



75th Ranger Regiment Nutrition Program

LTC Russ Kotwal
Medical Director

CPT Nick Barringer
Dietician

SFC Cesar Veliz
Medical Training

SFC Justin Siple
Culinary Advisor

***Warfighter Nutrition Conference
USUHS, Bethesda, MD
15 JULY 2008***

Report Documentation Page

Form Approved
OMB No. 0704-0188

Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

1. REPORT DATE 01 JUL 2008	2. REPORT TYPE N/A	3. DATES COVERED -	
4. TITLE AND SUBTITLE 75th Ranger Regiment Nutrition Program		5a. CONTRACT NUMBER	
		5b. GRANT NUMBER	
		5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)		5d. PROJECT NUMBER	
		5e. TASK NUMBER	
		5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) 75th Ranger Regiment 6420 Dawson Loop Ft Benning, GA 31905		8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)		10. SPONSOR/MONITOR'S ACRONYM(S)	
		11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release, distribution unlimited			
13. SUPPLEMENTARY NOTES Warfighter Nutrition Conference, held in USUHS, Bethesda, MD 15 July 2008, The original document contains color images.			
14. ABSTRACT			
15. SUBJECT TERMS			
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified	UU
			18. NUMBER OF PAGES 18
			19a. NAME OF RESPONSIBLE PERSON



Agenda

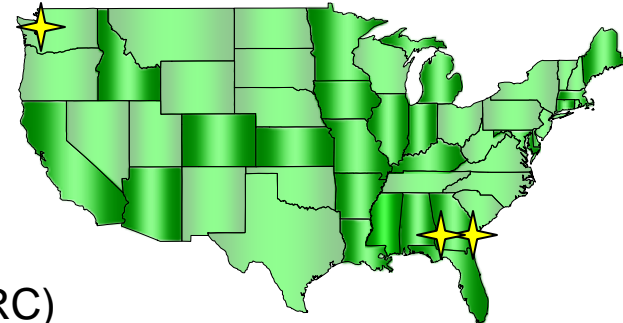


- **75th Ranger Regiment**
- **The RAW Program**
- **Nutrition Program**
 - **Hydration**
 - **Body Composition**
 - **Performance Nutrition**

75th Ranger Regiment



- **Mission:** Plan and conduct special military operations as directed by the National Command Authority in support of U.S. policies and directives.
 - Largest USSOCOM Direct Action Combat Force
 - Airfield Seizures
 - Special Operations Raids
 - Urban Combat
 - Non-combatant Evacuation Operations
- **Composition:** 4 Battalions, 3 Home Stations, 3300 Rangers
 - HAAF (1/75)
 - FLWA (2/75)
 - FBGA (3/75, RSTB, RHQ)
- **ROC Training:**
 - Initial Entry Courses (RIP, ROP)
 - Ranger School Prep Course (PRC)
- **Operational Readiness Training and Deployment Cycle**
 - Prep – Alert – Component (Combat Deployment)
 - Continuously deployed since 9/11
 - Multiple Overseas Locations Simultaneously





The RAW Program

4 Components:

- Functional Fitness
- Performance Nutrition
- Sports Medicine
- Mental Toughness



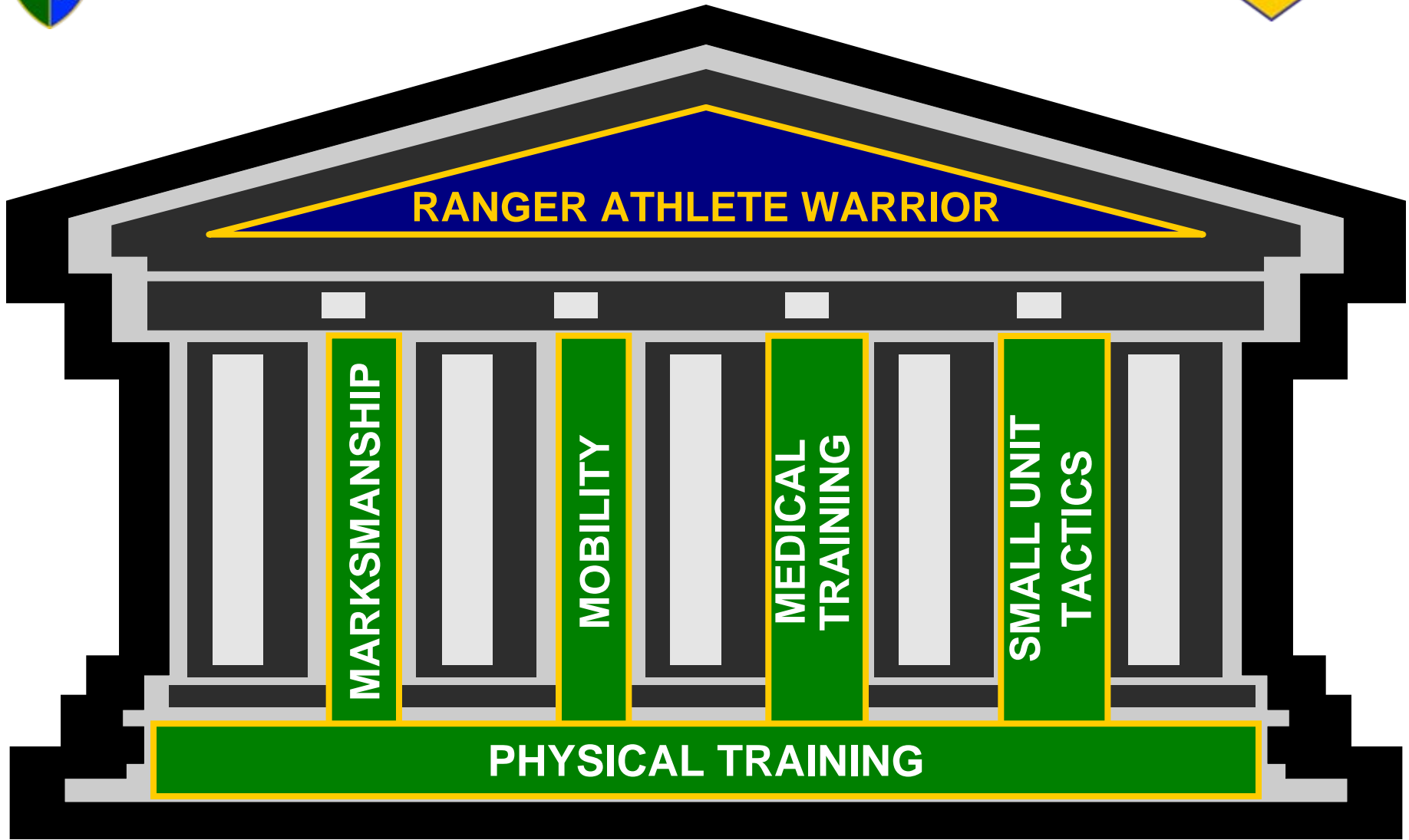
Team Approach:

Commander's Program!

- Ranger Leaders
- Culinary Advisors
- Physicians
- Physician Assistants
- **Physical Therapists**
- **Occupational Therapist**
- **Registered Dietician**



RAW and the Big Five





RAW Components



Functional Fitness

Ranger-Specific
Strength
Endurance
Movement Skills

Performance Nutrition

Right nutrients
Right time
Right balance
Supplement guidance

Sports Medicine

Prevention
Early intervention
Multi-disciplinary team

Mental Toughness

Ideal Performance State
Fatigue counter-measures
Endurance events



Nutrition and Hydration



2005-2007 FBGA Heat Injury Comparison

	2005			2006			2007			2005-2007
	HS	HE	Total	HS	HE	Total	HS	HE	Total	TOTAL
# FBGA	30	143	173	25	217	242	36	134	170	585
# ROC, 75 TH RR	3	2	5	6	1	7	5	3	8	21
ROC % of FBGA Cases	2.9%			2.9%			4.7%			
# ROC Students	2414			2498			2643			
Rate (Cases/1000 Students)	2.1			2.8			3.0			

NOTES:

- FBGA major heat injury cases as reported to FBGA Preventive Medicine Department
- 75th RR major heat injury cases as obtained from FBGA PM Dept and OPREP-3 Reports
- During this 3 year period, 1/75, 2/75, 3/75 had only 1 heat injury (HS) noted by 1/75 in 2006
- U.S. Army Heat Injury Prevention Task Force:
 - ✓ Army heat injury incidence declined significantly from 1987 to 1995 and has remained constant at **3.5 cases/1000** since 1995
 - ✓ “High risk” units currently include training schools and infantry units



Nutrition and Hydration



Heat Injury Factors and Controls

KNOWN CONTRIBUTING FACTORS	PREVENTION CONTROLS
Individual Demographics (Age, Sex, Genetics)	Physical exam, additional screening
Low Fitness	Fitness screening, staged training
Overweight	Fitness screening, staged training
Previous Heat Injury	Medical history and record screening
Contributory Medical Issues	Medical history and record screening
Current Medical Illness	Education and screening
Specific Prescription and OTC Medications	Limit medications, recycle as required
Certain Nutritional Supplements (ie. Ephedra)	Screen and ban certain supplements
Lack of Full Acclimatization	Afford time and enforce acclimatization
Hot and Humid Training Environment and Climate	Decrease, move, modify training
High Training, Equipment, and/or Clothing Workload	Modify workload as required
Cumulative Effect of Training	Maximize time and rest between events
Suboptimal Hydration, Nutrition, and/or Rest	Education, opportunity, enforcement
Highly Motivated	Education, set limits



Nutrition and Hydration



Added Heat Injury Controls for 2008

- Implementation of fitness level screening for RIP
- Implementation of release runs/road marches instead of formations to alleviate individual heat burden
- Shift of major PT events to later time in courses, increasing preparation time for individual fitness and acclimatization
- Building block approach to meet standards by end of program versus “gut check” at onset of program
- **Nutrition provided prior to and during major exertion events**
- Stronger enforcement of sleep hygiene
- **Medical hydration indicator implementation**
- Medical screening facility at Cole range to be implemented

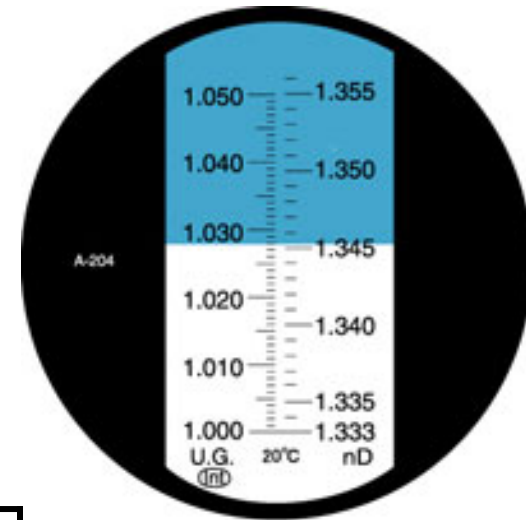


Nutrition and Hydration



Medical Hydration Indicator – Refractometer

- Educate on proper hydration
- Test status 48 hrs prior to event
- Re-educate
- Test status the day of the event



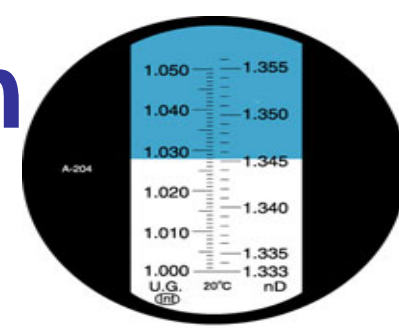
Indices of Hydration

Hydration Status	%BW Δ	Urine Color	USG
Well hydrated	+1 to -1	1 or 2	<1.010
Minimal dehydration	-1 to -3	3 or 4	1.010- 1.020
Significant dehydration	-4 to -5	5 or 6	1.020- 1.030
Serious dehydration	> -5	>6	>1.030





Nutrition and Hydration



Refractometer and RIP



- Pilot Study – July 2007 RIP Class
 - 99 RIP Students
 - Compared hydration status at two points prior to road march:
 - Initial test at 48 hrs prior to event
 - 85/99 students with significant or serious dehydration
 - Individuals initially found to be dehydrated received intensive education and a warning that they would not participate in event
 - Second test immediately prior to event
 - No students with significant or serious dehydration
 - No heat injuries or fallouts incurred during this event.
- Continue screening prior to heat injury “high risk” events
- Continue annual Heat Injury rate comparisons



Nutrition and Body Composition



Bod Pod system

Air displacement technology

- Track body composition
- Diet plan based on results
- Continue to monitor





Nutrition and Body Composition



Bod Pod: Best Ranger Competition

- Pilot Study – APR 08 BRC
 - 9 BRC Competitors
 - Evaluated at two points: three months and immediately prior to BRC
 - At three months prior to competition, average BF% = 14.6%
 - At immediately prior to competition, average BF% = 13.2%
 - Average of 2 lbs of body fat loss
 - 5/9 competitors finished
 - The leanest team gained fat intentionally and placed 4th
 - The team that lost the most body fat fell out of the competition
 - One team placed 1st and had an average BF% = 13.8%



Nutrition and Body Composition

Bod Pod: PRC & Ranger School



- Pilot Study – MAR 08 PRC & APR-MAY 08 Ranger School
 - 30 Students
 - Evaluated at three points:
 - Start of 22 day PRC (n=30)
 - Completion of PRC and start of 62 day Ranger School (n=30)
 - Completion of Ranger School (n=15)
 - Only 15 students graduated on time
 - Start of PRC: Average BF% = 16.6%
 - Start of Ranger School: Average BF% = 13.8%
 - End of Ranger School: Average BF% = 11.5%
 - Average weight loss = 3lbs during PRC and 5lbs during Ranger School.
 - Average body fat loss was 3lbs PRC and 2lbs during Ranger School.
 - Average Fat Free Mass increased 3lbs during PRC and increased 2lbs during Ranger School.

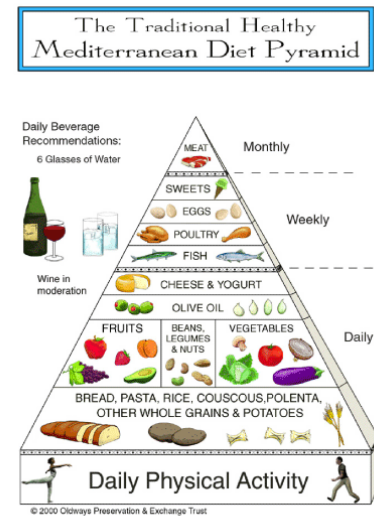


Performance Nutrition



Performance Nutrition Standards in Dining Facilities:

- **RAW Nutrition**
 - Emphasize the basics – fruits, vegetables, legumes
 - Mediterranean Diet
- Olympic Training Center (Colorado Springs, CO)
 - Performance based diet plan
 - Recovery foods and beverages
 - Caloric variety to accommodate energy expenditure
- Culinary Advisor Training
 - Educate on and provide antioxidant rich food sources
 - Food labels to educate and prompt informed decisions
 - Healthier oils and decreased fat during preparation
 - Bake and grill more than deep fry
 - Pull deep fryers and replace with convection ovens
 - Minimization of mandatory “fast food” choices





Performance Nutrition



Dietary/Nutritional Supplements

- Education, Regulations, Risks and Benefits
- SOF Nutrition Guide
- How to read labels, what to look for, USP seals
- Relevant supplement research
- Regular updates on benefits and adverse affects





Future Initiatives



- **2008:** Initiate monitoring of Body Composition pre and post combat deployment
- **2008:** Initiate Nutrition and Supplement questionnaire pre and post combat deployment
- **2008-09:** Implement “Go Green” initiative at DFAC
- **2008-09:** Nutrition labeling for all DFAC items
- **2008-09:** Pull deep fryers and replace with convection ovens
- **2008-09:** Integrate healthy grocery shopping and cooking classes in FRG meetings



QUESTIONS?

LTC Russ S. Kotwal, MD MPH
75th Ranger Regiment
6420 Dawson Loop
Ft Benning, GA 31905
kotwalr@soc.mil
(706) 545-3769

SFC Justin B. Siple
75th Ranger Regiment
6420 Dawson Loop
Ft Benning, GA 31905
siplej@soc.mil
(706) 626-2763

CPT Nick Barringer, RD
75th Ranger Regiment
6420 Dawson Loop
Ft Benning, GA 31905
barringn@soc.mil
(706) 545-7435