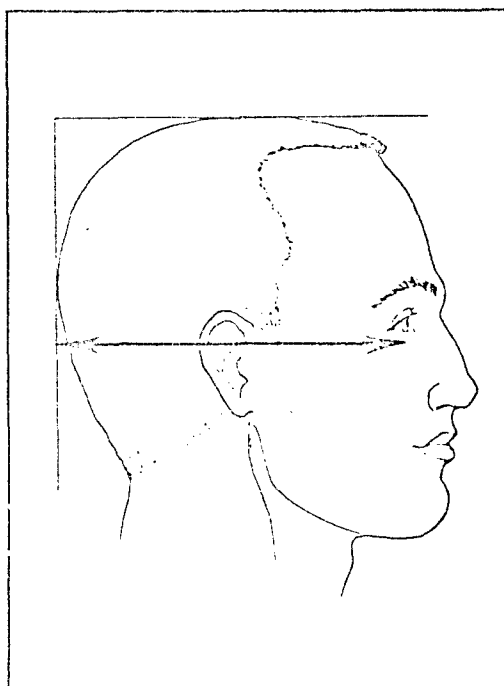
CENTIMETERS		INCHES
16.77	1ST	6.60
16.99	2ND	6.69
17.12	3RD	6.74
17.27	5TH	6.80
17.49	10TH	6.89
17.63	15TH	6.94
17.74	20TH	6.98
17.83	25TH	7.02
17.92	30TH	7.06
18.00	35TH	7.09
18.08	40TH	7.12
18.16	45TH	7.15
18.24	50TH	7.18
18.33	55TH	7.22
18.41	60TH	7.25
18.51	65TH	7.29
18.61	70TH	7.32
18.72	75TH	7.37
18.85	80TH	7.42
19.00	85TH	7.48
19.20	90TH	7.56
19.50	95TH	7.68
19.69	97TH	7.75
19.83	98TH	7.81
20.04	99TH	7.89

PERCENTILES

CENTIMETERS		INCHES
18.22	1ST	7.17
18.36	2ND	7.23
18.46	3RD	7.27
18.61	5TH	7.32
18.84	10TH	7.42
19.01	15TH	7.48
19.14	20TH	7.53
19.26	25TH	7.58
19.36	30TH	7.62
19.46	35TH	7.66
19.55	40TH	7.70
19.64	45TH	7.73
19.73	50TH	7.77
19.82	55TH	7.80
19.91	60TH	7.84
20.00	65TH	7.87
20.10	70TH	7.91
20.20	75TH	7.95
20.32	80TH	8.00
20.45	85TH	8.05
20.62	90TH	8.12
20.86	95TH	8.21
21.02	97TH	8.28
21.14	98TH	8.32
21.32	99TH	8.39

(H22) INFRACRIBITALE-BACK OF HEAD

The horizontal distance between the infraorbitale landmark on the bony eye socket under the eye and the vertical plane tangent to the back of the head is measured. The values of the right and left dimensions are averaged.

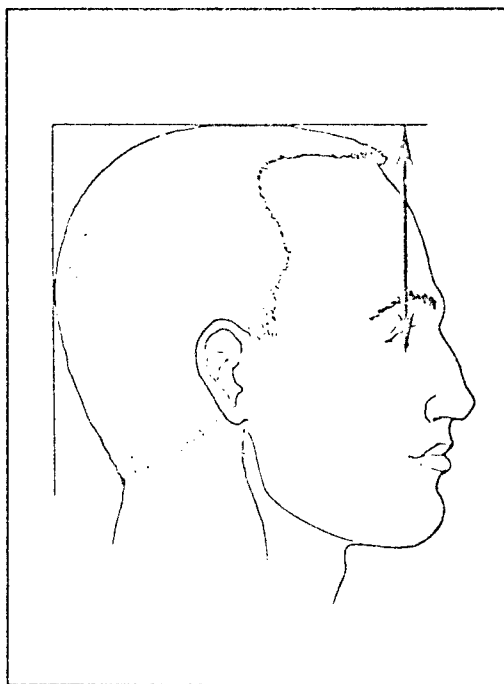


VARIABLE NO. (H22)—INFRAORBITALE-PAK OF HEAD

FEMALES			MALES		
THE SUMMARY STATISTICS			THE SUMMARY STATISTICS		
CENTIMETERS		INCHES	CENTIMETERS		INCHES
17.56	MEAN	6.91	18.08	MEAN	7.12
0.04	SE (MEAN)	0.01	0.03	SE (MEAN)	0.01
0.63	ST DEV	0.25	0.59	ST DEV	0.23
0.03	SE (SD)	0.01	0.02	SE (SD)	0.01
15.25	MINIMUM	6.00	16.44	MINIMUM	6.47
19.00	MAXIMUM	7.48	19.54	MAXIMUM	7.69
COEFF. OF VARIATION		3.6%	COEFF. OF VARIATION		3.3%
SYMMETRY—VETA I		-0.26	SYMMETRY—VETA I		0.01
KURTOSIS—VETA II		3.45	KURTOSIS—VETA II		2.80
NUMBER OF SUBJECTS		334	NUMBER OF SUBJECTS		474
PERCENTILES			PERCENTILES		
CENTIMETERS		INCHES	CENTIMETERS		INCHES
15.76	1ST	6.20	16.63	1ST	6.55
16.13	2ND	6.35	16.85	2ND	6.63
16.33	3RD	6.43	16.97	3RD	6.58
16.55	5TH	6.52	17.12	5TH	6.74
16.82	10TH	6.62	17.34	10TH	6.83
16.97	15TH	6.68	17.48	15TH	6.88
17.08	20TH	6.72	17.58	20TH	6.92
17.17	25TH	6.76	17.68	25TH	6.96
17.25	30TH	6.79	17.76	30TH	6.99
17.32	35TH	6.82	17.84	35TH	7.02
17.40	40TH	6.85	17.91	40TH	7.05
17.47	45TH	6.88	17.99	45TH	7.08
17.54	50TH	6.91	18.06	50TH	7.11
17.62	55TH	6.94	18.14	55TH	7.14
17.70	60TH	6.97	18.21	60TH	7.17
17.79	65TH	7.00	18.30	65TH	7.20
17.88	70TH	7.04	18.38	70TH	7.24
17.98	75TH	7.08	18.48	75TH	7.27
18.10	80TH	7.13	18.58	80TH	7.32
18.23	85TH	7.18	18.71	85TH	7.36
18.40	90TH	7.24	18.87	90TH	7.43
18.63	95TH	7.34	19.09	95TH	7.52
18.75	97TH	7.38	19.22	97TH	7.57
18.82	98TH	7.41	19.32	98TH	7.60
18.87	99TH	7.43	19.44	99TH	7.65

(H23) INFRACRIBITALE-TOPI OF HEAD

The vertical distance between the infraorbitale landmark on the bony eye socket under the eye and the horizontal plane tangent to the top of the head is measured. The values of the right and left dimensions are averaged.



VARIABLE NO. (H23)—INFRAORBITALE-TCP OF HEAD

FEMALES

MALES

THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
12.49	MEAN	4.92	
0.03	SE (MEAN)	0.01	
0.57	ST DEV	0.22	
0.02	SE (SD)	0.01	
10.77	MINIMUM	4.24	
14.17	MAXIMUM	5.58	
COEFF. OF VARIATION		4.6%	
SYMMETRY—VETA I		0.10	
KURTOSIS—VETA II		3.18	
NUMBER OF SUBJECTS		334	

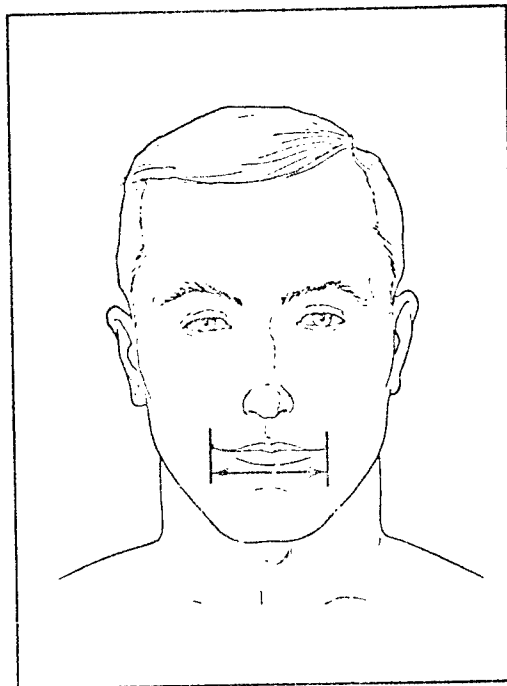
THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
13.06	MEAN	5.14	
0.03	SE (MEAN)	0.01	
0.55	ST DEV	0.22	
0.02	SE (SD)	0.01	
11.51	MINIMUM	4.53	
14.82	MAXIMUM	5.83	
COEFF. OF VARIATION		4.2%	
SYMMETRY—VETA I		0.13	
KURTOSIS—VETA II		2.93	
NUMBER OF SUBJECTS		474	

PERCENTILES		
CENTIMETERS		INCHES
11.06	1ST	4.35
11.30	2ND	4.45
11.43	3RD	4.50
11.59	5TH	4.56
11.80	10TH	4.65
11.93	15TH	4.70
12.02	20TH	4.73
12.11	25TH	4.77
12.18	30TH	4.80
12.25	35TH	4.82
12.32	40TH	4.85
12.39	45TH	4.88
12.46	50TH	4.90
12.53	55TH	4.93
12.60	60TH	4.96
12.68	65TH	4.99
12.76	70TH	5.02
12.85	75TH	5.06
12.96	80TH	5.10
13.08	85TH	5.15
13.24	90TH	5.21
13.47	95TH	5.31
13.61	97TH	5.36
13.71	98TH	5.40
13.84	99TH	5.45

PERCENTILES		
CENTIMETERS		INCHES
11.82	1ST	4.65
11.96	2ND	4.71
12.05	3RD	4.74
12.17	5TH	4.79
12.35	10TH	4.86
12.48	15TH	4.91
12.59	20TH	4.95
12.68	25TH	4.99
12.76	30TH	5.02
12.84	35TH	5.05
12.91	40TH	5.08
12.98	45TH	5.11
13.05	50TH	5.14
13.12	55TH	5.16
13.19	60TH	5.19
13.27	65TH	5.22
13.34	70TH	5.25
13.43	75TH	5.29
13.52	80TH	5.32
13.64	85TH	5.37
13.78	90TH	5.42
13.98	95TH	5.51
14.11	97TH	5.56
14.21	98TH	5.59
14.36	99TH	5.65

(H24) LIP LENGTH

The straight-line distance between the right and left cheilion landmarks at the corners of the closed mouth is measured.



VARIABLE NO. (F24)—LIP LENGTH

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
5.38	MEAN	2.12
0.02	SE (MEAN)	0.01
0.35	ST DEV	0.14
0.01	SE (SD)	0.01
4.24	MINIMUM	1.67
6.69	MAXIMUM	2.63
COEFF. OF VARIATION		6.6%
SYMMETRY—VETA I		0.00
KURTOSIS—VETA II		3.42
NUMBER OF SUBJECTS		334

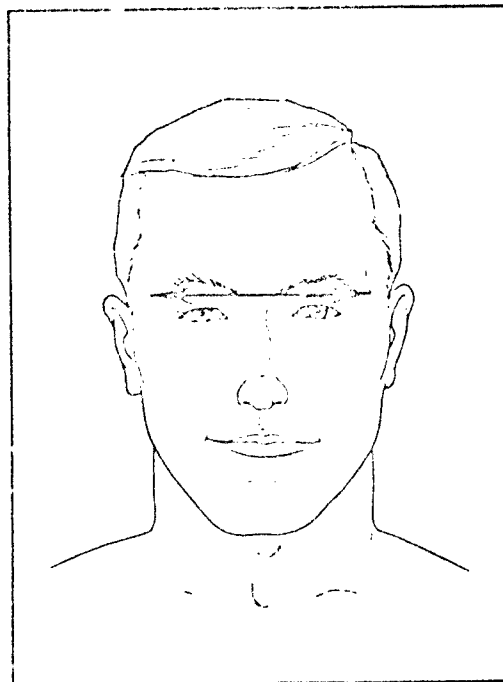
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
5.64	MEAN	2.22
0.02	SE (MEAN)	0.01
0.36	ST DEV	0.14
0.01	SE (SD)	0.01
4.61	MINIMUM	1.81
6.72	MAXIMUM	2.65
COEFF. OF VARIATION		6.5%
SYMMETRY—VETA I		0.15
KURTOSIS—VETA II		2.90
NUMBER OF SUBJECTS		474

PERCENTILES		
CENTIMETERS		INCHES
4.52	1ST	1.78
4.63	2ND	1.82
4.69	3RD	1.85
4.78	5TH	1.88
4.93	10TH	1.94
5.02	15TH	1.98
5.09	20TH	2.01
5.15	25TH	2.03
5.21	30TH	2.05
5.26	35TH	2.07
5.30	40TH	2.09
5.35	45TH	2.10
5.39	50TH	2.12
5.43	55TH	2.14
5.47	60TH	2.15
5.51	65TH	2.17
5.56	70TH	2.19
5.61	75TH	2.21
5.66	80TH	2.23
5.73	85TH	2.25
5.81	90TH	2.29
5.95	95TH	2.34
6.04	97TH	2.38
6.12	98TH	2.41
6.26	99TH	2.46

PERCENTILES		
CENTIMETERS		INCHES
4.83	1ST	1.90
4.93	2ND	1.94
4.99	3RD	1.97
5.07	5TH	2.00
5.19	10TH	2.04
5.27	15TH	2.07
5.33	20TH	2.10
5.38	25TH	2.12
5.44	30TH	2.14
5.48	35TH	2.16
5.53	40TH	2.18
5.57	45TH	2.19
5.62	50TH	2.21
5.67	55TH	2.23
5.71	60TH	2.25
5.77	65TH	2.27
5.82	70TH	2.29
5.88	75TH	2.31
5.94	80TH	2.34
6.02	85TH	2.37
6.12	90TH	2.41
6.26	95TH	2.46
6.34	97TH	2.50
6.40	98TH	2.52
6.48	99TH	2.55

(125) INTERIOR FACIAL BREADTH

The straight-line distance between the right and left zygofrontale landmarks at the upper margin of each bony eye socket is measured.



VARIABLE NO. (H25)—MAXIMUM FRONTAL BREADTH

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
11.04	MEAN	4.35
0.03	SE(MEAN)	0.01
0.49	ST DEV	0.19
0.02	SE(SD)	0.01
9.53	MINIMUM	3.75
12.54	MAXIMUM	4.94
COEFF. OF VARIATION		4.4%
SYMMETRY—VETA I		-0.09
KURTOSIS—VETA II		3.11
NUMBER OF SUBJECTS		334

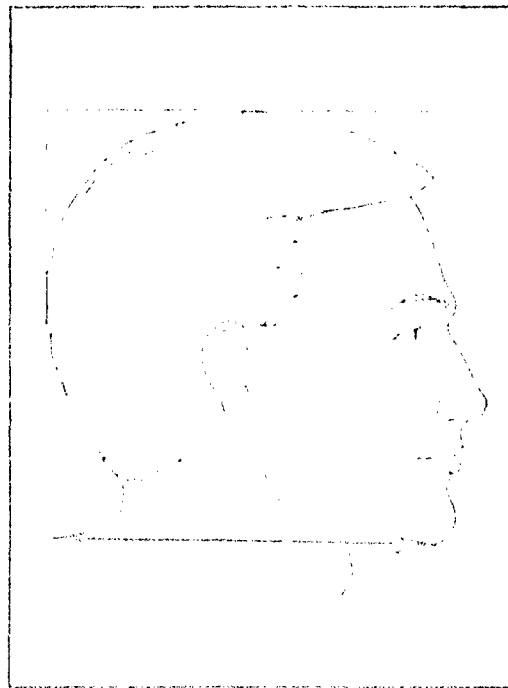
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
11.15	MEAN	4.39
0.02	SE(MEAN)	0.01
0.47	ST DEV	0.19
0.02	SE(SD)	0.01
9.82	MINIMUM	3.87
12.95	MAXIMUM	5.10
COEFF. OF VARIATION		4.2%
SYMMETRY—VETA I		0.42
KURTOSIS—VETA II		3.47
NUMBER OF SUBJECTS		474

PERCENTILES		
CENTIMETERS		INCHES
9.74	1ST	3.84
9.96	2ND	3.92
10.09	3RD	3.97
10.24	5TH	4.03
10.44	10TH	4.11
10.56	15TH	4.16
10.65	20TH	4.19
10.72	25TH	4.22
10.79	30TH	4.25
10.85	35TH	4.27
10.91	40TH	4.30
10.97	45TH	4.32
11.03	50TH	4.34
11.09	55TH	4.37
11.15	60TH	4.39
11.22	65TH	4.42
11.28	70TH	4.44
11.36	75TH	4.47
11.43	80TH	4.51
11.55	85TH	4.55
11.63	90TH	4.60
11.86	95TH	4.67
11.97	97TH	4.71
12.05	98TH	4.74
12.15	99TH	4.78

PERCENTILES		
CENTIMETERS		INCHES
10.15	1ST	4.00
10.27	2ND	4.04
10.35	3RD	4.07
10.44	5TH	4.11
10.59	10TH	4.17
10.69	15TH	4.21
10.77	20TH	4.24
10.83	25TH	4.27
10.89	30TH	4.29
10.95	35TH	4.31
11.01	40TH	4.33
11.06	45TH	4.35
11.12	50TH	4.38
11.17	55TH	4.40
11.23	60TH	4.42
11.29	65TH	4.45
11.36	70TH	4.47
11.43	75TH	4.50
11.52	80TH	4.53
11.62	85TH	4.58
11.76	90TH	4.63
11.93	95TH	4.72
12.13	97TH	4.78
12.25	98TH	4.82
12.45	99TH	4.90

(126) MENTON-BACK OF HEAD

The horizontal distance between the menton landmark at the bottom of the chin and the vertical plane tangent to the back of the head is measured.



VARIABLE NO. (H26)—MENTON-BACK OF HEAD

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
17.27	MEAN	6.80
0.05	SE(MEAN)	0.02
0.99	ST DEV	0.39
0.04	SE(SD)	0.02
14.08	MINIMUM	5.54
19.94	MAXIMUM	7.85
COEFF. OF VARIATION		5.7%
SYMMETRY—VETA I	-0.02	
KURTOSIS—VETA II	3.04	
NUMBER OF SUBJECTS		334

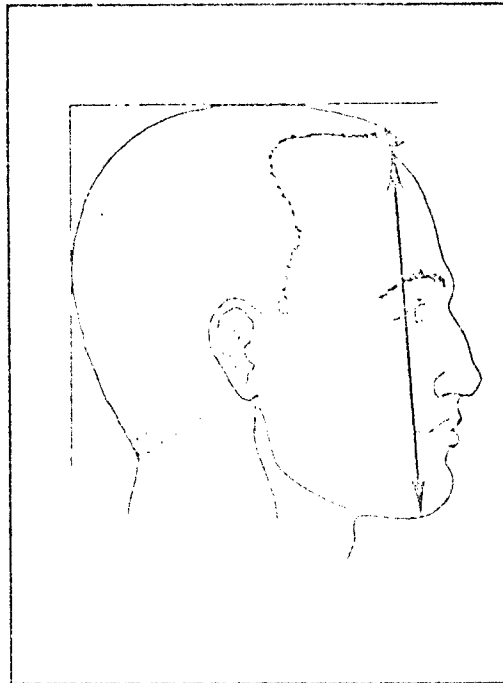
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
18.40	MEAN	7.24
0.04	SE(MEAN)	0.02
0.95	ST DEV	0.37
0.03	SE(SD)	0.01
15.38	MINIMUM	6.06
21.03	MAXIMUM	8.28
COEFF. OF VARIATION		5.1%
SYMMETRY—VETA I	0.06	
KURTOSIS—VETA II	3.24	
NUMBER OF SUBJECTS		474

PERCENTILES		
CENTIMETERS		INCHES
14.91	1ST	5.87
15.21	2ND	5.99
15.40	3RD	6.06
15.64	5TH	6.16
16.01	10TH	6.31
16.26	15TH	6.40
16.45	20TH	6.43
16.61	25TH	6.54
16.76	30TH	6.60
16.89	35TH	6.65
17.02	40TH	6.70
17.14	45TH	6.75
17.26	50TH	6.80
17.38	55TH	6.84
17.51	60TH	6.89
17.63	65TH	6.94
17.76	70TH	6.99
17.91	75TH	7.05
18.07	80TH	7.12
18.26	85TH	7.19
18.51	90TH	7.29
18.89	95TH	7.44
19.14	97TH	7.54
19.33	98TH	7.61
19.65	99TH	7.73

PERCENTILES		
CENTIMETERS		INCHES
16.01	1ST	6.31
16.39	2ND	6.45
16.61	3RD	6.54
16.87	5TH	6.64
17.24	10TH	6.79
17.47	15TH	6.83
17.64	20TH	6.95
17.79	25TH	7.01
17.92	30TH	7.06
18.04	35TH	7.10
18.16	40TH	7.15
18.27	45TH	7.19
18.39	50TH	7.24
18.50	55TH	7.28
18.62	60TH	7.33
18.74	65TH	7.38
18.88	70TH	7.43
19.02	75TH	7.49
19.18	80TH	7.55
19.38	85TH	7.63
19.63	90TH	7.73
19.99	95TH	7.87
20.22	97TH	7.96
20.38	98TH	8.02
20.62	99TH	8.12

(H27) MENTON-CRINION LENGTH

The straight-line distance between the menton landmark at the bottom of the chin and the crinion landmark on the lowest point of the hairline on the forehead is measured.



VARIABLE NO. (H27) — MENICN—CRINICN LENGTH

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
17.69	MEAN	6.97
0.05	SE (MEAN)	0.02
0.89	ST DEV	0.35
0.03	SE (SD)	0.01
15.33	MINIMUM	6.04
19.97	MAXIMUM	7.86
COEFF. OF VARIATION		5.0%
SYMMETRY—VETA I		-0.01
KURTOSIS—VETA II		2.84
NUMBER OF SUBJECTS		334

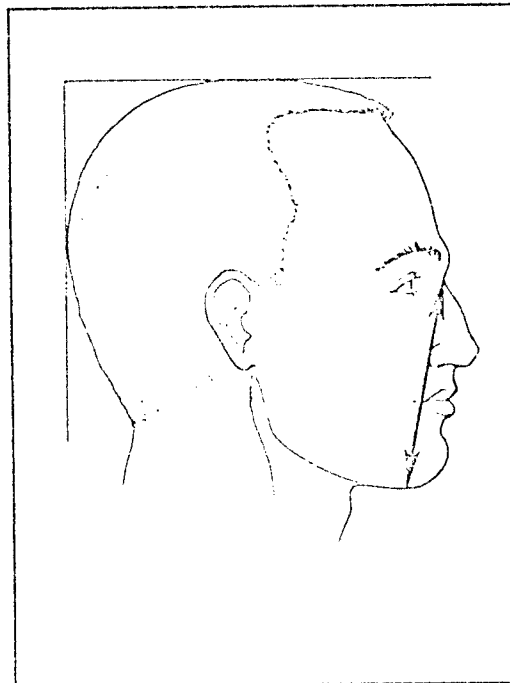
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
18.94	MEAN	7.46
0.05	SE (MEAN)	0.02
0.98	ST DEV	0.39
0.03	SE (SD)	0.01
15.53	MINIMUM	6.11
21.89	MAXIMUM	8.62
COEFF. OF VARIATION		5.2%
SYMMETRY—VETA I		0.05
KURTOSIS—VETA II		3.21
NUMBER OF SUBJECTS		469

PERCENTILES		
CENTIMETERS		INCHES
15.56	1ST	6.13
15.83	2ND	6.23
16.00	3RD	6.30
16.22	5TH	6.39
16.55	10TH	6.52
16.78	15TH	6.60
16.95	20TH	6.67
17.10	25TH	6.73
17.23	30TH	6.78
17.35	35TH	6.83
17.47	40TH	6.88
17.59	45TH	6.92
17.70	50TH	6.97
17.81	55TH	7.01
17.92	60TH	7.06
18.04	65TH	7.10
18.17	70TH	7.15
18.30	75TH	7.21
18.46	80TH	7.27
18.63	85TH	7.34
18.86	90TH	7.43
19.20	95TH	7.56
19.41	97TH	7.64
19.57	98TH	7.71
19.82	99TH	7.80

PERCENTILES		
CENTIMETERS		INCHES
16.74	1ST	6.59
16.95	2ND	6.68
17.11	3RD	6.73
17.33	5TH	6.82
17.69	10TH	6.96
17.93	15TH	7.06
18.13	20TH	7.14
18.30	25TH	7.20
18.45	30TH	7.26
18.58	35TH	7.31
18.71	40TH	7.37
18.83	45TH	7.41
18.95	50TH	7.46
19.07	55TH	7.51
19.18	60TH	7.55
19.31	65TH	7.60
19.43	70TH	7.65
19.57	75TH	7.71
19.73	80TH	7.77
19.91	85TH	7.84
20.15	90TH	7.94
20.55	95TH	8.09
20.83	97TH	8.20
21.06	98TH	8.29
21.46	99TH	8.45

(H23) MENTON-SELLION LENGTH

The straight-line distance between the menton landmark at the bottom of the chin and the sellion landmark on the deepest point of the root of the nose is measured.



VARIABLE NO. (H28) — NEWTON-SELLIGN LENGTH

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
11.50	MEAN	4.53
0.03	SE (MEAN)	0.01
0.61	ST DEV	0.24
0.02	SE (SD)	0.01
9.42	MINIMUM	3.71
13.42	MAXIMUM	5.28
COEFF. OF VARIATION		5.3%
SYMMETRY—VETA I		0.13
KURTOSIS—VETA II		3.28
NUMBER OF SUBJECTS		334

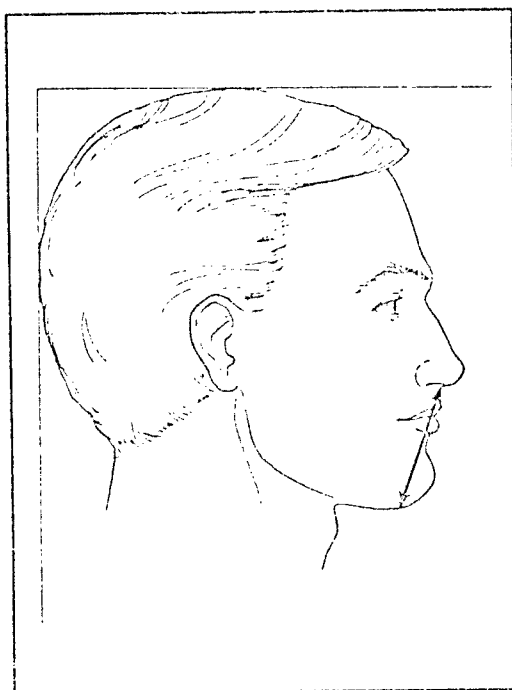
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
12.21	MEAN	4.81
0.03	SE (MEAN)	0.01
0.60	ST DEV	0.24
0.02	SE (SD)	0.01
10.48	MINIMUM	4.13
14.20	MAXIMUM	5.59
COEFF. OF VARIATION		4.9%
SYMMETRY—VETA I		0.17
KURTOSIS—VETA II		3.06
NUMBER OF SUBJECTS		474

PERCENTILES		
CENTIMETERS		INCHES
10.13	1ST	3.99
10.30	2ND	4.06
10.41	3RD	4.10
10.55	5TH	4.15
10.76	10TH	4.23
10.89	15TH	4.29
11.00	20TH	4.33
11.09	25TH	4.37
11.18	30TH	4.40
11.26	35TH	4.43
11.33	40TH	4.46
11.41	45TH	4.49
11.48	50TH	4.52
11.55	55TH	4.55
11.63	60TH	4.58
11.71	65TH	4.61
11.80	70TH	4.65
11.89	75TH	4.68
12.00	80TH	4.73
12.13	85TH	4.78
12.30	90TH	4.84
12.56	95TH	4.94
12.73	97TH	5.01
12.86	98TH	5.06
13.07	99TH	5.14

PERCENTILES		
CENTIMETERS		INCHES
10.93	1ST	4.30
11.03	2ND	4.34
11.11	3RD	4.37
11.22	5TH	4.42
11.43	10TH	4.50
11.57	15TH	4.56
11.69	20TH	4.60
11.79	25TH	4.64
11.88	30TH	4.68
11.97	35TH	4.71
12.05	40TH	4.74
12.12	45TH	4.77
12.20	50TH	4.80
12.27	55TH	4.83
12.35	60TH	4.86
12.43	65TH	4.89
12.51	70TH	4.93
12.60	75TH	4.96
12.70	80TH	5.00
12.82	85TH	5.05
12.98	90TH	5.11
13.23	95TH	5.21
13.41	97TH	5.28
13.55	98TH	5.34
13.81	99TH	5.44

(H29) MENTON-SUBNASALE LENGTH

The straight-line distance between the menton landmark at the bottom of the chin and the subnasale landmark under the nose is measured.



VARIABLE NO. (H29)—MENTON-SUENASALE LENGTH

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
6.78	MEAN	2.67
0.03	SE (MEAN)	0.01
0.52	ST DEV	0.20
0.02	SE (SD)	0.01
4.80	MINIMUM	1.89
8.39	MAXIMUM	3.30
COEFF. OF VARIATION		7.6%
SYMMETRY—VETA I		0.00
KURTOSIS—VETA II		3.65
NUMBER OF SUBJECTS		334

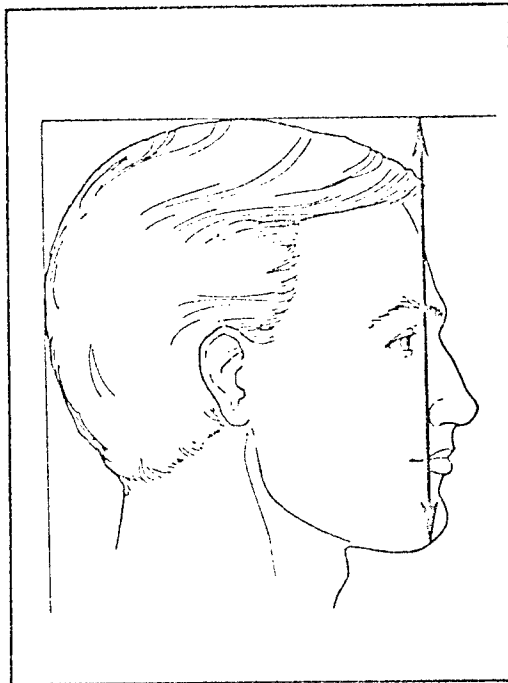
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
7.19	MEAN	2.83
0.02	SE (MEAN)	0.01
0.53	ST DEV	0.21
0.02	SE (SD)	0.01
5.35	MINIMUM	2.11
8.94	MAXIMUM	3.52
COEFF. OF VARIATION		7.4%
SYMMETRY—VETA I		-0.09
KURTOSIS—VETA II		3.50
NUMBER OF SUBJECTS		474

PERCENTILES		
CENTIMETERS		INCHES
5.45	1ST	2.15
5.68	2ND	2.24
5.81	3RD	2.29
5.97	5TH	2.35
6.17	10TH	2.43
6.29	15TH	2.48
6.39	20TH	2.51
6.46	25TH	2.54
6.53	30TH	2.57
6.59	35TH	2.60
6.65	40TH	2.62
6.71	45TH	2.64
6.76	50TH	2.66
6.82	55TH	2.69
6.89	60TH	2.71
6.95	65TH	2.74
7.02	70TH	2.76
7.10	75TH	2.80
7.19	80TH	2.83
7.30	85TH	2.87
7.44	90TH	2.93
7.65	95TH	3.01
7.79	97TH	3.07
7.89	98TH	3.10
8.04	99TH	3.16

PERCENTILES		
CENTIMETERS		INCHES
5.76	1ST	2.27
6.01	2ND	2.37
6.15	3RD	2.42
6.33	5TH	2.49
6.55	10TH	2.58
6.69	15TH	2.63
6.79	20TH	2.67
6.87	25TH	2.70
6.94	30TH	2.73
7.01	35TH	2.76
7.07	40TH	2.78
7.13	45TH	2.81
7.19	50TH	2.83
7.25	55TH	2.85
7.31	60TH	2.88
7.38	65TH	2.91
7.45	70TH	2.93
7.53	75TH	2.97
7.62	80TH	3.00
7.73	85TH	3.04
7.86	90TH	3.10
8.07	95TH	3.18
8.20	97TH	3.23
8.29	98TH	3.26
8.43	99TH	3.32

(HB0) MENTON-TOP OF HEAD

The vertical distance between the menton landmark at the bottom of the chin and the horizontal plane tangent to the top of the head is measured.



VARIABLE NO. (H30)—MENTON—TOP OF HEAD

FEMALES

MALES

THE SUMMARY STATISTICS
CENTIMETERS INCHES

21.86 MEAN 8.61
0.05 SE (MEAN) 0.02
0.86 ST DEV 0.34
0.03 SE (SD) 0.01

18.68 MINIMUM 7.35
24.26 MAXIMUM 9.55

COEFF. OF VARIATION 3.9%
SYMMETRY—VETA I 0.03
KURTOSIS—VETA II 3.20

NUMBER OF SUBJECTS 334

THE SUMMARY STATISTICS
CENTIMETERS INCHES

23.09 MEAN 9.09
0.04 SE (MEAN) 0.02
0.81 ST DEV 0.32
0.03 SE (SD) 0.01

20.89 MINIMUM 8.22
25.30 MAXIMUM 9.96

COEFF. OF VARIATION 3.5%
SYMMETRY—VETA I -0.10
KURTOSIS—VETA II 2.73

NUMBER OF SUBJECTS 474

PERCENTILES
CENTIMETERS INCHES

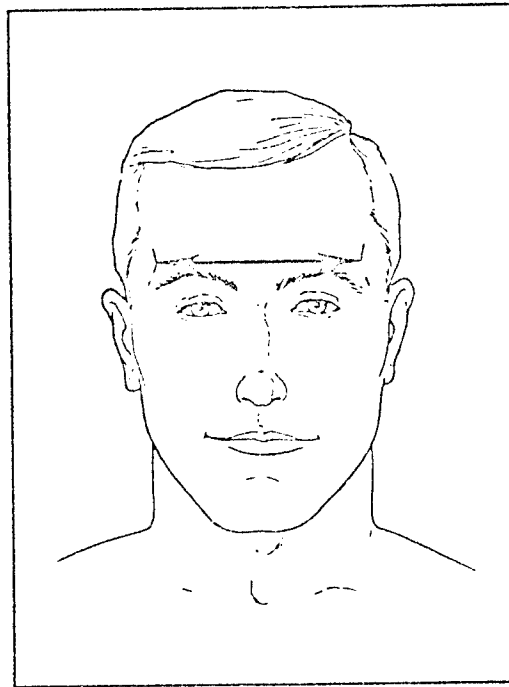
19.75 1ST 7.78
20.12 2ND 7.92
20.32 3RD 8.00
20.55 5TH 8.09
20.85 10TH 8.21
21.03 15TH 8.28
21.17 20TH 8.33
21.29 25TH 8.38
21.40 30TH 8.42
21.50 35TH 8.46
21.60 40TH 8.50
21.70 45TH 8.54
21.80 50TH 8.58
21.91 55TH 8.63
22.02 60TH 8.67
22.15 65TH 8.72
22.27 70TH 8.77
22.42 75TH 8.83
22.59 80TH 8.89
22.78 85TH 8.97
23.03 90TH 9.06
23.37 95TH 9.20
23.57 97TH 9.28
23.69 98TH 9.33
23.83 99TH 9.38

PERCENTILES
CENTIMETERS INCHES

21.21 1ST 8.35
21.38 2ND 8.42
21.51 3RD 8.47
21.69 5TH 8.54
22.00 10TH 8.66
22.21 15TH 8.74
22.39 20TH 8.81
22.54 25TH 8.87
22.67 30TH 8.92
22.79 35TH 8.97
22.90 40TH 9.02
23.01 45TH 9.06
23.12 50TH 9.10
23.22 55TH 9.14
23.33 60TH 9.18
23.43 65TH 9.23
23.54 70TH 9.27
23.66 75TH 9.31
23.79 80TH 9.36
23.93 85TH 9.42
24.11 90TH 9.49
24.37 95TH 9.60
24.55 97TH 9.66
24.68 98TH 9.72
24.90 99TH 9.80

(H31) MENSTRUATION BREADTH

The straight-line distance between the right and left frontotemporale landmarks on the temporal crests on each side of the forehead is measured.



VARIABLE NO. (H31)—MINIMUM FRONTAL BREADTH

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
10.32	MEAN	4.06
0.03	SE (MEAN)	0.01
0.46	ST DEV	0.18
0.02	SE (SD)	0.01
8.88	MINIMUM	3.50
11.87	MAXIMUM	4.67
COEFF. OF VARIATION		4.4%
SYMMETRY—VETA I		-0.10
KURTOSIS—VETA II		3.23
NUMBER OF SUBJECTS		334

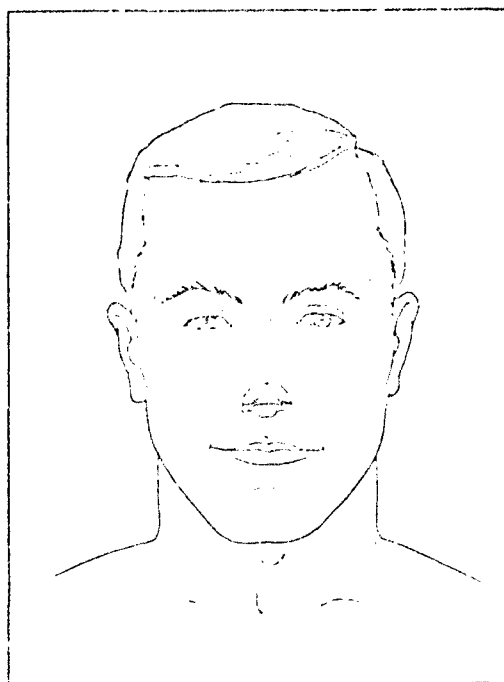
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
10.48	MEAN	4.13
0.02	SE (MEAN)	0.01
0.49	ST DEV	0.19
0.02	SE (SD)	0.01
9.21	MINIMUM	3.63
12.30	MAXIMUM	4.84
COEFF. OF VARIATION		4.6%
SYMMETRY—VETA I		0.19
KURTOSIS—VETA II		3.32
NUMBER OF SUBJECTS		474

PERCENTILES		
CENTIMETERS		INCHES
9.21	1ST	3.63
9.33	2ND	3.67
9.41	3RD	3.70
9.53	5TH	3.75
9.71	10TH	3.82
9.84	15TH	3.87
9.94	20TH	3.91
10.02	25TH	3.94
10.10	30TH	3.97
10.16	35TH	4.00
10.22	40TH	4.02
10.28	45TH	4.05
10.34	50TH	4.07
10.39	55TH	4.09
10.45	60TH	4.11
10.50	65TH	4.14
10.56	70TH	4.16
10.63	75TH	4.18
10.69	80TH	4.21
10.78	85TH	4.24
10.88	90TH	4.28
11.05	95TH	4.35
11.17	97TH	4.40
11.26	98TH	4.44
11.43	99TH	4.50

PERCENTILES		
CENTIMETERS		INCHES
9.38	1ST	3.69
9.50	2ND	3.74
9.58	3RD	3.77
9.69	5TH	3.81
9.86	10TH	3.88
9.98	15TH	3.93
10.08	20TH	3.97
10.15	25TH	4.00
10.23	30TH	4.03
10.30	35TH	4.06
10.36	40TH	4.08
10.42	45TH	4.10
10.48	50TH	4.13
10.54	55TH	4.15
10.60	60TH	4.17
10.66	65TH	4.20
10.73	70TH	4.22
10.80	75TH	4.25
10.88	80TH	4.28
10.97	85TH	4.32
11.10	90TH	4.37
11.29	95TH	4.45
11.43	97TH	4.50
11.54	98TH	4.54
11.73	99TH	4.62

(H32) NOSE BREADTH

The straight-line distance between the right and left alar landmarks on the sides of the nostrils is measured.



VARIABLE NO. (H22)—NOSE BREADTH

FEMALES

MALES

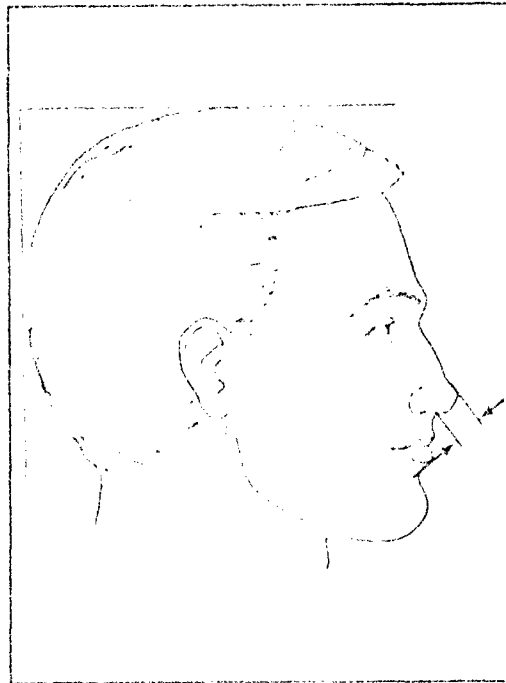
THE SUMMARY STATISTICS				THE SUMMARY STATISTICS			
CENTIMETERS		INCHES		CENTIMETERS		INCHES	
3.15	MEAN	1.24		3.46	MEAN	1.36	
0.02	SE (MEAN)	0.01		0.01	SE (MEAN)	0.01	
0.32	ST DEV	0.13		0.31	ST DEV	0.12	
0.01	SE (SD)	0.01		0.01	SE (SD)	0.01	
2.33	MINIMUM	0.92		2.78	MINIMUM	1.09	
4.46	MAXIMUM	1.76		5.13	MAXIMUM	2.02	
COEFF. OF VARIATION		10.1%		COEFF. OF VARIATION		8.9%	
SYMMETRY—VETA I		0.51		SYMMETRY—VETA I		0.93	
KURTOSIS—VETA II		3.94		KURTOSIS—VETA II		5.80	
NUMBER OF SUBJECTS		334		NUMBER OF SUBJECTS		474	

PERCENTILES		
CENTIMETERS		INCHES
2.53	1ST	1.00
2.58	2ND	1.02
2.61	3RD	1.03
2.67	5TH	1.05
2.77	10TH	1.09
2.84	15TH	1.12
2.89	20TH	1.14
2.94	25TH	1.16
2.98	30TH	1.18
3.02	35TH	1.19
3.06	40TH	1.21
3.10	45TH	1.22
3.14	50TH	1.23
3.17	55TH	1.25
3.21	60TH	1.26
3.25	65TH	1.28
3.29	70TH	1.30
3.34	75TH	1.31
3.39	80TH	1.34
3.45	85TH	1.36
3.54	90TH	1.39
3.69	95TH	1.45
3.80	97TH	1.50
3.89	98TH	1.53
4.06	99TH	1.60

PERCENTILES		
CENTIMETERS		INCHES
2.84	1ST	1.12
2.90	2ND	1.14
2.94	3RD	1.16
3.00	5TH	1.18
3.09	10TH	1.22
3.15	15TH	1.24
3.20	20TH	1.26
3.25	25TH	1.28
3.29	30TH	1.30
3.33	35TH	1.31
3.36	40TH	1.32
3.40	45TH	1.34
3.43	50TH	1.35
3.47	55TH	1.36
3.50	60TH	1.38
3.54	65TH	1.40
3.58	70TH	1.41
3.62	75TH	1.43
3.68	80TH	1.45
3.74	85TH	1.47
3.83	90TH	1.51
3.98	95TH	1.57
4.09	97TH	1.61
4.18	98TH	1.65
4.35	99TH	1.71

(H33) NOSE PROTRUSION

The straight-line distance between the pronasale landmark at the tip of the nose and the subnasale landmark under the nose is measured.



VARIABLE NO. (H33)—NOSE PROTRUSION

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
1.96	MEAN	0.77
0.01	SE (MEAN)	0.01
0.21	ST DEV	0.08
0.01	SE (SD)	0.00
1.23	MINIMUM	0.48
2.56	MAXIMUM	1.01
COEFF. OF VARIATION		10.9%
SYMMETRY—VETA I		0.05
KURTOSIS—VETA II		3.08
NUMBER OF SUBJECTS		334

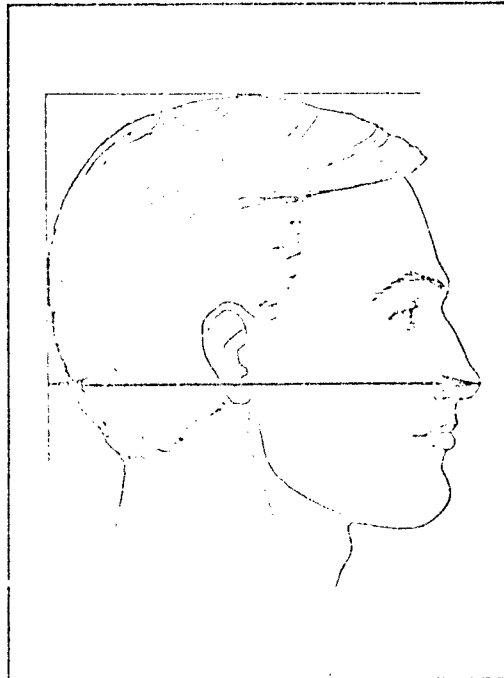
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
1.97	MEAN	0.78
0.01	SE (MEAN)	0.01
0.25	ST DEV	0.10
0.01	SE (SD)	0.00
1.28	MINIMUM	0.50
2.65	MAXIMUM	1.04
COEFF. OF VARIATION		12.4%
SYMMETRY—VETA I		-0.04
KURTOSIS—VETA II		2.83
NUMBER OF SUBJECTS		474

PERCENTILES		
CENTIMETERS		INCHES
1.44	1ST	0.57
1.53	2ND	0.60
1.58	3RD	0.62
1.63	5TH	0.64
1.70	10TH	0.67
1.75	15TH	0.69
1.78	20TH	0.70
1.81	25TH	0.71
1.84	30TH	0.73
1.87	35TH	0.74
1.90	40TH	0.75
1.92	45TH	0.76
1.95	50TH	0.77
1.98	55TH	0.78
2.00	60TH	0.79
2.03	65TH	0.80
2.07	70TH	0.81
2.10	75TH	0.83
2.15	80TH	0.85
2.19	85TH	0.86
2.26	90TH	0.89
2.34	95TH	0.92
2.39	97TH	0.94
2.41	98TH	0.95
2.43	99TH	0.96

PERCENTILES		
CENTIMETERS		INCHES
1.38	1ST	0.54
1.45	2ND	0.57
1.50	3RD	0.59
1.56	5TH	0.62
1.65	10TH	0.65
1.72	15TH	0.68
1.77	20TH	0.69
1.81	25TH	0.71
1.85	30TH	0.73
1.88	35TH	0.74
1.91	40TH	0.75
1.94	45TH	0.76
1.97	50TH	0.78
2.01	55TH	0.79
2.04	60TH	0.80
2.07	65TH	0.81
2.10	70TH	0.83
2.14	75TH	0.84
2.18	80TH	0.86
2.23	85TH	0.88
2.29	90TH	0.90
2.38	95TH	0.94
2.43	97TH	0.96
2.48	98TH	0.98
2.54	99TH	1.00

(ID4) PRONASALE-BACK OF HEAD

The horizontal distance between the pronasale landmark on the tip of the nose and the vertical plane tangent to the back of the head is measured.



VARIABLE NO. (H34) ---FRONASALE-BACK OF HEAD

FEMALES

MALES

THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
21.09	MEAN	8.30	
0.04	SE(MEAN)	0.02	
0.74	ST DEV	0.29	
0.03	SE(SD)	0.01	
18.29	MINIMUM	7.20	
22.88	MAXIMUM	9.01	
COEFF. OF VARIATION		3.5%	
SYMMETRY---VETA I		-0.39	
KURTOSIS---VETA II		3.65	
NUMBER OF SUBJECTS		334	

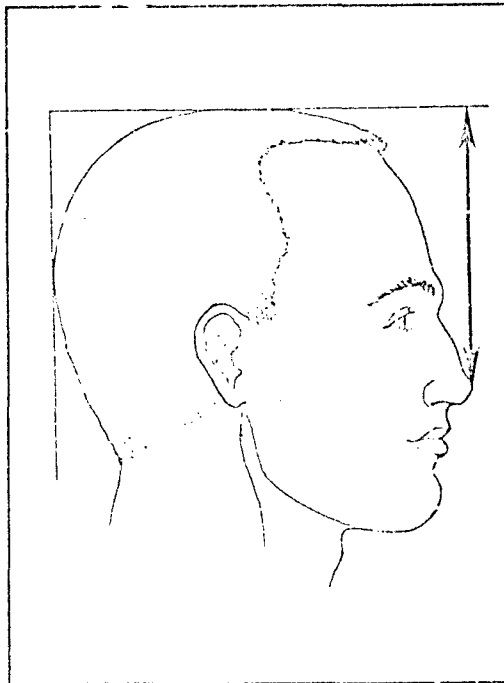
THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
22.04	MEAN	8.68	
0.03	SE(MEAN)	0.01	
0.71	ST DEV	0.28	
0.02	SE(SD)	0.01	
19.51	MINIMUM	7.68	
23.92	MAXIMUM	9.42	
COEFF. OF VARIATION		3.2%	
SYMMETRY---VETA I		-0.15	
KURTOSIS---VETA II		3.16	
NUMBER OF SUBJECTS		474	

PERCENTILES		
CENTIMETERS		INCHES
19.15	1ST	7.54
19.46	2ND	7.66
19.65	3RD	7.73
19.87	5TH	7.82
20.18	10TH	7.95
20.38	15TH	8.02
20.52	20TH	8.08
20.65	25TH	8.13
20.75	30TH	8.17
20.85	35TH	8.21
20.94	40TH	8.24
21.03	45TH	8.28
21.11	50TH	8.31
21.20	55TH	8.35
21.29	60TH	8.38
21.38	65TH	8.42
21.47	70TH	8.45
21.58	75TH	8.49
21.69	80TH	8.54
21.83	85TH	8.59
22.00	90TH	8.66
22.26	95TH	8.76
22.42	97TH	8.83
22.54	98TH	8.87
22.72	99TH	8.94

PERCENTILES		
CENTIMETERS		INCHES
20.22	1ST	7.96
20.50	2ND	8.07
20.66	3RD	8.13
20.86	5TH	8.21
21.15	10TH	8.33
21.33	15TH	8.40
21.47	20TH	8.45
21.59	25TH	8.50
21.69	30TH	8.54
21.79	35TH	8.58
21.88	40TH	8.61
21.96	45TH	8.65
22.05	50TH	8.68
22.13	55TH	8.71
22.22	60TH	8.75
22.31	65TH	8.78
22.41	70TH	8.82
22.51	75TH	8.86
22.63	80TH	8.91
22.77	85TH	8.97
22.95	90TH	9.03
23.21	95TH	9.14
23.38	97TH	9.20
23.50	98TH	9.25
23.68	99TH	9.32

(H35) PRONASALE-TOP OF HEAD

The vertical distance between the pronasale landmark on the tip of the nose and the horizontal plane tangent to the top of the head is measured.



VARIABLE NO. (H35)—PROTRUSALE-TOP OF HEAD

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
14.39	MEAN	5.66
0.04	SE (MEAN)	0.02
0.79	ST DEV	0.31
0.03	SE(SD)	0.01
11.93	MINIMUM	4.70
16.63	MAXIMUM	6.55
COEFF. OF VARIATION		5.5%
SYMMETRY—VETA I		0.06
KURTOSIS—VETA II		3.31
NUMBER OF SUBJECTS		334

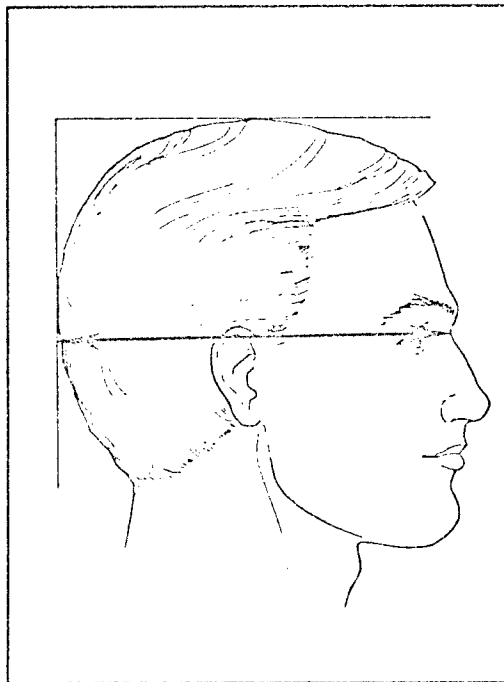
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
15.29	MEAN	6.02
0.04	SE (MEAN)	0.01
0.77	ST DEV	0.30
0.03	SE(SD)	0.01
13.35	MINIMUM	5.26
18.32	MAXIMUM	7.21
COEFF. OF VARIATION		5.0%
SYMMETRY—VETA I		0.27
KURTOSIS—VETA II		3.31
NUMBER OF SUBJECTS		474

PERCENTILES		
CENTIMETERS		INCHES
12.35	1ST	4.86
12.62	2ND	4.99
12.87	3RD	5.07
13.10	5TH	5.16
13.41	10TH	5.28
13.61	15TH	5.36
13.75	20TH	5.41
13.88	25TH	5.46
13.98	30TH	5.51
14.08	35TH	5.55
14.18	40TH	5.58
14.27	45TH	5.62
14.36	50TH	5.65
14.46	55TH	5.69
14.55	60TH	5.73
14.65	65TH	5.77
14.76	70TH	5.81
14.88	75TH	5.86
15.02	80TH	5.91
15.18	85TH	5.98
15.40	90TH	6.06
15.72	95TH	6.19
15.94	97TH	6.27
16.10	98TH	6.34
16.34	99TH	6.43

PERCENTILES		
CENTIMETERS		INCHES
13.63	1ST	5.36
13.78	2ND	5.42
13.89	3RD	5.47
14.05	5TH	5.53
14.31	10TH	5.64
14.50	15TH	5.71
14.65	20TH	5.77
14.78	25TH	5.82
14.89	30TH	5.86
15.00	35TH	5.90
15.10	40TH	5.94
15.19	45TH	5.98
15.28	50TH	6.02
15.38	55TH	6.05
15.47	60TH	6.09
15.56	65TH	6.13
15.67	70TH	6.17
15.78	75TH	6.21
15.90	80TH	6.26
16.05	85TH	6.32
16.25	90TH	6.40
16.57	95TH	6.52
16.80	97TH	6.61
16.99	98TH	6.69
17.32	99TH	6.82

(136) · SELLION-BACK OF HEAD

The horizontal distance between the sellion landmark at the deepest point of the root of the nose and the vertical plane tangent to the back of the head is measured.



VARIABLE NO. (H36)—SELLION-BACK OF HEAD

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
18.99	MEAN	7.48
0.04	SE (MEAN)	0.01
0.65	ST DEV	0.26
0.03	SE (SD)	0.01
16.48	MINIMUM	6.49
20.45	MAXIMUM	8.05
COEFF. OF VARIATION		3.4%
SYMMETRY—VETA I	-0.36	
KURTOSIS—VETA II	3.42	
NUMBER OF SUBJECTS		334

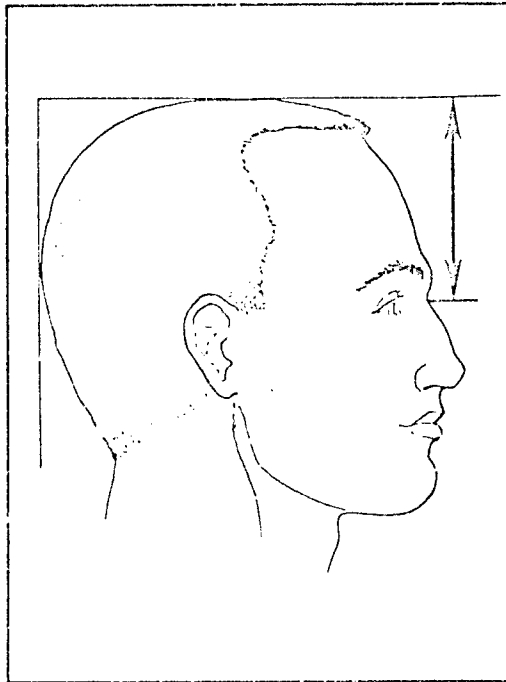
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
19.80	MEAN	7.79
0.03	SE (MEAN)	0.01
0.63	ST DEV	0.25
0.02	SE (SD)	0.01
17.66	MINIMUM	6.95
21.59	MAXIMUM	8.50
COEFF. OF VARIATION		3.2%
SYMMETRY—VETA I	-0.09	
KURTOSIS—VETA II	3.18	
NUMBER OF SUBJECTS		474

PERCENTILES		
CENTIMETERS		INCHES
17.27	1ST	6.80
17.55	2ND	6.91
17.71	3RD	6.97
17.91	5TH	7.05
18.18	10TH	7.16
18.35	15TH	7.23
18.48	20TH	7.28
18.59	25TH	7.32
18.68	30TH	7.36
18.77	35TH	7.39
18.85	40TH	7.42
18.93	45TH	7.45
19.01	50TH	7.48
19.09	55TH	7.52
19.17	60TH	7.55
19.25	65TH	7.58
19.34	70TH	7.61
19.44	75TH	7.65
19.54	80TH	7.69
19.66	85TH	7.74
19.82	90TH	7.80
20.03	95TH	7.89
20.16	97TH	7.94
20.24	98TH	7.97
20.36	99TH	8.02

PERCENTILES		
CENTIMETERS		INCHES
18.31	1ST	7.21
18.50	2ND	7.28
18.62	3RD	7.33
18.78	5TH	7.39
19.01	10TH	7.48
19.16	15TH	7.54
19.28	20TH	7.59
19.33	25TH	7.63
19.48	30TH	7.67
19.56	35TH	7.70
19.64	40TH	7.73
19.72	45TH	7.76
19.80	50TH	7.79
19.87	55TH	7.82
19.95	60TH	7.85
20.03	65TH	7.89
20.12	70TH	7.92
20.21	75TH	7.96
20.31	80TH	8.00
20.43	85TH	8.05
20.59	90TH	8.10
20.81	95TH	8.19
20.96	97TH	8.25
21.06	98TH	8.29
21.22	99TH	8.35

(HB7) SELLION-TO-CP OF HEAD

The vertical distance between the sellion landmark at the deepest point of the root of the nose and the horizontal plane tangent to the top of the head is measured.



VARIABLE NO. (H37)—SELLIGN-TOP OF HEAD

FEMALES

THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
10.52	MEAN	4.14	
0.04	SE (MEAN)	0.02	
0.69	ST DEV	0.27	
0.03	SE (SD)	0.01	
8.59	MINIMUM	3.38	
12.60	MAXIMUM	4.96	
COEFF. OF VARIATION		6.5%	
SYMMETRY—VETA I		0.19	
KURTOSIS—VETA II		3.22	
NUMBER OF SUBJECTS		334	

MALES

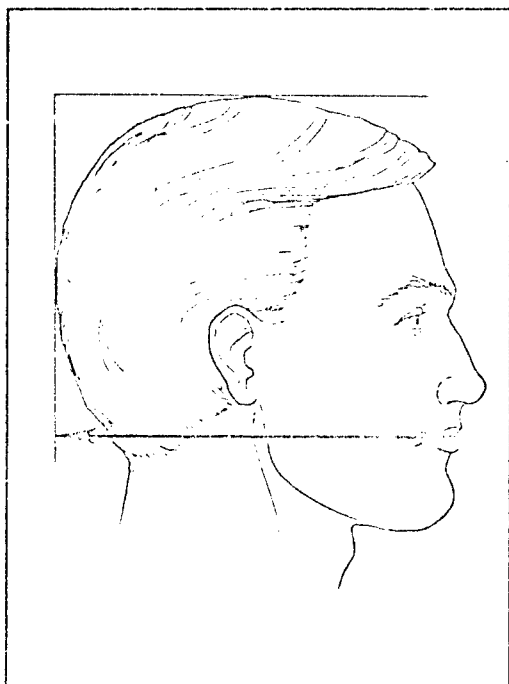
THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
10.99	MEAN	4.33	
0.03	SE (MEAN)	0.01	
0.64	ST DEV	0.25	
0.02	SE (SD)	0.01	
9.49	MINIMUM	3.74	
13.40	MAXIMUM	5.28	
COEFF. OF VARIATION		5.8%	
SYMMETRY—VETA I		0.27	
KURTOSIS—VETA II		3.14	
NUMBER OF SUBJECTS		474	

PERCENTILES		
CENTIMETERS		INCHES
8.93	1ST	3.52
9.13	2ND	3.60
9.25	3RD	3.64
9.42	5TH	3.71
9.66	10TH	3.80
9.83	15TH	3.87
9.95	20TH	3.92
10.06	25TH	3.96
10.16	30TH	4.00
10.25	35TH	4.03
10.33	40TH	4.07
10.42	45TH	4.10
10.50	50TH	4.13
10.58	55TH	4.17
10.67	60TH	4.20
10.76	65TH	4.23
10.85	70TH	4.27
10.95	75TH	4.31
11.07	80TH	4.36
11.22	85TH	4.42
11.41	90TH	4.49
11.70	95TH	4.61
11.91	97TH	4.69
12.08	98TH	4.76
12.35	99TH	4.86

PERCENTILES		
CENTIMETERS		INCHES
9.54	1ST	3.76
9.73	2ND	3.83
9.85	3RD	3.88
9.99	5TH	3.93
10.20	10TH	4.02
10.34	15TH	4.07
10.45	20TH	4.11
10.54	25TH	4.15
10.63	30TH	4.19
10.72	35TH	4.22
10.80	40TH	4.25
10.88	45TH	4.28
10.95	50TH	4.31
11.04	55TH	4.35
11.12	60TH	4.38
11.21	65TH	4.41
11.30	70TH	4.45
11.41	75TH	4.49
11.52	80TH	4.54
11.66	85TH	4.59
11.83	90TH	4.66
12.07	95TH	4.75
12.21	97TH	4.81
12.31	98TH	4.85
12.44	99TH	4.90

(HBS) STOMION-BACK OF HEAD

The horizontal distance between the stomion landmark at the center of the mouth where the lips touch when the mouth is closed and the vertical plane tangent to the back of the head is measured.



VARIABLE NO. (H32)—SIGNION-BACK OF HEAD

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
18.99	MEAN	7.48
0.04	SE (MEAN)	0.02
0.81	ST DEV	0.32
0.03	SE (SD)	0.01
16.26	MINIMUM	6.40
21.38	MAXIMUM	8.42
COEFF. OF VARIATION		4.2%
SYMMETRY—VETA I		0.00
KURTOSIS—VETA II		3.41
NUMBER OF SUBJECTS		334

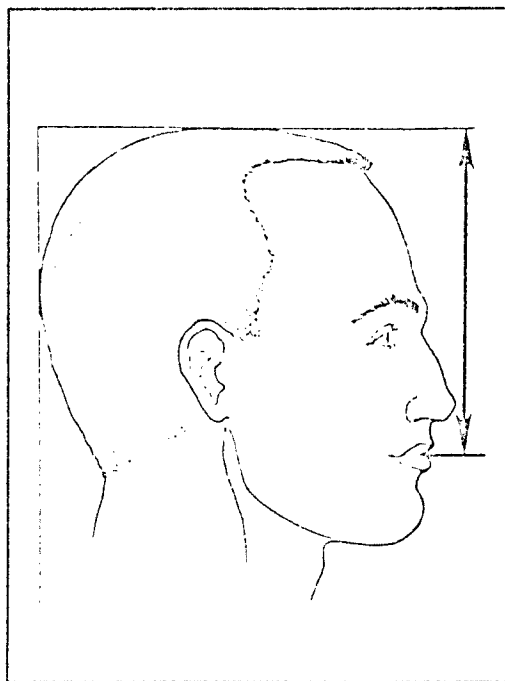
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
19.77	MEAN	7.78
0.04	SE (MEAN)	0.01
0.77	ST DEV	0.30
0.03	SE (SD)	0.01
17.62	MINIMUM	6.94
22.25	MAXIMUM	8.76
COEFF. OF VARIATION		3.9%
SYMMETRY—VETA I		0.13
KURTOSIS—VETA II		3.07
NUMBER OF SUBJECTS		474

PERCENTILES		
CENTIMETERS		INCHES
17.12	1ST	6.74
17.37	2ND	6.84
17.52	3RD	6.90
17.71	5TH	6.97
18.00	10TH	7.09
18.19	15TH	7.16
18.33	20TH	7.22
18.46	25TH	7.27
18.57	30TH	7.31
18.68	35TH	7.35
18.78	40TH	7.39
18.87	45TH	7.43
18.97	50TH	7.47
19.07	55TH	7.51
19.17	60TH	7.55
19.27	65TH	7.59
19.38	70TH	7.63
19.51	75TH	7.68
19.65	80TH	7.73
19.81	85TH	7.80
20.02	90TH	7.88
20.34	95TH	8.01
20.55	97TH	8.09
20.70	98TH	8.15
20.94	99TH	8.24

PERCENTILES		
CENTIMETERS		INCHES
17.91	1ST	7.05
18.16	2ND	7.15
18.31	3RD	7.21
18.51	5TH	7.29
18.79	10TH	7.40
18.98	15TH	7.47
19.13	20TH	7.53
19.25	25TH	7.58
19.36	30TH	7.62
19.46	35TH	7.66
19.56	40TH	7.70
19.66	45TH	7.74
19.75	50TH	7.78
19.85	55TH	7.81
19.95	60TH	7.85
20.05	65TH	7.89
20.16	70TH	7.94
20.28	75TH	7.98
20.41	80TH	8.04
20.57	85TH	8.10
20.78	90TH	8.18
21.08	95TH	8.30
21.28	97TH	8.38
21.43	98TH	8.44
21.65	99TH	8.52

(1139) STENION-TO-TOPI OF HEAD

The vertical distance between the stenson landmark at the center of the mouth where the lips touch when the mouth is closed and the horizontal plane tangent to the top of the head is measured.



VARIABLE NO. (H39)—SIGNUM-TOP OF HEAD

FEMALES

MALES

THE SUMMARY STATISTICS
CENTIMETERS INCHES

THE SUMMARY STATISTICS
CENTIMETERS INCHES

17.60	MEAN	6.93
0.04	SE(MEAN)	0.02
0.76	ST DEV	0.30
0.03	SE(SD)	0.01
15.26	MINIMUM	6.01
19.80	MAXIMUM	7.80
COEFF. OF VARIATION		4.3%
SYMMETRY—VETA I		0.10
KURTOSIS—VETA II		3.24
NUMBER OF SUBJECTS		334

12.59	MEAN	7.32
0.03	SE(MEAN)	0.01
0.73	ST DEV	0.29
0.02	SE(SD)	0.01
16.49	MINIMUM	6.49
20.80	MAXIMUM	8.19
COEFF. OF VARIATION		3.9%
SYMMETRY—VETA I		0.11
KURTOSIS—VETA II		2.83
NUMBER OF SUBJECTS		474

PERCENTILES
CENTIMETERS INCHES

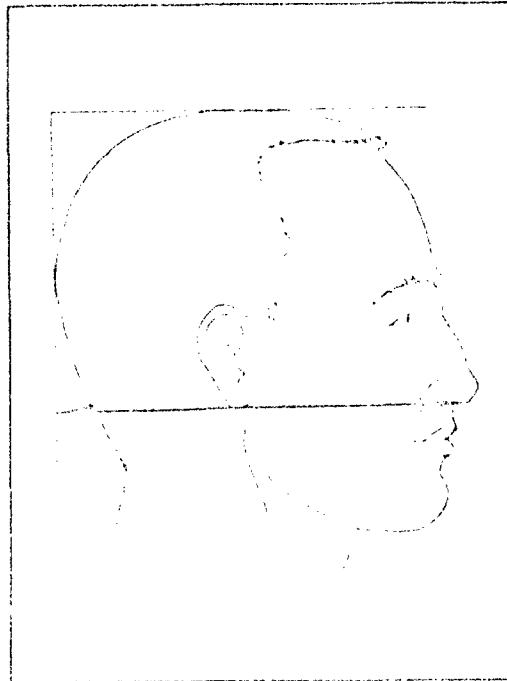
PERCENTILES
CENTIMETERS INCHES

15.70	1ST	6.18
16.01	2ND	6.30
16.18	3RD	6.37
16.40	5TH	6.45
16.68	10TH	6.57
16.85	15TH	6.64
16.99	20TH	6.69
17.10	25TH	6.73
17.20	30TH	6.77
17.30	35TH	6.81
17.39	40TH	6.85
17.48	45TH	6.88
17.57	50TH	6.92
17.66	55TH	6.95
17.76	60TH	6.99
17.86	65TH	7.03
17.97	70TH	7.07
18.09	75TH	7.12
18.23	80TH	7.18
18.40	85TH	7.24
18.61	90TH	7.33
18.93	95TH	7.45
19.13	96TH	7.53
19.27	98TH	7.59
19.48	99TH	7.67

17.05	1ST	6.71
17.20	2ND	6.77
17.29	3RD	6.81
17.43	5TH	6.86
17.66	10TH	6.95
17.82	15TH	7.02
17.96	20TH	7.07
18.08	25TH	7.12
18.18	30TH	7.16
18.29	35TH	7.20
18.38	40TH	7.24
18.48	45TH	7.27
18.57	50TH	7.31
18.67	55TH	7.35
18.77	60TH	7.39
18.87	65TH	7.43
18.98	70TH	7.47
19.09	75TH	7.52
19.22	80TH	7.57
19.37	85TH	7.63
19.56	90TH	7.70
19.83	95TH	7.81
20.00	97TH	7.87
20.12	98TH	7.92
20.30	99TH	7.99

(M40) SUBNASAL-BACK OF HEAD

The horizontal distance between the subnasale landmark under the nose and the vertical plane tangent to the back of the head is measured.



VARIABLE NO. (H10) — SUPRASALE-BACK OF HEAD

FEMALES

MALES

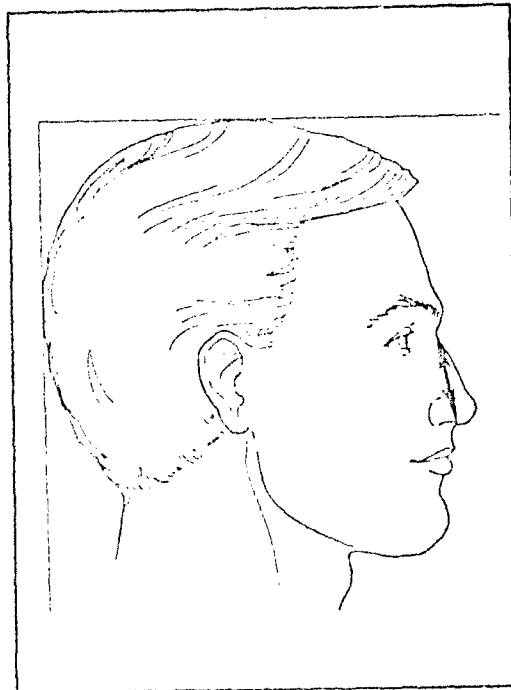
THE SUMMARY STATISTICS			THE SUMMARY STATISTICS		
CENTIMETERS		INCHES	CENTIMETERS		INCHES
19.49	MEAN	7.67	20.30	MEAN	7.99
0.04	SE(MEAN)	0.02	0.03	SE(MEAN)	0.01
0.75	ST DEV	0.30	0.71	ST DEV	0.28
0.03	SE(SD)	0.01	0.02	SE(SD)	0.01
16.58	MINIMUM	6.53	18.07	MINIMUM	7.11
21.35	MAXIMUM	8.41	22.41	MAXIMUM	8.82
COEFF. OF VARIATION		3.8%	COEFF. OF VARIATION		3.5%
SYMMETRY—VETA I		-0.32	SYMMETRY—VETA I		-0.05
KURTOSIS—VETA II		3.61	KURTOSIS—VETA II		2.96
NUMBER OF SUBJECTS		334	NUMBER OF SUBJECTS		474

PERCENTILES		
CENTIMETERS		INCHES
17.69	1ST	6.97
17.92	2ND	7.06
18.07	3RD	7.11
18.26	5TH	7.19
18.55	10TH	7.30
18.74	15TH	7.38
18.89	20TH	7.44
19.02	25TH	7.49
19.13	30TH	7.53
19.24	35TH	7.57
19.33	40TH	7.61
19.43	45TH	7.65
19.52	50TH	7.68
19.61	55TH	7.72
19.70	60TH	7.76
19.79	65TH	7.79
19.89	70TH	7.83
20.00	75TH	7.87
20.12	80TH	7.92
20.25	85TH	7.97
20.43	90TH	8.04
20.63	95TH	8.14
20.85	97TH	8.21
20.98	98TH	8.26
21.13	99TH	8.34

PERCENTILES		
CENTIMETERS		INCHES
18.57	1ST	7.31
18.82	2ND	7.41
18.96	3RD	7.46
19.14	5TH	7.54
19.40	10TH	7.64
19.57	15TH	7.71
19.71	20TH	7.76
19.82	25TH	7.80
19.92	30TH	7.84
20.02	35TH	7.88
20.11	40TH	7.92
20.20	45TH	7.95
20.29	50TH	7.99
20.38	55TH	8.02
20.48	60TH	8.06
20.57	65TH	8.10
20.68	70TH	8.14
20.79	75TH	8.19
20.92	80TH	8.23
21.06	85TH	8.29
21.24	90TH	8.36
21.49	95TH	8.46
21.64	97TH	8.52
21.73	98TH	8.56
21.86	99TH	8.61

(H41) SUBNASALE-SELLEION LENGTH

The straight-line distance between the subnasale landmark under the nose and the sellicion landmark at the deepest point of the nasal root is measured.



VARIABLE NO. (H41) — SUENSALE-SELLION LENGTH

FEMALES

MALES

THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
5.01	MEAN	1.97	
0.02	SE (MEAN)	0.01	
0.36	ST DEV	0.14	
0.01	SE (SD)	0.01	
4.04	MINIMUM	1.59	
6.46	MAXIMUM	2.54	
COEFF. OF VARIATION		7.2%	
SYMMETRY—VETA I		0.21	
KURTOSIS—VETA II		3.32	
NUMBER OF SUBJECTS		334	

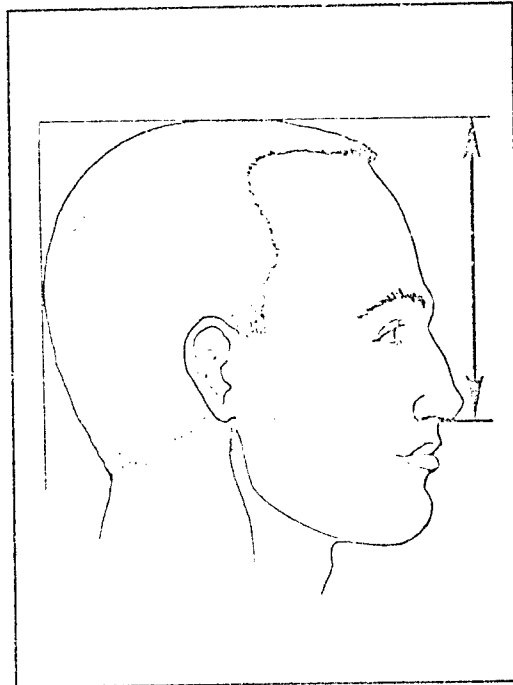
THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
5.24	MEAN	2.06	
0.02	SE (MEAN)	0.01	
0.36	ST DEV	0.14	
0.01	SE (SD)	0.01	
4.28	MINIMUM	1.69	
6.36	MAXIMUM	2.50	
COEFF. OF VARIATION		6.8%	
SYMMETRY—VETA I		0.17	
KURTOSIS—VETA II		2.99	
NUMBER OF SUBJECTS		474	

PERCENTILES		
CENTIMETERS		INCHES
4.17	1ST	1.64
4.29	2ND	1.69
4.35	3RD	1.71
4.44	5TH	1.75
4.56	10TH	1.80
4.64	15TH	1.83
4.70	20TH	1.85
4.76	25TH	1.87
4.81	30TH	1.89
4.86	35TH	1.91
4.90	40TH	1.93
4.95	45TH	1.95
5.00	50TH	1.97
5.04	55TH	1.98
5.09	60TH	2.00
5.14	65TH	2.02
5.19	70TH	2.05
5.25	75TH	2.07
5.32	80TH	2.09
5.39	85TH	2.12
5.49	90TH	2.16
5.61	95TH	2.21
5.69	97TH	2.24
5.73	98TH	2.26
5.79	99TH	2.28

PERCENTILES		
CENTIMETERS		INCHES
4.42	1ST	1.74
4.52	2ND	1.78
4.58	3RD	1.80
4.66	5TH	1.84
4.78	10TH	1.88
4.87	15TH	1.92
4.94	20TH	1.94
4.99	25TH	1.97
5.04	30TH	1.99
5.09	35TH	2.00
5.14	40TH	2.02
5.18	45TH	2.04
5.22	50TH	2.06
5.27	55TH	2.07
5.31	60TH	2.09
5.36	65TH	2.11
5.41	70TH	2.13
5.46	75TH	2.15
5.53	80TH	2.18
5.60	85TH	2.20
5.69	90TH	2.24
5.84	95TH	2.30
5.93	97TH	2.34
6.00	98TH	2.36
6.12	99TH	2.41

(H42) SUBNASALE-TO-P TOP OF HEAD

The vertical distance between the subnasale landmark under the nose and the horizontal plane tangent to the top of the head is measured.



VARIABLE NO. (H42) — SUENASALE-TOP OF HEAD

FEMALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
15.49	MEAN	6.10
0.04	SE (MEAN)	0.02
0.72	ST DEV	0.28
0.03	SE (SD)	0.01
12.96	MINIMUM	5.10
17.50	MAXIMUM	6.89
COEFF. OF VARIATION		4.6%
SYMMETRY—VETA I		0.04
KURTOSIS—VETA II		3.43
NUMBER OF SUBJECTS		334

MALES

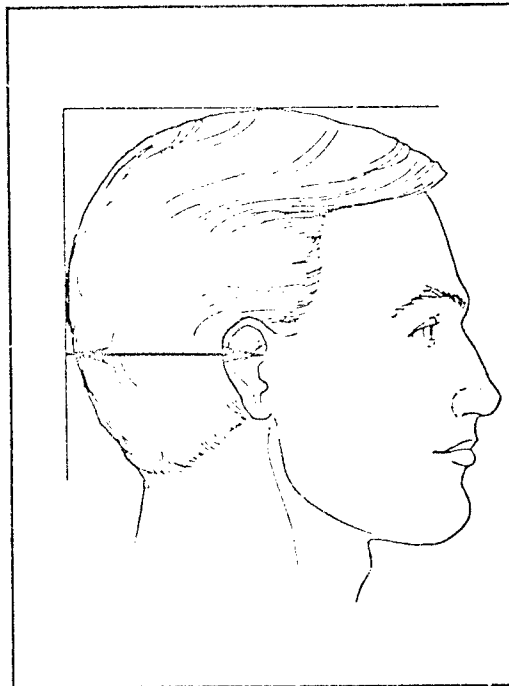
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
16.18	MEAN	6.37
0.03	SE (MEAN)	0.01
0.71	ST DEV	0.28
0.02	SE (SD)	0.01
14.13	MINIMUM	5.56
18.91	MAXIMUM	7.44
COEFF. OF VARIATION		4.4%
SYMMETRY—VETA I		0.23
KURTOSIS—VETA II		3.22
NUMBER OF SUBJECTS		474

PERCENTILES		
CENTIMETERS		INCHES
13.72	1ST	5.40
13.99	2ND	5.51
14.14	3RD	5.57
14.34	5TH	5.65
14.61	10TH	5.75
14.78	15TH	5.82
14.92	20TH	5.87
15.03	25TH	5.92
15.13	30TH	5.95
15.22	35TH	5.99
15.30	40TH	6.02
15.39	45TH	6.06
15.47	50TH	6.09
15.56	55TH	6.12
15.64	60TH	6.16
15.73	65TH	6.19
15.83	70TH	6.23
15.94	75TH	6.28
16.07	80TH	6.33
16.22	85TH	6.39
16.42	90TH	6.46
16.72	95TH	6.58
16.93	97TH	6.67
17.09	98TH	6.73
17.35	99TH	6.83

PERCENTILES		
CENTIMETERS		INCHES
14.65	1ST	5.77
14.80	2ND	5.82
14.90	3RD	5.86
15.04	5TH	5.92
15.28	10TH	6.01
15.44	15TH	6.08
15.57	20TH	6.13
15.69	25TH	6.18
15.79	30TH	6.22
15.89	35TH	6.26
15.96	40TH	6.29
16.07	45TH	6.33
16.16	50TH	6.36
16.25	55TH	6.40
16.34	60TH	6.43
16.43	65TH	6.47
16.53	70TH	6.51
16.63	75TH	6.55
16.76	80TH	6.60
16.90	85TH	6.65
17.09	90TH	6.73
17.38	95TH	6.84
17.58	97TH	6.92
17.74	98TH	6.98
18.01	99TH	7.09

(H43) TRAGION-BACK OF HEAD

The horizontal distance between the tragion landmark on the cartilaginous flap in front of the earhole and the vertical plane tangent to the back of the head is measured. The values of the right and left dimensions are averaged.



VARIABLE NO. (H43) — TRAGION-PAK OF HEAD

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
9.72	MEAN	3.83
0.03	SE(MEAN)	0.01
0.58	ST DEV	0.23
0.02	SE(SD)	0.01
7.99	MINIMUM	3.15
11.57	MAXIMUM	4.56
COEFF. OF VARIATION		6.0%
SYMMETRY—VETA I		-0.01
KURTOSIS—VETA II		3.24
NUMBER OF SUBJECTS		334

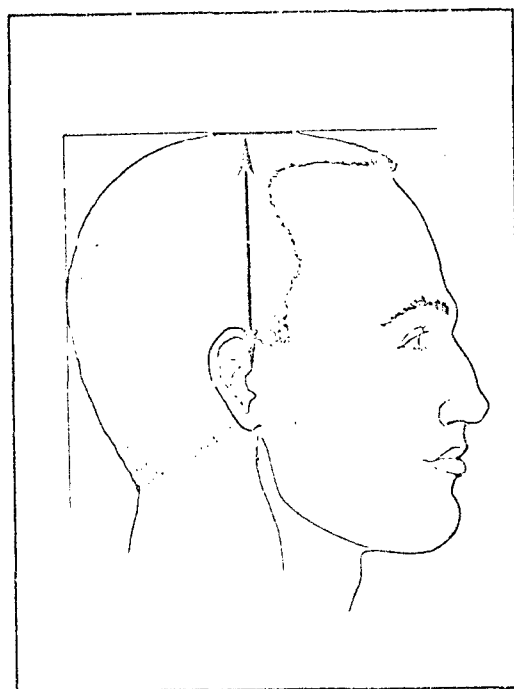
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
9.86	MEAN	3.88
0.02	SE(MEAN)	0.01
0.52	ST DEV	0.20
0.02	SE(SD)	0.01
8.26	MINIMUM	3.25
11.34	MAXIMUM	4.46
COEFF. OF VARIATION		5.2%
SYMMETRY—VETA I		0.18
KURTOSIS—VETA II		2.85
NUMBER OF SUBJECTS		474

PERCENTILES		
CENTIMETERS		INCHES
8.28	1ST	3.26
8.48	2ND	3.34
8.61	3RD	3.39
8.77	5TH	3.45
9.00	10TH	3.54
9.15	15TH	3.60
9.26	20TH	3.65
9.36	25TH	3.68
9.44	30TH	3.72
9.52	35TH	3.75
9.59	40TH	3.77
9.66	45TH	3.80
9.72	50TH	3.83
9.79	55TH	3.85
9.86	60TH	3.88
9.93	65TH	3.91
10.01	70TH	3.94
10.09	75TH	3.97
10.18	80TH	4.01
10.29	85TH	4.05
10.44	90TH	4.11
10.66	95TH	4.20
10.82	97TH	4.26
10.94	98TH	4.31
11.14	99TH	4.38

PERCENTILES		
CENTIMETERS		INCHES
8.77	1ST	3.45
8.88	2ND	3.50
8.96	3RD	3.53
9.06	5TH	3.57
9.22	10TH	3.63
9.33	15TH	3.67
9.42	20TH	3.71
9.50	25TH	3.74
9.57	30TH	3.77
9.64	35TH	3.80
9.71	40TH	3.82
9.77	45TH	3.85
9.84	50TH	3.87
9.91	55TH	3.90
9.98	60TH	3.93
10.05	65TH	3.96
10.13	70TH	3.99
10.21	75TH	4.02
10.31	80TH	4.06
10.42	85TH	4.10
10.56	90TH	4.16
10.76	95TH	4.24
10.89	97TH	4.29
10.98	98TH	4.32
11.12	99TH	4.38

(H44) TRAGION-TOP OF HEAD

The vertical distance between the tragion landmark on the cartilaginous flap in front of the earhole and the horizontal plane tangent to the top of the head is measured. The values of the right and left dimensions are averaged.



VARIABLE NO. (H44) — TRAGION-TOP OF HEAD

FEMALES

MALES

THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
12.48	MEAN	4.91	
0.03	SE (MEAN)	0.01	
0.54	ST DEV	0.21	
0.02	SE (SD)	0.01	
11.00	MINIMUM	4.33	
14.52	MAXIMUM	5.72	
COEFF. OF VARIATION		4.3%	
SYMMETRY—VETA I		0.28	
KURTOSIS—VETA II		3.55	
NUMBER OF SUBJECTS		334	

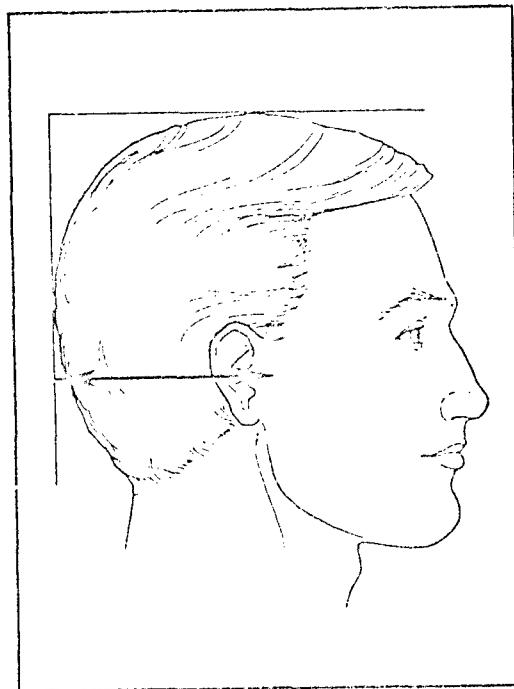
THE SUMMARY STATISTICS			
CENTIMETERS		INCHES	
13.05	MEAN	5.14	
0.03	SE (MEAN)	0.01	
0.55	ST DEV	0.22	
0.02	SE (SD)	0.01	
11.48	MINIMUM	4.52	
14.98	MAXIMUM	5.90	
COEFF. OF VARIATION		4.2%	
SYMMETRY—VETA I		0.09	
KURTOSIS—VETA II		3.06	
NUMBER OF SUBJECTS		474	

PERCENTILES		
CENTIMETERS		INCHES
11.13	1ST	4.38
11.36	2ND	4.47
11.48	3RD	4.52
11.64	5TH	4.58
11.84	10TH	4.66
11.96	15TH	4.71
12.06	20TH	4.75
12.14	25TH	4.78
12.20	30TH	4.81
12.27	35TH	4.83
12.33	40TH	4.85
12.39	45TH	4.88
12.45	50TH	4.90
12.51	55TH	4.93
12.58	60TH	4.95
12.65	65TH	4.98
12.72	70TH	5.01
12.81	75TH	5.04
12.90	80TH	5.08
13.02	85TH	5.13
13.18	90TH	5.19
13.42	95TH	5.28
13.59	97TH	5.35
13.71	98TH	5.40
13.91	99TH	5.48

PERCENTILES		
CENTIMETERS		INCHES
11.77	1ST	4.63
11.91	2ND	4.69
12.01	3RD	4.73
12.14	5TH	4.78
12.34	10TH	4.86
12.47	15TH	4.91
12.58	20TH	4.95
12.68	25TH	4.99
12.76	30TH	5.02
12.84	35TH	5.05
12.91	40TH	5.08
12.98	45TH	5.11
13.05	50TH	5.14
13.12	55TH	5.16
13.19	60TH	5.19
13.26	65TH	5.22
13.34	70TH	5.25
13.42	75TH	5.28
13.51	80TH	5.32
13.62	85TH	5.36
13.76	90TH	5.42
13.97	95TH	5.50
14.11	97TH	5.56
14.22	98TH	5.60
14.39	99TH	5.66

(H45) ZYGION-BACK OF HEAD

The horizontal distance between the zygion landmark on the zygomatic arch, or upper cheekbone, and the vertical plane tangent to the back of the head is measured. The values of the right and left dimensions are averaged.



VARIABLE NO. (H45) -- ZYGION-BACK OF HEAD

FEMALES

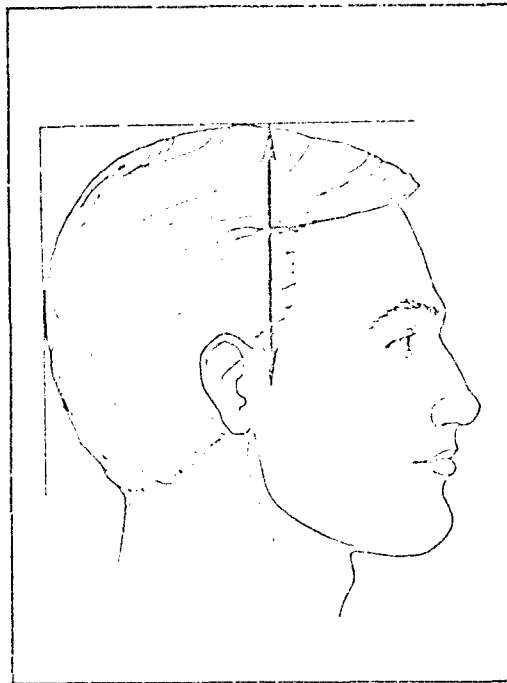
MALES

THE SUMMARY STATISTICS			THE SUMMARY STATISTICS		
CENTIMETERS		INCHES	CENTIMETERS		INCHES
12.72	MEAN	5.01	13.21	MEAN	5.20
0.04	SE (MEAN)	0.02	0.03	SE (MEAN)	0.01
0.75	ST DEV	0.30	0.57	ST DEV	0.22
0.03	SE (SD)	0.01	0.02	SE (SD)	0.01
10.67	MINIMUM	4.20	11.48	MINIMUM	4.52
15.34	MAXIMUM	6.04	14.90	MAXIMUM	5.87
COEFF. OF VARIATION		5.9%	COEFF. OF VARIATION		4.3%
SYMMETRY---VEIA I		0.06	SYMMETRY---VEIA I		0.00
KURTOSIS---VEIA II		3.02	KURTOSIS---VEIA II		2.90
NUMBER OF SUBJECTS		334	NUMBER OF SUBJECTS		474

PERCENTILES			PERCENTILES		
CENTIMETERS		INCHES	CENTIMETERS		INCHES
11.06	1ST	4.35	11.84	1ST	4.66
11.20	2ND	4.41	12.04	2ND	4.74
11.31	3RD	4.45	12.15	3RD	4.78
11.46	5TH	4.51	12.30	5TH	4.84
11.73	10TH	4.62	12.50	10TH	4.92
11.92	15TH	4.69	12.64	15TH	4.98
12.08	20TH	4.76	12.74	20TH	5.02
12.21	25TH	4.81	12.83	25TH	5.05
12.33	30TH	4.85	12.91	30TH	5.08
12.44	35TH	4.90	12.98	35TH	5.11
12.54	40TH	4.94	13.06	40TH	5.14
12.64	45TH	4.98	13.13	45TH	5.17
12.73	50TH	5.01	13.20	50TH	5.20
12.83	55TH	5.05	13.27	55TH	5.23
12.92	60TH	5.09	13.34	60TH	5.25
13.02	65TH	5.13	13.42	65TH	5.28
13.12	70TH	5.17	13.50	70TH	5.32
13.23	75TH	5.21	13.59	75TH	5.35
13.35	80TH	5.26	13.69	80TH	5.39
13.49	85TH	5.31	13.81	85TH	5.44
13.67	90TH	5.38	13.96	90TH	5.50
13.95	95TH	5.49	14.17	95TH	5.58
14.14	97TH	5.57	14.29	97TH	5.63
14.30	98TH	5.63	14.37	98TH	5.66
14.57	99TH	5.74	14.48	99TH	5.70

(146) ZYGION-TO-CP OF HEAD

The vertical distance between the zygion landmark on the zygomatic arch, or upper cheekbone, and the horizontal plane tangent to the top of the head is measured. The values of the right and left dimensions are averaged.



VARIABLE NO. (H46) — ZYGION—TOP OF HEAD

FEMALES

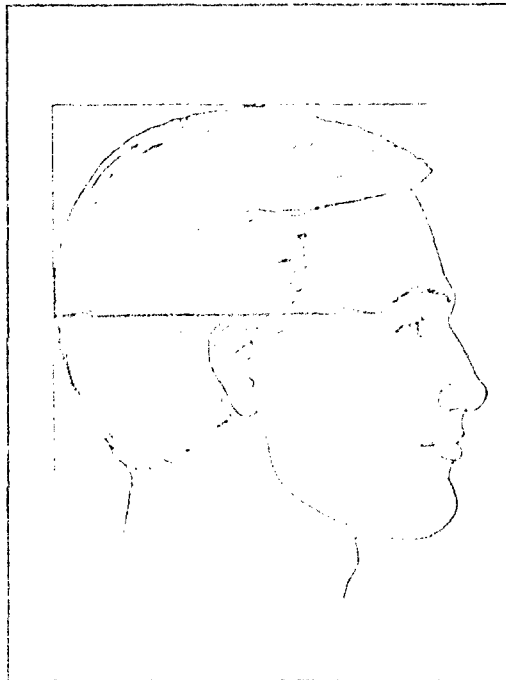
MALES

THE SUMMARY STATISTICS			THE SUMMARY STATISTICS		
CENTIMETERS		INCHES	CENTIMETERS		INCHES
12.62	MEAN	4.97	13.10	MEAN	5.16
0.03	SE(MEAN)	0.01	0.03	SE(MEAN)	0.01
0.52	ST DEV	0.20	0.54	ST DEV	0.21
0.02	SE(SD)	0.01	0.02	SE(SD)	0.01
11.23	MINIMUM	4.42	11.30	MINIMUM	4.45
14.10	MAXIMUM	5.55	14.81	MAXIMUM	5.83
COEFF. OF VARIATION		4.13	COEFF. OF VARIATION		4.13
SYMMETRY—VEIA I		0.25	SYMMETRY—VEIA I		0.06
KURTOSIS—VEIA II		3.23	KURTOSIS—VEIA II		3.23
NUMBER OF SUBJECTS		334	NUMBER OF SUBJECTS		474

PERCENTILES			PERCENTILES		
CENTIMETERS		INCHES	CENTIMETERS		INCHES
11.33	1ST	4.43	11.36	1ST	4.67
11.59	2ND	4.56	12.02	2ND	4.73
11.71	3RD	4.61	12.12	3RD	4.77
11.85	5TH	4.65	12.25	5TH	4.82
12.02	10TH	4.73	12.44	10TH	4.90
12.13	15TH	4.78	12.57	15TH	4.95
12.21	20TH	4.81	12.66	20TH	4.99
12.28	25TH	4.84	12.75	25TH	5.02
12.35	30TH	4.86	12.82	30TH	5.05
12.41	35TH	4.89	12.88	35TH	5.07
12.46	40TH	4.91	12.96	40TH	5.10
12.52	45TH	4.93	13.02	45TH	5.13
12.58	50TH	4.95	13.09	50TH	5.15
12.64	55TH	4.98	13.15	55TH	5.18
12.71	60TH	5.00	13.22	60TH	5.20
12.77	65TH	5.03	13.29	65TH	5.23
12.85	70TH	5.06	13.37	70TH	5.26
12.94	75TH	5.09	13.45	75TH	5.29
13.03	80TH	5.12	13.54	80TH	5.31
13.13	85TH	5.15	13.65	85TH	5.37
13.31	90TH	5.21	13.77	90TH	5.43
13.56	95TH	5.31	14.00	95TH	5.51
13.70	97TH	5.40	14.14	97TH	5.57
13.82	98TH	5.44	14.24	98TH	5.61
13.98	99TH	5.50	14.40	99TH	5.67

(117) ZYGOFRONTALE-ROCK OF HEAD

The horizontal distance between the zygofrontale landmark at the upper margin of the bony eye socket and the vertical plane tangent to the back of the head is measured. The values of the right and left dimensions are averaged.



VARIABLE NO. (H47)—ZYGOGYNIALE-BACK OF HEAD

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
16.25	MEAN	6.40
0.04	SE (MEAN)	0.01
0.63	ST DEV	0.25
0.02	SE (SD)	0.01
13.47	MINIMUM	5.30
17.94	MAXIMUM	7.06
COEFF. OF VARIATION		3.9%
SYMMETRY---VETA I		-0.50
KURTOSIS---VETA II		4.22
NUMBER OF SUBJECTS		334

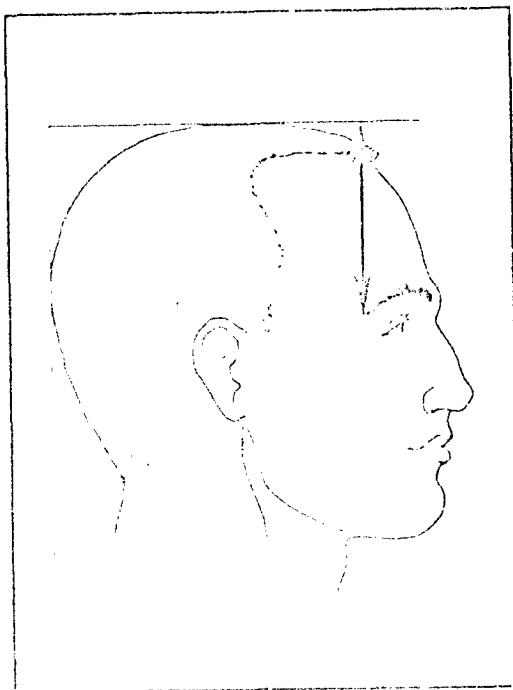
THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
17.27	MEAN	6.80
0.03	SE (MEAN)	0.01
0.56	ST DEV	0.22
0.02	SE (SD)	0.01
15.61	MINIMUM	6.15
18.86	MAXIMUM	7.43
COEFF. OF VARIATION		3.3%
SYMMETRY---VETA I		0.01
KURTOSIS---VETA II		2.87
NUMBER OF SUBJECTS		474

PERCENTILES		
CENTIMETERS		INCHES
14.50	1ST	5.71
14.81	2ND	5.83
14.98	3RD	5.90
15.19	5TH	5.98
15.47	10TH	6.09
15.64	15TH	6.16
15.77	20TH	6.21
15.87	25TH	6.25
15.96	30TH	6.28
16.04	35TH	6.32
16.12	40TH	6.35
16.20	45TH	6.38
16.27	50TH	6.41
16.35	55TH	6.44
16.42	60TH	6.47
16.50	65TH	6.50
16.58	70TH	6.53
16.67	75TH	6.56
16.78	80TH	6.60
16.90	85TH	6.65
17.05	90TH	6.71
17.26	95TH	6.80
17.40	97TH	6.85
17.49	98TH	6.89
17.62	99TH	6.94

PERCENTILES		
CENTIMETERS		INCHES
15.98	1ST	6.29
16.12	2ND	6.35
16.21	3RD	6.38
16.33	5TH	6.43
16.54	10TH	6.51
16.68	15TH	6.57
16.79	20TH	6.61
16.89	25TH	6.65
16.98	30TH	6.69
17.06	35TH	6.72
17.13	40TH	6.75
17.21	45TH	6.77
17.28	50TH	6.80
17.35	55TH	6.83
17.42	60TH	6.86
17.49	65TH	6.89
17.57	70TH	6.92
17.65	75TH	6.95
17.74	80TH	6.99
17.85	85TH	7.03
17.98	90TH	7.08
18.19	95TH	7.16
18.32	97TH	7.21
18.43	98TH	7.26
18.60	99TH	7.32

(H48) ZYGOFRONTALE-TOP OF HEAD

The vertical distance between the zygofrontale landmark at the upper margin of the bony eye socket and the horizontal plane tangent to the top of the head is measured. The values of the right and left dimensions are averaged.



VARIABLE NO. (H48)—ZYGOFRONIALE-TOP OF HEAD

FEMALES

MALES

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
9.93	MEAN	3.91
0.03	SE(MEAN)	0.01
0.61	ST DEV	0.24
0.02	SE(SD)	0.01
8.21	MINIMUM	3.23
11.81	MAXIMUM	4.65
COEFF. OF VARIATION		6.2%
SYMMETRY—VETA I		0.24
KURTOSIS—VETA II		3.23
NUMBER OF SUBJECTS		334

THE SUMMARY STATISTICS		
CENTIMETERS		INCHES
10.49	MEAN	4.13
0.03	SE(MEAN)	0.01
0.58	ST DEV	0.23
0.02	SE(SD)	0.01
8.78	MINIMUM	3.46
12.63	MAXIMUM	4.97
COEFF. OF VARIATION		5.5%
SYMMETRY—VETA I		0.19
KURTOSIS—VETA II		3.22
NUMBER OF SUBJECTS		474

PERCENTILES		
CENTIMETERS		INCHES
8.47	1ST	3.34
8.71	2ND	3.43
8.84	3RD	3.48
9.00	5TH	3.54
9.21	10TH	3.63
9.34	15TH	3.68
9.44	20TH	3.72
9.53	25TH	3.75
9.60	30TH	3.78
9.68	35TH	3.81
9.75	40TH	3.84
9.82	45TH	3.87
9.89	50TH	3.89
9.97	55TH	3.92
10.04	60TH	3.95
10.13	65TH	3.99
10.22	70TH	4.02
10.32	75TH	4.06
10.44	80TH	4.11
10.57	85TH	4.16
10.75	90TH	4.23
11.02	95TH	4.34
11.19	97TH	4.40
11.30	98TH	4.45
11.47	99TH	4.52

PERCENTILES		
CENTIMETERS		INCHES
9.19	1ST	3.62
9.35	2ND	3.68
9.44	3RD	3.72
9.57	5TH	3.77
9.76	10TH	3.84
9.89	15TH	3.90
10.00	20TH	3.94
10.09	25TH	3.97
10.18	30TH	4.01
10.25	35TH	4.04
10.33	40TH	4.07
10.40	45TH	4.10
10.48	50TH	4.12
10.55	55TH	4.15
10.63	60TH	4.18
10.70	65TH	4.22
10.79	70TH	4.25
10.88	75TH	4.28
10.98	80TH	4.32
11.11	85TH	4.37
11.26	90TH	4.43
11.49	95TH	4.52
11.63	97TH	4.58
11.74	98TH	4.62
11.90	99TH	4.68

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REFERENCES

1. Bradtmiller, Bruce, Jyoti Ratnaparkhi and Ilse Tebbetts. 1985. Demographic and Anthropometric Assessment of U.S. Army Anthropometric Data Base. Technical Report NATICK/TR-86/004 (AD A164 637). U.S. Army Natick Research, Development and Engineering Center, Natick, MA.
2. Clauser, Charles E., John T. McConville, Claire C. Gordon and Ilse O. Tebbetts. 1985. Selection of Dimensions for an Anthropometric Data Base. Volume I: Rationale, Summary, and Conclusions. Technical Report NATICK/TR-86/053 (AD A179 566). U.S. Army Natick Research, Development and Engineering Center, Natick, MA.
3. Clauser, Charles E., John T. McConville, Claire C. Gordon and Ilse O. Tebbetts. 1985. Selection of Dimensions for an Anthropometric Data Base. Volume II: Dimension Evaluation Sheets. Technical Report NATICK/TR-86/054 (AD A179 472). U.S. Army Natick Research, Development and Engineering Center, Natick, MA.
4. Churchill, Thomas, Bruce Bradtmiller, and Claire C. Gordon. 1988. Computer Software Used in the U.S. Army Anthropometric Survey 1987-1988. Technical Report NATICK/TR-88/045 (AD A201 185). U.S. Army Natick Research, Development and Engineering Center, Natick, MA.
5. Annis, James F. and Claire C. Gordon. 1988. The Development and Validation of an Automated Headboard Device for Measurement of Three-dimensional Coordinates of the Head and Face. Technical Report NATICK/TR-88/048 (AD A201 186). U.S. Army Natick Research, Development and Engineering Center, Natick, MA.
6. Zehner, Gregory, Vance Deason, Cay Ervin and Claire C. Gordon. 1987. A Photographic Device for the Collection of Anthropometric Data on the Hand. Technical Report NATICK/TR-87/044 (AD A201 184). U.S. Army Natick Research, Development and Engineering Center, Natick, MA.
7. Churchill, Edmund, John T. McConville, Lloyd L. Lauback and Robert M. White. 1971. Anthropometry of U.S. Army Aviators - 1970. Technical Report TR-72-52-CE (AD 743 528). U.S. Army Natick Laboratories, Natick, MA.
8. Army Regulation 40-501, Retention and Separation, 14 April 1990.
9. 1988 Anthropometric Survey of U.S. Army Personnel Data. 1989. U.S. Army Contract DAAK60-86-C-0128. U.S. Army Natick Research, Development and Engineering Center, Natick, MA.

10. Gordon, Claire C., Thomas Churchill, Charles E. Clauser, Bruce Bradtmiller, John T. McConville, Ilse Tebbetts, and Robert A. Walker. 1989. 1988 Anthropometric Survey of U.S. Army Personnel: Summary Statistics Interim Report. Technical Report NATICK/TR-89/027 (AD A209 600). U.S. Army Natick Research, Development and Engineering Center, Natick, MA.
11. Gordon, Claire C., Thomas Churchill, Charles E. Clauser, Bruce Bradtmiller, John T. McConville, Ilse Tebbetts, and Robert A. Walker. 1989. 1988 Anthropometric Survey of U.S. Army Personnel: Methods and Summary Statistics. Technical Report NATICK/TR-89/044. U.S. Army Natick Research, Development and Engineering Center, Natick, MA.
12. Army Demographic Data. June 1989. Project No. M001443. Defense Manpower Data Center, 1600 Wilson Blvd., Suite 400, Arlington, VA.
13. Clauser, Charles, Ilse Tebbetts, Bruce Bradtmiller, John McConville and Claire C. Gordon. 1988. Measurer's Handbook: U.S. Army Anthropometric Survey 1987-1988. Technical Report NATICK/TR-88/043 (AD A202 721). U.S. Army Natick Research, Development and Engineering Center, Natick, MA.
14. Kikta, Paul and Thomas Churchill. 1978. Editing Procedure for Anthropometric Survey Data. Technical Report AMRL-TR-78-38 (AD A060 393). Armstrong Aerospace Medical Research Laboratory, Wright-Patterson Air Force Base, OH.
15. Hertzberg, H.T.E., Edmund Churchill, C.W. Dupertuis, Robert M. White and A. Damon. 1963. Anthropometric Survey of Turkey, Greece and Italy. MacMillan Company, New York, NY.
16. O'Brien, R. and W. Shelton. 1941. Women's Measurements for Current and Pattern Construction. Miscellaneous Publication No. 454. U.S. Department of Agriculture, Textiles and Clothing Division, Bureau of Home Economics. U.S. Government Printing Office, Washington, DC.
17. Gifford, E.C., J.R. Prevost and J. Lazo. 1965. Aerospace Crew Equipment Laboratory Anthropometry of Naval Aviators - 1964. Report No. NAEC ACEL 533. U.S. Naval Air Engineering Center, Philadelphia, PA.
18. White, Robert M. and Edmund Churchill. 1971. The Body Size of Soldiers, U.S. Army Anthropometry - 1966. Technical Report 72-51-CE (AD 743 465). U.S. Army Natick Laboratories, Natick, MA.
19. Churchill, Edmund, Paul Kikta and Thomas Churchill. 1977. The AMRL Anthropometric Data Bank Library: Volumes I-V. Technical Report AMRL-TR-77-1 (AD A947 314). Aerospace Medical Research Laboratory, Wright-Patterson Air Force Base, OH.

20. Bolton, C.B., M. Kenward, R.E. Simpson and G.M. Turner. 1973. An Anthropometric Survey of 2000 Royal Air Force Aircrew, 1970-1971. Technical Report 73083, Royal Air Force Establishment, Farnborough, Hants, England.
21. McCann, C., I. Noy, E. Rodden and O. Logan. 1975. 1974 Anthropometric Survey of Canadian Forces Personnel. DCIEM Report No. 75-R-1114. Defence and Civil Institute of Environmental Medicine, Downsview, Ontario, Canada.
22. Clauser, Charles E., Pearl E. Tucker, John T. McCorville, Edmund Churchill, Lloyd Lauback and Joan Reardon. 1972. Anthropometry of Air Force Women. Technical Report AMRL-TR-70-5 (AD 743 113). Aerospace Medical Research Laboratory, Wright-Patterson Air Force Base, OH.
23. Churchill, Edmund, Thomas Churchill, John T. McCorville and Robert M. White. 1977. Anthropometry of Women of the U.S. Army - 1977: Report No. 2 - The Basic Univariate Statistics. Technical Report NATICK/TR-77/024 (AD A044 806) U.S. Army Natick Research and Development Command, Natick, MA.
24. Stoldt, H., A. Damon, R. McFarland and J. Roberts. 1965. Weight, Height and Selected Body Dimensions of Adults, United States, 1960-1962. Public Health Service Publication No. 1000, Series 11, No. 8. U.S. Government Printing Office, Washington, DC.

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APPENDIX A

Uses of the Dimensions

Most of the measured and derived dimensions for which data are reported in this volume serve multiple design and sizing applications. Some, chiefly head, hand, and foot variables, are needed for the design of a particular class of item to be worn on that part of the body. All the dimensions serve at least one of the 12 application categories described below:

Basic Body Descriptors: These are dimensions of overall body size and proportions. They are required to determine the anthropometric differences or similarities between populations. They are also used for selecting samples of subjects that are anthropometrically representative of a particular population for studies in which body size is of significance (e.g., the evaluation of the cockpit geometry in a new Army helicopter).

Key Dimensions/Microxxm Selection: These dimensions serve as key or control dimensions for the design, sizing, procurement, and issuing of clothing and personal equipment. Key dimensions for men's dress shirt sizes, for example, are often Neck Circumference and Sleeve Length. In addition, key dimensions are useful for selecting anthropometrically representative samples of test subjects for evaluating the fit and function of new items.

Garments (Clothing/Personal Equipment): These dimensions are useful for the design and sizing of Army uniforms, utility garments, and personal protective equipment (e.g., body armor, respirators, chemical protective clothing).

Clothing Manikins: These are three-dimensional forms which represent specific body sizes and shapes. They are valuable guides for the design and sizing of clothing and personal equipment worn on the body. The better the manikins represent sizes of Army men and women, the better the fit and the less alteration required of garments designed over them.

Load-Carrying Systems: These dimensions are used for the design and sizing of systems worn by soldiers to carry full-field gear and other types of equipment. Load-carrying systems are of critical importance to the combat-effectiveness and well-being of Army troops and support personnel.

Head and Face Equipment: The dimensions in this group are used primarily in the design of personal protective equipment worn on the head and face and for the design of optical and auditory devices.

Gloves: These are hand, finger, wrist, and forearm measurements used in the design, sizing, and procurement of gloves and in the construction of hand forms used to guide the design of gloves.

Foot Gear: These foot and ankle dimensions are needed for the design, sizing, procurement, and evaluation of shoes and boots.

Workspace and Body Clearance: Dimensions in this group are central to the design and layout of workstations occupied by Army personnel. They are also of paramount importance in the design and layout of workstations of Army weapon systems, particularly those, like aircraft, in which space is at a premium. Body clearance dimensions dictate, for example, the size of escape hatches and limited-size passageways that must be designed to allow quick and safe passage of an individual. In the field or in a depot, the performance of maintenance activities is also greatly enhanced if personnel have ready physical and visual access to maintenance and inspection ports, and have the reach capabilities to perform necessary service, repair, or replacement activities, often conducted under adverse conditions.

Aircraft Accommodation: The dimensions in this group are those that have been or are likely to be used to restrict individuals from operating aircraft with which they are anthropometrically incompatible. That is, certain aircraft do not safely and efficiently accommodate the complete range of body sizes found among aircrew personnel. Ideally, the more complete data that will be available from this survey can be used to avoid such problems in the future.

Body Links: These dimensions are needed for developing the link or "skeletal" system which is the foundation for all three-dimensional human models used to assess the body's reaction to hazardous environments, and for two- and three-dimensional models used in the design and evaluation of Army workstations.

Anthropomorphic Analogues: The dimensions in this group are useful for the development of four general types of models: (1) three-dimensional manikins and (2) three-dimensional computer-generated models (used to assess the body's reaction to high acceleration environments); (3) two-dimensional drawing-board manikins and (4) three-dimensional computer-generated, human-engineering analogues (used to guide the design and evaluation of workstations).

Table A-1 lists all the dimensions measured in the 1988 Anthropometric Survey, and designates the use or uses they may serve. It will be noted that Bizygomatic Breadth and Menton-Sellion Length are listed twice in the table. Both these dimensions were measured twice - once directly and once with the automated headboard device. Data from the latter should be used in concert with other three-dimensional data obtained with the headboard for designing purposes involving three-dimensional headforms. Applications for directly measured data include procurement tariffs and fitting. The information presented in this appendix and Table A-1 were taken from the 1988 Anthropometric Survey of U.S. Army Personnel: Methods and Summary Statistics¹¹.

TABLE A-1. Applications for the Measured and Derived Dimensions in the Army Survey.		Basic Body Descriptors	Key Dimen./Microcosms	Garments (Clothing/PE)	Clothing Manikins	Load-Carrying Systems	Head and Face Equipment	Gloves	Foot Gear	Work-space/Body Clearance	Aircraft Egress/evacuation	Body Limits	Anthropomorphic Analogues
(1) ABDOMINAL EXTENSION DEPTH, SIT	(D1) ABDOMINAL LINK			0						0		0	0
(2) ACROMIAL HEIGHT	(3) ACROMIAL HEIGHT, SITTING			0	0					0		0	0
(D2) ACROMION-AXILLA LENGTH				0	0	0						0	0
(4) ACROMION-RADIALE LENGTH	(H1) ALARE-BACK OF HEAD			0			0					0	
(H2) ALARE-TOP OF HEAD	(5) ANKLE CIRCUMFERENCE			0	0		0		0				0
(D3) ARM LENGTH		0											
(6) AXILLA HEIGHT	(D4) AXILLA-WAIST LENGTH (ND)			0	0	0							
(D5) AXILLA-WAIST LENGTH (O)	(7) AXILLARY ARM CIRCUMFERENCE			0	0	0							0
(8) BALL OF FOOT CIRCUMFERENCE				0	0	0			0				0
(9) BALL OF FOOT LENGTH	(10) BIACROMIAL BREADTH		0						0				0
(11) BICEPS CIRCUMFERENCE, FLEXED	(12) BIDELTOID BREADTH			0	0	0				0	0		0
(13) BICONIAL BREADTH				0			0						
(H4) BIMETROORBITAL BREADTH	(13) BIMALLEOLAR BREADTH						0						0
(H5) BIOCULAR BREADTH, MAXIMUM	(14) BISPINOUS BREADTH						0					0	
(H6) BITRAGION BREADTH							0						
(15) BITRAGION CORONAL ARC	(16) BITRAGION CORONAL ARC						0						
(17) BITRAGION CUNION ARC	(18) BITRAGION FRONTAL ARC						0						
(19) BITRAGION SUBMANDIBULAR ARC							0						

TABLE A-1. Continued

	Basic Body Descriptors	Key Dimen./Microcosms	Garments (Clothing/PE)	Clothing Manicins	Load-Carrying Systems	Head and Face Equipment	Gloves	Foot Gear	Workspace/Body Clearance	Aircraft Accommodation	Body Links	Anthropomorphic Analogues
(20) BITRAGION SUBNASALE ARC												
(21) BIZYGOMATIC BREADTH		○				○						○
(H7) BIZYGOMATIC BREADTH						○						○
(22) BSTPT/THELION-BSTPT/THELION BR			○	○	○							
(23) BUTTOCK CIRCUMFERENCE		○	○	○								○
(24) BUTTOCK DEPTH			○	○					○			○
(25) BUTTOCK HEIGHT			○	○								○
(26) BUTTOCK-KNEE LENGTH			○						○	○		○
(27) BUTTOCK-POPLITEAL LENGTH									○			○
(28) CALF CIRCUMFERENCE			○	○								○
(29) CALF HEIGHT			○	○				○				○
(D6) CALF LINK											○	○
(30) CERVICALE HEIGHT			○	○	○						○	○
(31) CERVICALE HEIGHT, SITTING											○	○
(H8) CHELION-BACK OF HEAD						○						○
(H9) CHELION-TOP OF HEAD						○						○
(32) CHEST BREADTH			○	○	○							○
(33) CHEST CIRCUMFERENCE		○	○	○	○							○
(34) CHEST CIRCUMFERENCE AT SCYE		○	○	○	○							○
(35) CHEST CIRC BELOW BREAST			○	○	○							○
(36) CHEST DEPTH			○	○	○				○			○
(37) CHEST HEIGHT			○	○	○							○
(D7) CHEST HEIGHT, SITTING					○							
(D8) CHEST-WAIST DROP (NI)			○	○								
(D9) CHEST-WAIST DROP (O)			○	○								
(H10) CHIN-BACK OF HEAD						○						
(H11) CHIN-TOP OF HEAD						○						
(D10) CLAVICLE LINK											○	○
(H12) CR'NION-BACK OF HEAD						○						
(H13) CR'NION-TOP OF HEAD						○						

TABLE A-1. Continued

	Basic Body Descriptors	Key Dinens/Microcosms	Garments (Clothing/PE)	Clothing Manikins	Load-Carrying Systems	Head and Face Equipment	Gloves	Foot Gear	Workspace/Body Clearance	Aircraft Accommodation	Body Links	Anthropometric Analogues
(38) CROTCH HEIGHT		O	O	O								O
(39) CROTCH LENGTH (ND)			O	O								
(40) CROTCH LENGTH (O)			O	O								
(D11) CROTCH LENGTH, ANTERIOR (ND)			O	O								
(D12) CROTCH LENGTH ANTERIOR (O)			O	O								
(41) CROTCH LENGTH, POSTERIOR (ND)			O	O								
(42) CROTCH LENGTH, POSTERIOR (O)			O	O								
(D13) DACTYLION HEIGHT									O			O
(D14) DACTYLION REACH FROM WALL									O	O		O
(D15) DACTYLION REACH FROM WALL, EXT									O			O
(43) EAR BREADTH							O					
(44) EAR LENGTH							O					
(45) EAR LENGTH ABOVE TRAGION							O					
(46) EAR PROTRUSION							O					
(H14) ECTOORBITALE-BACK OF HEAD							O					
(H15) ECTOORBITALE-TOP OF HEAD							O					
(47) ELBOW CIRCUMFERENCE				O					O			O
(48) ELBOW REST HEIGHT									O			O
(D16) ELBOW REST HEIGHT, STANDING									O			O
(D17) ELBOW-CENTER OF GRIP LENGTH									O			O
(D18) ELBOW-WRIST LENGTH									O			O
(D19) EYE HEIGHT									O			O
(49) EYE HEIGHT, SITTING		O							O		O	O
(D20) EYE-TRAGION LINK										O		O
(50) FOOT BREADTH, HORIZONTAL		O						O				O
(51) FOOT LENGTH		O						O	O		O	O
(52) FOREARM CIRCUMFERENCE, FLESHED			O						O			O
(53) FOREARM-FOREARM BREADTH									O	O		O
(54) FOREARM-HAND LENGTH									O			O
(H16) FRONTOTEMPORALE-BACK OF HEAD						O						

TABLE A-1. Continued

	Basic Body Descriptors	Key Dimen./Microcosms	Garments (Clothing/PE)	Clothing Manikins	Load-Carrying Systems	Head and Face Equipment	Gloves	Foot Gear	Workspace/Body Clearance	Aircraft Accommodation	Body Links	Anthropomorphic Analogues
(H17) FRONTOTEMPORALE-TOP OF HEAD (D21) FUNCTIONAL GRIP REACH (D22) FUNCTIONAL GRIP REACH, EXTENDED (55) FUNCTIONAL LEG LENGTH (H18) GLABELLA-BACK OF HEAD						○			○	○		○
(H19) GLABELLA-TOP OF HEAD (56) GLUTEAL FURROW HEIGHT (H20) GONION-BACK OF HEAD (H21) GONION-TOP OF HEAD (57) HAND BREADTH		○	○	○		○			○			○
(58) HAND CIRCUMFERENCE (59) HAND LENGTH (60) HEAD BREADTH (61) HEAD CIRCUMFERENCE (62) HEAD LENGTH		○ ○ ○ ○ ○	○ ○			○ ○ ○ ○	○ ○		○	○	○	○ ○ ○ ○ ○
(63) HEEL-ANKLE CIRCUMFERENCE (64) HEEL BREADTH (65) HIP BREADTH (66) HIP BREADTH, SITTING (67) ILIOCRISTALE HEIGHT			○ ○ ○ ○	○ ○	○			○ ○		○		○ ○ ○ ○
(D23) INDEX FINGER REACH (D24) INDEX FINGER REACH, EXTENDED (H22) INFRAORBITALE-BACK OF HEAD (H23) INFRAORBITALE-TOP OF HEAD (68) INTERPUPILLARY BREADTH						○ ○ ○			○ ○		○	○ ○ ○ ○
(69) INTERSCYE I (70) INTERSCYE II (71) KNEE CIRCUMFERENCE (72) KNEE HEIGHT, MIDPATELLA (73) KNEE HEIGHT, SITTING			○ ○ ○ ○	○ ○	○				○			○ ○ ○ ○ ○

TABLE A-1. Continued

	Basic Body Descriptors	Key Dimen./Microcosms	Garments (Clothing/PE)	Clothing Manikins	Load-Carrying Systems	Head and Face Equipment	Gloves	Foot Gear	Workspace/Body Clearance	Aircraft Accommodation	Body Links	Anthropomorphic Analogues
(74) LATERAL FEMORAL EPICONDYLE HT (75) LATERAL MALLEOLUS HEIGHT (H24) LIP LENGTH (76) LOWER THIGH CIRCUMFERENCE (H25) MAXIMUM FRONTAL BREADTH				○ ○		○		○			○ ○	○ ○
(H26) MENTON-BACK OF HEAD (H27) MENTON-CRANIUM LENGTH (77) MENTON-SELLION LENGTH (H28) MENTON-SELLION LENGTH (H29) MENTON-SUBNASALE LENGTH		○				○ ○ ○ ○ ○						○
(H30) MENTON-TOP OF HEAD (78) MIDSHOULDER HEIGHT, SITTING (H31) MINIMUM FRONTAL BREADTH (79) NECK-BUSTPOINT/SELLION LENGTH (80) NECK CIRCUMFERENCE						○		○				○ ○
(81) NECK CIRCUMFERENCE, BASE (82) NECK HEIGHT, LATERAL (D23) NECK LINK (D26) NECK-BUTTOCK LENGTH (D27) NECK-GLUTEAL FURROW LENGTH		○	○ ○	○ ○	○						○ ○	
(D28) NECK-SCYE LENGTH (H32) NOSE BREADTH (H33) NOSE PROTRUSION (83) OVERHEAD FINGERTIP REACH (84) OVERHEAD FINGERTIP REACH, EXT			○ ○	○ ○		○ ○		○ ○				○ ○
(85) OVERHEAD FINGERTIP REACH, SIT (D29) PELVIC LINK (86) POPliteal HEIGHT (H34) PRONASALE-BACK OF HEAD (H35) PRONASALE-TOP OF HEAD						○ ○		○ ○			○ ○	○ ○

TABLE A-1. Continued

	Basic Body Descriptors	Key Dimen./Microcosms	Garments (Clothing/PE)	Clothing Manikins	Load-Carrying Systems	Head and Face Equipment	Gloves	Foot Gear	Workspace/Body Clearance	Aircraft Accommodation	Body Links	Anthropomorphic Analogues
(87) RADIALE-STYLION LENGTH											○	
(D30) RISE (ND)			○	○								
(D31) RISE (O)			○	○								
(88) SCYE CIRCUMFERENCE			○	○								
(89) SCYE DEPTH			○	○	○							
(H36) SELLION-BACK OF HEAD						○						
(H37) SELLION-TOP OF HEAD						○						
(90) SHOULDER CIRCUMFERENCE		○	○									○
(91) SHOULDER-ELBOW LENGTH			○	○					○			○
(92) SHOULDER LENGTH			○	○	○							
(D32) SHOULDER SLOPE			○	○								
(D33) SHOULDER-WAIST LENGTH (ND)			○	○								
(D34) SHOULDER-WAIST LENGTH (O)			○	○								
(93) SITTING HEIGHT	○	○							○	○	○	○
(D35) SLEEVE INSEAM			○	○								
(94) SLEEVE LENGTH: SPINE-ELBOW			○	○								
(95) SLEEVE LENGTH: SPINE-SCYE			○	○								
(96) SLEEVE LENGTH: SPINE-WRIST		○	○	○								
(97) SLEEVE OUTSEAM			○	○								
(98) SPAN			○	○					○	○		○
(99) STATURE	○	○	○		○				○		○	○
(H38) STOMION-BACK OF HEAD						○						
(H39) STOMION-TOP OF HEAD						○						
(100) STRAP LENGTH			○	○	○							
(H40) SUBNASALE-BACK OF HEAD						○						
(H41) SUBNASALE-SELLION LENGTH						○						○
(H42) SUBNASALE-TOP OF HEAD						○						
(101) SUPRASTERNALE HEIGHT			○	○							○	
(D36) SUPRASTERNALE HEIGHT, SITTING			○	○								
(102) TENTH RIB HEIGHT			○	○								○

TABLE A-1. Continued

	Basic Body Descriptors	Key Dimen./Microcosms	Garments (Clothing/PE)	Clothing Manikins	Load-Carrying Systems	Head and Face Equipment	Gloves	Foot Gear	Workspace/Body Clearance	Aircraft Accommodation	Body Links	Anthropomorphic Analogues
(103) THIGH CIRCUMFERENCE												
(104) THIGH CLEARANCE												
(D37) THIGH LINK												
(D38) THORAX LINK												
(105) THUMB BREADTH												
(106) THUMB TIP REACH												
(D39) THUMB TIP REACH, EXTENDED												
(D40) TRACION HEIGHT												
(D41) TRACION HEIGHT, SITTING												
(H43) TRACION-BACK OF HEAD												
(H44) TRACION-TOP OF HEAD												
(107) TROCHANTERION HEIGHT												
(D42) VERTICAL GRIP REACH												
(D43) VERTICAL GRIP REACH DOWN												
(D44) VERTICAL GRIP REACH, EXTENDED												
(D45) VERTICAL GRIP REACH, SITTING												
(D46) VERTICAL INDEX FINGERTIP REACH												
(D47) VERTICAL INDEX FINGERTIP REACH DOWN												
(D48) VERTICAL INDEX FINGERTIP REACH, EXT												
(D49) VERTICAL INDEX FINGERTIP REACH, SIT												
(D50) VERTICAL THUMB TIP REACH DOWN												
(D51) VERTICAL THUMB TIP REACH, SITTING												
(108) VERTICAL TRUNK CIRC (ASCO)												
(109) VERTICAL TRUNK CIRC (USA)												
(D52) VERTICAL WRIST HEIGHT												
(D53) VERTICAL WRIST HEIGHT, EXTENDED												
(D54) VERTICAL WRIST HEIGHT, SITTING												
(110) WAIST BACK LENGTH (G)												
(111) WAIST BACK LENGTH (O)												
(D55) WAIST BACK, VERTICAL (G)												

TABLE A-1. Continued

	Basic Body Descriptors	Key Dimen./Microcosms	Garments (Clothing/PE)	Clothing Manikins	Load-Carrying Systems	Head and Face Equipment	Gloves	Foot Gear	Workspace/Body Clearance	Aircraft Accommodation	Body Links	Anthropomorphic Analogues
(D56) WAIST BACK, VERTICAL (O)			O	O								
(112) WAIST BREADTH			O	O	O							O
(113) WAIST CIRCUMFERENCE (ND)		O	O	O	O							O
(114) WAIST CIRCUMFERENCE (O)		O	O	O	O							O
(115) WAIST DEPTH			O	O	O							O
(116) WAIST FRONT LENGTH (ND)		O	O	O	O							
(117) WAIST FRONT LENGTH (O)		O	O	O	O							
(118) WAIST HEIGHT (ND)			O	O	O				O			O
(119) WAIST HEIGHT (O)			O	O	O				O			O
(120) WAIST HEIGHT, SITTING (ND)			O	O					O			O
(121) WAIST HEIGHT, SITTING (O)			O	O					O			O
(D57) WAIST-BUTTOCK DROP (ND)			O	O								
(D58) WAIST-BUTTOCK DROP (O)			O	O								
(122) WAIST-HIP LENGTH			O	O								
(123) WAIST (ND) - WAIST (O) LENGTH			O	O								
(D59) WAIST-WAIST (ND) OVER SHOULDER			O	O								
(D60) WAIST-WAIST (O) OVER SHOULDER			O	O								
(124) WEIGHT	O	O	O	O					O	O		O
(125) WRIST-CENTER OF GRIP LENGTH			O	O					O	O		O
(126) WRIST CIRCUMFERENCE			O	O			O					O
(127) WRIST HEIGHT									O			O
(128) WRIST HEIGHT, SITTING									O			O
(129) WRIST-INDEX FINGER LENGTH									O			O
(130) WRIST-THUMB TIP LENGTH									O	O		O
(131) WRIST-WALL LENGTH									O	O		O
(132) WRIST-WALL LENGTH EXTENDED									O			O
(H45) ZYGION-BACK OF HEAD						O						
(H46) ZYGION-TOP OF HEAD						O						
(H47) ZYGOPFRONTALE-BACK OF HEAD						O						
(H48) ZYGOPFRONTALE-TOP OF HEAD						O						

APPENDIX B

The Statistical Measures

The statistical measures used in this report are univariate statistics selected to provide potential users with a maximum of useful information. They are, too, the statistics that are used in other anthropometric reports prepared by the U.S. Army.

The statistics provided for each variable are the following:

1. The arithmetic mean (\bar{X}). This is the arithmetic average and is computed as the sum of the values divided by the number of values:

$$\bar{X} = \frac{\sum X}{N}$$

where X is the individual measurement and N is the sample size.

2. The standard error of the mean ($Se_{\bar{X}}$). This is a standard deviation type of statistic and is an estimate of the sampling error of the mean. It is computed as:

$$Se_{\bar{X}} = \frac{SD}{\sqrt{N}}$$

where SD is the standard deviation for that variable and N is the sample size.

3. The standard deviation (SD). This is a measure of variability and is computed as:

$$SD = \sqrt{\frac{\sum (X - \bar{X})^2}{N}}$$

where X is the individual measurement, \bar{X} is the mean value for that measurement, and N is the sample size.

4. The standard error of the SD (Se_{SD}). This is another measure of variability and is an estimate of the sampling error of the SD. It is computed as:

$$Se_{SD} = \frac{SD}{\sqrt{2N}}$$

where SD is the standard deviation of the variable of interest and N is the sample size.

5. Minimum. The smallest observed value for a particular variable.
6. Maximum. The largest observed value for a particular variable.
7. N. The number of subjects measured for a particular variable.
8. Symmetry (β_1). A dimensionless statistic that is an indicator of whether a set of data is symmetrically distributed. It is computed as:

$$\beta_1 = \frac{\sum(X-\bar{X})^3}{N * SD^3}$$

where X is the individual measurement, \bar{X} is the mean of that measurement, N is the sample size, and SD is the standard deviation of the measurement. The normal distribution value for β_1 is 0.

9. Kurtosis (β_2). A dimensionless statistic that indicates the level of agreement between a normal distribution and the actual distribution of the data. The normal distribution value for β_2 is 3.
10. The coefficient of variation. A statistic that restates the standard deviation as a percent of the mean and is computed as:

$$CV = 100 * \frac{SD}{\bar{X}}$$

where \bar{X} is the mean and SD is the standard deviation of a measurement.

11. The percentiles. This group of statistics represents measures of order or position. These measures can be thought of as being obtained by arranging the data in order from the smallest to the largest and then observing the value of the datum which lies at a specified position in the array. The 99 percentiles - ranging from the first to the 99th - are the values at the points which separate consecutive blocks or units of 1% of the data in the ordered array. The first percentile is the value which separates the smallest 1% of the data from the 99% of the data with larger values; the second percentile separates the smallest 2% from the larger 98% and so on. Twenty-five of these percentiles which are believed to be most useful to designers and engineers have been included for each measurement.

The calculation of the percentiles uses a procedure developed by Edmund Churchill specifically for anthropometric survey data; it is described in detail in Hertzberg et al., 1963.¹⁵ The percentile values are first calculated by routine interpolation within the cumulative frequency distribution. These values are then smoothed by the use of a fourth-degree polynomial in terms of normal-curve deviates. The procedure approximates a graphic process of deriving percentiles using normal probability paper. The information presented in this appendix was taken from the 1963 Anthropometric Survey of U.S. Army Personnel: Methods and Summary Statistics¹⁴.

APPENDIX C

Comparability of 1968 Anthropometric Survey Dimensions with Dimensions of Other Large-Scale Surveys

The primary objective of this appendix is to document the comparability of the 1968 Anthropometric Survey dimensions with like or similarly named dimensions measured in other large-scale anthropometric surveys. Data from surveys are frequently used to compare body-size distributions among and between populations, e.g., males and females, occupational groups, racial groups, age categories. A particularly vexing problem in drawing conclusions from such comparisons is whether differences between the data are reflecting real population differences or are the result of using different techniques to measure what may be described or named as the same dimension. Differences in landmark definitions, subject positioning, instruments and their techniques of use can and do lead to significantly different results.

It is particularly important that the body-size comparability among U.S. military populations be known. Items of personal protective equipment, clothing, and weapon systems are sometimes designed to be used by more than one U.S. military service and/or by allied services in other countries. In recent years, design for compatibility of use among NATO services has received increased emphasis. This kind of cooperative effort requires knowledge of population distributions of dimensions which form the basis for sizing, procurement and issue of protective equipment, and determination of the comparability of persons who may be called upon to use often-restrictive workpieces, as in the case of pilots from one country undergoing training in another nation's aircraft.

Dimensions measured in the 1968 Anthropometric Survey are compared to like or similarly named dimensions measured in six earlier U.S. and two foreign military surveys and two surveys of U.S. civilians. Data from the earlier military surveys serve as the basis for the design of current equipment, clothing, and systems. Many of these, of course, will remain in military inventories for some time.

The following means were used to judge the comparability of the 1968 Anthropometric Survey dimensions to other survey dimensions:

1. published descriptions of the dimensions and how they were measured.
2. published definitions of the landmarks used.
3. knowledge of measuring and landmarking techniques observed in the field by John T. McConville and/or Charles E. Clauser during five of the six U.S. military surveys and personal interaction with the principal investigators of all the other surveys except O'Brien's¹⁹.
4. examination of summary statistics.

Table C-1 presents the comparability of the 1988 Anthropometric Survey data to data from the other surveys listed. The following codes are used:

C - COMPARABLE -- The landmarks and measuring techniques used are of such comparability that differences between data from surveys can be considered to reflect real anthropometric differences between populations.

PC - PROBABLY COMPARABLE -- Differences in landmark definitions and/or measuring techniques are of insufficient magnitude to make the resulting data inappropriate to use for most human engineering purposes such as the sizing, design, procurement, and issuing of military equipment or assessing the suitability of assigning personnel to restrictive workspaces.

NC - NOT COMPARABLE -- Landmark differences and measuring techniques are believed to be different enough so that dimensions so coded should not be used as the basis for answering any population comparison questions.

CU - COMPARABILITY UNKNOWN -- Most of the dimensions receiving this designation are bust-related dimensions found among those measured in the O'Brien¹⁶ effort. In this survey a bandeau instead of a bra was worn and comparability cannot be determined. Data from the few other dimensions coded CU reflect discrepancies for which no explanation is readily apparent.

The comparability between derived dimensions reported here and like dimensions measured directly in other surveys is, and will remain, unknown without extensive analyses. Therefore, derived dimensions do not appear in this table.

Although the automated headboard was a unique measuring device, the technique was sufficiently similar in principle to older headboard measuring techniques to make comparisons valid. A general comparison of headboard data from the 1988 Anthropometric Survey to headboard data from the 1967 and 1968 Air Force survey and the 1970 Army survey of Aviators demonstrates that the coefficients of variation in the 1988 Anthropometric Survey data are smaller than the coefficients of variation of like dimensions from the other three surveys. These smaller coefficients are believed to indicate that a more stable subject head position was achieved using the automated headboard than could be achieved with headboards used in previous surveys. The information presented in this appendix and Table C-1 were taken from the 1988 Anthropometric Survey of U.S. Army Personnel: Methods and Summary Statistics¹¹.

TABLE C-1. ANSUR Dimensions: Assessment of Comparability with Other Surveys.		USN '63 17	USA '66 18	USA '70 7	USAF '67'9	RAF 2,000 20	CF 21	USAF '63 Women 22	USA '77 Women 23	HS 24	O'Brien 16
C = comparable NC = not comparable CU = comparability unknown PC = probably comparable											
(1) ABDOMINAL EXTENSION DEPTH, SIT					NC						
(2) ACROMIAL HEIGHT			NC	PC	PC			PC	PC		
(3) ACROMIAL HEIGHT, SITTING	NC			NC	NC						
(4) ACROMION-RADIALE LENGTH				PC				PC	PC		
(H1) ALARE-BACK OF HEAD											
(H2) ALARE-TOP OF HEAD											
(5) ANKLE CIRCUMFERENCE	C	C	C	C	C		C	C			C
(6) AXILLA HEIGHT					NC			C	C		
(7) AXILLARY ARM CIRCUMFERENCE	C						C	C		NC	C
(8) BALL OF FOOT CIRCUMFERENCE		PC	C	C	NC			C			
(9) BALL OF FOOT LENGTH			C	C	C				C		
(10) BIACROMIAL BREADTH	NC	NC	NC	NC	NC	NC	NC	NC	NC		NC
(11) BICEPS CIRCUMFERENCE, FLEXED	C	C	C	C	C	C	C	C	C		
(12) BICEP TOID BREADTH		C	C	C		C	C	C			
(H3) BIGONIAL BREADTH	PC			PC				PC			
(H4) BINFRAORBITALE BREADTH											
(13) BIMALLEOLAR BREADTH				C							
(H5) BIOCULAR BREADTH, MAXIMUM											
(14) BISPINOUS BREADTH									CU		
(H6) BITRAGION BREADTH	PC	PC	PC	PC				PC	PC		
(15) BITRAGION CHIN ARC											
(16) BITRAGION CORONAL ARC	C		C	C	C	C	C	C			
(17) BITRAGION ORBITAL ARC											
(18) BITRAGION FRONTAL ARC	C			C				C			
(19) BITRAGION SUBMANDIBULAR ARC	C			C				C			
(20) BITRAGION SUBM. SALE ARC	C			C							
(21) BIZYGOMATIC BREADTH	PC	C	C	C		C	C	C	C		
(H7) BIZYGOMATIC BREADTH	PC	PC	PC	PC		PC	PC	PC	PC		
(22) ESTETHELION-ESTETHELION BR							C				
(23) BUTTOCK CIRCUMFERENCE	C	C	C	C	C	C		C			NC

TABLE C-1. Continued

	USN '64	USA '66	USA '70	USAF '67	RAF 2,000	CF	USAF '68 Women	USA '77 Women	HES	O'Brien
(24) BUTTOCK DEPTH	C			C			C			
(25) BUTTOCK HEIGHT				C			C			NC
(26) BUTTOCK-KNEE LENGTH	NC	NC	NC	NC	NC		NC	NC		NC
(27) BUTTOCK-POPLITEAL LENGTH	NC	NC	NC	NC		NC	NC	NC		NC
(28) CALF CIRCUMFERENCE	C	C	C	C	C		C	C		C
(29) CALF HEIGHT		C	C	C				PC		
(30) CERVICALE HEIGHT	NC	NC	NC	NC			C	C		C
(31) CERVICALE HEIGHT, SITTING										C
(H8) CHEILION-BACK OF HEAD										
(H9) CHEILION-TOP OF HEAD										
(32) CHEST BREADTH	PC	PC	PC	PC			PC	PC		
(33) CHEST CIRCUMFERENCE	PC	PC	PC	PC	PC	PC	PC	PC		CU
(34) CHEST CIRCUMFERENCE AT SCYE				C			CU	CU	NC	CU
(35) CHEST CIRC BELOW BREAST							PC	PC		
(36) CHEST DEPTH	C	C	C	C			C	C		
(37) CHEST HEIGHT	CU			CU			CU	CU		NC
(H10) CHIN-BACK OF HEAD				PC			PC	PC		
(H11) CHIN-TOP OF HEAD										
(F12) CRINION-BACK OF HEAD										
(H13) CRINION-TOP OF HEAD										
(38) CROTCH HEIGHT	PC	PC	PC	PC	PC	PC	PC	PC		NC
(39) CROTCH LENGTH (ND)										
(40) CROTCH LENGTH (O)				NC						
(41) CROTCH LENGTH, POSTERIOR (N)										
(42) CROTCH LENGTH, POSTERIOR (C)										
(43) EAR BREADTH	C			C			C	C		
(44) EAR LENGTH	C			C			C	C		
(45) EAR LENGTH ABOVE TRAGION				C						
(46) EAR PROTRUSION				C						
(H14) ECTOORBITALE-BACK OF HEAD				NC						

TABLE C-1. Continued

	USN '64	USA '66	USA '70	USAF '67	RAF 2,000	CF	USAF '68 Women	USA '77 Women	MES	O'Brien
(H15) ECTOORBITALE-TOP OF HEAD										
(47) ELBOW CIRCUMFERENCE				C						NC
(48) ELBOW REST HEIGHT	PC		PC	PC	PC					
(49) EYE HEIGHT, SITTING	C	C	C	C			C	C		
(50) FOOT BREADTH, HORIZONTAL	C	C	C	C	PC	C	C	C		
(51) FOOT LENGTH	C	C	C	C	PC	C	C	C		
(52) FOREARM CIRCUMFERENCE, FLEXED	PC	PC	PC	C			C	PC		NC
(53) FOREARM-FOREARM BREADTH				C						
(54) FOREARM-HAND LENGTH	C	C	C		C			C		
(H16) FRONTOTEMPORALE-BACK OF HEAD										
(H17) FRONTOTEMPORALE-TOP OF HEAD										
(55) FUNCTIONAL LEG LENGTH			NC		NC			NC		
(H18) GLABELLA-BACK OF HEAD				PC				PC		
(H19) GLABELLA-TOP OF HEAD			PC	PC				PC		
(56) GLUTEAL FURROW HEIGHT	C			C			C	C		
(H20) GONION-BACK OF HEAD										
(H21) GONION-TOP OF HEAD										
(57) HAND BREADTH	C	C	C	C		C	C	C		
(58) HAND CIRCUMFERENCE	C	C	C	C			C	C		
(59) HAND LENGTH	PC	PC	PC	C		PC	C	CU		
(60) HEAD BREADTH	C	C	C	C	C	C	C	C		
(61) HEAD CIRCUMFERENCE	C	C	C	C	NC	NC	C	C		
(62) HEAD LENGTH	C	C	C	C	C		C	C		
(63) HEEL-ANKLE CIRCUMFERENCE		C	C	C	NC			C		
(64) HEEL BREADTH		CU	NC					PC		
(65) HIP BREADTH	PC	PC	PC	PC			PC	PC		
(66) HIP BREADTH, SITTING	CU	C	NC	NC			NC	C	C	
(67) ILIOCRISTALE HEIGHT		C		PC						
(H22) INFRAORBITALE-BACK OF HEAD										
(H23) INFRAORBITALE-TOP OF HEAD										

TABLE C-1. Continued

	USN '64	USA '66	USA '70	USAF '67	RAF 2,000	CF	USAF '68 Women	USA '77 Women	HES	O'Brien
(68) INTERPUPILLARY BREADTH	NC	NC	NC	NC						
(69) INTERSCYE I	C	C	C	NC			C	NC		NC
(70) INTERSCYE II								PC		
(71) KNEE CIRCUMFERENCE				C			C	NC		
(72) KNEE HEIGHT, MIDPATELLA				PC						
(73) KNEE HEIGHT, SITTING	CU	CU	NC	C	NC			NC		PC
(74) LATERAL FEMORAL EPICONDYLE HT										
(75) LATERAL MALLEOLUS HEIGHT				PC			CU			
(H24) LIP LENGTH	CU			CU			CU			
(76) LOWER THIGH CIRCUMFERENCE	PC	PC	PC							
(H25) MAXIMUM FRONTAL BREADTH	CU			CU						
(H26) MENTON-BACK OF HEAD					NC		NC	NC		
(H27) MENTON-CRINION LENGTH								PC		
(77) MENTON-SELLION LENGTH		C	NC	C		C	NC	NC		
(H28) MENTON-SELLION LENGTH		PC	NC	PC		PC	NC	NC		
(H29) MENTON-SUBNASALE LENGTH										
(H30) MENTON-TOP OF HEAD				NC	NC		NC	NC		
(78) MIDSHOULDER HEIGHT, SITTING		C	C	C			C			
(H31) MINIMUM FRONTAL BREADTH				PC				PC		
(79) NECK-BUSTPOINT/THIELION LENGTH							NC	NC		NC
(80) NECK CIRCUMFERENCE	C	C	C	NC	C	NC				
(81) NECK CIRCUMFERENCE, BASE							NC	NC		NC
(82) NECK HEIGHT, LATERAL										
(H32) NOSE BREADTH	PC			PC			PC	PC		
(H33) NOSE PROTRUSION	CU									
(83) OVERHEAD FINGERTIP REACH										
(84) OVERHEAD FINGERTIP REACH, EXT										
(85) OVERHEAD FINGERTIP REACH, SIT		NC	C					PC		
(86) POPLITEAL HEIGHT	NC	NC	NC	NC			NC	NC		CU
(H34) PRONASALE-BACK OF HEAD	PC	PC	PC	PC			PC	PC		

TABLE C-1. Continued

	USN '64	USA '66	USA '70	USAF '67	RAF 2,000	CF	USAF '63 Women	USA '77 Women	HES	O'Brien
(H35) PRONASALE-TOP OF HEAD				CU			CU			
(87) RADIALE-STYLION LENGTH				C			C			
(88) SCYE CIRCUMFERENCE	C	C	C	NC			C			NC
(89) SCYE DEPTH										CU
(H36) SELLION-BACK OF HEAD	CU	CU	CU	CU				CU		
(H37) SELLION-TOP OF HEAD				CU						
(90) SHOULDER CIRCUMFERENCE	C	C	C	C			C	C		
(91) SHOULDER-ELBOW LENGTH	NC	PC	PC	NC				PC		
(92) SHOULDER LENGTH	NC	NC	NC	NC			NC	NC		NC
(93) STUTING HEIGHT	C	C	C	C	NC		C	C	C	
(94) SLEEVE LENGTH: SPINE-ELBOW				NC			C			NC
(95) SLEEVE LENGTH: SPINE-SCYE				NC			PC			
(96) SLEEVE LENGTH: SPINE-WRIST	C	NC	C	NC		C	PC			
(97) SLEEVE OUTSEAM							NC			
(98) SPAN						C				
(99) STATURE	C	C	C	C	NC	C	C	C	NC	C
(H38) STOMION-BACK OF HEAD								CU		
(H39) STOMION-TOP OF HEAD				PC			CU	CU		
(100) STRAP LENGTH							NC			
(H40) SUBNASALE-BACK OF HEAD				CU			PC	CU		
(H41) SUBNASALE-SELLION LENGTH	PC			PC			PC	PC		
(H42) SUBNASALE-TOP OF HEAD				PC			CU	CU		
(101) SUPRASTERNALE HEIGHT	C			C			C	C		
(102) TENTH RIB HEIGHT										
(103) THIGH CIRCUMFERENCE	C	C	C	C	C		C	C		
(104) THIGH CLEARANCE			NC	C	CU		NC	PC	NC	
(105) THUMB BREADTH										
(106) THUMB-TIP REACH	PC	PC	PC	PC	PC	PC	PC	PC		
(H43) TRACION-BACK OF HEAD	CU	PC	PC	PC	PC		PC	CU		
(H44) TRACION-TOP OF HEAD	PC	PC	PC	PC	PC		PC	CU		

TABLE C-1. Continued

	USN '64	USA '65	USA '70	USAF '67	RAF 2,000	CF	USAF '68 Women	USA '77 Women	HES	O'Brien
(107) TROCHANTERION HEIGHT				C			NC	C		
(108) VERTICAL TRUNK CIRC (ASCC)					C					CU
(109) VERTICAL TRUNK CIRC (USA)	NC	PC	NC	NC		C	PC	PC		
(110) WAIST BACK LENGTH (ND)										
(111) WAIST BACK LENGTH (O)		CU	CU	CU						
(112) WAIST BREADTH	NC			C			NC	NC		
(113) WAIST CIRCUMFERENCE (ND)	CU									
(114) WAIST CIRCUMFERENCE (C)		C	C	C		C			CU	
(115) WAIST DEPTH	NC			C			NC	NC		
(116) WAIST FRONT LENGTH (ND)										
(117) WAIST FRONT LENGTH (O)				NC						
(118) WAIST HEIGHT (ND)	CU									
(119) WAIST HEIGHT (O)		C	C	C						
(120) WAIST HEIGHT, SITTING (ND)										
(121) WAIST HEIGHT, SITTING (O)							NC			
(122) WAIST-HIP LENGTH										
(123) WAIST (ND) - WAIST (O) LENGTH										
(124) WEIGHT	C	C	C	C	C	C	C	C	NC	C
(125) WRIST-CENTER OF GRIP LENGTH										
(126) WRIST CIRCUMFERENCE	NC	NC	NC	C	C		C	C		C
(127) WRIST HEIGHT				C						
(128) WRIST HEIGHT, SITTING										
(129) WRIST-INDEX FINGER LENGTH										
(130) WRIST-THUMB TIP LENGTH										
(131) WRIST-WALL LENGTH										
(132) WRIST-WALL LENGTH EXTENDED										
(H45) ZYGION-BACK OF HEAD										
(H46) ZYGION-TOP OF HEAD										
(H47) ZYCOFRONTALE-BACK OF HEAD										
(H48) ZYCOFRONTALE-TOP OF HEAD										

APPENDIX D

A Glossary of Anatomical and Anthropometric Terms

anatomical position -- a standard position of the body to which all anatomical directions (e.g., superior, medial, anterior) are referenced (see Figure D-1).

anterior -- pertaining to the front of the body; as opposed to posterior.

axillary -- pertaining to the armpit (axilla).

bi -- a prefix denoting connection with or relation to each of two symmetrically paired parts.

biceps (brachii) --- the large muscle on the anterior surface of the upper arm.

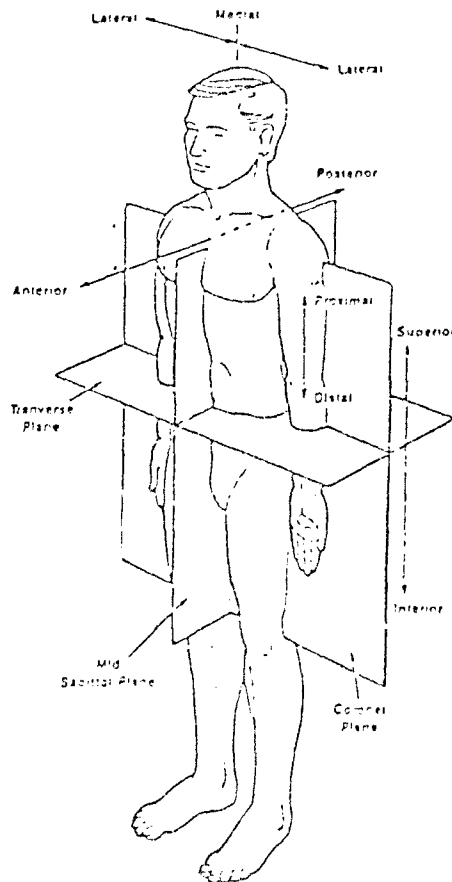


Figure D-1. The body in the anatomical position.

canthus -- a corner or angle formed by the meeting of the eyelids.

coronal plane -- any vertical plane at right angles to the midsagittal plane (see Figure D-1).

deltoid muscle -- the muscle that forms the flesh of the lateral side of the upper third of the upper arm.

distal -- the end of a bone or body segment farthest from the head; as opposed to proximal (see Figure D-1).

dorsal -- pertaining to the back of the body or one of its parts (on the hand, its top surface as opposed to its palmar surface).

epicondyle -- the bony eminence at the distal end of the humerus, radius, and femur.

extend -- to move adjacent segments so that the angle between them is increased, as when the leg is straightened; as opposed to flex.

femoral epicondyle -- the bony projections on either side of the distal end of the femur.

femur -- the thigh bone.

flex -- to move a joint in such a direction as to bring together the two parts which it connects, as when the elbow is bent; as opposed to extend.

fossa -- a depression, usually somewhat longitudinal in shape, in the surface of a part, as in a bone.

Frankfort plane -- the standard horizontal plane or orientation of the head. The plane is established by a line passing through the right tragion (approximate earhole) and the lowest point of the right orbit (eye socket).

frontal bone -- the bone that underlies the forehead.

hyperextend -- to overextend a limb or other part of the body.

iliac -- pertaining to an ilium, which is one of the three fused bones that form one side of the pelvis.

iliac crest -- the superior rim of a pelvic bone.

ilium -- the largest and superior bone of the three fused bones that form one side of the pelvis.

inferior -- below, in relation to another structure; lower (see Figure D-1).

lateral -- lying near or toward the sides of the body; as opposed to medial (see Figure D-1).

latissimus dorsi -- the large muscle covering the lower half of the back above the waist and converging on the upper arm in such a way that its flesh forms the posterior border of the axilla (armpit).

malleoli -- rounded bony projection on either side of the ankle. The lateral malleolus, on the outside of the ankle, is at the distal end of the fibula (one of the two bones of the calf); the medial malleolus, on the inside of the ankle, is at the distal end of the tibia (shinbone).

mandible -- the jawbone.

mastoid process -- lowest bony projection behind and below the ear. It can best be felt immediately behind the earlobe.

medial -- lying near or toward the midline of the body; as opposed to lateral (see Figure D-1).

metacarpophalangeal joint -- a joint (knuckle) formed by the juncture of a finger bone (phalanx) with the palm bone (metacarpal).

metatarsophalangeal joint -- a joint formed by the juncture of a toe bone (phalanx) with the foot bone (metatarsal).

mid-sagittal plane -- the vertical plane which divides the body into right and left halves (see Figure D-1).

olecranon -- the proximal end of the ulna (elbow).

palmar -- pertaining to the palm side of the hand; as opposed to its dorsal surface.

patella -- the kneecap.

phalanx -- a finger or toe bone.

pisiform -- a wrist bone on the little finger side of the hand at the base of the palm. It can be felt as a bony protuberance just below the fleshy pad at the base of the palm.

plantar -- pertaining to the sole of the foot.

posterior -- pertaining to the back of the body; as opposed to anterior (see Figure D-1).

proximal -- the end of a bone or body segment nearest the head; as opposed to distal (see Figure D-1).

radius -- the bone of the forearm on the thumb side of the arm.

seam -- a tailoring term referring to the armpit of a garment.

superior -- above, in relation to another structure; higher (see Figure D-1).

supra -- prefix designating above or on.

temporal crest -- a ridge originating on the zygomatic process of the frontal bone and extending along the lateral aspect of the skull.

thoracic -- pertaining to the thorax; in this text, pertaining especially to the vertebra to which the ribs are attached.

thorax -- that part of the trunk between the neck and the abdomen enclosed by the rib cage.

trapezius -- the large muscle that originates on the neck and the upper half of the back and converges on the shoulder between midshoulder and acromion.

vertebra -- a bone of the spine. In humans there are seven cervical (neck), 12 thoracic (chest), five lumbar (lower back), five sacral (fused), and four caudal (tail) vertebrae.

zygomatic arch -- the bony arch below and to the side of the orbit of the skull extending horizontally along the side of the head from the cheekbone (the zygomatic bone) nearly to the external ear.

zygomatic bone -- a bone of the face underlying the upper part of the cheek.

The information presented in this appendix was taken from the 1988 Anthropometric Survey of U.S. Army Personnel: Methods and Summary Statisticsⁱⁱ.

The Biographical Data Form (continued)

US ARMY ANTHROPOMETRIC SURVEY (ARSUR)

BIOGRAPHICAL DATA: PERSONAL HISTORY

1. Your Birthdate:/...../.....
(Month) (Day) (Year)

2. Age: Years

3. Sex: /...../ Male
/...../ Female

4. Race: /...../ White, not of Hispanic origin
/...../ Black, not of Hispanic origin
/...../ Hispanic
/...../ Asian/Pacific Islander
/...../ American Indian/Alaskan Native
/...../ Mixed (Specify:)
/...../ Other (Specify:)

5. How tall are you in bare feet?'"
Feet Inches (e.g., 5' 8")

6. How much do you weigh without clothes? Pounds

7. Do you wear: /...../ Prescription Glasses?
/...../ Prescription Contact Lenses?
/...../ Both?
/...../ Neither?

8. With which hand do you usually write?
/...../ Right /...../ Left /...../ Either Hand

The Biographical Data Form (continued)

9. Do you currently participate in resistance or free-weight training at least once a week?

/...../ Yes

/...../ No

If you answered "No", go to question 10.

If you answered "Yes", complete questions 9a, 9b, and 9c.

a. How long have you been involved in this training?

..... Years, Months (Example: 2 Years, 7 Months)

b. How many days per week do you now train?

Upper body: Days per week

Lower body: Days per week

c. On the days that you train, how many hours per day do you train?

Upper body: Hours per day

Lower body: Hours per day

10. Do you currently run on a regular basis?

/...../ Yes

/...../ No

If you answered "No", go to question 11.

If you answered "Yes", complete questions 10a, 10b, and 10c.

a. How long have you been running?

..... Years, Months (Example: 3 Years, 9 Months)

b. How many days per week do you now run?

..... Days per week

c. On the days that you run, how many miles do you usually cover?

..... Miles

The Biographical Data Form (continued)

11. Your Birthplace:

12. Mother's Birthplace:

13. Father's Birthplace:

14. Mother's Race: /...../ White, not of Hispanic origin
/...../ Black, not of Hispanic origin
/...../ Hispanic
/...../ Asian/Pacific Islander
/...../ American Indian/Alaskan Native
/...../ Mixed (Specify:)
/...../ Other (Specify:)

15. Father's Race: /...../ White, not of Hispanic origin
/...../ Black, not of Hispanic origin
/...../ Hispanic
/...../ Asian/Pacific Islander
/...../ American Indian/Alaskan Native
/...../ Mixed (Specify:)
/...../ Other (Specify:)

DO NOT WRITE BELOW THIS LINE

16. Ethnicity/National Extraction:
Subject:
Mother:
Father:

17. Body Dimensions
Actual Height
Actual Weight