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**THESIS**

**ASSESSING FITNESS AND NUTRITION PROGRAMS IN  
THE MARINE CORPS: A QUALITATIVE ANALYSIS OF  
PERCEPTIONS OF EFFECTIVENESS**

by

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December 2009

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IN THE MARINE CORPS: A QUALITATIVE ANALYSIS  
OF PERCEPTIONS OF EFFECTIVENESS**

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## **ABSTRACT**

America is facing an overweight epidemic, and the Marine Corps is not immune to this problem. The percentage of overweight Marines doubled between January 2003 and December 2008. The objective of this research was to assess the current Marine Corps physical fitness and nutrition programs and their effectiveness as perceived by Marines. The authors conducted surveys and interviews to gain insight on how Marines felt the Marine Corps remedial programs (BCP, RCP, and MAP) and the Semper Fit program supported them in maintaining a healthy lifestyle.

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## EXECUTIVE SUMMARY

America is facing an overweight epidemic, and the Marine Corps is not immune to this problem. The percentage of overweight Marines doubled between January 2003 and December 2008. The objective of this research was to assess the current Marine Corps physical fitness and nutrition programs and their effectiveness as perceived by Marines. The authors conducted surveys and interviews to gain insight on how Marines felt the Marine Corps remedial programs (BCP, RCP, and MAP) and the Semper Fit program supported them in maintaining a healthy lifestyle.

Anonymous, Web-based surveys and qualitative, semi-structured interviews were used to facilitate this research. The survey respondents were Marines, which included the authors' fellow graduate students, previous co-workers, and subsequent referrals to other Marines throughout the Corps. Participants' rank and time in service ranged from Private through Lieutenant Colonel and from three months to over twenty years. The interviews were conducted in two different demographic categories; ten were active duty Marines and five were Semper Fit professionals.

Through surveys and interviews, the following five findings were discovered.

1. **Marines express a desire for nutrition education.** Marines felt that nutrition is important to maintain a healthy weight and body composition. Marines indicated that there is a lack of education and support for fitness and nutrition. It was suggested that in-depth nutrition classes be incorporated and reinforced throughout a Marine's career.
2. **Nutrition and fitness programs need to be consistent and credible Marine Corps-wide.** According to Marines, there are a variety of resources and programs available; however, the level of support received is different throughout the Corps. Likewise, credibility of the programs and the instructors/trainers are equally important.
3. **Unconventional methods for weight-loss are unhealthy and could negatively influence performance.** Over 30% of Marines surveyed claimed to use extreme measures (such as starvation, dehydration, weight-loss supplements, fad dieting and liposuction) to pass a weigh-in or body composition evaluation. This finding suggests there is a potential problem throughout the Marine Corps and raises serious concerns.



4. **Poor nutrition and fitness practices have an effect on Marines' careers.** America's overweight epidemic affects military recruiting efforts. When this unhealthy lifestyle continues in the Marine Corps, career promotion and retention are jeopardized.
5. **Semper Fit and unit relationships need attention.** Marines have a modest level of awareness about Semper Fit programs. It was concluded that Semper Fit and commands need to communicate more effectively to promote what Semper Fit can provide for the Marine and the unit.

The following recommendations were determined from this research.

1. Instill nutrition training early and emphasize it with different levels of nutrition education throughout a Marine's career
2. Ensure consistency and credibility of remedial programs (BCP, RCP, MAP)
3. Ensure credibility among the Semper Fit staff
4. Provide healthier food options at Marine Corps installations for Marines and their families
5. Increase awareness of Semper Fit

Future research should examine the costs and benefits of: hiring an accredited professional to support unit-level physical training, wellness courses and remedial programs, instituting levels of nutrition education throughout a Marine's career, and improving the healthy food options available to Marines and their families on Marine bases.

## LIST OF ACRONYMS AND ABBREVIATIONS

ACE	American Council on Exercise
AL	Ammunition Lift
BCE	Body Composition Evaluation
BCP	Body Composition Program
BF	Body Fat
BMI	Body Mass Index
BMR	Basal Metabolic Rate
CCI	Combat Conditioning Instructor
CCP	Combat Conditioning Program
CDC	Center for Disease Control
CFT	Combat Fitness Test
COs	Commanding Officers
CPTR	Command Physical Training Representative
DI	Drill Instructor
DoD	Department of Defense
E-x	Enlisted grades (x = number 1 thru 9)
HQMC	Headquarters Marine Corps
MANUF	Maneuver under Fire
MAP	Military Appearance Program
MCAS	Marine Corps Air Station
MCBCMAP	Marine Corps Body Composition and Military Appearance Program
MCCS	Marine Corps Community Services
MCI	Marine Corps Institute
MCMAP	Marine Corps Martial Arts Program
MCO	Marine Corps Order
MCPFP	Marine Corps Physical Fitness Program
MCRD	Marine Corps Recruit Depot
MCT	Marine Combat Raining
MCWST	Marine Corps Water Survival Training
MOS	Military Occupational School
MTC	Movement to Contact
MTF	Medical Treatment Facility
NCO	Non-commissioned Officer
NFL	National Football League
NPS	Naval Postgraduate School

OCS	Officer Candidate School
OIC	Officer in Charge
O-x	Officer Grades (x = number 1 thru 9)
PCA	Permanent Change of Assignment
PCS	Permanent Change of Station
PFT	Physical Fitness Test
RCP	Remedial Conditioning Program
S-3	Training Shop within a Command
SFO	Semper Fit Officer
SNCO	Staff Non-commissioned Officer
SOI	School of Infantry
TBS	The Basic School
USDA	United States Department of Agriculture
WO-x	Warrant Officer Grades (x = number 1 thru 5)

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-Paula Taibi

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-Leigh Elizabeth Wallace

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# **I. INTRODUCTION**

## **A. CHAPTER OVERVIEW**

The first chapter of this thesis provides the motivation to conduct research on Marine Corps physical fitness and nutrition programs. It introduces the research objective, as well as limitations and benefits of this research. Finally, a brief discussion of the research methodology will be provided, followed by a short description of each chapter.

## **B. BACKGROUND**

The Marine Corps relies on its members to be in top physical health to accomplish its unique and vast mission. After meeting minimum health qualifications, civilians who desire to become Marines are put through intense mental and physical training during Marine Corps Recruit Training (enlisted Marines) and the Naval Academy or Officer Candidate School (OCS) (for commissioned officers). After their initial training, enlisted Marines go to a follow-on school called Marine Combat Training (MCT) and officers attend The Basic School (TBS), where they each learn further skills in infantry tactics and Marine Corps leadership. In each of these schools, the physical demands are intense. Marines must be able to run, jump, climb and shoot all while carrying their weapons and sometimes a rucksack weighing up to half their body weight. To go along with the physical challenges, there are the mental demands of classroom instruction and performance evaluations. There is usually little time to consider what to eat and when to sleep, but the two are precious activities to Marines during this time. Fast forward to Marines who are further along in their career, past their military occupational school (MOS) and arrival to their first, second, third or more duty assignments; the physical fitness and health requirements have not changed, but the intensity has. After completing all of their initial training, typically the speed at which a Marine is moving and the intensity of their physical training dramatically decreases. It is important that Marines know how to fuel their bodies with the appropriate nutrients for optimal performance for the specific job they are performing.

America is a fast food nation and Marines live in it. According to Eric Schlosser, the author of *Fast Food Nation*, “Fast food has infiltrated every nook and cranny of American society.”<sup>1</sup> Numerous fast food eating establishments are located on military installations around the world. Military dining facilities (chow halls) serve unlimited soda, potato chips, fried foods and fatty desserts to those who desire them. While there are healthy alternatives at fast food chains and chow halls, many Marines do not partake in these options. Some of their decisions may be due to lack of education in what constitutes a healthy diet. In addition, some of their choices may be related to ignorance of what food to eat to sustain them for their activity. Often, Marines make poor diet and exercise decisions and take extreme measures to ensure they do not fail weight/body composition evaluations. These actions can have detrimental outcomes and/or lead to a cycle of weight loss followed by weight gain.<sup>2</sup> Eventually, those Marines who follow this sort of practice find that they are no longer able to shed the weight in time and are placed on a remedial weight control or military appearance program.

With this background, the authors were motivated to assess the benefits and limitations of the current physical fitness and nutrition programs in the Marine Corps, as well as assess how Marines perceive the effectiveness of the programs. Moreover, the authors desired to understand how educated Marines are in relation to proper nutrition.

### **C. RESEARCH OBJECTIVE**

The objective of this research was to assess the Marine Corps’ current physical fitness and nutrition programs and their effectiveness as perceived by Marines. The authors analyzed the current Marine Corps Body Composition Program (BCP), the Remedial Conditioning Program (RCP) and Military Appearance Program (MAP). Current programs available for Marines in maintaining a healthy lifestyle were examined. These objectives were explored through surveys and in-depth interviews with Marines at different stages in their career. The following research questions were considered.

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<sup>1</sup> Eric Schlosser, *Fast Food Nation* (New York: Harper Perennial, 2005), 3.

<sup>2</sup> Interview with Semper Fit staff (#3), August 27, 2009.

- What is the current fitness status of the Marine Corps? Specifically, based on Marine Corps standards, how many Marines meet the body composition requirements? How many are considered “overweight?”
- What are the Marine Corps standards for fitness?
- What programs exist to assist in nutrition education and the Marines’ fitness levels?
  - How are these programs designed to achieve the objective of increasing the fitness of individuals in the Marine Corps?
  - How are these programs perceived among Marines?
  - How much do first term and career Marines understand about fitness and nutrition?
  - In what ways do the programs focus on fitness?
  - In what ways do the programs focus on nutrition?
- What are the benefits and drawbacks of instituting a qualified nutrition program to Marines? Based on this research, what can the Marine Corps do to more effectively reach and maintain its fitness standards?

#### **D. LIMITATIONS AND BENEFITS OF RESEARCH**

Limiting factors for conducting this research were largely due to the authors’ location in Monterey, California, restricted time available, and minimal funding. The sample of Marines surveyed and interviewed were a convenience sample, which may or may not be a generalization of the Marine Corps as a whole. Given ample time, comprehensive data could have been collected and analyzed, to include a relative statistical data analysis and an expanded range of personal interviews.

The benefits of this qualitative study will provide key insights into the current Marine Corps physical fitness and nutrition programs, their effectiveness, and how the programs are perceived by Marines. This research can aid senior Marine leadership in making future decisions about fitness and nutrition programs and policies.

#### **E. METHODOLOGY OF RESEARCH**

The methodology of this research was designed to assess the Marine Corps’ current physical fitness and nutrition programs and their effectiveness from the perspectives of Marines. This research contains a literature review of physical fitness and



nutrition programs that help Marines with weight issues and physical fitness. The literature review also includes supporting research for the effect of America's obesity epidemic on the Marine Corps. It concludes with a summary of nutrition in relation to health and how nutrition corresponds to Marines as athletes.

To obtain information on how important Marines consider nutrition is in maintaining a healthy lifestyle and body composition, the authors created an online survey. This survey provided feedback from the Marines' perspective of the current fitness and nutrition programs and their value. Finally, qualitative semi-structured interviews were conducted to strengthen the information collected from the surveys and provide more depth to the survey analysis.

## **F. ORGANIZATION OF THESIS**

This thesis is designed to present a clear view of the research conducted and the authors' findings. It is organized into five chapters, as follows:

**Chapter I—Introduction.** This chapter introduces the thesis research. It defines the research objective and includes the limitations and benefits of the research. This chapter describes the research methodology and concludes with an outline of the thesis.

**Chapter II—Literature Review.** This chapter is a review of Marine Corps Orders on Fitness and Body Composition/Military Appearance Programs. It summarizes the Marine Corps Order on the Semper Fit Program. Next, it highlights the affects of America's obesity epidemic on the Marine Corps through supporting research. Finally, this chapter provides a summary of nutrition and the relationship between fitness and health and the Marine athlete.

**Chapter III—Survey and Interview Methodology, Results, and Discussion.** This chapter provides a detailed description of the survey and interview methodology and results. It concludes with an in-depth discussion of the authors' findings.

**Chapter IV—Summary of Research and Recommendations.** The final portion of the thesis contains the summary of research, a review of the findings, the authors' recommendations, and describes issues for further research.

## **G. CHAPTER SUMMARY**

This chapter introduced the background used to motivate the thesis research. It identified research objective and the initial research questions. Furthermore, it discussed the benefits and limitations of this research, and provided an overview of the research methodology. This chapter concluded with the thesis organization.

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## **II. LITERATURE REVIEW**

### **A. CHAPTER OVERVIEW**

The Literature Review begins with a detailed summary of Marine Corps standards for fitness and body composition. It includes the physical evaluation requirements and remedial programs designed to support Marines who do not meet standards. Next, it describes the Semper Fit program, the Marine Corps' supporting program for healthy living. This chapter continues with supporting research that describes America's obesity epidemic and how it affects the Marine Corps. Lastly, this chapter provides a summary on nutrition and explains its importance to healthy living, as well as its relation to the Marine athlete.

### **B. MARINE CORPS STANDARDS FOR FITNESS AND BODY COMPOSITION**

The Department of Defense (DoD) Instruction 1308.3, *DoD Physical Fitness and Body Fat Program*, is the current governing policy for the Armed Forces that requires each service to develop programs in health and wellness, nutrition, physical fitness, and body composition. This policy sets the minimum standards in fitness and body composition and provides each branch of service the authority to develop specific programs according to their unique mission.<sup>3</sup> In keeping with DoD Instruction 1308.3, the Marine Corps has three primary methods for measuring, controlling, and supporting its force in health and wellness, fitness and overall combat readiness.

1. Marine Corps Physical Fitness Program
2. Marine Corps Body Composition and Military Appearance Program
3. Marine Corps Semper Fit Program

The following describes each program, according to their respective Marine Corps Order.

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<sup>3</sup> U.S. Department of Defense Instruction, 1308.3, *DoD Physical Fitness and Body Fat Programs Procedures* (Washington, DC: ASD/FMP, November 5, 2002), 3.

## **1. Marine Corps Physical Fitness Program (MCPFP), MCO 6100.13**

The purpose of the MCPFP is to emphasize the requirement for all Marines to be physically fit and to “adopt a healthy lifestyle and a lifelong commitment to fitness.”<sup>4</sup> MCO 6100.13 is the authority that directs Marines to participate in a Combat Conditioning Program (CCP) that “enhances their ability to meet the physical demands of their military occupational specialty (MOS) while emphasizing the Marine Corps ethos of every Marine a rifleman.”<sup>5</sup> The two methods used for measuring a Marine’s overall fitness are the Physical Fitness Test (PFT) and the Combat Fitness Test (CFT). The MCPFP describes the procedures for conducting these two tests and their scoring methods. The PFT is an annual event taken during the first half of the calendar year and the CFT is an annual event taken during the second half of the calendar year.<sup>6</sup> These are scored events that must be completed by all active duty and reserve Marines no matter their age, gender, rank or duty assignment. In situations where Marines fail to meet the requirements for the PFT and/or CFT, the unit commander places them on a Remedial Conditioning Program (RCP) to help them improve where needed. Furthermore, results from each fitness test are included in a Marine’s performance evaluation. Further information for each program is explained in detail below.

### ***a. Combat Conditioning Program (CCP)***

The CCP is designed to fit the unit’s mission and is a tool for the commander and small unit leader to promote fitness and wellness within his/her command. Commanders and Officers in Charge (OICs) are required to ensure their Marines participate in a minimum of five combat conditioning sessions per week, with a minimum duration of 30 minutes each. The required combat conditioning sessions can be a combination of organizational (group) and individual training. The Marine Corps Martial Arts Program (MCMAP), Marine Corps Water Survival Training (MCWST), and other mission specific training can also be incorporated. Marines are encouraged to use a

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<sup>4</sup> U.S. Marine Corps Order 6100.13 W/CH 1, *Marine Corps Physical Fitness Program* (Washington, DC: HQMC, August 1, 2008), 1.

<sup>5</sup> *Ibid.*, enclosure 1, 1–1.

<sup>6</sup> *Ibid.*, enclosure 1, 2–1 and 3–1.

number of fitness and nutrition services provided by Semper Fit, such as fitness and health assessments, group exercise classes, health promotion programs and nutritional guidance. Navy Medical Treatment Facilities (MTF) and health clinics provide health care to Marines and may refer Marines to a sports medicine specialist or nutritionist/dietician as needed. Additionally, the MCPFP order states that commanders are required to appoint (in writing) a Combat Conditioning Instructor (CCI) and/or a Command Physical Training Representative (CPTR) to develop and implement the CCP and to coordinate and supervise PFTs and CFTs.<sup>7</sup>

***b. Physical Fitness Test (PFT)***

The PFT was developed to assess a Marine's overall "strength, stamina, and cardiovascular system." Marines are scored in the following events.

- **Dead-hang pull-ups** (males)—complete maximum number of repetitions before dropping from the bar
- **Flexed-arm hang** (females)—start with chin above a bar and maintain elbow flexion for maximum time
- **Abdominal crunches**—execute maximum number of repetitions for two minutes
- **Three-mile run**—run a three-mile course as quickly as possible

The purpose of the PFT is to test a Marine's strength, endurance and cardiovascular/respiratory fitness. Each event has a requirement for completion in number of repetitions and/or time; a Marine can achieve a maximum of 100 points per event, for a total of 300 maximum points. Age and gender are considered in the equation for points awarded in each event. Table 1 reflects the minimum performance requirements by age group and event. A Marine must earn more points than the minimum in one or more events to receive an overall passing score.

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<sup>7</sup> U.S. Marine Corps Order 6100.13 W/CH 1, *Marine Corps Physical Fitness Program*, enclosure 1, 1–1 through 1–3.

Table 1. PFT Minimum Performance Requirements<sup>8</sup>

Age Groups	Pull-Ups/ Flexed Arm Hang	Abdominal Crunches	3.0 Mile Run (Min)	Total Points	Min Score	Additional Points Needed
17–26	3/15(SEC)	50	28 (m) 31 (f)	105	135	30
27–39	3/15	45	29 (m) 32 (f)	94	110	16
40–45	3/15	45	30 (m) 33 (f)	88	88	0
46+	3/15	40	33 (m) 36 (f)	65	65	0

There are three PFT classifications: 1st, 2d, and 3d class. A 3d class is the minimum a Marine must achieve in order to pass the test. Table 2 shows the PFT classification scores by event and age group.<sup>9</sup>

Table 2. PFT Classification Scores<sup>10</sup>

PFT Class	17–26	27–39	40–45	46+
1st	225	200	175	150
2d	175	150	125	100
3d	135	110	88	65

***c. Combat Fitness Test (CFT)***

The CFT was designed with events associated with “combat related tasks” and is a complement to the PFT. It evaluates a Marine’s “strength, stamina, agility, coordination, and overall anaerobic capacity.”<sup>11</sup> The CFT consists of three timed events.

<sup>8</sup> Table 2–1, MCO 6100.13 W/CH 1, enclosure 1, 2–5.

<sup>9</sup> Ibid., enclosure 1, 2–1 through 2–8.

<sup>10</sup> Table 2–2, MCO 6100.13 W/CH 1, enclosure 1, 2–5.

<sup>11</sup> Ibid., enclosure 1, 3–1.

- Movement to Contact (MTC)—an 880 yard timed run
- Ammunition Lift (AL)—complete maximum number of repetitions of lifting a 30 pound ammo can for two minutes
- Maneuver Under Fire (MANUF)—A 300 yard timed series of combat related tasks that include: combat crawls, grenade throws, body drag/carries, agility movements, and an ammunition resupply

As with the PFT, the CFT has minimum scoring requirements for each event, according to age and gender. Failure to meet the minimum, in time or number of repetitions, in any one of the CFT events results in an overall failure for the entire test. The minimum acceptable score in each event is 60 points. Additionally, the maximum possible combined points for all three events is 300, while the minimum acceptable combined points is 190. Similar to the PFT, the CFT has three scoring classifications; 1st class, 2d class, and 3d class. However, the CFT scoring classification does not change as age increases. Table 3 shows the CFT Minimum Requirements by age and gender and Table 4 shows the CFT Classifications and points required.<sup>12</sup>

Table 3. CFT Minimum Performance Requirements<sup>13</sup>

	<b>Male</b>			
	<b>17–26</b>	<b>27–39</b>	<b>40–45</b>	<b>46+</b>
MTC	4:13	4:31	5:07	5:09
AL	33	28	17	16
MANUF	3:58	4:42	5:59	6:07
	<b>Female</b>			
	<b>17–26</b>	<b>27–39</b>	<b>40–45</b>	<b>46+</b>
MTC	5:27	5:28	5:35	5:50
AL	17	13	7	6
MANUF	5:59	6:04	6:25	6:30

<sup>12</sup> Table 2–2, MCO 6100.13 W/CH 1, enclosure 1, 3–1 through 3–8.

<sup>13</sup> Table 3–3, MCO 6100.13 W/CH 1, enclosure 1, 3–8.



Table 4. CFT Classification Scores<sup>14</sup>

1st Class	270–300
2d Class	225–269
3d Class	190–224
Fail	189 and below

***d. Remedial Conditioning Program (RCP)***

The RCP is a 30-day (minimum) locally managed program intended to help Marines improve their fitness levels and/or is a supplemental program to help them meet body composition/military appearance standards. RCP is not a punitive program. It is a means for Marines to improve in the necessary areas in a structured, progressive and well-supervised environment. Marines remain on the RCP until they achieve their required goals. Assignment to RCP is mandatory for, but not limited to, the following.<sup>15</sup>

- Failure to achieve a 3d class PFT
- Failure of one or more PFT or CFT components
- Recovery from injury, prolonged inactivity, or performing poorly in MOS related tasks
- Assignment to the Body Composition Program (BCP) or Military Appearance Program (MAP)

***e. Performance Evaluations***

Results of a Marine’s PFT and CFT are recorded in their training record and can affect their performance evaluations. Failure to pass the PFT and/or the CFT results in reduced performance grading, which affects promotion. Any Marine (regardless of rank) who fails the PFT and/or CFT, is not eligible for promotion, reenlistment, or assignment to special schools. Consecutive failed PFTs and/or CFTs result in derogatory

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<sup>14</sup> Table 3–4, MCO 6100.13 W/CH 1, enclosure 1, 3–8.

<sup>15</sup> Ibid., enclosure 1, 4–1 through 4–2.

material in one's service record and may further result in an administrative separation from the Marine Corps. However, Marines who perform above average (score 285 points or more on the PFT) are likely to receive higher performance evaluations.<sup>16</sup>

## **2. Marine Corps Body Composition and Military Appearance Program (MCBCMAP), MCO 6110.3**

The Marine Corps Body Composition and Military Appearance Program (MCBCMAP) are two separate programs (BCP and MAP) relating to physical health and appearance of Marines. The MCBCMAP recognizes that excess body fat can lead to a number of medical conditions, reduced combat readiness, and degraded leadership effectiveness.<sup>17</sup> Both programs are designed to support Marines in maintaining positive attitudes and behaviors for living healthy lifestyles. They are each closely monitored through periodic assessments and provide a means for remedial support if a Marine should fall outside regulations. Each unit's assigned CCI or CPTR is responsible to the commander for managing the MCBCMAP and the relating remedial programs. Waivers can be obtained for assignment to formal remediation programs for such situations as units deployed to extreme combat zones, severe medical conditions, pregnancy, or other extenuating circumstances.<sup>18</sup>

### ***a. Body Composition Program (BCP)***

The BCP is based on DoD regulations that military service members must conform to established height/weight and body fat standards to sustain combat readiness. Standards are derived from Body Mass Index (BMI) tables, which are a "physiological relationship of weight-for-height."<sup>19</sup> When comparing the BMI tables in MCO 6110.3 and in DoD Instruction 1308.3, the Marine Corps' height/weight and body fat standards correlate to BMI's of no lower than 19.0 and no higher than 25.0 (females) and 27.5 (males) and are in keeping with DoD guidelines for optimal weight, body composition

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<sup>16</sup> Table 3–4, MCO 6100.13 W/CH 1, enclosure 1, 1–4 through 1–6.

<sup>17</sup> U.S. Marine Corps Order 6110.3 W/CH 1, *Marine Corps Body Composition and Military Appearance Program* (Washington, DC: HQMC, August 8, 2008), 2.

<sup>18</sup> *Ibid.*, enclosure 1, 2.

<sup>19</sup> DoD Instruction 1308.3, 12.

and the prospect to maintain a suitable military appearance. All active duty Marines are weighed on a semi-annual basis (annual for Reserve Marines) or more often at the discretion of the commanding officer or OIC.<sup>20</sup> If a Marine is over their maximum allowable weight, then a body composition evaluation (BCE) is performed to estimate body fat percentage. The Marine Corps follows DoD policy for measuring body fat, using the circumference technique by measuring area circumferences of the body: neck, abdomen and hips (for women). Height and circumference values, based on gender, are used with a corresponding table, located in enclosure 4 of MCO 6110.3. Measurements are taken three times at the prescribed locations to ensure accuracy. BCE measurements based on gender are as follows.<sup>21</sup>

**Males:** abdomen - neck = circumference value

**Females:** waist + hips - neck = circumference value

Table 5 lists the minimum and maximum allowable weight per height for males and females. At the bottom of the table are the allowable body fat percentages per age group for each gender.

Table 5. DoD Height/Weight Standards<sup>22</sup>

<b>Males</b>			<b>Females</b>		
<b>HEIGHT (Inches)</b>	<b>MAXIMUM STANDARD (Pounds)</b>	<b>MINIMUM STANDARD (Pounds)</b>	<b>HEIGHT (Inches)</b>	<b>MAXIMUM STANDARD (Pounds)</b>	<b>MINIMUM STANDARD (Pounds)</b>
58"	131	91	58"	119	91
59"	136	94	59"	124	94
60"	141	97	60"	128	97
61"	145	100	61"	132	100
62"	150	104	62"	136	104
63"	155	107	63"	141	107
64"	160	110	64"	145	110
65"	165	114	65"	150	114

<sup>20</sup> MCO 6110.3 W/CH 1, 4.

<sup>21</sup> Ibid., 6 through 7.

<sup>22</sup> MCO 6110.3 W/CH 1, enclosure 3, 1.

Males			Females		
HEIGHT (Inches)	MAXIMUM STANDARD (Pounds)	MINIMUM STANDARD (Pounds)	HEIGHT (Inches)	MAXIMUM STANDARD (Pounds)	MINIMUM STANDARD (Pounds)
66"	170	117	66"	155	117
67"	175	121	67"	159	121
68"	180	125	68"	164	125
69"	186	128	69"	169	128
70"	191	132	70"	174	132
71"	197	136	71"	179	136
72"	202	140	72"	184	140
73"	208	144	73"	189	144
74"	214	148	74"	194	148
75"	220	152	75"	200	152
76"	225	156	76"	205	156
77"	231	160	77"	210	160
78"	237	164	78"	216	164
79"	244	168	79"	221	168
80"	250	173	80"	227	173
Marine Corps Body Composition Standards					
Age Group		Male			Female
17-26		18% BF			26% BF
27-39		19% BF			27% BF
40-45		20% BF			28% BF
46+		21% BF			29% BF

***b. BCP Formal Assignment***

If a Marine fails to meet weight and body composition standards, they are assigned to the formal BCP program by the commanding officer and are subsequently required to participate in the command's RCP program. Medical evaluations are conducted to determine potential risk factors, recommended weight/fat loss goals and nutritional/dietary measures prior to formal assignment to BCP and participation in RCP. The commander's BCP is a six-month (minimum for first assignment) assignment managed by the command's CCI or CPTR. It is designed to give Marines encouragement and the tools necessary to make healthy "lifestyle adjustments"<sup>23</sup> to lose weight and body fat. When assigned, Marines are required to complete the following:

<sup>23</sup> MCO 6110.3 W/CH 1, enclosure 3, 8.

- Complete Marine Corps Institute (MCI) correspondence courses on fitness and nutrition
- Attend diet and nutrition seminars (or private classes) hosted by Semper Fit or health professionals
- Participate in the commander's RCP
- Show progress in keeping with individual medical guidelines

If a Marine shows satisfactory progress during the first six months, but still fails to meet standards at the end of the six months, he/she allowed to one-time extension of six months (not counted as a second assignment). If Marines are assigned to BCP for a second or subsequent time (after successfully completing a first assignment) and are unsuccessful, they are not permitted an extension of any kind. Assignment to the Formal BCP program has several negative repercussions that can affect a Marine's standing and/or career (examples are below).<sup>24</sup>

- Derogatory comments in service record
- Adverse performance reports / substandard evaluations
- Excluded from promotion, reenlistment, or assignment to special schools
- Restricted from executing permanent change of station (PCS) or assignment (PCA) orders (if on second or subsequent assignment to BCP program)
- Eligible for administrative separation from service

*c. MAP*

The Marine Corps recognizes that Marines of all ages and gender have differing body shapes; however, they must all maintain a suitable military appearance. The MAP was designed as a tool for commanders/OICs to enforce the Marine Corps leadership principle of "set the example" and to uphold good order and discipline within their commands by requiring Marines to present themselves in an appropriate manner while in uniform. Marines may meet all requirements for weight and body composition, but have an unsightly appearance in uniform due to improper weight distribution

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<sup>24</sup> MCO 6110.3 W/CH 1, enclosure 3, 8-12.

(excessive accumulation of body fat), personal hygiene, and/or grooming. A MAP inspection is conducted in conjunction with periodic weigh-ins or any time at the discretion of the commander or OIC.

*d. MAP Formal Assignment*

Marines, after being given adequate warning, are assigned to the formal MAP program based on recommendations by the Marine's senior leadership as a result of weigh-ins and BCEs, daily observation, or uniform inspections; however, the decision is ultimately made by the commanding officer (with appropriate Courts Martial authority). Like formal BCP, Marines are medically evaluated to discount underlying health conditions prior to formal MAP assignment. The program takes place in 60-day increments, where Marines assigned comply with standards and are removed or are subsequently extended if they show signs of improvement. MAP involves the following activities.

- Command leadership mentoring program
- Diet and nutrition assistance
- Lifestyle coaching hosted by Semper Fit
- Participate in the commander's RCP
- Show progress in keeping with individual medical guidelines

Placement on the formal MAP program can result several negative courses of action that may affect a Marine's standing or career:

- Adverse fitness report / substandard conduct marks
- Excluded from promotion, reenlistment, or assignment to special schools

Since MAP is subjective in nature, Marines have the opportunity, if desired, to appeal their formal assignment to the next higher commander in their chain of command.<sup>25</sup>

**3. Marine Corps Semper Fit Program, MCO P1700.29**

Semper Fit is a component of Marine Corps Community Services (MCCS) created to help Marines lead a healthy lifestyle and maintain combat readiness. At the

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<sup>25</sup> MCO 6110.3 W/CH 1, enclosure 3, 8-12.

time the Semper Fit manual was published (November 1999), research by the Center for Disease Control (CDC) concluded about half of all U.S. deaths and illnesses were related to an unhealthy lifestyle, to include poor diet, inadequate exercise, stress, smoking, and alcohol abuse.<sup>26</sup> The Semper Fit initiative supports the DoD Operation “Be Fit” program and the Department of Health and Human Services “Healthy People 2000” program, which both encourage improved health of the general United States population.<sup>27</sup>

Semper Fit involves several components, including health education, fitness promotion, and recreational activities and support. The Semper Fit Health Promotions Program provides educational group classes and individual counseling. It is based on nine educational elements.<sup>28</sup>

- Tobacco use prevention and cessation
- Physical fitness
- Injury prevention
- Nutrition
- Stress management
- Suicide awareness
- Alcohol and substance abuse prevention and control
- Hypertension identification and control
- STD and HIV transmission prevention

Semper Fit health and fitness centers are operated by qualified staff and are located aboard almost all Marine Corps installations. As each base or station is different, so too are the resources Semper Fit provides. By appointing a Semper Fit Officer (SFO), unit commanders are encouraged to stay informed on what is available and to seek support from Semper Fit services to help their unit remain healthy and combat ready.<sup>29</sup>

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<sup>26</sup> U.S. Marine Corps Order P1700.29 W/CH 1, *Marine Corps Semper Fit Program Manual* (Washington, DC: HQMC, November 8, 1999), 1–3.

<sup>27</sup> *Ibid.*, 2.

<sup>28</sup> *Ibid.*, 1–3.

<sup>29</sup> *Ibid.*, 1–9.

This section reviewed the Marine Corps orders on physical fitness and body composition. It described the physical evaluation standards, as well as remedial programs designed to assist Marines if they fail to meet the fitness or body composition standards. This section concluded with an introduction to the Semper Fit program that provides Marines and their families with support and guidance for leading healthy lifestyles.

The next section on Supporting Research reviews the causes for weight control issues, as synthesized from several sources, and how they affect the Marine Corps.

### **C. FITNESS, NUTRITION, AND OVERWEIGHT ISSUES IN THE MARINE CORPS: SUPPORTING RESEARCH**

Several reports, articles, and Web sites were reviewed to support this research on fitness, nutrition and weight issues in the Marine Corps. Results from the readings centered on the following themes: America’s obesity epidemic affects the Marine Corps; weight issues negatively impact the Marine and the Corps; and nutrition plays a large role in a Marine’s weight and ability to lead a healthy lifestyle.

#### **1. America’s Obesity Epidemic has an Affect on the Marine Corps**

Currently, 1/3 of Americans are categorized as overweight.<sup>30</sup> This fact has an impact on the U.S. Armed Forces, including the Marine Corps, despite having stringent physical fitness and body composition standards. According to a study published in the January 2009 Medical Surveillance Monthly Report (MSMR), which studied overweight diagnoses of active duty service members during routine medical exams between 1998–2008, the U.S. Armed Forces is “significantly affected” by America’s obesity epidemic.<sup>31</sup> The study also found that “medically unfit for service” rejections due to weight-related health issues have increased among civilian applicants for military service since 1998.<sup>32</sup> DoD-wide, the number of overweight service members steadily rose during the last eleven years, from 1.6% to 4.4%; however, the most significant increase for the Marine

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<sup>30</sup> John Cloud, “Why Exercise Won’t Make You Thin,” *Time*, August 9, 2009, <http://www.time.com/time/printout/0,8816,1914857,00.html>.

<sup>31</sup> Robert F. DeFraités, MD, ed., *Medical Surveillance Monthly Report (MSMR)*, “Diagnoses of Overweight/Obesity, Active Component, U.S. Armed Forces, 1998–2008,” 16, no. 01 (January 2009): 6.

<sup>32</sup> *Ibid.*, 5.



Corps was between 2002 and 2008, where the overweight diagnoses more than doubled. In 2002, the percentage of Marines who were medically diagnosed as being overweight was 0.5% and, by the end of 2008, the percentage rose to 1.2% (from 1,018 to 2,646 Marines). Figure 1 shows this data in more detail.

Annual number and percentage of service members who received an outpatient diagnosis of overweight\*, by calendar year, active component, U.S. Armed Forces, January 1998-December 2008

	1998		1999		2000		2001		2002		2003		2004		2005		2006		2007		2008	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
<b>Total</b>	25,652	1.6	25,010	1.6	26,744	1.7	25,016	1.6	28,316	1.8	34,333	2.1	41,002	2.5	46,684	2.9	55,716	3.5	62,569	4.0	68,788	4.4
<b>Service</b>																						
Army	12,690	2.3	11,213	2.1	12,243	2.2	11,393	2.1	12,298	2.2	15,201	2.7	23,373	4.1	23,856	4.3	26,504	4.7	25,323	4.4	28,477	4.8
Navy	4,462	1.0	3,888	0.9	3,632	0.9	4,163	1.0	4,620	1.1	4,851	1.2	5,773	1.4	8,424	2.1	10,215	2.6	11,465	3.1	12,177	3.4
Air Force	6,787	1.7	8,618	2.2	9,608	2.5	7,939	2.0	10,119	2.6	12,700	3.2	9,586	2.4	11,421	2.9	15,108	4.0	20,973	5.7	23,471	6.7
Marine Corps	1,587	0.8	1,149	0.6	1,027	0.5	1,309	0.6	1,018	0.5	1,149	0.6	1,490	0.7	1,857	0.9	2,253	1.1	3,048	1.4	2,646	1.2
Coast Guard	126	0.3	142	0.4	234	0.6	212	0.5	261	0.6	432	1.0	780	1.8	1,126	2.6	1,636	3.8	1,760	4.0	2,015	4.6
<b>Sex</b>																						
Male	18,350	1.3	17,869	1.3	19,302	1.4	17,343	1.3	19,788	1.4	23,964	1.7	30,882	2.2	35,349	2.6	42,068	3.1	47,194	3.5	52,439	3.9
Female	7,302	3.1	7,141	3.1	7,442	3.1	7,673	3.2	8,528	3.5	10,369	4.2	10,120	4.1	11,335	4.8	13,648	5.8	15,375	6.8	16,347	7.2
<b>Race/ethnicity</b>																						
White, non-Hispanic	13,673	1.4	14,768	1.5	16,403	1.6	15,042	1.5	16,826	1.6	19,985	1.9	23,703	2.3	27,033	2.7	32,584	3.2	37,308	3.7	40,475	4.0
Black, non-Hispanic	5,731	1.8	5,501	1.8	5,909	1.9	5,736	1.8	6,513	2.1	8,055	2.7	9,698	3.4	10,371	3.8	11,861	4.5	12,753	5.0	13,948	5.5
Other	6,248	1.9	4,741	1.5	4,432	1.6	4,238	1.5	4,977	1.7	6,293	2.1	7,601	2.5	9,280	3.0	11,271	3.6	12,508	3.9	14,363	4.6
<b>Age</b>																						
<20	1,926	0.9	1,402	0.6	1,676	0.6	1,402	0.5	1,483	0.6	1,647	0.6	1,393	0.6	2,264	1.0	2,642	1.2	3,698	1.8	3,362	1.6
20-24	8,793	1.6	7,932	1.4	8,865	1.5	8,308	1.4	9,514	1.5	11,291	1.8	13,070	2.0	13,668	2.2	14,882	2.4	15,667	2.5	17,818	3.0
25-29	6,167	1.7	6,028	1.7	6,086	1.7	5,555	1.7	6,072	1.8	7,715	2.2	9,231	2.5	10,372	2.8	12,537	3.4	14,007	3.7	16,064	4.2
30-34	3,434	1.2	3,522	1.3	3,558	1.3	3,419	1.4	3,764	1.5	4,766	1.9	6,162	2.4	7,192	2.9	8,572	3.5	9,626	4.0	10,854	4.6
35-39	3,361	1.4	3,812	1.6	4,096	1.7	3,758	1.6	4,248	1.9	4,972	2.2	6,182	2.8	7,005	3.4	8,947	4.4	10,200	5.0	10,856	5.5
40+	1,971	1.3	2,314	1.6	2,461	1.7	2,574	1.8	3,235	2.2	3,942	2.6	4,964	3.1	6,183	3.9	8,136	5.3	9,371	6.2	9,832	6.6
<b>Marital status</b>																						
Single	9,820	1.4	8,795	1.2	9,978	1.3	9,516	1.2	10,758	1.3	12,596	1.6	14,865	1.8	16,397	2.2	18,173	2.5	20,251	2.8	21,937	3.1
Married	14,771	1.6	15,031	1.7	15,466	1.8	14,318	1.7	16,182	1.9	19,955	2.3	24,096	2.7	27,900	3.1	34,391	3.9	38,693	4.3	42,438	4.8
Other	1,061	1.4	1,184	1.6	1,300	1.4	1,182	1.6	1,376	1.8	1,782	2.5	2,041	2.8	2,387	3.3	3,152	4.2	3,625	4.6	4,411	5.6
<b>Military occupation</b>																						
Combat	3,292	1.2	2,939	1.1	3,057	1.2	2,489	1.0	3,027	1.2	3,414	1.3	5,454	2.1	6,707	2.2	7,105	2.7	6,441	2.5	8,076	3.1
Health care	3,338	2.4	3,448	2.6	3,263	2.5	3,099	2.3	3,756	2.8	4,076	3.1	4,295	3.2	5,573	4.2	8,189	6.2	8,560	6.5	8,799	6.9
Other	19,022	1.5	18,623	1.5	20,424	1.6	19,428	1.5	21,533	1.7	26,843	2.1	31,253	2.4	34,404	2.7	40,422	3.2	47,568	3.8	51,911	4.2

Figure 1. Medical Surveillance Monthly Report on Overweight Diagnoses of Active Duty Service Members from January 1998 to December 2008

Several factors seem to explain overweight issues among service members, including stress, deployments, increasingly sedentary lifestyles outside military duty, and unhealthy dietary habits.<sup>33</sup> The MSMR study noted that when military members were not deployed or away on training missions, they “live, shop, and recreate in civilian communities.”<sup>34</sup> In other words, military members live in regular American communities and are just as likely to engage in unhealthy eating habits, such as eating at fast food

<sup>33</sup> DeFraitess, MD, ed., *Medical Surveillance Monthly Report (MSMR)*, 2, 6.

<sup>34</sup> *Ibid.*, 6.

restaurants, and taking part in physically passive recreational behaviors, such as playing videogames, watching television, and seeing movies instead of participating in more physical activities.<sup>35</sup>

The overweight epidemic in the military, including the Marine Corps, has a pervasive impact on the health of the Marine Corps.

## **2. Overweight Issues Negatively Impact the Marine and the Corps**

Being overweight has negative implications for the individual Marine and the Marine Corps as a whole. Overweight issues affect a Marine's health, performance, and potentially his/her career. Additionally, weight problems can sometimes lead to practicing unconventional or extreme methods for weight loss. Finally, operational readiness within the Marine Corps could be degraded if Marines are deemed "unfit for duty" due to weight-related medical issues.

According to the MSMR study, there was a significant medical concern regarding the overweight epidemic in the U.S. Armed Services. Excess body weight can result in both acute and chronic health effects, including diabetes, musculoskeletal disorders, cardiovascular diseases, and cancers.<sup>36</sup> Consequently, an increase in body fat leads to diminished performance, particularly in aerobic capacity and endurance stamina.<sup>37</sup>

Overweight issues not only affect one's health, but also a Marine's job. As previously discussed, failing to meet weight and body fat standards can result in adverse performance evaluations and jeopardize a Marine's career. More than 3,000 military service members were separated in 2003 for failure to meet their corresponding weight and body composition standards.<sup>38</sup>

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<sup>35</sup> DeFraités, MD, ed., *Medical Surveillance Monthly Report (MSMR)*, 6.

<sup>36</sup> Ibid.

<sup>37</sup> Judith Grumstrup-Scott and Bernadette M. Marriott, ed., *Body Composition and Physical Performance: Applications for the Military Services* (Washington, DC: National Academy of Sciences, 1992), 71, [http://www.nap.edu/openbook.php?record\\_id=2031&page=71](http://www.nap.edu/openbook.php?record_id=2031&page=71).

<sup>38</sup> *The Medical News*, "U.S. Army Looks at how some Soldiers are Trying to Lose Weight," June 3, 2005, <http://www.news-medical.net/news/2005/06/03/10683.aspx>.

To protect their jobs, some military members use unconventional practices to keep their weight within standards, according to an article published on News-Medical.net. Such methods to reduce weight include, but are not limited to skipping meals, fasting, using “fat burner” medication or appetite suppressants, taking laxatives, and using a rubber or plastic suit in the sauna or steam room. These drastic measures not only compromise health, but also affect how a service member is prepared for combat.<sup>39</sup>

Finally, if health becomes a problem among Marines, it could have a direct impact on the Corps as a whole in terms of operational readiness. If Marines are deemed “unfit for duty” due to weight-related medical issues, they can become non-deployable and unable to support their unit’s mission. The increasing rate of overweight service members poses serious problems in the military community by decreasing operational effectiveness.<sup>40</sup>

While several factors may contribute to weight gain, the MSMR study suggests that proper nutrition plays a large role in reducing body fat.<sup>41</sup>

### **3. Nutrition Plays a Large Role in a Marine’s Weight and Ability to Lead a Healthy Lifestyle**

Nutrition has a major effect on a Marine’s ability to manage their weight and to lead a healthy lifestyle. A major recommendation in the MSMR study was that “‘nutritional fitness’ should be a priority of military medical and line leaders at every level.”<sup>42</sup> Other recommendations, such as more effective community health education efforts, more aggressive clinical prevention programs related to obesity and exercise would also increase awareness of the adverse health effects of when service members are overweight.<sup>43</sup> However, nutrition continues to be a key factor in other research as well. For example, other studies suggest that “the availability of more low-fat/low-calorie foods in the dining facilities,” along with “structured gym workouts and sessions with a

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<sup>39</sup> *The Medical News*, “U.S. Army Looks at how some Soldiers are Trying to Lose Weight.”

<sup>40</sup> DeFraités, MD, ed., *Medical Surveillance Monthly Report (MSMR)*, 6.

<sup>41</sup> *Ibid.*

<sup>42</sup> *Ibid.*

<sup>43</sup> *Ibid.*

personal trainer or dietician, personal weight management workbooks, internet and PDA-based programs, weight loss medications, [and] having a weight loss partner” can all be useful for battling weight loss.<sup>44</sup> As one researcher explained, “There are certain weight loss tools that work well for some, but not for all people trying to manage their body weight. We need to find or develop programs and tools that meet individual needs based on lifestyles and preferences.”<sup>45</sup>

The next section provides a more detailed definition of nutrition, its affect on weight and lifestyle, and its relationship to Marines as athletes.

#### **D. NUTRITION AND THE MARINE CORPS**

Over the past two decades, obesity numbers have risen drastically. Today, approximately one-third of Americans are obese and another one-third is considered overweight by the Federal Government’s definition.<sup>46</sup> In a society that is fighting an obesity and overweight epidemic, a healthy and active lifestyle along with nutritional awareness should be a part of the solution. Nutrition and fitness have a significant relationship in that both are necessary in maintaining an overall healthy life.<sup>47</sup>

Essentially, food is fuel for the body. According to Allegra Burton, a registered dietician, “the body is comparable to a car that cannot run on empty and which will perform at its best when properly fueled.”<sup>48</sup> Not only is food necessary for survival, but it supplies the body with energy<sup>49</sup> and affects every human’s ability to keep healthy, perform work, and live happy.

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<sup>44</sup> *The Medical News*, “U.S. Army Looks at how some Soldiers are Trying to Lose Weight.”

<sup>45</sup> *Ibid.*

<sup>46</sup> Cloud, “Why Exercise Won’t Make You Thin.”

<sup>47</sup> Cedric X. Bryant, PhD and Daniel J. Green, ed., *American Council on Exercise: Personal Trainer Manual*, 3<sup>rd</sup> ed. (San Diego, CA: American Council on Exercise, 2003), 115.

<sup>48</sup> Allegra Burton, RD, MPH, “Nutrition for the Endurance Athlete: The Marathoner’s Diet for Optimal Performance,” <http://www.marathonguide.com/training/articles/Nutrition.cfm>.

<sup>49</sup> *American Journal of Clinical Nutrition*, 77, no. 5, 1093, May 2003, <http://www.ajcn.org/cgi/content/full/77/5/1093>.

The following sections explain the importance of nutrition education both in the general population and particularly to support the athletic demands of the Marine Corps. Additionally, this section provides a brief overview of nutrition and nutrients, as well as their relationship to Marine fitness and readiness.

## **1. Nutrition Education in Our Youth**

Today's government recognizes that nutrition is an important aspect in life. Recently, over 9,000 schools joined a national "farm-to-school" program that helps promote healthier diets.<sup>50</sup> Nutritional daily allowances are recommended to students in hopes that they will become more aware of the food they choose to put on their lunch trays.<sup>51</sup>

Even high government officials are starting to make a stand and fight the obesity epidemic by getting at the problem where it starts—our youth. In 2009, former governor Jon S. Corzine of New Jersey launched the statewide "Governor's Fitness and Nutrition Challenge." This program encourages children six to seventeen years of age to meet four goals: exercise one hour a day, eat healthy, eliminate sugary drinks, and reduce computer and TV screen time.<sup>52</sup> This program asks parents and schools to step up their involvement with health of the nation's youth. According to Corzine, "Childhood obesity has become a serious problem, but luckily there is an easy solution, [by] eating healthier and increasing exercise, and this program will help them do it," he said, adding, "Instilling healthy habits at an early age is the best way to ensure a healthy future for our kids."<sup>53</sup>

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<sup>50</sup> Claire Suddath, "School Lunches," *Time*, October 7, 2009, <http://www.time.com/time/nation/article/0,8599,1929053,00.html>.

<sup>51</sup> *Ibid.*

<sup>52</sup> Governors Press, "Governor Corzine Kicks-off Statewide Nutrition and Fitness Challenge for Students," (October 2, 2009), <http://www.politickernj.com/governors-press-office/33722/governor-corzine-kicks-statewide-nutrition-and-fitness-challenge-studen>.

<sup>53</sup> Governors Press, "Governor Corzine Kicks-off Statewide Nutrition and Fitness Challenge for Students."

Furthermore, the National Football League Network launched a “2009 Keep Gym in School Campaign.” This is the second year that the NFL has sponsored a national program aimed to advance fitness and physical education in America’s middle schools. This program was established as a response to “warnings of childhood obesity” and how the related diseases could mean the “next generation will be the first in 200 years to have shorter life spans than their parents.”<sup>54</sup>

## **2. Nutrition Education in the Marine Corps**

Today’s young Marines, and Marine recruits, come from the video game generation of sedentary lifestyles.<sup>55</sup> Many of these young adults have limited to no education on properly fueling their bodies and eating healthy. Some are athletes and although they may know how to prepare for sporting events, the physically demanding requirements of Marine Corps basic training is still a surprise. At basic training, these new Marines undergo the most challenging physical training most have ever experienced. During the several weeks of training, they are told what to do and how to do it every minute of the day. The physical training is exhausting for recruits and they are provided a high-calorie diet to support their activity. Nutrition education at this point in a Marine’s career is important to prevent weight gain or loss of energy and understand what healthy eating actually means. At basic training, young recruits undergo significant life changes to form them into Marines; the education introduced there has a lasting effect on these individuals.

Generally, today’s young Marines rely on the Corps to keep them in shape. The transition from basic training to an operational unit is tough. Their new job specialty may not be as physically demanding at their basic training was; however, they still have to uphold the standards of the Marine Corps. After initial training, Marines are still required to pass the semi-annual physical fitness tests, as well as meet weight standards. If they

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<sup>54</sup> Reuters, “NFL Launches 2009 National Keep Gym in School Campaign at a New York City Middle School.” September 22, 2009, <http://www.reuters.com/article/pressRelease/idUS114236+22-Sep-2009+PRN20090922>.

<sup>55</sup> Craig Sherman, “Semper Fit Teaching Healthy Habits,” Official U.S. Marine Corps Web site, <http://www.marines.mil>.

have not changed their diet to reflect their changed level of physical activity, they may find themselves falling outside of weight and fitness standards. Furthermore, similar to many Americans today, they are often uneducated about proper nutrition. Nutrition education is the key to help people adapt to a new lifestyle, such as transitions from a physically active training schedule to a more sedentary office environment that many Marines experience.<sup>56</sup>

### **3. The Marine Athlete**

Marines are endurance athletes. They must be to be athletic and healthy to perform jobs be combat ready. Therefore, it is crucial for Marines to be knowledgeable on how to feed their bodies.<sup>57</sup> Drill Instructors (DI) often teach their recruits the importance of proper nutrition, as DI stated in an article by Deanne P. Huria, “What you put into your body is what you get out of your body.”<sup>58</sup> According to the Semper Fit nutrition course available through Marine Net, “One of a Marine’s best defenses is knowing how to fuel your body for peak performance.”<sup>59</sup> Marines need to maintain the necessary endurance for everyday activities and be able to provide long-term energy to their bodies to complete their mission; for that reason, Marines need to develop well-balanced eating habits and understand proper nutrition.<sup>60</sup> A health educator at Marine Corps Air Station (MCAS) Cherry Point Naval Hospital recognizes that, “Marines live a fast-paced lifestyle. Their nutritional needs are higher than the average person therefore they need to monitor eating habits to ensure they have a proper balance of the required nutrients to live healthy.”<sup>61</sup> In other words, Marines should be aware of energy balance

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<sup>56</sup> Deanne P. Huria, “Hotel Co. DI Pushes Good Nutrition Habits on Recruits,” Official Web site of the U.S. Marine Corps, <http://www.marines.mil>.

<sup>57</sup> Ibid.

<sup>58</sup> Ibid.

<sup>59</sup> Semper Fit: Marine Net Nutrition Course, <https://www.marinenet.usmc.mil/marinenet/>.

<sup>60</sup> Huria, “Hotel Co. DI Pushes Good Nutrition Habits on Recruits.”

<sup>61</sup> Adam Testagrossa, “Eating Healthy Keeps Marines in High-Gear,” Official Web site of the U.S. Marine Corps, <http://www.marines.mil>.

and good nutrition.<sup>62</sup> With proper and sufficient nutrition education, Marines can understand how to maintain a healthy body weight and how to fuel their bodies with the right nutrients to stay fit and combat ready.<sup>63</sup>

As more Marines are having weight issues, it is also becoming harder to recruit new personnel critical to mission readiness. In an article from FOXNews.com, weight issuers are said to be the “biggest obstacle to enrolling young men and women into the military—more of a problem than lack of education or a criminal record.”<sup>64</sup> Moreover, to maintain optimal health, Marines need to focus on “lifestyle choices, exercise choices, and food choices” according to LCDR Paul Allen, a registered dietitian assigned to the Nutrition Clinic at Naval Station Great Lakes Naval Hospital in Illinois.<sup>65</sup> In other words, Marines must to use the resources available to them and continually educate themselves so that they may uphold Marine Corps standards for fitness and body composition.

#### **4. Nutrition Options for Marines**

It can be extremely difficult for Marines to eat healthy when the options are limited. Chow halls, Marine Corps-wide, are filled with high calorie, high fat, and high sodium food. Often, healthy options are limited to the salad bar, which, depending on how an individual makes a salad, can potentially be just as unhealthy. Marine Corps bases are abundant with fast food chains, such as Burger King, Domino’s Pizza, Taco Bell, and Wendy’s, just to name a few. Generally, healthy food options are difficult to find on a Marine Corps base. Ultimately, Marines need to be provided with appropriate nutritional education, as well as healthier options, especially when they are obligated to uphold strict fitness and weight standards.<sup>66</sup>

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<sup>62</sup> Semper Fit: Marine Net Nutrition Course.

<sup>63</sup> Ibid.

<sup>64</sup> FOXNews.com, “U.K. Military Raises Concerns about Fat Soldiers,” August 2, 2009, [http://www.foxnews.com/printer\\_friendly\\_story/0,3566,536177,00.html](http://www.foxnews.com/printer_friendly_story/0,3566,536177,00.html).

<sup>65</sup> Kimberly Leone, “Dietician Gives Recruiters Nutrition Advice,” Official U.S. Marine Corps Web site, <http://www.marines.mil/>.

<sup>66</sup> MilitaryTimes.com Forums, Community Editor, “Corps Wants Slimmer Marines while Offering Fattening Chow,” October 26, 2008, <http://militarytimes.com/forums/showthread.php?t=1570081>.



## 5. Nutrition in Relation to Health

The council on Food and Nutrition of the American Medical Association defines nutrition as:

The science of foods, the nutrients and the substances therein, their action, interaction and balance in relation to health and diseases. Nutrition science is the area of knowledge regarding the role of food in the maintenance of good health. Thus, nutrition is the study of food at work in our body.<sup>67</sup>

The World Health Organization of the United Nations describes health as the “state of complete physical, mental, and social well-being and not merely the absence of disease and infirmity.”<sup>68</sup> Hence, nutrition is one key to building and sustaining an optimal state of health for any specific individual. A neglected diet in conjunction with a sedentary lifestyle is a significant risk factor for life-threatening chronic diseases and death, such as heart disease, stroke, hypertension, diabetes, and cancer.<sup>69</sup> These diseases account for two-thirds of all deaths in the United States. A significant portion of health problems in the United States is due to excessive energy intake and not enough physical activity.<sup>70</sup>

According to the Navy’s Nutrition and Weight Control Self-Study Guide, nutrition is the science of nourishment, and the study of nutrients and the processes by which organisms utilize them.<sup>71</sup> Poor nutritional habits can have a serious effect on physical potential and influences all functions of the human body. All living organisms, plants, animals, humans, etc. need good nutrition to grow and function properly.<sup>72</sup>

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<sup>67</sup> “What is Nutrition?” <http://www.eguruguide.com/index.htm>.

<sup>68</sup> Ibid.

<sup>69</sup> Bryant, *American Council on Exercise*, 115.

<sup>70</sup> “What is Nutrition?”

<sup>71</sup> U.S. Navy, Naval Personnel 156002B, *Navy Nutrition and Weight Control Self-Study Guide* (Washington, DC: NAVPERS, 1996), 12.

<sup>72</sup> U.S. Navy, Naval Personnel 156002B, *Navy Nutrition and Weight Control Self-Study Guide*, 12.

Therefore, without adequate nutrition, the risk of disease, starvation and death increase. Furthermore, an unbalanced combination of nutrients can potentially cause aggressive disturbances on all parts of the body.<sup>73</sup>

## 6. Overview of Nutrients

Nutrients are the “life-sustaining substances found in food.”<sup>74</sup> These substances constantly work together to deliver the body with energy and necessary supplies, and to regulate growth, maintenance, and repair the body’s tissues.<sup>75</sup> There are six major classes of nutrients: Protein, Carbohydrates, Fat, Vitamins, Minerals, and Water. The nutrients of Protein, Carbohydrates, and Fat (Lipids) provide the body with calories. These nutrients are known as macronutrients because they provide energy.<sup>76</sup> All vitamins and minerals are micronutrients, which help the body access and use the energy from macronutrients more efficiently.<sup>77</sup> The micronutrients do not provide calories, but are crucial in maintaining a healthy diet. They facilitate metabolism, or chemical breakdown, of the macronutrients. One must consume vitamins and minerals through smart food choices.<sup>78</sup> Figure 2 is from the American Council on Exercise (ACE) Personal Trainer Manual and breaks down all the nutrient classes and their major functions.<sup>79</sup>

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<sup>73</sup> American Journal of Clinical Nutrition.

<sup>74</sup> Bryant, *American Council on Exercise*, 116.

<sup>75</sup> *Ibid.*, 116.

<sup>76</sup> *Semper Fit: Marine Net Nutrition Course*.

<sup>77</sup> *Ibid.*

<sup>78</sup> *Ibid.*

<sup>79</sup> Bryant, *American Council on Exercise*, 117.

<b>Nutrient</b>	<b>Function</b>
Protein	<ul style="list-style-type: none"> <li>✓ Builds and repairs body tissue</li> <li>✓ Major component of enzymes, hormones, and antibodies</li> </ul>
Carbohydrate	<ul style="list-style-type: none"> <li>✓ Provides a major source of fuel to the body</li> <li>✓ Provides dietary fibers</li> </ul>
Lipids	<ul style="list-style-type: none"> <li>✓ Chief storage form of energy in the body</li> <li>✓ Insulate and protect vital organs</li> <li>✓ Provide fat-soluble vitamins</li> </ul>
Vitamins	<ul style="list-style-type: none"> <li>✓ Help promote and regulate various chemical reactions and bodily processes</li> <li>✓ Do not yield energy themselves, but participate in releasing energy from food</li> </ul>
Minerals	<ul style="list-style-type: none"> <li>✓ Enable enzymes to function</li> <li>✓ A component of hormones</li> <li>✓ A part of bone and nerve impulses</li> </ul>
Water	<ul style="list-style-type: none"> <li>✓ Enables chemical reactions to occur</li> <li>✓ About 60% of the body is composed of water</li> <li>✓ Essential for life as we cannot store it, nor conserve it</li> </ul>

Figure 2. The six classes of nutrients and their functions<sup>80</sup>

For each individual, the necessary amount of each of these nutrients varies widely; however, there are essential guidelines for making sure that the body receives enough nutrients to sustain a healthy and active lifestyle. Although specific guidelines for the appropriate amount of each of these nutrients can be found throughout several different literatures, the following guidelines are provided via the American Council on Exercise Personal Trainer Manual.<sup>81</sup> These guidelines (below) accommodate a normal, healthy adult of average size who engages in physical activity to maintain optimal health:

<sup>80</sup> ACE Personal Trainer Manual, 117.

<sup>81</sup> Ibid.

- **Protein**—Helps build and repair body tissues. It is a major component of enzymes, hormones, and antibodies. Approximately 50–70 grams or 12–20% of caloric intake should be devoted to protein consumption.<sup>82</sup>
- **Carbohydrates**—Provides major sources of fuel to the body, as well as dietary fibers. One should consume a minimum of 125 grams and maximum 400 grams or 55–65% of caloric intake as carbohydrate,<sup>83</sup> or up to 70% for the endurance athlete.<sup>84</sup>
- **Fat**—Necessary energy for the body and is stored in the form of fat. This nutrient insulates and protects vital organs and helps absorb fat-soluble vitamins. Approximately 30–65 grams of fat should be consumed, depending on caloric consumption, or 25–30% of caloric intake from fat.<sup>85</sup>
- **Vitamins**—Helps promote and regulate various chemical reactions and bodily processes. This nutrient does not provide energy, but does assist in releasing energy from food. Maintaining a well-balanced diet will provide all the essential vitamins and minerals. Extreme dosages of vitamins and minerals will not increase performance and could potentially be hazardous to the body.<sup>86</sup>
- **Minerals**—Enables enzymes to function; they are a component of hormones, and assist with bone and nerve impulses.<sup>87</sup>
- **Water**—This nutrient composes approximately 60% of the body. It enables chemical reactions to occur. One should consume two to three quarts of water every day.<sup>88</sup>

To practice superior nutritional habits, one needs to know how much energy (calories) are required each day. Acquiring this knowledge will help one determine how much to eat to maintain their current weight, lose weight, or gain weight and how to perform daily activities better. The first step in knowing how many calories to consume is

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<sup>82</sup> ACE Personal Trainer Manual, 117.

<sup>83</sup> Ibid.

<sup>84</sup> Burton, “Nutrition for the Endurance Athlete: The Marathoner’s Diet for Optimal Performance.”

<sup>85</sup> Bryant, *American Council on Exercise*, 117.

<sup>86</sup> Burton, “Nutrition for the Endurance Athlete: The Marathoner’s Diet for Optimal Performance.”

<sup>87</sup> Ibid.

<sup>88</sup> Bryant, *American Council on Exercise*, 117.

to identify one's Basal Metabolic Rate (BMR) and then calculate the calories necessary for one's current activity level.<sup>89</sup> In other words, the BMR is the number of calories the body needs to function to maintain its current weight.

- **The Pyramid**—A guideline that helps people to live a healthy life is the U.S. Department of Agriculture's "MyPyramid."<sup>90</sup> This pyramid provides specific recommendations for making food choices that will improve the quality of an average American diet and meet all the nutrient needs from the different food sources. This is a simple reminder to all Americans about the importance of "making healthy food choices and being active every day."<sup>91</sup>

This emphasizes that physical activity is not the only factor to a healthy and fit lifestyle; nutrition also plays a significant role. Figure 3 is from the *The American Council on Exercise* textbook.

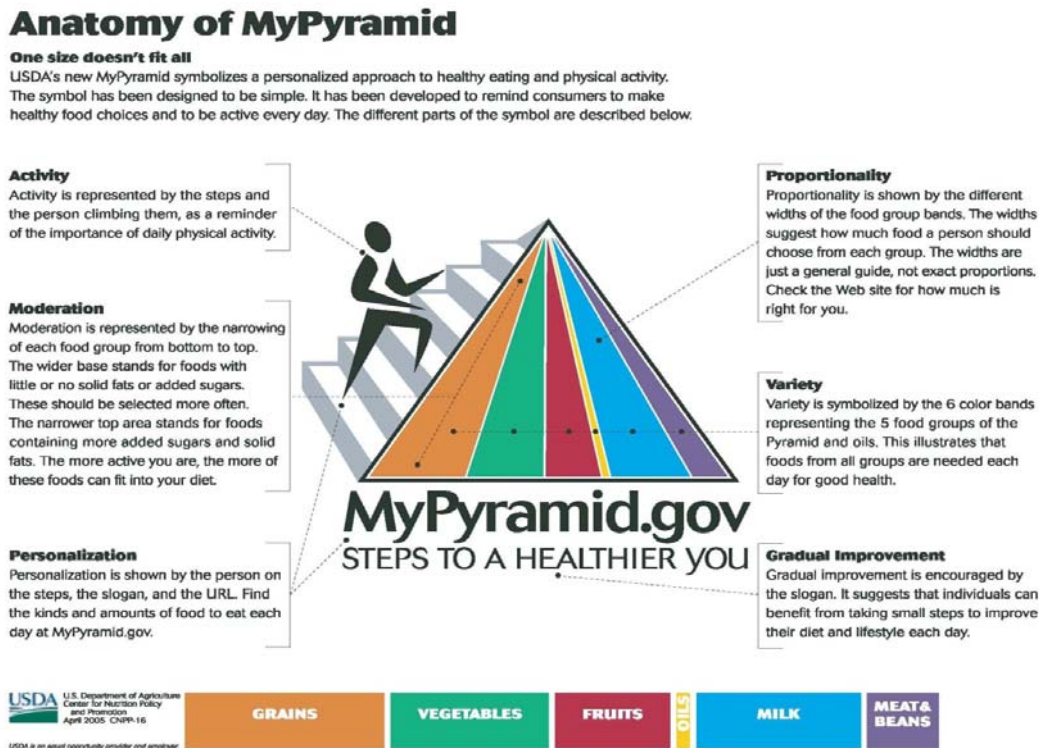


Figure 3. The Food Pyramid<sup>92</sup>

<sup>89</sup> Semper Fit: Marine Net Nutrition Course.

<sup>90</sup> Bryant, *American Council on Exercise*, 117.

<sup>91</sup> *Ibid.*, 119.

<sup>92</sup> *Ibid.*

## 7. Nutrition for the Marine Athlete

As endurance athletes, Marines should eat a diet high in carbohydrates, moderate in protein, and low in fat while consuming enough water throughout the day. According to Allegra Burton, RD, MPH, an endurance athlete should know why these nutrients are important, how much of them to eat and how much water to drink before, during and after exercise.<sup>93</sup> For all the parts of proper nutrition to fit into place, the Marine should understand the following.

- Why is a certain amount of carbohydrates or protein important?
- Is it bad to consume too little to too much of certain nutrients?
- What is the appropriate amount of fat that should be consumed?
- When should I eat protein, carbohydrates, and fat?

Carbohydrates are extremely critical in an athlete's daily life. The body prefers muscle glycogen (the body's storage form of carbohydrates) to fuel endurance activities. Once the glycogen breakdown surpasses its replacement, glycogen stores empty and the result is fatigue and loss of sustained performance. Therefore, to keep the glycogen stores at capacity, the athlete or Marine needs to monitor their carbohydrate consumption.<sup>94</sup>

Protein is imperative for muscle growth and repair. When muscle glycogen levels are lost, resulting from inefficient calorie and carbohydrate intake, protein is used for energy instead of muscle growth and repair. Using protein for fuel, as opposed to carbohydrates, is ineffective and is detrimental to how the body recovers. Carbohydrates are a more efficient and safer fuel for energy because they digest easily and quickly replace muscle glycogen. For the body to recover efficiently, appropriate protein and carbohydrate consumption are essential.<sup>95</sup>

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<sup>93</sup> Burton, "Nutrition for the Endurance Athlete: The Marathoner's Diet for Optimal Performance."

<sup>94</sup> Ibid.

<sup>95</sup> Ibid.

On the other hand, too much protein consumption can be costly. Excessive protein is either used as energy or stored as fat. Excess protein also increases the body's water requirement resulting in potential dehydration. A high-protein, high-fat diet following intense physical activity will result in deficient replacement of muscle glycogen and weaken performance.<sup>96</sup>

An athlete should not ignore fat. One should consume less than 30% of total calories from fat.<sup>97</sup> At the same time, too much fat prior to intense physical activity could affect performance and should be avoided.<sup>98</sup>

Not only do Marines need to be knowledgeable about their carbohydrate, protein, and fat consumption, they should also be aware of the possible effects of using supplements. While some supplements may be beneficial, there are considerable associated risks.<sup>99</sup> Dietary supplements include vitamins, minerals, herbs/botanicals, and amino acids. They are a separate category from food and drugs, according to the 1994 Dietary Supplement Health and Education Act. There is no consistency or dependable information about the ingredients in most supplements, and dietary supplements are not subject to the Food and Drug Administration's pre-market safety evaluations.<sup>100</sup>

The above information is a small portion of the education necessary to help with weigh issues involving the Marine Corps, other military services, and the American population. Nonetheless, simply following basic nutritional guidelines could benefit every Marine and guarantee that their body will be sufficiently and properly fueled, hydrated, and ready to perform at its best, ensuring overall mission accomplishment.

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<sup>96</sup> Burton, "Nutrition for the Endurance Athlete: The Marathoner's Diet for Optimal Performance."

<sup>97</sup> U.S. Navy, Naval Personnel 156002B, 15.

<sup>98</sup> Burton, "Nutrition for the Endurance Athlete: The Marathoner's Diet for Optimal Performance."

<sup>99</sup> Semper Fit: Marine Net Nutrition Course.

<sup>100</sup> Ibid.

## **E. CHAPTER SUMMARY**

This chapter started with a detailed description of the Marine Corps standards for physical fitness and body composition. It provided an overview of remedial programs for Marines who do not meet standards and introduced the Semper Fit program for health and wellness. This chapter presented research supporting America's obesity epidemic and its affect on the Marine Corps. Finally, it discussed the importance of nutrition on healthy living and its relationship to the Marine athlete.



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### **III. SURVEY AND INTERVIEW METHODOLOGY, RESULTS, AND DISCUSSION**

#### **A. CHAPTER OVERVIEW**

This chapter describes the methodology and results of surveys and interviews that were used to gain perspectives from newly enlisted and experienced Marines about the status of fitness and nutrition programs in the Marine Corps. This chapter concludes with an in-depth discussion section and analyzes the findings.

#### **B. METHODOLOGY**

##### **1. Introduction of Methods Used**

The authors chose to use an anonymous survey method to reach out to the largest sample of Marines possible. Qualitative semi-structured interviews augmented information gathered from the surveys and provided more depth to survey analysis. The survey and interview questions were designed to provide feedback, from the Marine's perspective, of current Marine Corps fitness and nutrition programs and their effectiveness. Through the surveys and interviews, the goal was to obtain information on how important Marines consider nutrition to be in maintaining a healthy lifestyle and body composition. Questions were created pertaining to a Marine's perceived level of fitness, their knowledge of nutrition and fitness, and his/her awareness of the Marine Corps programs available to them. Survey and interview responses and comments varied throughout the range of grades, ages, and levels of experience.

##### **2. Participants**

The sample of survey respondents was primarily active duty Marines. It was a convenience sample that included the authors' fellow graduate students, previous co-workers, and subsequent referrals to Marines throughout the Marine Corps. In total, there were 401 surveys sent and 390 surveys completed, resulting in a 97.3% response rate. Approximately 50% of respondents were newly enlisted male Marines (with less than four months time in service) stationed at the School of Infantry (SOI) West, located at

Camp Pendleton, California. Approximately 40% of respondents were Marine officers stationed at the Naval Postgraduate School (NPS) in Monterey, California. Finally, approximately 10% of respondents were former co-workers, peers and their associates spread throughout the operating forces.

Interviews were conducted in two different demographic categories: ten were active duty Marines primarily stationed aboard Camp Pendleton, California, and five were Semper Fit professionals from Marine Corps Recruit Depot (MCRD) and Marine Corps Air Station (MCAS) Miramar, located in San Diego, California.

The identities of both the survey respondents and interview participants were kept anonymous.

### **3. Materials and Design**

The surveys included 38 forced choice questions and 13 open-ended comment sections. The survey was broken down into five parts: Introduction, Basic Information, Physical Fitness and Body Composition, Nutrition Education and Resources, and Additional Comments. An example of the survey questions are located in Appendix A, comments from selected open-ended questions are located in Appendices B through J.

- **Part 1—Introduction.** The survey introduction described to the Marine who the administrators were and the purpose of the survey. It also emphasized that the surveys were completely anonymous.
- **Part 2—Basic Information.** Questions 1 through 7 were designed to obtain basic information, such as age, gender, rank, military occupational specialty (MOS), and time in service. Marines were also asked if they planned to re-enlist/continue service beyond their current contract and if not, what their reasons were for leaving active duty.<sup>101</sup>
- **Part 3—Physical Fitness and Body Composition.** Questions 8 through 20 requested information on a Marine’s perceived fitness level and body composition in relation to Marine Corps fitness and weight standards. Further inquiries asked if Marines ever felt isolated or were treated differently due to their weight or body composition and if they ever practiced unconventional methods for losing weight to meet standards for a weigh-in or body fat taping.

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<sup>101</sup> The term “re-enlist” is used loosely to describe a Marine’s intent to continue beyond their obligated service requirement (i.e., enlisted Marines “re-enlist,” but officers do not “re-enlist”).

- **Part 4—Nutrition Education and Resources.** Questions 21 through 38 requested information on whether Marines had received any nutrition training while in the Marine Corps. Questions inquired about the Marine’s knowledge of Semper Fit and resources, such as nutritionists, dieticians or personal trainers. The survey then asked for the Marine’s perception of the Semper Fit program and the support it gave to Marines.
- **Part 5—Additional Comments.** The final portion (question 39) of the survey requested any additional comments the Marine had and thanked them for their participation.

Active duty Marine interviews were based on a semi-structured interview protocol designed to evaluate the scope of knowledge and perspectives of the participants about the following topics: (The Marine interview protocol is located in Appendix K.)

- Marine Corps Fitness Programs
- The Semper Fit Program
- Opinions regarding America’s overweight epidemic and its relation to the Marine Corps
- Ideas to combat weight problems in the Marine Corps
- Nutrition and its importance
- Recommendations

The interviews conducted with the Semper Fit professionals were also based on a semi-structured interview protocol to gain knowledge and their judgment of the programs provided at their respective bases and their perception of how the programs were received by Marines. Semper Fit interviewees were also asked if weight issues were a problem in the Marine Corps and, if so, how their service aided in combating the issue. (The Semper Fit interview protocol is located in Appendix L)

#### **4. Procedures**

The survey was developed using Survey Monkey,<sup>102</sup> a Web-based program that enabled a Web link to be delivered via email to the participants. Upon distribution, the study was active for responses for a period of two weeks: September 1 through 15, 2009.

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<sup>102</sup> Survey Monkey, <http://www.surveymonkey.com>.

Active duty interviews followed the semi-structured outline mentioned above and included seven Marines from the School of Infantry (SOI) West. These interviews were conducted in a private conference room that included only the interviewee and the two authors. Other interviews took place via email and phone correspondence.

Semper Fit interviews were conducted in the professional's office and included only the interviewee and the two authors. For the interviews, in person and on the phone, the researchers took notes and did not use any other recording device.

## **C. SURVEY AND INTERVIEW RESULTS**

The goal of the surveys and interviews were to obtain information to answer the following research questions.

- What is the current fitness status of the Marine Corps?
- Based on Marine Corps standards, how many Marines meet the body composition requirements?
- What are the Marine Corps standards for fitness?
- What programs exist to assist in nutrition education and Marines' fitness levels?
- How are Marine Corps fitness and nutrition programs perceived among Marines?
- How much fitness and nutrition education do Marines have?
- How important do Marines feel nutrition is in maintaining a healthy lifestyle?

The results are as follows.

### **1. Participant Basic Information**

Survey and interview data collected in this section was useful in cross-referencing future questions if there was indication that age, experience, or grade affected the way a Marine responded. The Marines interviewed ranged from the grades of E-2 to O-5, were primarily male from the infantry specialty, and were between the ages of 18 and 40. The highest respondents to the survey, according to grade, were as follows: 45.6% were the rank E-1 to E-3, 26.2% were O-1 to O-3, and 14.0% were O-4 to O-5. The remaining

respondents were between the enlisted grades E-4 to E-9 (13%) and all warrant officer grades (1.2%). No officer above the grade of O-6 responded. To illustrate the population of the respondents, the results from survey question one are summarized in Figure 4.

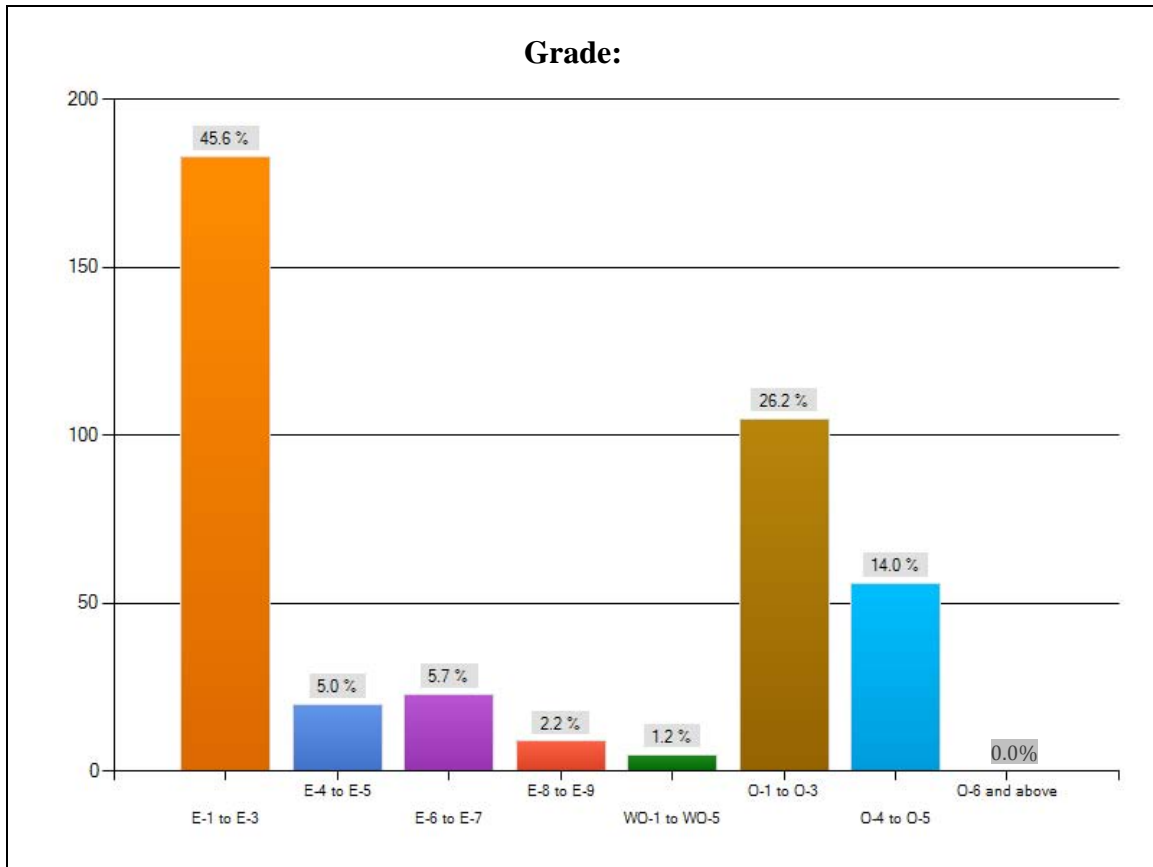


Figure 4. Percentage distribution of grades for all survey respondents (Survey Question 1)

Basic demographics of the survey respondents consisted of job specialty, age, gender and time in service. The Marines participating in this survey came from a variety of MOSs, from both the ground and aviation communities, and were between the ages of 17 to 26 (49.4%) and 27 to 39 (46.1%). Respondents were primarily male; however, 6% were female. While the female sample seemed low, it reflected the approximate ratio of men to women Marine Corps wide.<sup>103</sup> Most participants had less than one-year time in

<sup>103</sup> Women in Military Service for America Memorial Foundation, Inc., *Statistics on Women in the Military*, 2009, <http://www.womensmemorial.org/PDFs/StatsonWIM.pdf>.

service (43.9%), others ranged from 5 to 12 years (24.4%) and 13–20 years (25.4%); the lowest percent of participants had 1 to 4 years service (4.7%) or had served more than 21 years (1.5%). The following graph (Figure 5) represents the sample’s years in service.

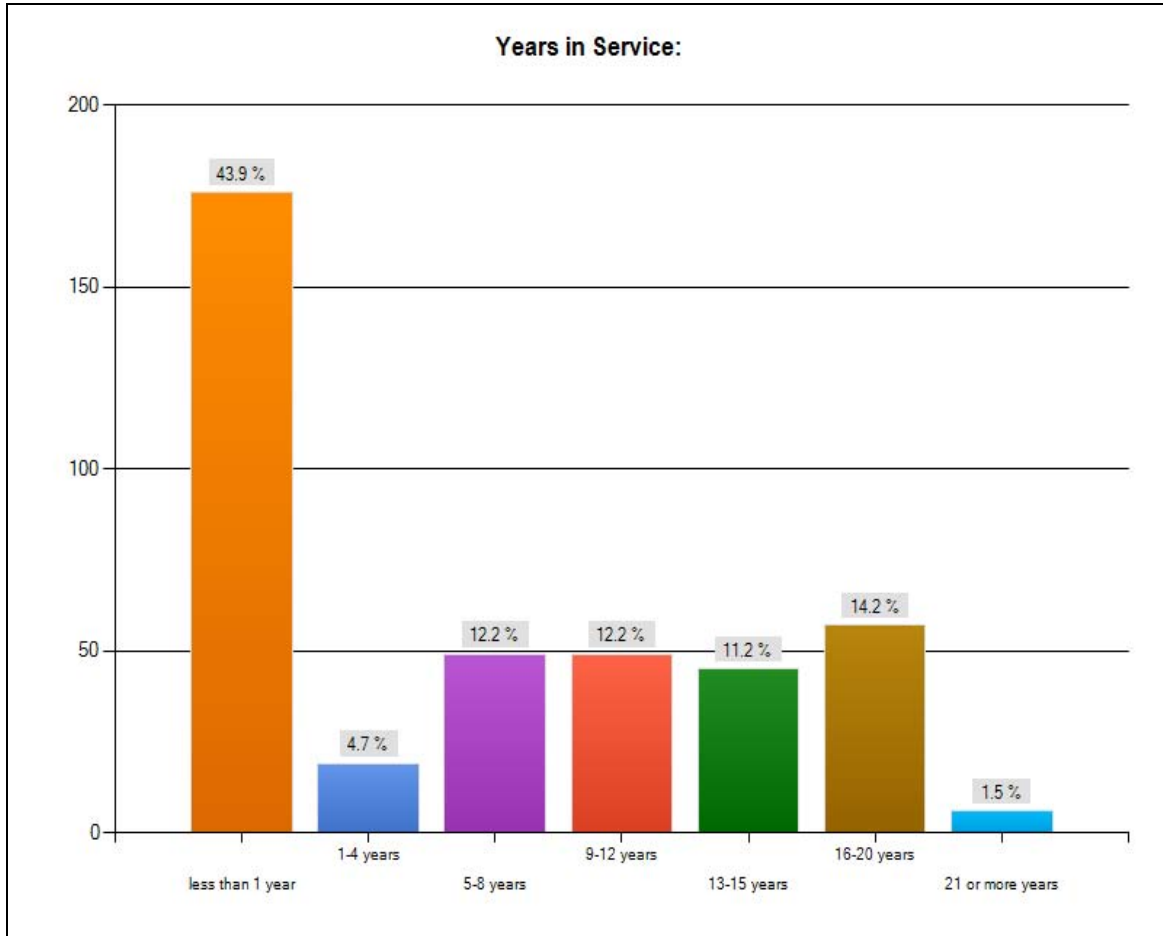


Figure 5. Percentage distribution of time in service for all survey respondents (Survey Question 5)

Respondents were asked if they planned on re-enlisting/continuing service beyond their current contract. Responses indicated 56.9% were planning to re-enlist, 12.2% were not planning to re-enlist, while 30.9% were unsure at the time of the survey. Those that did not plan to re-enlist (12.2%) were asked to select from a list of reasons why not. The two most common reasons why a Marine would not re-enlist were to pursue new career interests (17.5%) and/or to spend more time with family (17.2%). Educational goals were another leading reason (12.5%) affecting a participant’s decision to leave active duty.

Other justifications for not re-enlisting were as follows: physical fitness issues (2.2%), weight issues (2.2%), and medical reasons (1.7%). Comments listed in the “other” category (7.7%) as reasons for Marines leaving active duty included retirement, felt it was time to move on, too many deployments, and undesirable duty stations. Figure 6 illustrates the various reasons why Marines chose not to re-enlist.

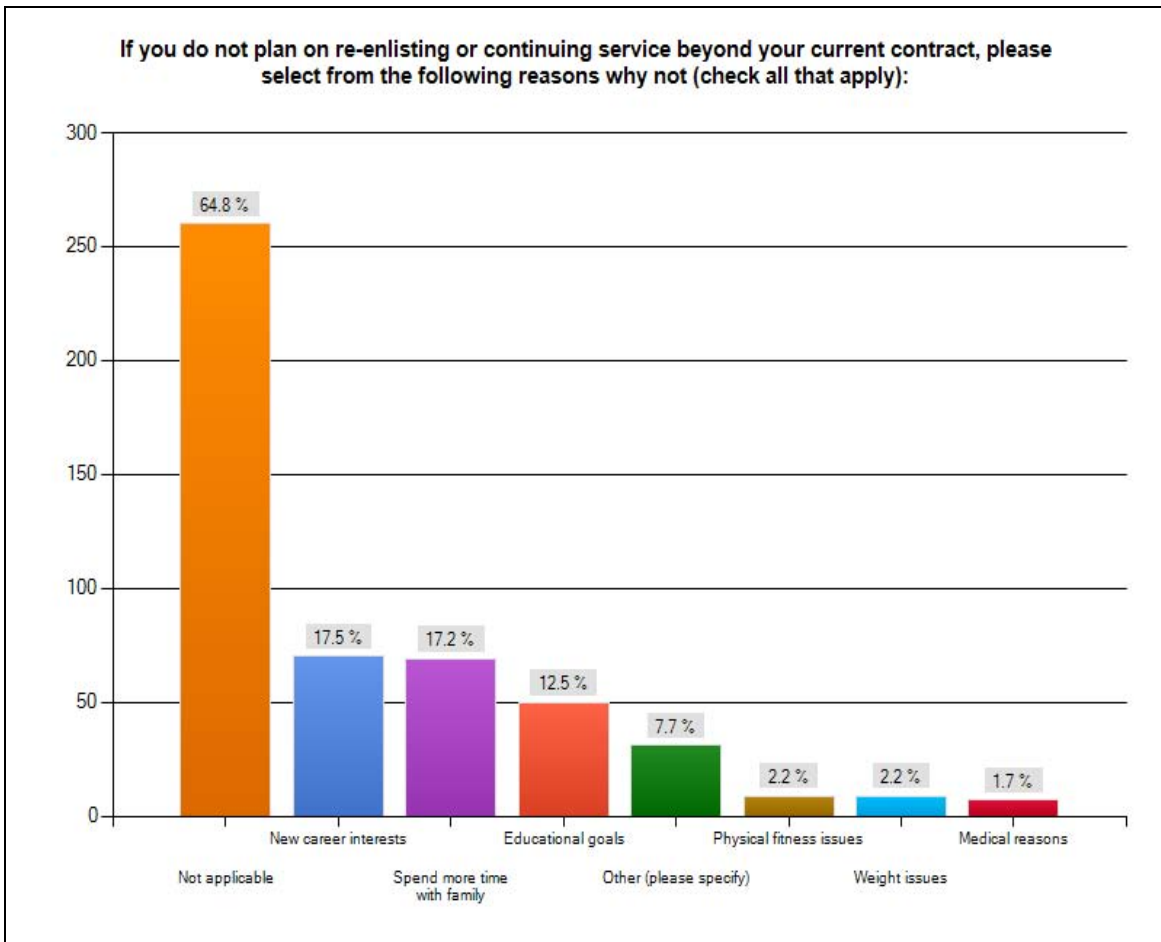


Figure 6. Percentage distribution of reasons for not re-enlisting for survey respondents who did not plan to re-enlist (Survey Question 7)

## 2. Physical Fitness and Body Composition

This section covered inquiries on a Marine’s perceived fitness level and body composition in relation to Marine Corps fitness and weight standards. Additionally, it explored a Marine’s participation in remedial programs (BCP, RCP, and MAP). Finally,



participants were asked if they ever felt isolated or treated differently due to their weight or body composition and if they ever practiced unconventional methods for losing weight to meet standards for a weigh-in or body fat taping.

Marines were asked to describe themselves regarding their weight and body composition during certain periods in their careers, such as the following.

- Prior to Basic Training (i.e., bootcamp, OCS, TBS)
- During Basic Training
- Within 12 months following Basic Training
- 1 to 4 years following Basic Training
- More than 4 years following Basic Training

Weight and body composition were defined as Underweight, At weight (+/- 3 pounds), Overweight but within body fat standards, and Overweight and over body fat standards. The results are shown in Figure 7.

<b>In each of the following time periods, select which best describes you according to Marine Corps standards for your height and weight:</b>				
	<b>Under-weight</b>	<b>At Weight (+/- 3lbs)</b>	<b>Overweight, but w/in body fat standards</b>	<b>Overweight, and over body fat standards</b>
<b>Prior to Basic Training (i.e. bootcamp, OCS, TBS)</b>	22.2%	60.1%	12.1%	5.6%
<b>During Basic Training</b>	29.0%	67.8%	3.0%	0.3%
<b>W/in 12 months following Basic Training</b>	20.9%	72.3%	5.7%	1.1%
<b>1 to 4 years following Basic Training</b>	23.2%	63.5%	10.7%	2.6%
<b>More than 4 years following Basic Training</b>	24.3%	57.3%	15.6%	2.8%

Figure 7. How Marines described themselves during certain period of their careers, in relation to Marine Corps height and weight standards (Survey Question 10)

When asked about their current state of physical fitness, most participants (44.8%) described themselves as “physically fit.” Regarding the Marine Corps weight and body composition standards, 97% said they were within standards, the remaining 3% (12 Marines) admitted to being currently overweight and outside body fat standards. Six

of those 12 Marines, felt they were either “below average fitness” or “unfit” in relation to Marine Corps standards. It can be concluded that the other six of the 12 Marines believed they were at least “physically fit.”

Information was requested on whether a Marine ever participated in a command sponsored formal weight management program (i.e., BCP, RCP, MAP) and how satisfied the respondents were with each program. Most respondents selected “not applicable” in the survey due to never being required to participate in a formal weight management program. However, about 5% of the respondents participated in BCP, 3% in RCP, and 2% in MAP. Of the BCP participants (5%), the average rating of the program was “poor.” Of the RCP participants (3%), most rated the program as either “average” or “poor.” Of the MAP participants (2%), just over 50% rated the program as “average.” Of the respondents who participated in a formal weight management program, their satisfaction with each program is illustrated in Table 6.

<b>If you have ever participated in the following programs, rate the support you have received:</b>					
	<b>Unsatisfactory</b>	<b>Poor</b>	<b>Average</b>	<b>Excellent</b>	<b>Outstanding</b>
<b>Body Composition Program (BCP)</b>	16.7%	44.4%	22.2%	16.7%	16.7%
<b>Command Remedial Conditioning Program (RCP)</b>	9.0%	36.4%	36.4%	9.0%	9.0%
<b>Military Appearance Program (MAP)</b>	0.0%	14.3%	51.2%	14.3%	14.3%

Table 6. Perceived Satisfaction with Support Received from Marine Corps Remedial Programs (Survey Question 11)

Respondents also commented on the command sponsored formal weight management program in the open comments section. For example, several remarks about the programs described Marines’ frustration with inconsistencies among individual commands and throughout the Marine Corps. One Marine questioned the legitimacy of the programs saying, “NOBODY follows the program to the letter. Whether it is the [Operations Officer] himself, the clerk doing the rope and chokes [measurements] or someone in between, there is also some leniency somewhere...the program is flawed.”<sup>104</sup>

<sup>104</sup> Survey comment (#24) from Question 39, Appendix J.

Conversely, some Marines described the programs as a positive experience, depending on the Marines in charge of the specific program and the individual effort put forth by the program participants.<sup>105</sup> Others complained of poor program organization and hardly any long-term benefits; as one Marine commented, “I feel these programs are all command dependent, are enforced sporadically, make little to no difference in a Marine’s long term mental/emotional issues, which keep them out of standards.”<sup>106</sup>

Marines were asked if they had ever been treated differently or felt isolated by their peers, superiors, and/or subordinates because of their weight and body composition. Most Marines reported that they had not been treated differently; however, 6.5% claimed they had been treated differently and/or felt isolated by their superiors, 5% by their peers, and 2.3% by their subordinates.

Information was gathered about whether Marines used unconventional methods to lose weight prior to an official weigh-in and/or body fat taping. Most respondents (68.8%) said they had never used such techniques; however, 31.2% of surveyed Marines did use at least one of the listed practices and/or filled in other strategies used. The most common methods utilized were: limited food intake (23.7%), extreme cardio (17.1%), wore a sweat suit or plastic suit during exercise and/or in the steam room (17.1%), and used weight-loss supplements and/or taken diuretics or laxatives (15.3%). Additional methods described in the “other” category were the following.

- Wore a weighted vest/belt during workout
- Conducted neck exercises to increase neck measurement
- Intentional dehydration
- Liposuction
- Fad dieting
- Gave blood
- Limited alcohol

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<sup>105</sup> Survey comment (#4) from Question 11, Appendix B.

<sup>106</sup> Survey comment (#16) from Question 11, Appendix B.

Figure 8 depicts these results in detail.

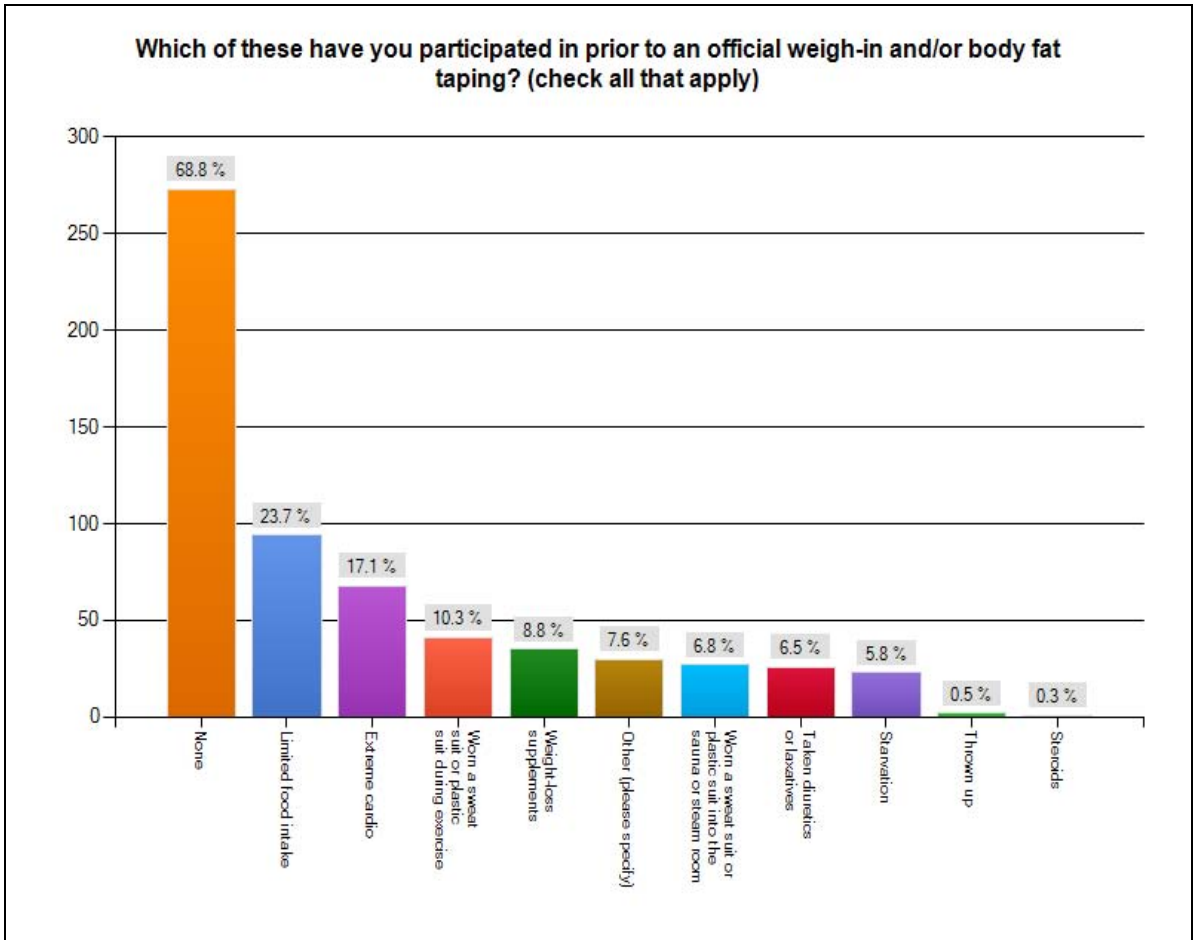


Figure 8. Degree of participation in unconventional methods used for weight loss (Survey Question 14)

If Marines participated in any of the above weight loss methods, they were asked whether or not the methods helped them meet standards and, if so, how long before the weight lost returned (if it returned). Of the respondents who used the above methods (31.2% Marines), 41.4% were able to keep the weight off for more than one month, 31% admitted the weight returned within one month, 25% said the weight returned within one week, and 6.9% revealed they gained more weight than before the weigh-in and body fat taping. Some respondents indicated that unconventional methods are widespread in the Marine Corps, as expressed in the following participant's comment.

The survey discusses nutrition and hits on some critical elements that the Marine Corps fails to address. In my opinion, the number of Marines that “cut weight” or use significant means to make weight are extremely high and are often unknown by senior leadership.<sup>107</sup>

To assess how a consistent exercise regiment would potentially benefit a Marine’s performance on the annual PFT, questions were asked regarding a participant’s workout frequency and their most recent PFT performance. Most Marines (45.3%) stated they worked out between 4–5 days per week, 18.6% worked out 6–7 days per week, 27.2% worked out three days per week, and 8.8% admitted they worked out fewer than three days per week. The results are illustrated in Figure 9.

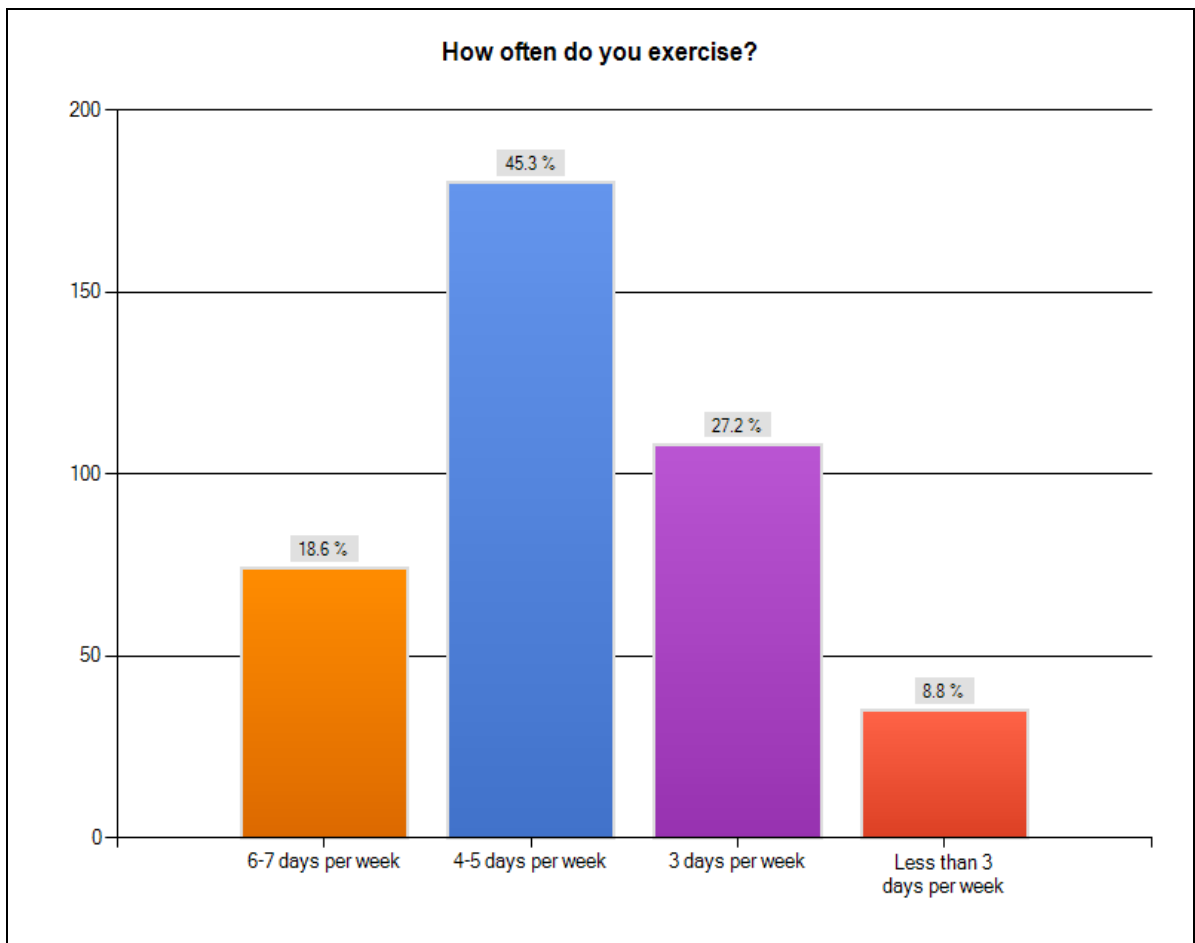


Figure 9. Frequency of exercise per week (Survey Question 17)

<sup>107</sup> Survey comment (#33) from Question 39, Appendix J.

In regards to their most recent PFT, respondents were asked if their PFT results were negatively affected and if so, how. Most Marines (67.3%) admitted to having some cause that negatively affected their PFT, while 32.7% said they had “no negative affect.” The most common cause was poor physical preparation (27.7%) and/or an unhealthy diet (27.5%), 21.9% had a medical injury, 15.1% claimed stress was a factor, and deployment affected 10.1%. “Other” responses (11.6%) listed as affecting a Marine’s PFT included the following:

- Smoking
- Depression
- Age
- Family issues
- High operational tempo
- Alcohol, lifestyle
- Dehydration from preparing for weigh-in before the PFT

Figure 10 depicts these results in detail.

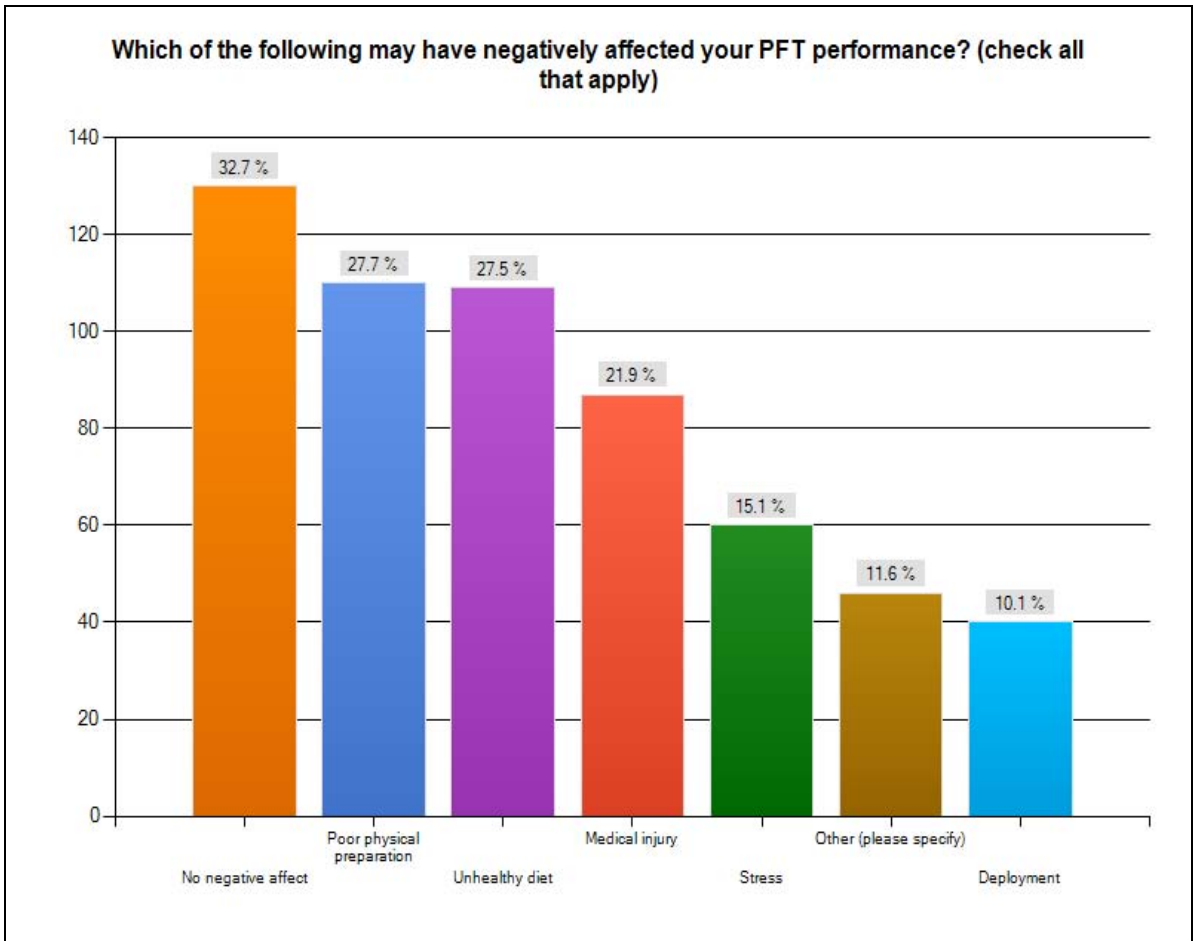


Figure 10. Reasons for negative performance on most recent PFT (Survey Question 20)

### 3. Nutrition Education and Resources

This section of the survey covered questions about “formal nutrition training” that participants might have received throughout their careers. It also asked about their knowledge and experience with the Semper Fit program. Finally, this section covered the participant’s perception of nutrition in relation to maintaining a healthy lifestyle.

Marines were asked “what kind of formal nutrition training have you received?” The following options were given for formal nutrition training formats.

- Command provided training (S-3)
- SNCO/NCO classes
- Semper Fit Nutrition MCI

- Self-sought professionals (civilian)
- Self-sought (Semper Fit, Navy Medical)
- Command directed (Semper Fit, Navy Medical)
- Other resources (requested comments)

Of all survey respondents, 37.5% said they had not received any type of “formal nutrition training;” however; the majority of Marines (62.5%) claimed to have some form of instruction: 39.2% sought training on their own (civilian and/or military source), 37.2% received training through military leadership, 9.2% completed nutrition class via Marine Net, and 6.1% were command directed via Semper Fit or Navy Medical. “Other” sources (11.0%) included high school and/or college courses and knowledge through family members and/or friends. Figure 11 shows these results in detail.

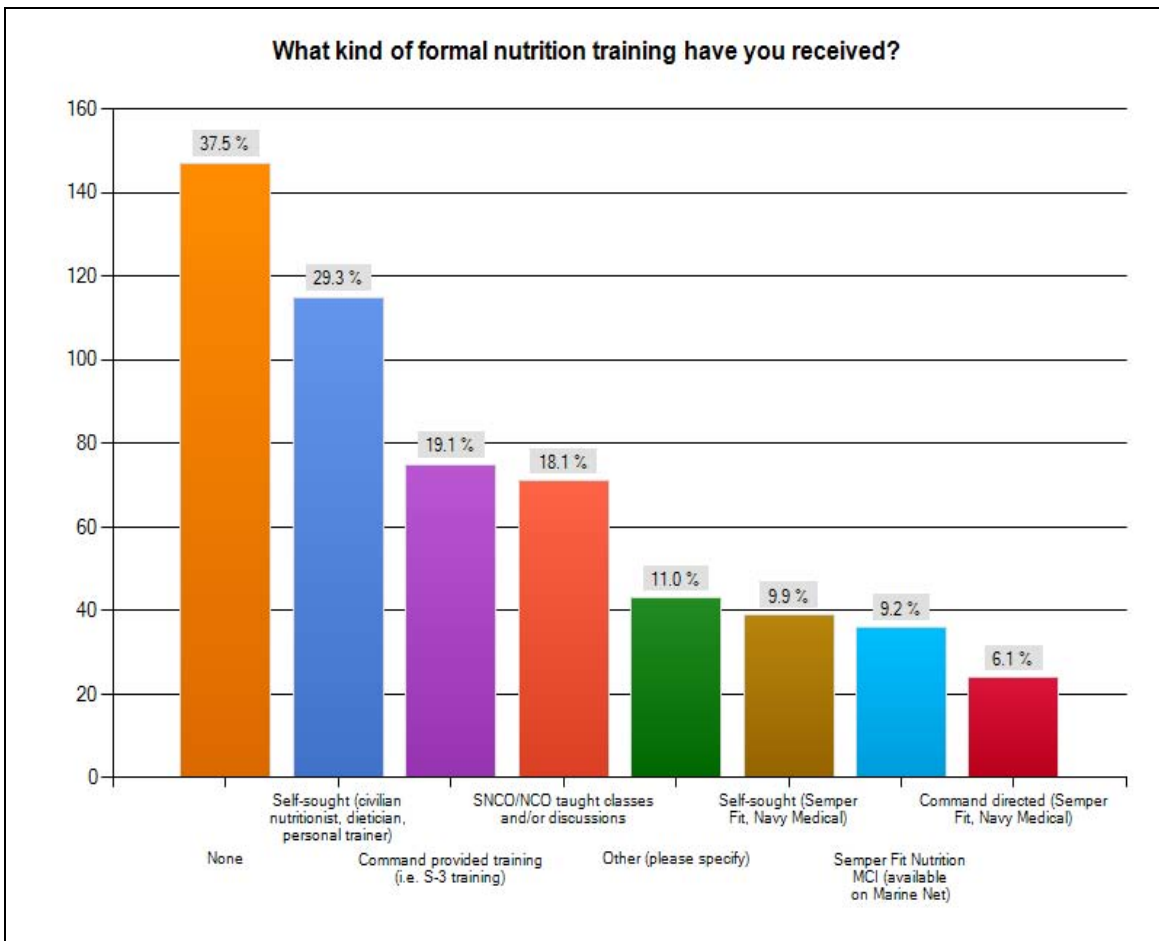


Figure 11. Types of formal nutrition training received (Survey Question 21)



The next question asked Marines if they had ever received nutrition classes specifically during any phase of formal Marine Corps training, such as Basic Training, The Basic School, MOS school, and career development courses. If they received training, they were asked to rate the instruction as: unsatisfactory, poor, average, excellent, or outstanding. The majority who received training noted it was during initial schools (Basic Training, Officer Candidate School, and The Basic School). For those that received training during any school and/or course, the most common rating for all courses was “average.” Still, there were 90 remarks in the comments section, which either reflected a Marine’s experience with a course or explained something about their experience in providing guidance to their own Marines. Further information was requested on “who” provided the formal training discussed previously. For the most part, a military mentor (NCO, SNCO, or officer) provided instruction, while others received training from Semper Fit, Command PT representatives, or Navy Medical. Many of the courses noted were part of an annual training requirement.

Marines commonly described the nutrition classes they as a “check in the box training event,”<sup>108</sup> using outdated material, with no lasting impact. One Marine’s description stated, “Classes are dry...Most of the training is given by individuals less than qualified to be teaching about nutrition. Qualified nutritionists should be giving these periods of instruction.”<sup>109</sup> There was positive feedback; however, it was limited. A few Marines noted their experience with Marine mentors who shared their knowledge of nutrition and fitness. Some Marines also mentioned that they received nutrition information from a NCO, SNCO or Officer during intense training periods (Basic Training, Corporal’s Course, and SOI), in preparation for the demanding physical activity they faced.

The next few questions sought to understand whether Marines thought nutrition was important in maintaining a healthy weight and body composition. They were also asked how they described their general eating habits and what resources they used to gain knowledge about nutrition. According to the Marines surveyed, many (48.2%) claimed

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<sup>108</sup> Survey comment (#53) from Question 22, Appendix C.

<sup>109</sup> Survey comment (#48) from Question 22, Appendix C.

that nutrition was “extremely important” in maintaining a healthy weight and body composition, 32.1% said it was “very important,” 16.6% responded as “important,” 2.8% felt it was “somewhat important,” and one respondent (0.3%) felt nutrition was “not important.” When asked how the Marines described their eating habits, most (71.2%) claimed to “usually maintain a healthy diet, with occasional fast food or junk food,” some Marines (20.2%) admitted to only “sometimes” maintaining a healthy diet, others (5.1%) said they “always” maintained a healthy diet, and few (3.6%) “Do not pay attention to their diet.” This data is represented in Figure 12.

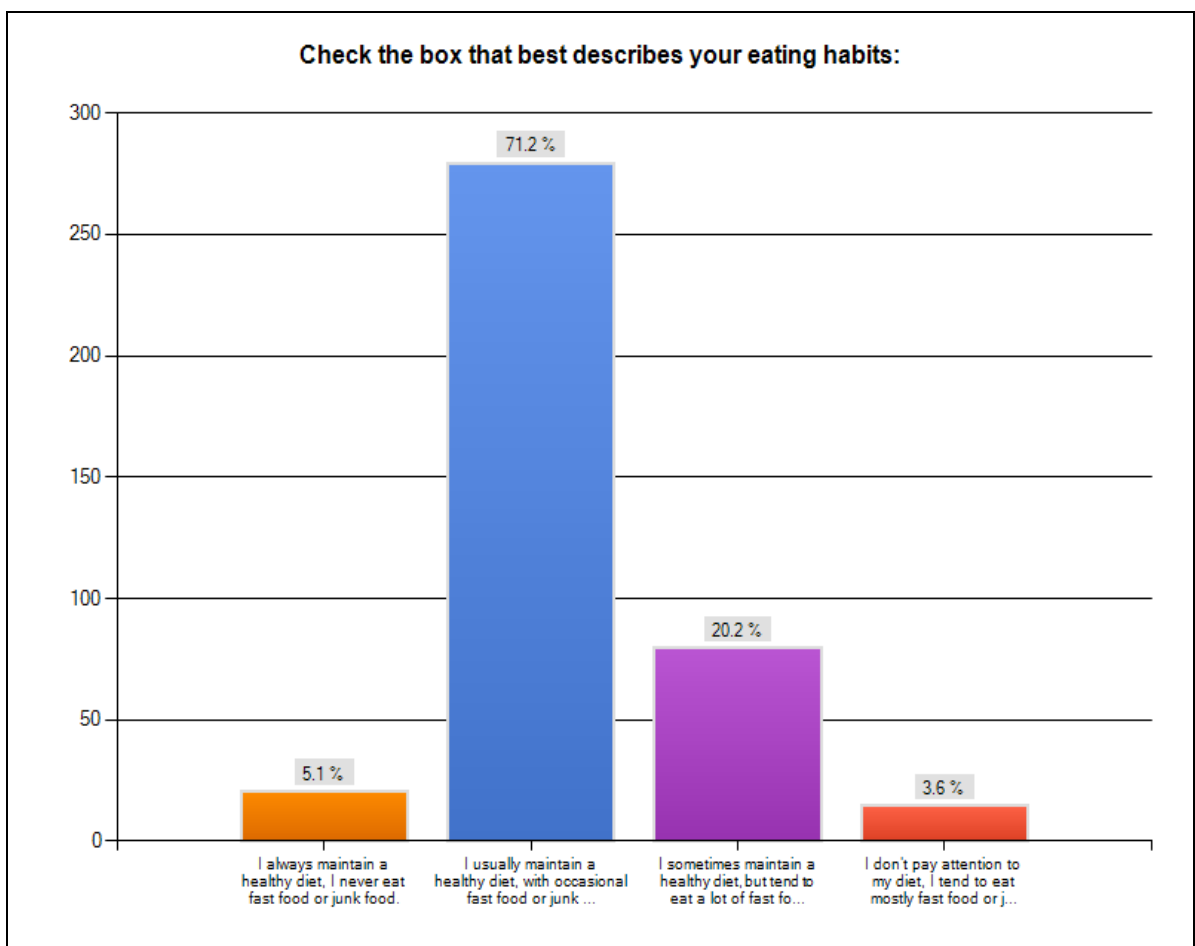


Figure 12. Degree of healthy eating habits (Survey Question 25)

Of the 23.8% of respondents above who only “sometimes” maintain a healthy diet or who “do not” pay attention to their diet, 71% believed that nutrition was “very important” to “extremely important” in maintaining a healthy lifestyle and body composition.

Marines were asked, “Where do you currently get most of your knowledge about nutrition?” The following resources were reported.

- Fitness Magazines (47.7%)
- Fellow Marines—peers (41.8%)
- Friends and family (41.6%)
- Professionals—Fitness trainers, Medical personnel, Nutritionists (34.9%)
- Fellow Marines—superiors (30.6%)
- Fitness/Athletic books (24%)
- Diet books (8.7%)
- Scientific Magazines (6.1%)

“Other” sources (16.3%) for information were Internet, high school/college athletics and courses, common sense, television shows, and the Crossfit fitness program. The responses are depicted in Figure 13.

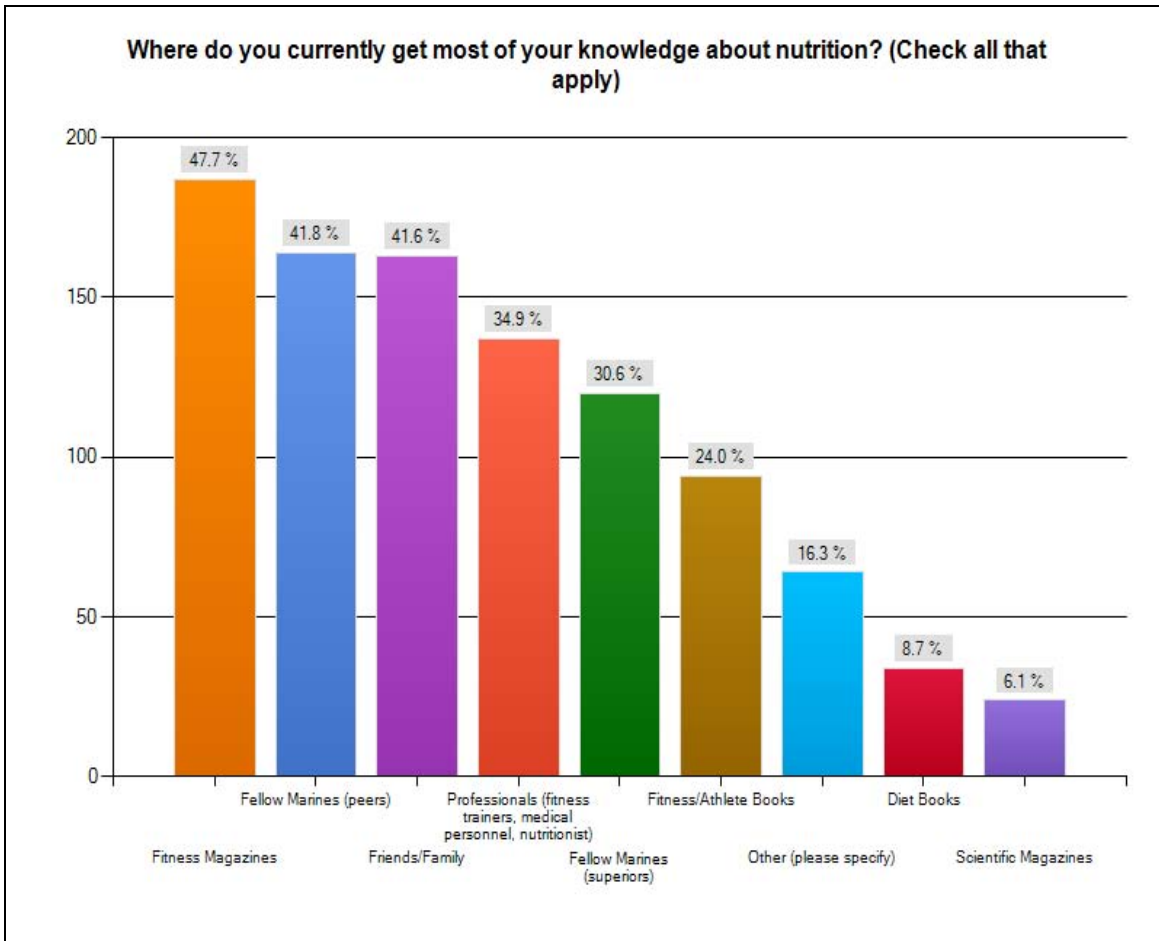


Figure 13. Sources of nutrition information (Survey Question 26)

The next several questions requested information about a Marine’s knowledge, experiences, and satisfaction with the Semper Fit program. Regarding nutritionists and dietitians available through Semper Fit, participants were asked about their interest in using this service and their satisfaction with the service if they had used it. Over half (54.3%) of the respondents were aware of classes taught by nutritionists via Semper Fit, while 25% were not aware of the classes, and 20.7% “did not know about Semper Fit.” Additionally, 5.4% of all survey participants worked with either a nutritionist or dietitian through Semper Fit. These participants were then asked to rate their satisfaction for the service received: 4.7% were “completely unsatisfied,” 28.5% were “somewhat satisfied,” 28.6% were “satisfied,” 14.3% were “very satisfied,” and 23.8% were “extremely satisfied,” with their service from Semper Fit nutritionists or dietitians. For all Marine participants surveyed, most (60.7%) would be interested in attending nutrition classes

available through Semper Fit; 13% of participants claimed they “did not know about Semper Fit.” The 26.3% who said they were not interested in attending these classes were asked for their reasoning. Responses included the following.

- Know enough already
- Did not think it would be valuable
- Used other resources (professionals or books)
- Not enough time
- Not interested

Participants were asked about their interest in using personal trainers available through Semper Fit and their satisfaction with the service if they had ever used one. Most Marines (74.7%) surveyed had never worked with a personal trainer and 18.1% had worked with a personal trainer, but not through Semper Fit. The 7.2% of Marines who had sought a personal trainer through Semper Fit were asked to rate their experience: 7.4% were “completely unsatisfied,” 22.3% were “somewhat satisfied,” 44.4% were “satisfied,” 18.5% were “very satisfied,” and 7.4% were “extremely satisfied,” with their service from Semper Fit personal trainers. For all Marines surveyed, most (59.9%) would be interested in using a personal trainer through Semper Fit in the future (12.5% of participants claimed they “did not know about Semper Fit”). The 26.7% of Marines who would not consider using a personal trainer through Semper Fit in the future were asked for their reasons. Their responses varied.

- Know enough already
- Did not think it would be valuable
- Used other resources (professionals or books)
- Not enough time
- Not interested

Marines were then asked, “How supportive do you think the Semper Fit staff is in assisting Marines with their weight or fitness goals?” Most participants (45.4%) claimed they “did not know about Semper Fit.” The remaining Marines rated the Semper Fit staff as follows: 17.6% said they were “supportive,” 16.1% noted they were “very supportive,” 11.5% felt the staff was “extremely supportive,” and 9.4% stated they were only

“somewhat supportive.” No respondents said the Semper Fit staff was “not supportive.” Figure 14 illustrates survey participants’ perception of the support received from the Semper Fit staff.

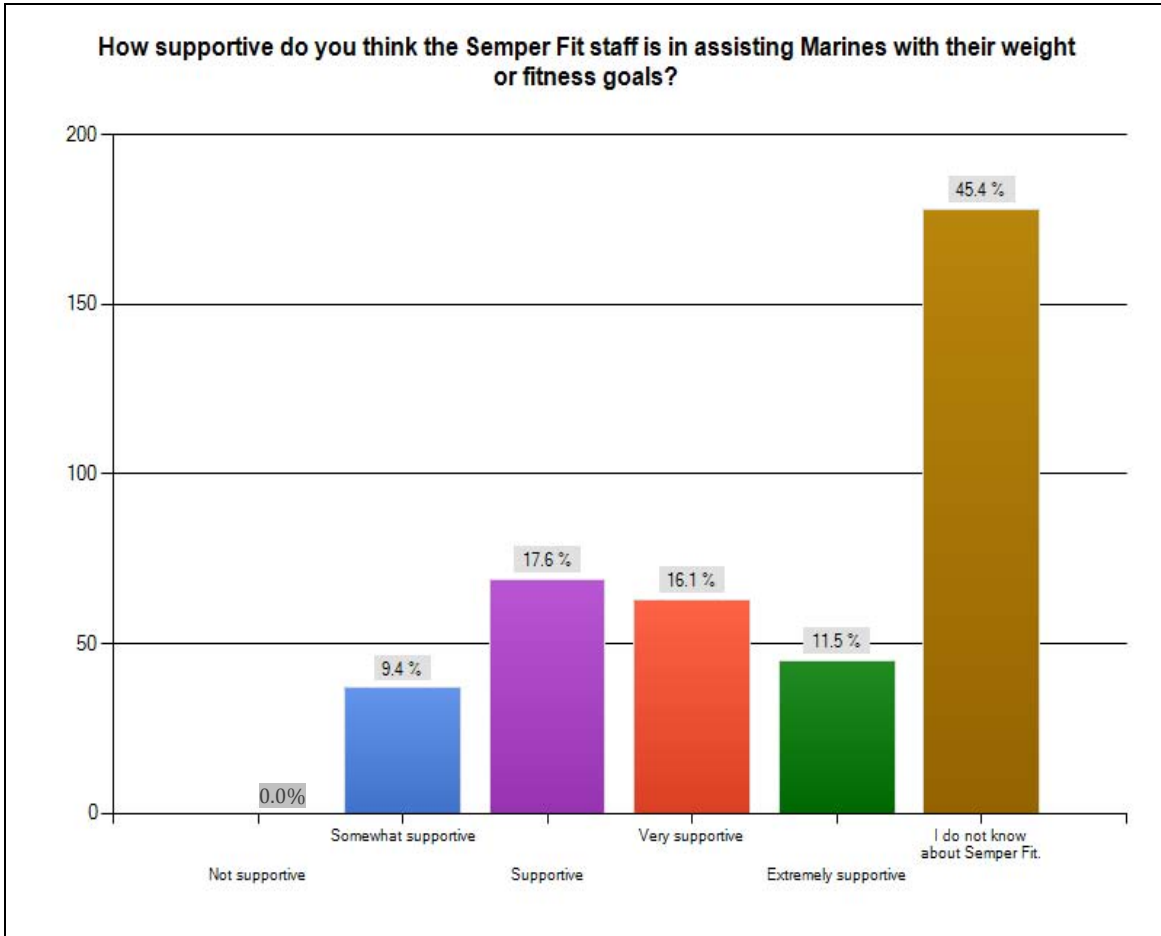


Figure 14. Perceived support from Semper Fit staff for meeting weight or fitness goals (Survey Question 36)

The last two questions of this section asked whether or not a Marine had taken either of the Semper Fit courses on Nutrition or Fitness. Over half (53%) of the Marines surveyed were unaware that the courses were offered. The Semper Fit Nutrition course was taken by 8.7% of participants and 5.3% took the Semper Fit Fitness course.

#### 4. Additional Comments

At the end of the survey, Marines were presented an opportunity to provide additional comments. Sixty-five participants shared a variety of opinions and experiences regarding Marine Corps fitness and nutrition programs. Common topics include concern that nutrition is not correctly addressed, increased unit-level support for nutrition education, improved nutritional options on Marine Corps bases, and increased nutrition education for the military family members.

**Nutrition not properly addressed with Marines.** Numerous respondents commented that nutrition was not appropriately addressed in the Marine Corps; as one Marine stated, “I think that nutrition training should be required. Not only for weight, but [also for] health. At least five Marines at my unit are currently having heart problems.”<sup>110</sup> Other Marines shared their opinions concerning nutrition education and related it to the body composition program.

- I honestly do not think nutrition is emphasized enough in the Marine Corps. I have had Marines on BCP; however, the program emphasized cardio instead of a combination of both cardio and healthy eating habits. This is definitely a Marine Corps wide problem.<sup>111</sup>
- Maturity level also plays an important role with nutrition and fitness. Marines will continue to wash their faces with pizza and beer if that is what they wish to do on their [own] time...<sup>112</sup>

Some Marines felt nutrition education should be at the forefront of a Marine’s career, as declared by the following responses:

- I believe nutrition should start immediately at boot camp and continued throughout a Marine’s career. Mission Accomplishment and Troop Welfare. The mission will get accomplished and troop welfare should include our Marines’ health.<sup>113</sup>

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<sup>110</sup> Survey comment (#6) from Question 39, Appendix J.

<sup>111</sup> Survey comment (#29) from Question 39, Appendix J.

<sup>112</sup> Survey comment (#40) from Question 39, Appendix J.

<sup>113</sup> Survey comment (#1) from Question 39, Appendix J.

- I believe you need to push nutrition even before basic [training]. For example, have the recruiters make the recruits go to a nutrition class so they have some type of understanding of what you put in your mouth effects their body.<sup>114</sup>

**Unit-level support for nutrition education.** The below comments are from a few survey respondents explaining their opinions on how nutrition was important and should be encouraged at the unit-level throughout the Marine Corps.

- Nutrition is obviously important and not focused on by commands with the exception of the annual mandatory training. Marines are either not given good alternatives to healthy eating, or choose to eat what they like. Commands do not make a Marine’s nutrition a priority and therefore reap what they sow.<sup>115</sup>
- I have been a Marine Corps officer for 16 years, with tours on both recruiting duty and recruit training. I think the average young adult has a much worse diet and physical fitness regimen than 16 years ago. The Marine Corps must do more through command sponsored education to get Marines to eat right and exercise in a sensible manner.<sup>116</sup>
- This is a good topic to look at. The majority of Marines (officer and enlisted) I know have to “prepare” for a weigh in by changing their normal eating and/or exercise program in some way. The multiple changes in weigh in rules (the two week separation between weigh in and PFT)<sup>117</sup> and the BCP process (grace period/no grace period) in the last couple of years show that the Corps knows it’s a problem, but they do not know how to fix it.<sup>118</sup>

**Nutritional options available on Marine Corps bases.** There were many negative comments concerning the food choices available at Marine Corps dining facilities and on-base restaurants.

- In regards to nutrition, the Marine Corps has to offer better selections in the Chow Halls and get rid of the vast variety of fast food aboard the bases. You can train a Marine in the gym all day, but the moment they go to the Chow Hall to eat, they are not offered a variety of healthy meals. They can get of plenty of hamburgers and pizza, but not a large amount of nutritious

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<sup>114</sup> Survey comment (#63) from Question 39, Appendix J.

<sup>115</sup> Survey comment (#43) from Question 39, Appendix J.

<sup>116</sup> Survey comment (#21) from Question 39, Appendix J.

<sup>117</sup> Note: The two-week separation between weigh-in and PFT is no longer required at this time (MCBCP/MAP, MCO 6110.3, Encl. 1, 4).

<sup>118</sup> Survey comment (#20) from Question 39, Appendix J.



offerings. If we are forcing our junior Marines to use their meal cards<sup>119</sup> to eat, then we have to give them better variety at the Chow Hall.<sup>120</sup>

- It does not help that the preponderance of food venues aboard a base are fast food based. The ratio of fast food (e.g., McDonalds, Wendy's, Taco Bell, etc.) as compared to healthy food (e.g., Club System,<sup>121</sup> Chow Hall [salad bar]) are not proportionate. Too often, ...Coke machines, candy machines, fast food trucks at the rifle range [and flight line] ...does not support a healthy Marine Corps...<sup>122</sup>

One Marine interviewed mentioned that there are Subway restaurants that offer healthier options; however, he complained that the lines were usually too long during lunch breaks leading him to choose less healthy options. He also suggested that the chow halls and the base mini-marts provide more fresh fruits and vegetables for quick snacks.<sup>123</sup>

**Nutrition education for the military family.** Proper education oriented at Marine families was a repeated concern among the final survey comments. Two Marines that are quoted below identified the necessity for the Marine spouse to be on board and educated on how to shop, cook and eat more healthfully.

- Generally speaking, nutrition classes or “instruction” would be much more affective if taught to military dependents. Nutrition starts with “young” wives and the lifestyle they promote at home. You can see it first hand at the Commissary. Young wives buy junk and processed food. Teach them to cook healthy!<sup>124</sup>
- Nutrition depends on who purchases food in household. My wife is a very healthy eater and will not purchase processed foods. She spends lots of time reading food labels. Training in this area would be very helpful especially for single Marines. Note: commissaries need to really focus on offering healthier items.<sup>125</sup>

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<sup>119</sup> Note: meal card is the common name for the authorization for Marines to dine in the chow hall without payment. It is given to Marines who reside in the barracks and do not receive a monthly subsistence allowance.

<sup>120</sup> Survey comment (#26) from Question 39, Appendix J.

<sup>121</sup> Note: Club Systems refer to Officers Club, SNCO Club and Enlisted Club restaurants.

<sup>122</sup> Survey comment (#33) from Question 39, Appendix J.

<sup>123</sup> Interview with active duty Marine (#2), August 28, 2009.

<sup>124</sup> Survey comment (#16) from Question 39, Appendix J.

<sup>125</sup> Survey comment (#38) from Question 39, Appendix J.

## D. DISCUSSION

This section discusses the survey results and analysis and is further augmented through the interviews conducted. There were five primary findings:

- Marines express a desire for nutrition education
- Nutrition and fitness programs need to be consistent and credible Marine Corps-wide
- Unconventional methods for weight-loss are widespread within the Marine Corps
- Poor nutrition and fitness practices have an effect on Marines' careers
- Semper Fit and unit relationships need attention

### 1. Marines Express a Desire for Nutrition Education

Given the observations provided by survey respondents, participants recognized that nutrition is important to maintaining a healthy weight and body composition. Participants also indicated a lack of education and support for fitness and nutrition and the consequent relationship to body composition.

#### a. *Nutrition is Important*

Of all survey respondents, 97% agreed that nutrition was significantly important in maintaining a healthy weight and body composition. While most Marines believed nutrition was important, 76% “usually” to “always” maintain a healthy diet, while 24% of respondents claimed they only “sometimes” or “never” paid attention to their diets.<sup>126</sup> A Sergeant (E-5) from the Aviation community, with more than five years of service, explained how he views nutrition, “It is very important in supporting the body’s energy and performance and is key to losing weight.”<sup>127</sup> Likewise, a Staff Sergeant (E-6) Infantryman, with more than six years of service, stated, “Nutrition is very important: you can work out all day long, but if you do not fuel your body properly it will do no good.... Give Marines the tools, and then it is up to them to execute with that

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<sup>126</sup> Marines’ relative perceptions on maintaining a healthy diet may differ from one another; frequency was not quantified to survey respondents by a definition.

<sup>127</sup> Interview with active duty Marine (#2), August 28, 2009.

knowledge.”<sup>128</sup> Furthermore, a survey respondent explained, “I always tried to gain weight and muscle, so I didn’t know how to eat to lose weight until I talked to the military nutritionist.”<sup>129</sup> Given that Marines felt nutrition was important, they expressed a desire for more education.

***b. Greater Desire for Education***

When asked what kind of formal nutrition training Marines received, 38% had none; however, 39% took the initiative to seek nutritional guidance on their own through civilian and/or military resources. Of all respondents, 97% claimed to seek their own knowledge on nutrition through various sources, such as magazines, books, internet, friends and family, fellow marines, and professionals. The remaining 3% stated that they did not actively seek nutrition information. Additionally, 61% of all respondents expressed their interest in attending classes available through Semper Fit. For example, a Gunnery Sergeant (E-7) Infantryman, with 15 years of service, suggested: “a basic nutrition class would help; however, people need self motivation... classes should focus on reading labels and portion control.... Marines should gain a clear understanding of what nutrition means.”<sup>130</sup> The Sergeant from above also recommended: “An in-depth nutrition class should be incorporated at the Corporal’s and Sergeant’s courses.... Nutrition should be reinforced through physical training instruction.”<sup>131</sup>

This survey data supported by the interview comments reinforced the finding that Marines felt nutrition is extremely important to maintaining a healthy lifestyle and they had a desire for further education in this area.

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<sup>128</sup> Interview with active duty Marine (#6), August 28, 2009.

<sup>129</sup> Survey Comment (#10) from Question 29, Appendix E.

<sup>130</sup> Interview with active duty Marine (#5), August 28, 2009.

<sup>131</sup> Interview with active duty Marine (# 2), August 28, 2009.

## **2. Nutrition and Fitness Programs Need to be Consistent and Credible Marine Corps Wide**

Results from survey and interview data suggest that there were a variety of resources and programs, but they were not consistent throughout the Corps. Likewise, credibility of the programs and the instructors/trainers were just as important.

### ***a. Consistency is Imperative***

As previously indicated, 62% of the Marines surveyed had received some form of nutrition training; however, approximately 38% of respondents claimed to have received none. These results suggested that even though there were standardized nutrition and fitness programs, they were not consistent across the Marine Corps.

In reference to Marine Corps remedial programs for weight management, the survey comments indicated that there needed to be consistency. As one Marine claimed, “I feel these programs are all command dependent, are enforced sporadically, make little to no difference in a Marine’s long term mental/emotional issues, which keep them out of standards.”<sup>132</sup> Another survey respondent suggested that the Marine Corps design a more effective database for tracking Marines on remedial programs to maintain the integrity of each Marine’s during changes in command/leadership and transfers to other duty stations.<sup>133</sup> While consistency is very important, courses and instructors also needed to be credible.

### ***b. Credibility is a Must***

Marines’ perceptions through the surveys and interviews suggested that instructors needed to have the appropriate credentials, teach memorable classes, and be physically fit in appearance to hold their attention. Of those who received training, some claimed the information received was very basic and the classes were not well retained, “the mere fact that I cannot recall any nutritional training... means it had no residual

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<sup>132</sup> Survey comment (#16) from Question 11, Appendix B.

<sup>133</sup> Survey comment (#23) from Question 11, Appendix B.

staying power or long-term impact.”<sup>134</sup> Still, others claimed that classes were in-depth and valuable, as one Marine explained his experience at bootcamp and SOI, “...both classes were very in-depth. What I liked most was that they both had realistic goals. [They] taught about proper calorie intake and diet.”<sup>135</sup>

In general, many Marines expressed enthusiasm about their instruction from Semper Fit staff and peer mentors, such as NCOs, SNCOs and Officers. During the interview sessions with the Semper Fit staff aboard MCRD and MCAS Miramar, the authors found the interviewees portrayed credibility in both appearance and credentials. On the other hand, there were Marines who perceived some of the Semper Fit staff as unqualified. One Marine shared the following observation:

Almost half of the ‘personal trainers’ that Semper Fit provides and I have seen are overweight themselves. There is no way that an overweight trainer can be an effective tool to get Marines into shape. Perhaps it could work in the civilian world when the trainers are a little less fat than the persons they are working with, but in the Marine Corps this is not the case. Not only would this affect motivation, but I would question any information a Semper Fit trainer would provide if they are overweight.<sup>136</sup>

Another Marine had good experience with some trainers, but not all:

I have faith in the abilities of the Semper Fit trainers because I am personally familiar with our local trainer. Some of the other trainers don’t present a great physical appearance leading me to question their credibility.<sup>137</sup>

Survey data, along with the Marines’ impressions, reflected differences in support provided by remedial programs and the entire range of resources Marines sought for guidance; this reinforces the claim that consistency and credibility are necessary for effective nutrition and fitness programs. One survey respondent recommended that the

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<sup>134</sup> Survey comment (#16) from Question 23, Appendix D.

<sup>135</sup> Survey comment (#20) from Question 22, Appendix C.

<sup>136</sup> Survey comment (#15) from Question 35, Appendix H.

<sup>137</sup> Survey comment (#3) from Question 39, Appendix J.

Marine Corps hire contracted professionals to assist each unit's training office in conducting fitness and remedial programs. This respondent further suggested that the Marine Corps should:

Form a [training team] that has a military lead with a contracted dietician, strength professional and fitness guru that can go to units to provide a course on mandatory fitness requirements (MCMAP, PFT, CFT), an update on new exercise methods to build strength, diets that work for each body type, and an overview of programs and directives.<sup>138</sup>

### **3. Unconventional Methods for Weight-loss are Widespread Within the Marine Corps**

Unconventional methods for weight-loss were widespread within the Marine Corps. The survey found that over 30% of Marines claimed to taking extreme measures to meet a weigh-in or body composition evaluation. This finding highlights a potential problem throughout the Marine Corps and raises a serious concern. According to a study done by the U.S. Army Research Institute of Environmental Medicine, unconventional methods, such as those identified below, could “negatively impact health, as well as performance.”<sup>139</sup> The survey cited the following unconventional methods for weight-loss as being practiced by Marines.

- Limited food intake
- Starvation
- Taken diuretics or laxatives
- Weight-loss supplements
- Worn a sweat suit or plastic suit during exercise
- Worn a sweat suit or plastic suit into the sauna or steam room
- Liposuction
- Steroids
- Throwing-up
- Extreme Cardio

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<sup>138</sup> Survey comment (#7) from Question 39, Appendix J.

<sup>139</sup> *The Medical News*, “U.S. Army Looks at how some Soldiers are Trying to Lose Weight.”

- Dehydration
- Fad dieting

Interviews with the Semper Fit staff revealed that unhealthy methods for weight-loss were common among Marines. One situation was involved a gunnery sergeant who would stop eating for two days prior to a weigh-in to meet standards.<sup>140</sup> Similarly, findings suggest that desperate Marines sought Semper Fit professionals to lose weight prior to a weigh-in and asked guidance for the quickest way to lose weight. The Marines that sought this help admitted that they had practiced unhealthy behaviors so many times that their bodies were no longer responsive and were therefore in need of new ideas.<sup>141</sup>

One particular respondent, an Officer in the Logistics community with 15 years of service, confessed to using some of the above weight-loss methods to meet Marine Corps weight and body composition standards. He also admitted that these methods worked for a weigh-in and/or body taping, but weight-loss was temporary and returned within a week to a month. In the additional comments section, he concluded by explaining, “I feel my weight is about as low as it is going to go. I would consider liposuction again in the future if my career depended on it.”<sup>142</sup>

These responses and attitudes toward weight-loss highlight that this is a significant issue Marine Corps-wide and should not be overlooked.

#### **4. Poor Nutrition and Fitness Practices Have an Effect on Marines’ Careers**

Poor nutrition and fitness practices of Americans today have led to overweight issues and unhealthy lifestyles. This overweight epidemic affects military recruiting efforts. When this unhealthy lifestyle continues in the Marine Corps, career progression and retention are jeopardized.

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<sup>140</sup> Interview with Semper Fit staff (#1), August 27, 2009.

<sup>141</sup> Interview with Semper Fit staff (#4), August 27, 2009.

<sup>142</sup> Survey comment (#19) from Question 39, Appendix J.

**a. *Overweight Problems Affect Recruiting Efforts***

During the interview sessions, the participants were asked about their view on whether America had an obesity epidemic and, if so, how it affected the Marine Corps. One respondent noted that America does have a problem and it is affecting Marine Corps recruiting: “America is obese and it is affecting the Marine Corps’ potential recruits.”<sup>143</sup> He went on to describe a young man who lost over 150 pounds to join the Marine Corps. He also stated, “In order to meet the recruiting mission, recruiters sometimes let standards fall [with reference to overweight candidates].” Another Sergeant (E-5), a parachute rigger with six years of service, discussed his opinion on the fitness level of new recruits:

The overweight epidemic in America is debatable, but the Marine Corps does have a problem... Marines coming into bootcamp [new recruits] have different athletic and nutritional backgrounds... some struggle with fitness more than others. With their lack of activity and too many video games, they try to be active, but they are actually only trained to be couch potatoes.<sup>144</sup>

Unhealthy lifestyles create problems for recruits during basic training. They also set up Marines to struggle in meeting standards throughout their careers and can potentially jeopardize their promotion and retention.

**b. *Unhealthy Lifestyles May Affect Career Progression and Retention for Marines***

The re-enlistment survey question explored if fitness and/or weight issues are driving Marines away from active duty. Of the Marines who listed reasons for not re-enlisting, 10% claimed the driving factor in their decision was for weight and/or physical fitness issues. This narrowly indicates that weight and fitness standards are a potential Marine Corps retention issue.

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<sup>143</sup> Interview with active duty Marine (#5), August 28, 2009.

<sup>144</sup> Interview with active duty Marine (#3), August 28, 2009.



Additionally, not meeting weight and body composition standards could have detrimental effects on a Marine's career, such as billet re-assignments, adverse performance evaluations, and even discharge from service. Senior ranking officers described their experience with potential Marine MOS instructors who were overweight upon arrival to the training command. Six of 44 (approximately 14%) potential instructors exceeded weight and body composition standards. These Marines were given a timeframe to comply with standards. If they failed to comply, they were sent back to their previous commands with an adverse performance report.<sup>145</sup> This reflects how important it is to meet standards to succeed in a Marine's career.

Army Researchers reported more than 3,000 military members were separated for failing to meet weight and/or body composition standards in 2003.<sup>146</sup> Furthermore, a January 2009 Medical Surveillance Monthly Report, confirmed that the number of military service members who failed to meet such standards had more than doubled between January 2003 and December 2008.<sup>147</sup> This research, along with the findings in the current study, suggest that that poor nutrition and fitness practices affect recruiting efforts and career progression.

## **5. Semper Fit and Unit Relationships Need Attention**

Survey and interview responses indicated mixed awareness about Semper Fit programs and revealed a gap in the relationship between Marines, their commands, and Semper Fit.

### ***a. There is a Lack of Awareness About Semper Fit Wellness Programs***

In reference to awareness about the Semper Fit program, approximately 13% of survey respondents claimed they did not know about Semper Fit, and over half of the respondents were unaware of the Semper Fit fitness and nutrition correspondence courses available through Marine Net. One Semper Fit professional noted, "When most

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<sup>145</sup> Interview with active duty Marines (#7 and #8), August 28, 2009.

<sup>146</sup> *The Medical News*, "U.S. Army Looks at how some Soldiers are Trying to Lose Weight."

<sup>147</sup> DeFraités, MD, ed., *Medical Surveillance Monthly Report (MSMR)*, 3.

Marines consider Semper Fit, they refer to the gyms and fitness centers aboard Marine Corps installations.”<sup>148</sup> In addition to the lack of awareness about Semper Fit, findings indicate a gap in the relationship between Marines, their commands, and Semper Fit.

*b. A Gap in the Relationship*

As noted by several respondents, Semper Fit offered valuable training and could be more successful if, “the unit commander is interested and more involved [in the program].”<sup>149</sup> Another Marine praised the Semper Fit program and noted the importance of a good command focus on the issue: “The support [Semper Fit] offered was accessible, frequent, fun, and highly accurate...It wasn’t about [Semper Fit], it was about Marine attitudes, and commander’s established climate for fitness and nutrition.”<sup>150</sup>

The Marine Corps Order on Semper Fit requires that each unit have a Semper Fit Representative.<sup>151</sup> It is up to the Semper Fit Health Promotions Coordinators at each installation to promote their programs appropriately. A Semper Fit professional alluded to some difficulties in building relationships with unit commanders despite the importance of doing so: “council with Unit COs is hit or miss.”<sup>152</sup>

This information emphasizes that the coordination between units and Semper Fit needs attention.

**E. CHAPTER SUMMARY**

This chapter started with a detailed description of the methodology used to conduct the research. The next section presented the results from the Web-based survey distributed to various Marines throughout the Marine Corps. The final section discussed the five primary findings based on the survey results and analysis and were further

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<sup>148</sup> Interview with Semper Fit staff (#4), August 28, 2009.

<sup>149</sup> Survey comment (#22) from Question 11, Appendix B.

<sup>150</sup> Survey comment (#8) from Question 29, Appendix E.

<sup>151</sup> Semper Fit Program Manual, MCO P1700.29, xv.

<sup>152</sup> Interview with Semper Fit staff (#1), August 27, 2009.

strengthened through qualitative semi-structured interviews conducted with active duty Marines and Semper Fit staff. The next chapter summarizes the thesis and provides the conclusions and recommendations from this research.

## **IV. SUMMARY OF RESEARCH AND RECOMMENDATIONS**

### **A. CHAPTER OVERVIEW**

This chapter reviews the thesis research and summarizes the research findings. Next, this chapter details the recommendations drawn from the research. Finally, it concludes with areas for further research pertaining to this thesis topic.

### **B. SUMMARY OF RESEARCH**

This research assessed the Marine Corps' current physical fitness and nutrition programs and their effectiveness as perceived by Marines. These objectives were explored through surveys and in-depth interviews with Marines at different stages in their career. The following research questions were answered during this research.

- What is the current fitness status of the Marine Corps?
- Based on Marine Corps standards, how many Marines meet the body composition requirements?
- What are the Marine Corps standards for fitness?
- What programs exist to assist in nutrition education and Marines' fitness levels?
- How are Marine Corps fitness and nutrition programs perceived among Marines?
- How much fitness and nutrition education do Marines have?
- How important do Marines feel nutrition is in maintaining a healthy lifestyle?

The second chapter of this thesis provided a literature review of current Marine Corps orders on physical fitness standards, remedial programs and the Semper Fit program, as well as supporting research on nutrition and its importance to living a healthy lifestyle. This chapter found that America's obesity epidemic has a negative impact on Marines and the Marine Corps as a whole. Nutrition was defined in relation to health and its importance to the Marine athlete. It also determined that nutrition education provide Marines the tools to live a healthier lifestyle, as well as combat weight issues.

The third chapter explained the methodology used to conduct this research. It presented the results from the Web-based survey and the qualitative semi-structured interviews utilized during this research. It provides perspectives from newly enlisted and experienced Marines about the current status of Marine Corps fitness and nutrition programs. Primary findings from this study include the following.

- **Marines express a desire for nutrition education.** Marines felt that nutrition was important to maintain a healthy weight and body composition. Marines indicated that there was limited education and support for fitness and nutrition. It was suggested that in-depth nutrition classes be incorporated and reinforced throughout a Marine's career.
- **Nutrition and fitness programs need to be consistent and credible Marine Corps-wide.** According to Marines, there are a variety of resources and programs available; however, the level of support received is different throughout the Corps. Likewise, credibility of the programs and the instructors/trainers is equally important.
- **Unconventional methods for weight-loss are unhealthy and could negatively influence performance.** Over 30% of Marines surveyed claimed to use extreme measures (such as starvation, dehydration, weight-loss supplements, fad dieting and liposuction) to pass a weigh-in or body composition evaluation. This finding highlights a potential problem throughout the Marine Corps and raises serious concerns.
- **Poor nutrition and fitness practices have an effect on Marines' careers.** America's overweight epidemic affects military recruiting efforts. When this unhealthy lifestyle continues in the Marine Corps, career progression and retention are affected.
- **Semper Fit and unit relationships need attention.** Marines have a modest level of awareness about Semper Fit programs. Semper Fit and commands need to communicate more effectively to promote what Semper Fit can provide for the Marine and the unit.

The next section discusses the authors' recommendations for the Marine Corps based on the literature research and findings from the surveys and interviews.

## **C. RECOMMENDATIONS**

The following recommendations are based on the literature review and findings drawn from the survey and interview results that described Marines' perspectives on current fitness and nutrition programs:

- Instill nutrition training early and emphasize it with different levels of nutrition education throughout a Marine's career
- Ensure consistency and credibility of remedial programs (BCP, RCP, MAP)
- Ensure credibility among the Semper Fit staff
- Provide healthier food options at Marine Corps installations for Marines and their families
- Increase awareness of Semper Fit

**1. Instill Nutrition Training Early and Emphasize It with Different Levels of Nutrition Education Throughout a Marine's Career**

Nutrition education should be instilled early and emphasized with different levels of nutrition education throughout a Marine's career. Nutrition training could proactively educate Marines in leading healthy lifestyles. Most Marines (62% in this survey) have had a fundamental nutrition class at some point in their careers. However, much of this training was not well retained and the information often lacked depth beyond a Marine's general knowledge. Furthermore, 97% of Marines admitted to seeking their own nutrition information through various sources: magazines, books, internet, friends and family, fellow Marines, and health professionals. These findings suggest that Marines truly desire further nutrition education to learn how to fuel their bodies appropriately.

If nutrition education starts at the beginning of a Marine's career and continues during career development courses, such as NCO and career schools, their understanding will continue to increase. As a Marine's career progresses, they will assume more mentor and leadership roles. Therefore, the more a Marine learns about nutrition, the more likely they will be to share their knowledge with others and re-emphasize the importance of nutrition.

Marines live and work in a fast-paced and stressful environment. Nutrition education will help Marines make better choices and become more aware of living a well-rounded, healthy life. This education could help prevent Marines from becoming overweight due to unhealthy eating habits and reduce the chance of being placed on

remedial programs. The remedial programs are a reactive means to help Marines who are already overweight. Marines are not required to pursue any type of nutritional education until assigned to these programs.

## **2. Ensure Consistency and Credibility of Remedial Programs (BCP, RCP, MAP)**

The Marine Corps remedial programs (BCP, RCP, MAP) need more consistency and credibility. This research found that there is a specific Marine Corps Order (MCO 6110.3) describing the requirements for these programs, but each unit executes their programs differently. As some Marines noted, programs are not usually tailored to a specific individual. All Marines are different and their bodies all respond in different ways. Some program leaders have the mentality to run all the time and eat less, which can be ineffective.<sup>153</sup>

Additionally, the findings suggest that some Marines perceived physical training representatives, who instruct remedial programs, as lacking proper qualifications to train others to lose weight and body fat. One recommendation is to standardize training for the physical training representatives. Another consideration is hire accredited professionals (possibly from Semper Fit) to support each unit. A hired professional could help unit training representatives conduct the fitness and remedial programs within the command. These professionals could also help provide the unit with nutritional education and information.

Furthermore, to increase motivation, the Marine Corps could hire a consulting team to travel to different commands to train and motivate Marines concerning nutrition and fitness. To capture the Marines' attention, the consulting teams could include widely recognized experts in the fields of nutrition, diet, and physical fitness.

## **3. Ensure Credibility Among the Semper Fit Staff**

Although Semper Fit is a very beneficial program to the Marine Corps, throughout this research Marines criticized the credibility of some Semper Fit staff.

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<sup>153</sup> Survey comment (#7 and #17) from Question 11, Appendix B.

Generally, Marines had good perceptions of the Semper Fit staff's knowledge; however, would not likely seek guidance from someone who does not set a good physically fit example. Individuals they want to emulate motivate Marines. It is difficult to gain a Marine's respect if the trainer is not a good model for healthy living. Therefore, to be credible and effectively motivate Marines, Semper Fit staff must be physically fit and healthy.

#### **4. Provide Healthier Food Options at Marine Corps Installations for Marines and Their Families**

This research found a common complaint among Marines was the lack of healthy food options available to Marines on base. Specifically, the chow halls have few selections on the "main-line" that are not fried, without heavy oils or creams. The chow halls offer a "fast food" line that consists of items such as hamburgers, hot dogs, fried chicken, and French fries, and the salad bar is generally one of the only healthy options. One key recommendation is for the Marine Corps to consider providing healthier alternatives by considering adjusting the ingredients and cooking methods used at the chow halls. In addition, chow halls could post nutritional facts to increase awareness of nutritional food quality.

Fast food establishments dominate most Marine Corps installations. For example, the following are quick food options aboard Marine Corps Base Camp Pendleton: McDonald's, Johnny Rockets, Domino's Pizza, Pizza Hut, Wendy's, Taco Bell, Starbucks, Subway and various other grills and snack bars. Subway is commonly known as having the healthiest options among fast food establishments. However, according to Marines, the lines are typically long at Subway, leading them to choose another venue.

The healthy options for a quick meal are few and far between, but that does not ignore the fact that Marines need the education to make smart and healthy decisions throughout their busy days.

#### **5. Increase Awareness of Semper Fit**

Semper Fit offers Marines and their dependents numerous health and wellness programs. Some of their programs include fitness centers, access to personal and group



trainers, nutrition guidance, stress management, tobacco cessation, alcohol and substance abuse awareness, and various recreational and sports activities. However, this research documents a gap between the Semper Fit program and Marines. Marine Corps leadership (Officers, SNCOs, NCOs) could better encourage their Marines to seek assistance from these programs.

Promoting Semper Fit programs should be a combined effort between the Health Promotions Coordinators and Marine Corps leadership. The unit commanders and the Health Promotions Coordinators need to establish good relations for each to express their desired needs and expected support from one another.

The next section provides issues for further research derived from the above recommendations.

#### **D. ISSUES FOR FURTHER RESEARCH**

Based on this research, the issues for further research include performing a cost-benefit analysis of the below topics.

- Hiring an accredited professional to support unit physical training and remedial programs
- Instituting levels of nutrition education throughout a Marine's career
- Improving the healthy food options available to Marines aboard base

##### **1. Cost-Benefit Analysis of Hiring an Accredited Professional to Support Unit Physical Training and Remedial Programs**

Research could be conducted on the costs and benefits associated with hiring an accredited professional in fitness and nutrition to support unit physical training and remedial programs. Such research would explore the benefits, weighed against the costs, of the command hiring such a professional to assist Marines who do not meet Marine Corps physical fitness and body composition standards. This action would potentially ensure that every Marine has the nutrition education and assistance available when needed. Additionally, this research could examine whether accredited professionals possess the necessary credibility to motivate Marines, as well as the potential for standardizing the information presented to Marines.

## **2. Institute Levels of Nutrition Education Throughout a Marine's Career**

Another recommendation for further research is to perform a cost-benefit analysis on implementing different levels of nutrition training throughout a Marine's career. One possibility is to start nutrition education at an elementary level during basic training or initial schools and continue to build upon that training throughout each milestone in a Marine's career. At each milestone, the importance of nutrition would be re-emphasized and the training complexity would increase. This research would weigh the benefits against the costs of increasing Marine leaders' confidence and their credibility to impart their knowledge on their fellow Marines and subordinates. The research would also assess whether such actions could help prevent Marines from having nutrition related health and weight issues later in their careers.

## **3. Improve the Healthy Food Options Available to Marines Aboard Base**

One final issue for further research is to perform a cost-benefit analysis on improving the restaurant chains and food selections at the commissaries and chow halls aboard Marine Corps installations to healthier alternatives. Marine Corps bases could replace some of the pizza joints and Burger Kings with healthier fast food restaurants, such as Jamba Juice, Baja Fresh, and Einstein Bros. Bagels. Additionally, the commissaries could carry a larger selection of organic products and increase their healthy quick grab selections. Finally, research could consider implementing healthier cooking methods and using high-quality ingredients. Future research should investigate the costs of making these changes against the benefits to Marine fitness and nutrition. This research would investigate the degree of support for such changes amongst Marines and dependents, as well as the potential positive health impacts.

## **E. CHAPTER SUMMARY**

This chapter provided a brief summary of the thesis research and reviewed the findings of this research. Next, the research recommendations were described. Finally, this chapter concluded with areas to consider for further research pertaining to this thesis topic.

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# APPENDIX A. SURVEY QUESTIONS

## 1. USMC FITNESS AND NUTRITION SURVEY

As students of the Naval Postgraduate School, we are conducting this survey on current Marine Corps Fitness and Nutrition programs for our graduate research. Your participation is appreciated and your responses are completely anonymous.

It is our intent to get a general sense of your level of fitness and knowledge of nutrition. We are also looking to gain an understanding of your experience, if any, with the following: Remedial Conditioning Program (RCP), Body Composition Program (BCP), Military Appearance (MAP), nutrition education, and programs available through Semper Fit.

Although this survey is not officially sponsored by the Marine Corps, your input is very valuable because we will be submitting our findings to Headquarters Marine Corps for their information and evaluation.

Thank you for your participation!

## 2. BASIC INFORMATION

This survey is completely anonymous. For the following questions, please answer as truthfully as possible. Your honesty is vital to our research and will assist us in providing the Marine Corps with an honest assessment of current programs in fitness and nutrition. We thank you for your support.

### 1. Rank:

- |                                     |  |
|-------------------------------------|--|
| <input type="checkbox"/> E-1 to E-3 | <input type="checkbox"/> WO-1 to WO-5  |
| <input type="checkbox"/> E-4 to E-5 | <input type="checkbox"/> O-1 to O-3    |
| <input type="checkbox"/> E-6 to E-7 | <input type="checkbox"/> O-4 to O-5    |
| <input type="checkbox"/> E-8 to E-9 | <input type="checkbox"/> O-6 and above |

### 2. MOS:

### 3. Age:

- |                                |                                      |
|--------------------------------|--------------------------------------|
| <input type="checkbox"/> 17-26 | <input type="checkbox"/> 40-45       |
| <input type="checkbox"/> 27-39 | <input type="checkbox"/> 46 and over |

### 4. Gender:

- |                               |                                 |
|-------------------------------|---------------------------------|
| <input type="checkbox"/> Male | <input type="checkbox"/> Female |
|-------------------------------|---------------------------------|

### 5. Years in Service:

- |   |                                      |   |
|---|--------------------------------------|---|
| <input type="checkbox"/> less than 1 year | <input type="checkbox"/> 9-12 years  | <input type="checkbox"/> 21 or more years |
| <input type="checkbox"/> 1-4 years        | <input type="checkbox"/> 13-15 years |   |
| <input type="checkbox"/> 5-8 years        | <input type="checkbox"/> 16-20 years |   |

### 6. Do you plan to re-enlist or continue service beyond your current contract?

- Yes
  No
  Do not know, at this time

**7. If you do not plan on re-enlisting or continuing service beyond your current contract, please select from the following reasons why not (check all that apply):**

- Medical reasons
- Spend more time with family
- New career interests
- Educational goals
- Physical fitness issues
- Weight issues
- Not applicable
- Other (please specify)

### 3. PHYSICAL FITNESS AND BODY COMPOSITION

Please answer the following questions about physical fitness and body composition.

**8. How would you describe your current state of physical fitness ?**

- Unfit
- Below average fitness
- Physically fit
- Above average fitness
- Extremely physically fit

**9. According to Marine Corps standards for your height and weight, which best describes you?**

- Always within height/weight standards, have never been taped for body fat
- Sometimes over height/weight standards, have been taped on occasion, but have always met body fat percentage
- Always over height/weight standards, but within body fat percentage
- Always over height/weight standards, have been over body fat percentage, but am currently within standards
- Currently exceed standards for both height/weight and body fat percentage

10. In each of the following time periods, select which best describes you according to Marine Corps standards for your height and weight:

	Under-weight	At weight (+/- 3 pounds)	Overweight, but within body fat standards	Overweight, and over body fat standards
Prior to basic training (i.e. bootcamp, OCS, TBS)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
During basic training	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Within 12 months following basic training	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1 to 4 years following basic training	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
More than 4 years following basic training	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

11. If you have ever participated in the following programs, rate the support you have received:

	Unsatisfactory	Poor	Average	Excellent	Outstanding	Not applicable
Body Composition Program (BCP)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Command Remedial Conditioning Program (RCP)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Military Appearance Program (MAP)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

In your own words, please describe what was positive and/or negative about the support you received. Be specific.

12. If you were weighed in today, do you think you would be:

- Under-weight
  Overweight, but within body fat standards  
 At weight (plus or minus 3 pounds)
  Overweight, and over body fat standards

13. Regarding your weight and/or body composition, check all that apply:

- I have been treated differently and/or felt isolated by my peers.  
 I have been treated differently and/or felt isolated by my superiors.  
 I have been treated differently and/or felt isolated by my subordinates.  
 I have not been treated any differently or felt isolated.

**14. Which of these have you participated in prior to an official weigh-in and/or body fat taping? (check all that apply)**

- Limited food intake
- Starvation
- Thrown up
- Taken diuretics or laxatives
- Weight-loss supplements
- Steroids
- Extreme cardio
- Worn a sweat suit or plastic suit during exercise
- Worn a sweat suit or plastic suit into the sauna or steam room
- None
- Other (please specify)

**15. Did any of the selected methods in the above question help you meet Marine Corps standards?**

- Yes                       No                       Not applicable

**16. In reference to the above questions, what happened after the official weigh-in and/or taping? (check all that apply)**

- Kept the weight off for longer than 1 month
- The weight returned within 1 month
- The weight returned within 1 week
- Gained more weight than before weigh-in
- Not applicable
- Other (please specify)

**17. How often do you exercise?**

- 6-7 days per week                       3 days per week  
 4-5 days per week                       Less than 3 days per week

**18. When was your last PFT?**

- 3 months or less                       10-12 months  
 4-6 months                               More than 12 months  
 7-9 months

**19. What PFT class did you achieve?**

- |                                    |                                    |
|------------------------------------|------------------------------------|
| <input type="checkbox"/> 1st class | <input type="checkbox"/> 3rd class |
| <input type="checkbox"/> 2nd class | <input type="checkbox"/> Failed    |

**20. Which of the following may have negatively affected your PFT performance? (check all that apply)**

- Deployment
- Medical injury
- Stress
- Unhealthy diet
- Poor physical preparation
- No negative affect
- Other (please specify)

**4. NUTRITION EDUCATION AND RESOURCES**

Please answer the following questions about nutrition education and resources available through Semper Fit.

**21. What kind of formal nutrition training have you received?**

- Command provided training (i.e. S-3 training)
- SNCO/NCO taught classes and/or discussions
- Semper Fit Nutrition MCI (available on Marine Net)
- Self-sought (civilian nutritionist, dietician, personal trainer)
- Self-sought (Semper Fit, Navy Medical)
- Command directed (Semper Fit, Navy Medical)
- None
- Other (please specify)



22. If you have ever received nutrition classes during any of the following, please rate the nutritional training received.

	Unsatisfactory	Poor	Average	Excellent	Outstanding	N/A
Basic Training	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Marine Combat Training (MCT)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MOS School	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Academy (Naval or other)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Officer Candidate School (OCS)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The Basic School (TBS)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Corporal's Course	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sergeant's Course	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Career Course	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Advanced Course	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please describe what was positive and/or negative about the training received. Be specific.

23. Who provided the nutrition classes, if any, during the following:

	Semper Fit	Command PT Representative	Medical	Military Mentor (NCO, SNCO, Officer)	Not applicable
Basic Training	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Marine Combat Training (MCT)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MOS School	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Academy (Naval or other)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Officer Candidate School (OCS)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The Basic School (TBS)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Corporal's Course	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sergeant's Course	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Career Course	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Advanced Course	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Other (please be specific):

**24. How important do you feel nutrition is in maintaining a healthy weight and body composition?**

- Not important
- Somewhat important
- Important
- Very important
- Extremely important

**25. Check the box that best describes your eating habits:**

- I always maintain a healthy diet, I never eat fast food or junk food.
- I usually maintain a healthy diet, with occasional fast food or junk food.
- I sometimes maintain a healthy diet, but tend to eat a lot of fast food or junk food.
- I don't pay attention to my diet, I tend to eat mostly fast food or junk food.

**26. Where do you currently get most of your knowledge about nutrition? (Check all that apply)**

- Fitness Magazines
- Scientific Magazines
- Fitness/Athlete Books
- Diet Books
- Friends/Family
- Fellow Marines (peers)
- Fellow Marines (superiors)
- Professionals (fitness trainers, medical personnel, nutritionist)
- Other (please specify)

**27. Do you know there are classes taught by nutritionists available through Semper Fit?**

- Yes
- No
- I do not know about Semper Fit.

**28. Have you ever worked with a Nutritionist or Dietician through Semper Fit?**

- Yes
- No

**29. If "yes" to working with a Nutritionist or Dietician through Semper Fit, how satisfied were you with the support received?**

- Completely unsatisfied
- Somewhat satisfied
- Satisfied
- Very satisfied
- Extremely satisfied
- Not applicable

Please briefly explain:

**30. Would you attend nutrition classes taught through Semper Fit?**

- Yes                       No                       I do not know about Semper Fit.

**31. If you answered "No", why wouldn't you attend nutrition classes taught through Semper Fit? (check all that apply)**

- Know enough already                       Do not think the information Semper Fit provides is valuable.  
 Use other resources (books)                       Not interested  
 Use other resources (professional)                       Not applicable

Other (please specify)  
\_\_\_\_\_

**32. Have you ever worked with a personal trainer available through Semper Fit? (check all that apply)**

- Yes, to get in shape                       No, I have never worked with a Personal Trainer.  
 Yes, to lose weight                       No, I have worked with a Personal Trainer, but not through Semper Fit.  
 Yes, to build muscle

Other (please specify)  
\_\_\_\_\_

**33. If you sought a personal trainer through Semper Fit, rate how satisfied you were with the results from the training you received:**

- Completely unsatisfied                       Satisfied                       Extremely satisfied  
 Somewhat satisfied                       Very satisfied                       Not applicable

Please briefly explain:  
\_\_\_\_\_

**34. If you haven't used a Semper Fit personal trainer, would you use one in the future?**

- Yes                       No                       I do not know about Semper Fit.

**35. If you answered "No", why would you not use a personal trainer through Semper Fit? (check all that apply)**

- Know enough already                       Do not think the information Semper Fit provides is valuable.  
 Use other resources (books)                       Not interested  
 Use other resources (professional)                       Not applicable

Other (please specify)  
\_\_\_\_\_

**36. How supportive do you think the Semper Fit staff is in assisting Marines with their weight or fitness goals?**

- |  |  |
|--|--|
| <input type="checkbox"/> Not supportive      | <input type="checkbox"/> Very supportive                 |
| <input type="checkbox"/> Somewhat supportive | <input type="checkbox"/> Extremely supportive            |
| <input type="checkbox"/> Supportive          | <input type="checkbox"/> I do not know about Semper Fit. |

Please briefly explain:

**37. Have you taken the Semper Fit Nutrition MCI (available on Marine Net)?**

- |   |   |
|---|---|
| <input type="checkbox"/> Yes, as part of the BCP/MAP program. | <input type="checkbox"/> No, I have not taken the course.           |
| <input type="checkbox"/> Yes, I chose to take it on my own.   | <input type="checkbox"/> No, I did not know the course was offered. |

**38. Have you taken the Semper Fit Fitness MCI (available on Marine Net)?**

- |   |   |
|---|---|
| <input type="checkbox"/> Yes, as part of the BCP/MAP program. | <input type="checkbox"/> No, I have not taken the course.           |
| <input type="checkbox"/> Yes, I chose to take it on my own.   | <input type="checkbox"/> No, I did not know the course was offered. |

**5. CONCLUSION**

Thank you for participating in this survey. You have provided us important feedback for our research. This information may be useful for future policy implementations.

**39. Please provide any additional comments:**

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## APPENDIX B. MARINE COMMENTS FROM SURVEY QUESTION

### 11

Question 11: **If you have ever participated in the following programs, rate the support you have received:** (Programs listed were: Body Composition (BCP), Command Remedial Conditioning Program (RCP), and Military Appearance Program (MAP))

#	In your own words, please describe what was positive and/or negative about the support you received. Please be specific about each program.
1	I feel that there is too much of a concentration placed on running. With overweight people, running places too much impact on the knees and legs thus landing a large percent of Marines in BCP/RCP on light duty. A lot of Marines feel that the high rate is due to lazy Marines, but it largely falls on the high demand and high impact on overweight Marines. More cross-fit and weight training would help build metabolism and keep bodies away from light duty.
2	n/a
3	people get to obsessed with one aspect of physical fitness. If we could do it ourselves id be better not everone is the same and when your forced to do things that help others sometimes more than not hurt others
4	N/A
5	There is no set schedule for the program. Most of the time it is individual pt. However, when the person on BCP meets the required standard their supervisors get the credit for a job well done. At times there were set pt sessions but overall if it wasn't for the individual effort there would be no success.
6	My opinion of all the above programs is they only work if the commander is interested and involved in them. Bottom line is, it is difficult to ensure a Marine who does not meet the height and weight standards out of the Corps. Marines are supposed to be physically fit and look good in uniform, if they don't they need to be gone. The standard is the standard and they need to meet it everyday.
7	The BCP Marines that ran the program had the mentality to run 5 days a week and 2 workouts on tues. and thurs.
8	The support that was given to the BCP program was poor from S-3. They didn't have a plan and they didn't do things to improve fitness and lower the BCP members weight. The excercises that was given to the BCP was only to make the individual stronger and lose weight temporarily but as soon as the body was used to the PT the body would gain weight to be back where it was comfortable. Semper-fit was more helpful with giving the BCP marines metabolism readings and helping with a diet plan any time a marine needed help it was given. If I could run BCP myself I would have the marines on tred mills and elipticles the whole time. Do what a normal person would do to cut the weight. I also would monitor food intake. Make marines fill out log books. Might not tell the truth but the program is what a you put into it.
9	Its hard to lose any weight when its the same excercises daily. The excercises are repeditive.
10	During the time I have been on BCP I feel the PT is poor. The PT is not structured. The PT we do is more for RCP rather then BCP.
11	n/a
12	As indicated, I have never been assigned to these programs but I have been very involved in the process. I feel these programs are all command dependent, are enforced sporadically, make little to no difference in a Marines long term mental / emotional issues which (in my opinion) keep them out of standards.
13	N/A
14	N/A

15	The program is clearly designed to just point a finger at you and weed you out. No program I have seen in 17 years has been worth a damn. Just another "witch-hunt" program by those that are genetically predisposed to be 6'4"/180 lbs and able to run and eat anything. The rest of the real world and those of us 10% that are always battling the issue only get haunted like high-school cheerleaders before prom trying to shed 5 pounds.
16	I have never been in any of the programs
17	I was on weight control as a Cpl in 1996. The support I received from my SNCO's, officers and the Battery GySgt, who ran the program, was outstanding. The goal-oriented program and weekly feedback was instrumental to my success. Back then, it was the norm to run, run, run and run some more. The Gunny ran a diverse program that was positive rather than negative.
18	I am 68" and 185 right now. I was 186 on my boot camp ID card 1988. I often get below 181 for weigh ins and if I do not workout. I gain weight lifting/crossfit/or training for CFT. If I just run I make weight easier, always seems odd I have to stop working out to meet USMC weight standards. I have been measured 9-18% body fat through the years depending on system used although my weight range has been 179-190 since 1988. Just some info on what I have gone through. I just scored 293 on CFT but am overweight. It has been a hassle through the years. Last PFT was 286
19	Positive- Endstate is Marines are looking out for Marines.
20	During my time the program was strict and I was held accountable to maintain or get to standards. Now adays I've seen a lot of leanancy towards the Individual.
21	I actually was in charge of the BCP program. I found it difficult to adequately support everybody. The senior leadership (SNCOs and Officers) pushed off their overweight Marines to the company office to take care of. Sometimes, it's not the Marines that don't want to help themselves, it's the fact that there are too many for one Marine to help and their immediate leadership gives up on them.
22	I only participated in these programs as the controlling arm. The remedial conditioning program is always hampered by those at a higher rank restricting what can be implemented. The BCP program does not gage body composition correctly. I have seen many occasions where a Marine can perform a 270 PFT or higher but weighs in slightly over. Because of a skinny neck the Marine then tapes an incorrect body fat percentage based only on his skinny neck.
23	I have vast experience with the BCP program as an OIC and Company Commander. I have had to write numerous adverse reports, unfortunately, on Marines who worked directly for me and who I deployed, with- who were outstanding performers in their MOS but could not control their weight. Then there were also poor performers who fell into the same category. I also have peers who have been taped since the day they joined. From my point of view and observations from positions held as a Company Grade Officer, the BCP program is extremely demanding on the leadership, administratively. It has been one of my biggest leadership challenges over the past few years. The positives of the program are obvious. It is a standard that we as Marines demand. The negatives are sometimes intangible and felt at the lower levels and can be frustrating to say the least. The most common situation I experienced was this: A new OIC/CO/NCOIC takes over only to find that Marines now under his/her charge are overweight and may have been overweight for some time. Many may have already been run in the "system" as on the BCP program. Great, now where is the paperwork? Nonexistent, lost between outgoing S-3s and oncoming S-3s, CO's, OICs who knows. No excuses, all lack of administrative performance between deployments to OIF, Desert Talons, MEU's, Remain Behinds, and now OEF. The Marines has probably had 2 to 3 OICs over the past 2 years. Now what? Start over. Everything from scratch because without the paperwork there will be no

	<p>admin sep board or decision by the CO. This was the trend that I saw which made it extremely difficult to see the program through. What usually resulted was multiple adverse fitreps from multiple OICs which restricted the Marine from re-enlisting. I can't present negatives without a recommendation. A computerized record, database maybe, on Marines who were put on BCP may help. Each weigh in, date put on the program, date of re-evaluation could be added. An MOL addition in the unit leaders tab. We track pft scores, rifle scores, awards in MOL but the BCP program, a program that will end a Marine's career, is being very poorly tracked in my opinion. All in all, if I could change anything it would be the way we run the program administratively.</p>
24	<p>All three programs can be positive, depending on how seriously it is taken by the individual and those who are running it. Putting individuals in charge of the programs who have no clue to what functional fitness is or what proper nutrition is produces negative effects.</p>
25	<p>N/A</p>
26	<p>Observed Marines assigned to MAP, but ran a high 1st class PFT. Outstanding Marine, but looked bad in uniform and was forced out as a LCpl.</p>
27	<p>The support was outstanding, NCO's are always there to motivate you no matter what.</p>



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## APPENDIX C. MARINE COMMENTS FROM SURVEY QUESTION

22

Question 22: **If you have ever received nutrition classes during any of the following, please rate the nutritional training received:** (Courses listed were: Basic Training, Marine Combat Training (MCT), MOS School, Academy, Officer Candidates School (OCS), The Basic School (TBS), Corporal's Course, Sergeant's Course, Career Course, and Advanced Course)

#	Please describe what was positive and/or negative about the training received. Please be specific for each school/course.
1	A nutritionist gave classes at the PME school. They were insightful because I had not thought of nutrition in relation to Marine Corps duties.
2	I have never personally received diet training. I have given informal periods of instruction and sent Marines to health promotions. Most BCP Marines don't think they have a problem with nutrition or they have a fleeting desire to correct their nutritional deficiencies.
3	Sorry but that was a long time ago and I just remember that we had a class on nutrition during either the career or advanced course. It was obviously not very memorable either way.
4	OCS taught me about the negative affects of SODA and high fatty foods
5	Just the same things weve heard are whole lives.
6	While completing college, USNA provided sound nutritional advice coupled with knowledgeable "teachers" to assist in reaching above average results
7	Every class focused on leading a healthy lifestyle.
8	I don't remember ever getting a nutrition class. If I did it must not have been very good.
9	The NWC gave us a detailed class in fitness followed by a health assessment to include a cholesteral screening. This was very helpful, as it was tailored to the indiviudal body type
10	Nutrition is just one of many classes at OCS and TBS; they are all a blur.
11	I have never had any official nutrition training. I did have our flight surgeon give a class at a safety stand down many years ago. It was less than 30 minutes and very brief.
12	For the most part...no one addresses this subject on the limited and hyper-compressed schedule the Marine Corps foists upon students. I do not believe it is because no one in the school houses care....there is no time and it is not ...even remotely a prayer.
13	Nutrition is a complex subject that most Marines do not understand. They think eating less but still eating bad food makes a difference. Or the emphasis is put on calorie intake and not on what those calories are (whole wheat/fruits/vegetables).
14	Took a fitness and weight training class that clearly delineated how various work out programs could be tailored for different results. Also the instructors worked with the individuals to help tailor programs that could be used again and again in order to maintain a high standard of physical fitness.
15	In entry level training, the diet and exercise regimes focus on calorie/carbohydrate nutritional intake. Negative training at MOS schools stem from overwieght instructors.
16	Positive: made it simple and stressed health/combat fitness over "physique", etc. Negative: not enough time spent on it; especially regarding how to give/make practical health training measures (aside from, e.g., Semper Fit) for Marines under your direct leadership.
17	Reinforces awareness of fitness requirements
18	Never received any such training until the fleet.
19	Do not recall nutrition training in any of the above-mentioned courses that I attended.

20	As you can see, I have never recieved nutritional training that has had enough impact that even triggers a memory of the course. I don't believe that a simple nutrition course is the answer for most overweight Marines. Most overweight Marines (Careerist) know more about nutrition then the average person. Most have been on diets their entire life.
21	I don't recall whether or not I received any.
22	You need to include MACE because they provide nutrition training.
23	None was provided at MCT
24	Nutrition taught in flight training. Flight status requires annual physiology courses.
25	Training consisted of a video filmed in the 1970s that described how a hamburger provided something from each of the 4 food groups.
26	I don't recall the nutritional training, if any, recieved during this training.
27	Nutrition classes given to me as a young marine seemed useless. They were usually taught by an overweight SNCO or an "old" Person who seemed out of touch. Then i saw them all in the local burger king. The Nutrition classes given to Officers were usually by hyperFit individuals I wanted to emulate. Thus they motivated me to pay attention.
28	I have only ever received the very basic nutrition classes that talk about what to eat and caloric intake.
29	Some call TBS, "The Body Softener". My physical condition decreased during the training. TBS should have courses on how to keep the platoon leader and the platoon in shape during long deployments. Marines are getting fat in Iraq and Afghanistan.
30	Half-hearted efforts to teach outdated material.
31	I do not recall any specific nutrition training.
32	Nutrition training was due to high-blood pressure vice height and weight concern. Training was adequate, but very generic and hardly relevant to the immediate high-intensity needs of TBS/IOC/etc.
33	Really don't remember if I received nutrition training at any formal school; must not have had an impact.
34	The training received in the school house environments is generally related to the Food Pyramid schema. Specific nutrition training at an advanced level does not exist and is only taught at these schools as a "check in the block" mentality.
35	Had no effects
36	From what I have read and the results I have seen both on myself and others, the misconception that the body goes into "Starvation Mode" after missing one or two meals has been frustrating to me in the past.
37	Only remember having a class at a unit since I came in. I do not remember training at schools.
38	It wasn't official. No graphs, reading material. All orders.
39	The CO and NCO were more worried trying to be tuff, and didn't help Marines work on true weight loss.
40	It was only about an hour long and didn't go into any details.

41	It was just the basic stuff.
42	Don't remember any formal training.
43	Very bland information, over simplified and wrong in some cases. We find out new things about nutrition every day as a society and information tends to be dated.
44	We did not receive any formal classes on nutrition during bootcamp.
45	At bootcamp, seemed like an average class. The instructor didn't seem to care much.
46	I can't recall ever receiving any nutrition related training/education during my service in the Corps.
47	Very informative. Helped me learn a lot about nutrition.
48	The training is always the same. Classes are dry and treated like a check in the box. Most of the training is given by individuals less than qualified to be teaching about nutrition. Qualified nutritionists should be giving these periods of instruction.
49	Cannot remember.
50	if formal nutrition education occurred at any of these schools, i don't remember it
51	Classes given are vague. The information given needs to be tailored to high impact individuals or even big bone/heavy people.
52	A nutritionist from Semper Fit conducted a nutrition class for Career Course. The course was very well taught and organized. Good class participation and instructor motivation is key.
53	It is usually a "check in the box" training event. The best nutrition training I ever received came from a motivated Sergeant serving as a unit S-5 SACO who was training to be a physical therapist. He took the time to help Marines come up with individual diets and exercise plans that they could actually stick with.
54	There has been little to no training - almost just enough to get the check in the box. I found all of it to be based on "old" food pyramid guidelines, not on specifically tailoring nutrition needs to an individual's activity level (or inactivity level). And the programs I have seen don't really address caloric intake for the "normal" person, and the dining halls, mess facilities don't seem to offer many foods that would help lead to an optimal nutrition guidelines.
55	They were just short lectures on the FDA's food pyramid and suggested daily intakes which are skewed beyond comprehension.
56	none
57	one positive of the class was that almost every aspect of nutrition was covered. One negative was that it wasn't as in depth as I thought it would be.
58	During Basic Training, not a long class and not very informative. Very basic.
59	Great information.
60	Basic Training, gave a really detailed class. The instructors were well informed for what they were teaching.
61	Basic Training, it was not very informational. Very basic.
62	Basic Training, was instructed on what to eat prior to PFT which was good. Not very in depth on why to eat/drink.
63	Golf Company had a good class in Boot Camp from the 1stSergeant

64	none
65	very basic information was given.
66	none
67	the broad range of nutrition information covered during basic allowed the recruits to better understand why nutrition is important.
68	POS: Basic info about some nutrition NEG: Not detailed enough for some to utilize information outside of example given.
69	in bootcamp, I didn't hear one useful thing about nutrition except "no sweets". SOI is the first place I received a useful class on nutrition.
70	very basic
71	Bootcamp and SOI: both classes were very in depth. What I liked most was that they both had realistic goals. Taught about proper calorie intake and diet.
72	Basic Training: Taught what to eat at chow hall, taught to drink water all day long. Nothing negative. SOI: Rehash, no negative.
73	Boot camp covered everything quite well.
74	Positive: Diet, hydration, dietary supplementation use and abuse
75	Basic Training was basic. Received some decent council at OCS Juniors. Didn't attend seniors.
76	Corporal's course had the most information on nutrition.
77	Learned what has most protein value or negative affects other foods may carry. while at ITB, know what foods I should eat, knowing I will be on my own on the weekends.
78	The drill instructor told us what not and what to eat... but that is about it.
79	Basic Training - short class, only a single class given MOS School - very good instructors and class participation.
80	class was vague with likes and dislikes
81	basic -- it helped, but they didnt go into depth very much
82	it was a basic nutrition and fitness class so it was good, but I learned nothing new.
83	Limited basic info was covered.
84	Very limited knowledge
85	The Basic Camp training was brief but it still contained good information.
86	it was a very basic common sense course
87	The class I received in boot camp was helpful, especially when teaching us to prepare for physically demanding activities.
88	good instructor but very basic information. the DIs also went over eating before a PFT
89	No detail about things... just stay away from some types of food, but no explanation.
90	basic training: it was covered once, but not very in detail

## APPENDIX D. MARINE COMMENTS FROM SURVEY QUESTION 23

Question 23: **Who provided the nutrition classes [in reference to Question 22], if any, during the following:** (Courses listed were: Basic Training, Marine Combat Training (MCT), MOS School, Academy, Officer Candidates School (OCS), The Basic School (TBS), Corporal's Course, Sergeant's Course, Career Course, and Advanced Course)

#	Other (please be specific)
1	I spoke with the dietician once during college. I was advised to keep a food log and monitor calories. I wasn't overweight at the time but injured and unable to maintain my normal PT. Once I got back on track w/ PT, I didn't have problems.
2	OCS nutrition instructor was the PTI from the British Royal Marines
3	There was a health and nutrition class given to us at EWS by Semper Fit. I was underwhelmed.
4	The mere fact that I can not recall any such nutritional training...means it had no residual staying power or long term impact.
5	The instructor at USNA was an officer, but specifically assigned to the PE department based on her specialty as a Navy nutritionist.
6	I don't remember receiving Nutrition classes from any of the schools listed above except at TBS.
7	Taught by a flight doc
8	Semper Fit, at safety standdowns presented by 3MAW/MAG11
9	I don't recall the nutritional training, if any, recieved during this training.
10	Took through an outside organization
11	At the Naval Academy, I was seen by the USNA Nutritionist. I was underweight.
12	Nutrition Classes were taught during the last few safety stand downs at my last command.
13	Academy classes were geared toward athletes, very helpful
14	As a Co Gunny, I have taken the time to talk to the Marines.
15	none
16	none
17	none
18	none
19	Instructor had a good sense of humor which made it easier to follow along.

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## APPENDIX E. MARINE COMMENTS FROM SURVEY QUESTION 29

Question 29: If "yes" to working with a Nutritionist or Dietician through Semper Fit, how satisfied were you with the support received?

#	Please briefly explain
1	I took the breathing exam...results were explained but I did not get much out of it. I have also taken the physical fitness test at Semper Fit (toe touch, ride the bike, bicep curl) and the results were explained and I was able to make a routine based on strengths/weaknesses shown from this test.
2	I only got to go once a week and all they did was weigh me and increase or decrease the same exercises I was doing
3	They seemed to really care and believe in what they were teaching our Marines.
4	The semper-fit gave metabolism test to help regulate my diet and helped answer any question i had on nutrition.
5	I am a unique beastie...I used to be an MCCS Semper Fit Facility Manager - the support we offered was accessible, frequent, fun, and highly accurate. But that didn't matter. It wasn't about 'us' (MCCS), it was about Marine attitudes, and Commander's established climate for fitness and nutrition.
6	I feel they do not explain much about eating habits and what to eat
7	Attended classes as part of annual training at MCAS Cherry Point, once or twice.
8	Semper Fit is restrained by budget and personnel shortages. The really good employees are strung out all over the camp which make them very difficult to have regular appointments. They are not given the best tools to use and even if they do conduct a fitness test, that test is not applicable to the Marine Corps which leads to Junior Marines behind discouraged. Simper Fit says I am at 17% but the Marine Corps 'rope and choke' says I am at 24% because I have a small neck. If I had a dollar for every time I heard that story, I could retire today. If the Marine Corps was truly concerned with accurate height/weight standards they would seek a better method to measure the body fat % so that it is fair for ALL body types.
9	Staff was able to work with me and my section regarding nutrition support. It was to assist our Marines who had just had babies and help them with their eating plans.
10	I always tried to gain weight and muscle, so I didn't know how to eat to lose weight until I talked to the military nutritionist.
11	It was a command directed course so it was very short and to the point
12	I sat in on a nutrition class



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## APPENDIX F. MARINE COMMENTS FROM SURVEY QUESTION

31

Question 31: **If you answered “No”, why wouldn't you attend nutrition classes taught through Semper Fit? (check all that apply)**

#	Other (please specify)
1	I would seek classes through semper fit b/c I know the credentials of the local personal trainer. Otherwise I would not seek support from semperfit for the above reasons.
2	My problem is not a lack of nutritional & fitness education just a lack of the discipline or will power to make a change or stock to a more health lifestyle.
3	I would if they were offered
4	I recommend that we have medical or professional personnel teach classes on nutrition and exercise training.
5	Have not heard good things about Semper Fit nutritionists.
6	no time
7	No time
8	Probably too busy - suspect there's little they could teach that I don't know... Might make my Marines take a class if offered, though. Education, by itself, only solves a small part of the problem; big part is lifestyle - consider a Marine stationed at Miramar, living north of Temecula, with a 4 hour a day commute, an 8-hour work day, and limited access to healthy dining choices on base... Will the wise words of a nutritionist likely have a significant impact?
9	Probably not convenient if not online.
10	I have been very attentive to my health and nutrition throughout my adult life. I would probably ask a question or two from time to time, but have no reason to sit through an entire class.
11	Only as time permitted.
12	If the nutritionist bought my groceries and cooked for me, then maybe I might be interested. My less than perfect diet is a result of lack of desire and time in the kitchen, and prior planning at the grocery store.
13	The thing about nutrition is not "knowing" it's "doing"...Doesn't take a rocket scientist to know that eating the right combination of fresh fruits and vegetables, with limited red meat and foods high in sat fat is better than eating processed meals from a box or can or fast food...it's actually having the ability and drive to seek out the healthy choice. Tradeoffs between choice, convenience, cost, time, etc are all part of the decision. Attending classes and "knowing" more wouldn't benefit me.
14	Time constraints
15	usually a time issue
16	I feel I get the most comprehensive information about food and physiology through my personal nutritionist.
17	The day I can't kick my own ass is the day I get out of the Corps.
18	Already not enough time in the day.
19	I know enough - I used to be into body building. If you dont have the self discipline - the classes wont help anyway.
20	I do not have enough time!

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## APPENDIX G. MARINE COMMENTS FROM SURVEY QUESTION 33

Question 33: **If you sought a personal trainer through Semper Fit, rate how satisfied you were with the results from the training you received:**

#	Please briefly explain
1	From my discussions w/ the local personal trainer most Marines that come in b/c they are on BCP are looking for a quick fix and are not motivated to put in the required time & effort required for cardio. You don't need a trainer to watch you spend 30+ min on a treadmill, stair machine, bike, run, or walk. However, w/o direct supervision many Marines seem inclined to throw the blame at the trainer b/c they don't put in the time.
2	i only got to go once a week and all they did was weigh me and increase or decrease the same exercises i was doing
3	Your body is what you put into it. Semper-fit helps you understand this.
4	I did not need one -but the ones that worked for me as well as the ones i have viewed in recent years - are doing well -but extremely overburdened -and no option exists for them to earn dollars above and beyond the Draconian work/pay.hours guidelines
5	It is BCP PT. They focus more on building stamina not losing weight.
6	I was stationed near a small Marine gym on a naval base, thus the trainer was not busy all the time and was able to provide ample individual time.
7	The trainer can't lift the weights for me and time becomes a factor.
8	The spinning class I attended was good to go
9	It took longer to heal than I thought it would - they did nothing wrong.

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## APPENDIX H. MARINE COMMENTS FROM SURVEY QUESTION

35

Question 35: **If you answered “No”, why would you not use a personal trainer through Semper Fit?**

#	Other (please specify)
1	I know qualifications of local Personal trainer. Otherwise, I would not be inclined to use one b/c my knowledge is sufficient to set up a good PT routine.
2	My problem is not a lack of nutritional & fitness education just a lack of the discipline or will power to make a change or stock to a more health lifestyle.
3	I recommend that we have professional personnel teach exercise training. Specifically, I would like to see strength training from professionals athletes
4	Again -this is America and capitalism. If the incentive exists to go above and beyond the govvie (NAF) pay grade by tip, or other convention...then by gollie trainers need those creative incentives -otherwise its just an 8 hour day. They should be allowed to set their own rates-but true, still pay appropriate percentage to Semper Fit
5	no time
6	workout on my own and don't feel I need a "personal trainer" for my specific exercise goals
7	I've had friends that are professional trainers some for major sports teams that were prior military and they had very negative experience with Semper Fit trainers that were not knowledgable enough.
8	They make exercise too complicated.
9	I said yes, but don't know that I actually would use one. I simply wouldn't be opposed to the possibility.
10	Not enough time available at present, maybe in the future.
11	I don't go to the gym on a regular enough basis. I put it in when it fits in.
12	time constraints
13	The day I can't kick my own ass is the day I need to get out of the Corps.
14	Fitness is a part of my discipline. I get rid of my discipline, I fall apart.
15	Almost half of the "personal trainers" that Semper Fit provides and I have seen are overweight themselves. There is no way that an overweight trainer can be an effective tool to get Marines into shape. Perhaps it could work in the civilian world when the trainers are a little less fat then the person they are working with, but in the Marine Corps this is not the case. Not only would this affect motivation but I would question any information a Semper Fit trainer would provide if they are overweight.
16	I already have a good enough training regiment.
17	It depends if I need it.
18	i do crossfit
19	do it my self

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# APPENDIX I. MARINE COMMENTS FROM SURVEY QUESTION

## 36

**Question 36: How supportive do you think the Semper Fit staff is in assisting Marines with their weight or fitness goals?**

#	Please briefly explain
1	have not used a semper fit staff
2	I have not had the need to seek assistance from them so I can not rate them.
3	I have never used Semper Fit
4	They are here to help the marines.
5	ONLY...if sought out by the Marine or a Commander forces the marine to go. The latter happens not often enough.
6	They will answer any question.
7	If you ask for their help they are more than willing to facilitate you and work around your schedule.
8	I think Semper Fit doesn't focus enough on combat fitness. I see them spending more time on jazzercise, leotards, and the latest workout music. I have been thrown out of Semper Fit gyms for doing functional fitness workouts.
9	don't know anyone who has used a semper fit trainer
10	At every base I've been the Semper Fit personal trainers have gone out of there way to help anyone that needed (or didn't need). Semper Fit class schedules tailor to all needs.
11	I've never worked with them so have no idea how supportive they are.
12	I can only imagine.
13	Answered "supportive" because I assume they are, but haven't been in a Marine gym in several years due to back-to-back deployments in Saudi Arabia and Japan with non-Fleet units.
14	They are supportive but the complaint of most SF Staff is that they have no power over the individual and they don't get alot of command support. In some cases, they are a check in the box for a Marine on the program; in other cases, they are expected to babysit the Marines for the command but are given no authority to enforce a fitness program.
15	The people I've met are nice, but the problem is that the Marine Corps does not care if a Marine is fit or not. The numbers at the weigh in are all that matters.
16	I don't know how supportive they have been.
17	Never interacted with them.
18	Personality based. I have noticed that a lot of trainers are female, not that they cannot train males, but I prefer to work out with someone that I would like to emulate and can imagine that men may feel the same way. Additionally, I would like to see more boxing, wrestling, and MMA coaches and gyms.
19	Never used or heard feedback
20	They are very eager to help, but I don't think S.F is a viable option for the majority of people at least not prior to getting into a situation where they are forced to attend.
21	There presence is barely felt. Unless I aggressively sought them out, I would not be able to find a representative.
22	I don't know enough about the program.



23	I do not know whether or not Semper fit is supportive.
24	Never worked with any semper fit staff/trainiers
25	Never seen them.
26	I dont think they go out of their way to look for ways to help you - the ones I have seen seem to be doing admin work, etc unless you approach them.
27	I have not worked with them, so I can not access how supportive they are.
28	I know that Semper Fit exists, but have not pursued them and they have not given many (if any) briefs at our command.
29	I think they want to help, but commands very rarely would support such activity.
30	I wish I knew about Semper Fit.
31	I have not joined Semper Fit yet. I've only heard about it in bootcamp.
32	I've had junior Marines use the Semper Fit staff and they lost weight.
33	They do their jobs, but sometimes you can see that they regret it.
34	knew about program, but never did it.
35	I haven't been in the Marine Corps long enough to take advantage of the program.

## APPENDIX J. MARINE COMMENTS FROM SURVEY QUESTION 39

Question 39: **Please provide any additional comments:**

#	Response Text
1	I believe nutrition should start immediately at bootcamp and continued throughout a Marine's career. Mission Accomplishment and Troop Welfare. The mission will get accomplished and troop welfare should include our Marines' health.
2	I am not 100% convinced that the personnel, civilian or military FAPs, that operate Semper Fit are the best and most knowledgeable. Due to the restraints placed on them by Semper Fit they are only allowed to discuss and train utilizing certain methods and protocols. That being said, I do not think your average "gym" has personnel that are any better either. I am more inclined to talk to and seek out advice from an exercise physiologist, or at minimum a trainer with a physiology background rather than a trainer from a gym who studied a book and took a basic certification course.
3	I have faith in the abilities of the semper fit trainers because I am personally familiar with our local trainer. Some of the other trainers don't present a great physical appearance leading me to question their credibility. I have never had any major problems with making the weight or military appearance standard. Generally, I have been successful in imparting my personal diet and fitness knowledge to my Marines. The most successful BCP program I have seen was closely monitored by a Sgt Plt Sgt who got at least 5 Marines who had slipped deep out of standards back into shape. Previously these Marines were overlooked because they were able to perform a PFT and were athletic despite not possessing the optimum military appearance.
4	I believe that if more young Marines understood how much sugar they intake, including these energy drinks. Knowing the affects and possible consequences of continuous max amounts of sugar intake daily, it would encourage them to be more aware of the nutrition.
5	Every Marine should be allowed to have one annual complete physical fitness assessment by a certified personal trainer at Semper Fit. The goal is to give the Marine a good work out routine that will address the strengths and weaknesses of the Marine. A Fitness/Nutrition website should be created for Marines to track their progress and get the latest tips on Fitness/Nutrition.
6	I think nutrition training should be required. Not only for weight, but health. At least five Marines at my unit are currently having heart problems.
7	I would like to see the Marine Corps invest in professional training for both fitness and exercise. It would be nice to have one POC in a unit to manage PT requirements such as MCMAP, CFT, PFT that is assisted by a contracted professional (ie, the BN S-3, w/ a contracted employee). The medical personnel should set-up better fitness training/evaluation tailored to the Marine and Sailor, rather than a routine check-up. This will get the member involved in his or her health. Form a TT that has a military lead w/ a contracted: dietitian, strength professional, and fitness guru that can go to units to provide a course on mandatory fitness requirements (MCMAP, PFT/CFT), an update on new exercise methods to build strength, diets that work for each body type and an overview of programs and directives. Bns could put this in the TEP along w/ safety at unit stand-downs.
8	I believe that you could get more info from the responses to Question 30 if you reformatted it to something along the lines of "Under which of the following circumstances would you attend a nutrition course at semper fit?" command direction, command encouraged, peer encouraged, actively seek out under own volition, attend under own volition if convenient
9	It is recommend that when assigned to BCP that S-3 should take the time to figure out what will work for each individual. Every marine is different in body structure and attitude. Since assigned to BCP, S-3 has not helped in reaching my goal. They provide PT but its repetitive exercises that our bodies become used to. I have recently made changes in my lifestyle that no one has helped me have weight loss. This was done me and me alone. No thanks to the Marine Corps.....

10	I have lots depending on whether you want to pick my brain as the only former MCCA/Semper Fit facility manager, National Levels coach, and underachieving All-Marine triathlete several times over, you will likely have in this survey. email: [REDACTED] Pardon my cynicism, but welcome contact for further input
11	I learned about nutrition through college courses and from my mother who is an RN.
12	[REDACTED] is the man. He IS fitness, defined. I tend to be eternally above my weight, but don't drink water the night before a way in, which puts me in weight standards. That was not an option on the survey, overweight 363 days of the year. I have no trouble with PT, and am overweight due to lifting weights.
13	I feel that Pt for BCP should focus more on weight lose.
14	Survey was good.
15	I would like to see more nutrition/get back in shape classes for female Marines coming off of post-partum leave.
16	Generally speaking, nutrition classes or "instruction" would be much more effective if taught to military dependents. Nutrition starts with "young" wives and the lifestyle they promote in the home. You can see it first hand at the commissary. Young wives buy junk and processed food. Teach them to cook healthy!
17	As with most standards, it tends to be applied more towards the "junior" Marines. High and weight standards are over rated and used too often as an avenue to threaten a Marine rather than to motivate him/her. I've yet to bear witness to any senior SNCO/Officer who was in clear violation of the standard, (even while in the most forgiving of uniforms, cammies). I look forward to see how the new guidance regarding height and weight standards affect the Corps.
18	Good luck with the thesis!
19	As you can see from my current situation and my issues with the taping procedures, I am not a fan of the Marine Corps Fitness Program. I come from a family where 6 out of 8 of my aunts and uncles have had gastric bypass as well as my father (twice). I am proud to average 210 - 212 daily (72") even though I am 8-10 lbs over weight. I am the most fit person in my family and if you seen me in uniform you would never know that I was over. I run almost everyday, I jump rope, I lift weights but...because of my family body type and medical history (back surgeries) I feel my weight is about as low as its going to go. I would consider lipo suction again in the future if my career depended on it. I am thankful for what the Marine Corps has done for me and I hope to maintain the same discipline after retirement.
20	This is a good topic to look at. The majority of Marines (officer and enlisted) I know have to "prepare" for a weigh in by changing their normal eating and/or exercise program in some way. The multiple changes in weigh in rules (the 2 week separation between weigh in and PFT) and the BCP process (grace period/no grace period) in the last couple of years show that the Corps knows it is a problem, but they don't know how to fix it.
21	I have been a Marine Corps officer for 16 years, with tours on both recruiting duty and recruit training. I think the average young adult has a much worse diet and physical fitness regimen than 16 years ago. The Marine Corps must do more through command sponsored education to get Marines to eat right and exercise in a sensible manner.
22	The best nutrition class I was a part of was my Biology class in college. Understanding how the different elements that you eat are processed and stored by the body makes me understand why high fat/high calories are not needed by the body.
23	Done - Have a great weekend and good luck :)

24	Hopefully your study will shed some light on the completely useless BCP/MAP/PT program that the Marine Corps continues to use. For what it is worth, in 1992, the bodyfat tables were more lenient than when the BCP program came online. Overnight I gained 3% just by the new table. But it was alright because you were allowed to go to 22% with a 1st class PFT. Now that is gone, so I am now following a more stringent measure than 17 years ago! I understand why with the DOD mandated tables, but the Corps moving away from the +4% allowance was very drastic and not helpful. It is also helpful to remember that anyone who has worked in S-3 knows that NOBODY follows the program to the letter. Whether it is the OPSO himself, the clerk doing the rope and chokes or someone in between, there is also some leniency somewhere. So the why have a program that is not truly enforced because 90% of the Marine Corps knows the program is flawed. Not that I am jaded...
25	This survey was too long. Some answers needed a comment, but I wasn't provided one. Some answers did not have an option I wanted to select, but I was required to choose. Therefore, the answer was a random choice (not valid).
26	In regards to nutrition, the Marine Corps has to offer better selections in the Chow Halls and get rid of the vast variety of fast food aboard the base.s You can train a Marine in the gym all day, but the moment that they go to the Chow Hall to eat, the are not offered a variety of healthy meals. They can get plenty of hamburgers and pizza, but not a large amount of nutritious offerings. If we are forcing our junior Marines to use their meal cards to eat, then the we have to give them better variety at the chow hall.
27	I am not fond of the current Marine Corps bodyfat measurements. While I am fortunate to have a fairly thick neck, there are Marines who are heavy/overweight who have a thin neck and adversely affected by the current measurements. There are far better, and relatively inexpensive, methods to use, such as calipers.
28	The choices you provided did not capture all of the possible ht/wt/BF combinations. Most of the time I'm at weight (plus or minus 5 lbs) I've always been officially weighed at or under...However, IF I was taped I would tape well over the BF limits. I've been losing weight over the last several months and I'm now 10 lbs under my max, yet I still tape well over BF. The BF measurement should go away. So long as a Marine looks acceptable in uniform and can perform the job it should not matter what the BF is.
29	I honestly do not think nutrition is emphasized enough in the Marine Corps. I have had Marines on BCP, however, the program emphasized cardio instead of a combination of both cardio and healthy eating habits. This is definitely a Marine Corps wide problem.
30	Great Survey Paula; good luck with your project!
31	I don't think the answer to better nutrition is adding a unit or individual training requirement (if this was being considered as a recommendation).
32	You can't out-train a bad diet.
33	The survey discusses nutrition and hits on some critical elements that the Marine Corps fails to address. In my opinion, the number of Marines that "cut weight" or use significant means to make weight are extremely high and are often unknown by senior leadership. It does not help that the preponderance of food venues aboard a base are fast food based. The ratio of fast food (e.g. McDonalds, Wendy's, Taco Bell, etc.) as compared to healthy food (e.g. Club system, Chow Hall, etc.) and not proportionate. Too often, MCCA is allowed to make a profit at the expense of the Marine Corps (e.g. Coke machines, candy machines, Fast food trucks at the rifle range, etc.). Not to grind an axe, but MCCA's mission does not support a healthy Marine Corps and MCCA is the one providing the service. This is generally not within the Commander's AOR.

34	I currently do crossfit workouts, sports, as well as other training. I feel I am in good physical condition but have always had the hassle of weight. My limit was just reduced by a 1lb so I am now more overweight! With a 293 CFT, 286 PFT, good appearance, at age 39, I think I represent the Corps well and can do sustained combat operations. I have tried different things but my weight is normally about 185, five pounds over my limit.
35	Could you show your findings in the Marine Times or something?
36	Fitness is key to combat. Marines need to know that. Push on through pain for glory. Semper Fidelis-oorah.
37	I don't have problems maintaining my weight so I don't really care.
38	Nutrition depends on who purchases food in household. My wife is very healthy eater and will not purchase processed foods. She spends lots of time reading food labels. Training in this area would be very helpful especially for single Marines. Note: Commissaries need really focus on offering healthier items.
39	I have never had any issues with weight, but as a Marine leader I have had many Marines under my supervision that struggled with weight. While we as leaders will try to do everything in our power to assist a Marine with his/her weight issues, the ultimate responsibility lies with the individual Marine. Every single Marine knows the standard. The standard is not a secret to anyone. All entry level Marines graduate their basic training (Boot Camp, OCS) within weight. Most maintain their new physiques, while some lose it. Marines hold discipline, and personal accountability in high regard. Those Marines who remain true to these basic tenets are successful. The Marine Corps promises Marines nothing, but gives all of its Marines many opportunities to succeed. Those Marines who wish to fall outside the standards that they are keenly aware of, have made a conscious decision to fail, and ultimately deserve the chance to do so. All Marines must understand that like any successful product, the Corps has an image to preserve, and a mission to accomplish. Those who believe in what the Marine Corps is selling become life-long customers. Those that do not, fall by the wayside. The standard is the standard, and is not negotiable. Whether we leaders agree with it or not does not matter. Our only job is to enforce it.
40	Maturity level also plays an important role with nutrition and fitness. Marines will continue to wash their faces with pizza and beer if that is what they wish to do on their time. The BCP program will only help us get rid of those who do not wish to comply with the standards, it will not fix those who do not care.
41	Nutrition is only one of the knowledge sources to fitness and health. Lititure or classes need to be offered to heavier personnel that better explains or understands the struggles we go through. I can attest, eating healthy and exercise are not enough to get you under standards.
42	Semper Fit nutrition and physical fitness classes should be standard within all areas of the Corps, they should not be the exception. Bases and stations should practice and reinforce more healthy standards of life; less smoking and fast food and more swimming pools, gyms and running and walking paths.
43	Nutrition is obviously important and not focused on by commands with the exception of the annual mandatory training. Marines are either not given good alternatives to healthy eating, or choose to eat what they like. Commands do not make a Marines nutrition a priority and therefore reap what they sow.
44	I believe CrossFit combined with the Paleo Diet in Zone proportions are the key to fitness and healty Marines. This information is readily available on the net and it is a shame that MCCS/SemperFit have such an issue with CrossFit.
45	Yes! I believe nutrition is very important. I am very bad about watching what I eat. It would be nice to learn about ways or techniques to stay healthy.

46	More Marines might go to Semper Fit if the course was taught by a female instructor.
47	I would really like to know what Semper Fit is and what its about. I had no clue it was a real organization.
48	In my opinion, diet is the most important aspect of nutrition & being healthy. I think that it is great that the Marine Corps is concentrating more on this subject & this should continue.
49	Thank you.
50	I didn't know about Semper Fit, but am glad to know a program exists and is available to junior Marines.
51	I believe a healthy diet is important to not just Marines/Navy, but to all Americans. The United States' obesity rate would drop so quick.
52	I worked out a times a week before the Marine Corps, but now I'm cut from all the training we do. Motivated!
53	thank you too!
54	Good Luck!
55	After bootcamp, I gained 15 pounds because I had bad eating habits.
56	I think diet & exercise is important when your job uses your body all day. However, I think the amount of time Marines spend eating & what we do on the weekends has bigger effects on our performance than our diets. Eating right for 5 days only to kill your liver and lungs over the weekend doesn't really make for a healthy lifestyle...more research there would be helpful. Thanks.
57	I recommend a Crossfit gym at Camp Pendleton or other MC Bases.
58	I think the Marine Corps should educate on the importance of vitamins because we don't usually get everything through our food.
59	I am a reservist.
60	I am proud I joined the Marines, and proud to claim the title Devil Dog.
61	I miss my wife and want to go home.
62	I feel the Marine Corps does a lot to keep their Marines fit, but it always comes down to how much effort each individual Marine puts in.
63	PT in bootcamp should be harder
64	I believe you need to push nutrition even before basic. For example, have the recruiters make the recruits go to a nutrition class so they have some type of understanding of what you put in your mouth effects their body.
65	The Marine next to me is really fat. He needs help.

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# **APPENDIX K. ACTIVE DUTY MARINE CORPS INTERVIEW QUESTIONS**

## **Background Information**

1. MOS:
2. Rank:
3. Time In Service:
4. Marine Corps Background/Experience:

## **Questions**

1. What do you know about Marine Corps Fitness Programs?
2. What do you know about Semper Fit?
3. America has an overweight epidemic; do you think this is affecting the Marine Corps?
4. How can we combat overweightness in the Marine Corps?
5. What do you know about nutrition?
6. Do you think it is important? What would your recommendations be as an individual and as a leader of Marines?



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## **APPENDIX L. SEMPER FIT STAFF MEMBER INTERVIEW QUESTIONS**

### **Background Information**

1. Job Title
2. Education

### **Questions**

1. Tell me about the programs you offer in fitness (group, unit, and individual), particularly in nutrition.
2. How many Marines take advantage of your programs, out of their own interest and about how many are command directed to meet with your staff?
3. Do you see overweight Marines? Do you see overweightness as a problem in the Marine Corps? If so, what do you think the solutions are?
4. Have you seen Semper Fit's role in actively supporting Marines' health and wellness evolve in the last few years? If so, how?

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