

Award Number: DAMD17-03-2-0030

TITLE: Military Health Behaviors: Promotion of Healthy Weight and Fitness in Career Personnel

PRINCIPAL INVESTIGATOR: Donald A. Williamson, Ph.D.

ASSOCIATE INVESTIGATORS: Donna H. Ryan, M.D., H. Raymond Allen, Ph.D., Tiffany M. Stewart, Ph.D., and Corby K. Martin, Ph.D.

COLLABORATING PERSONNEL: COL Gaston P. Bathalon, Ph.D., RD, FADA, and MAJ Lolita M. Burrell, Ph.D.

CONTRACTING ORGANIZATION:
Pennington Biomedical Research Center
6400 Perkins Rd.
Baton Rouge, LA 70808-4124

REPORT DATE: May 2006

TYPE OF REPORT: Annual Report

PREPARED FOR:
U.S. Army Medical Research and Materiel Command
Fort Detrick, Maryland 21702-5012

DISTRIBUTION STATEMENT: (Check one)

- ☒ Approved for public release; distribution unlimited
☐ Distribution limited to U.S. Government agencies only;
report contains proprietary information

The views, opinions and/or findings contained in this report are those of the author(s) and should not be construed as an official Department of the Army position, policy or decision unless so designated by other documentation.

REPORT DOCUMENTATION PAGE				Form Approved OMB No. 0704-0188	
Public reporting burden for this 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 this 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 Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 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 any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.					
1. REPORT DATE (30-05-2006)		2. REPORT TYPE Annual		3. DATES COVERED 01 May 05 - 30 April 06	
4. TITLE AND SUBTITLE Military Health Behaviors: Promotion of Healthy Weight and Fitness in Career Personnel				5a. CONTRACT NUMBER DAMD17-03-2-0030	
				5b. GRANT NUMBER 03311005	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S) Donald A. Williamson, Ph.D., Donna H. Ryan, M.D., H. Raymond Allen, Ph.D., Tiffany M. Stewart, Ph.D., Corby K. Martin, Ph.D., COL Gaston P. Bathalon, Ph.D., RD, FADA, and MAJ Lolita M. Burrell, Ph.D				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Pennington Biomedical Research Center 6400 Perkins Rd Baton Rouge, LA 70808-4124 E-Mail: Williada@pbrc.edu				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES) U.S. Army Medical Research Materiel Command Fort Detrick, Maryland 21702-5012				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION / AVAILABILITY STATEMENT ☒ Approved for public release; distribution unlimited ☐ Distribution limited to U.S. Government agencies only - report contains proprietary information					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT The primary aims of this research project are: 1) development of a computer-based data collection system for tracking body weight/body fat and fitness in career Soldiers, 2) development of an internet-based intervention for the promotion of healthy nutrition and physical fitness, and 3) testing the efficacy of this internet-based intervention for the prevention of weight gain and promotion of physical fitness in career Soldiers. The study is being conducted at Ft. Bragg in Fayetteville, NC in collaboration with Womack Medical Center at Ft. Bragg and the U.S. Army Research Institute of Environmental Medicine in Natick, MA. The results of this study will be used to formulate a national program for the promotion of healthy body weight and fitness in career soldiers.					
15. SUBJECT TERMS nutrition, physical fitness, Soldiers, health, weight, body fat					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES 24	19a. NAME OF RESPONSIBLE PERSON Donald Williamson, Ph.D.
a. REPORT Unclassified	b. ABSTRACT Unclassified	c. THIS PAGE Unclassified			19b. TELEPHONE NUMBER (include area code) 225-763-3122

Table of Contents

Cover.....	1
SF 298.....	2
Introduction.....	4
Body.....	5
Key Research Accomplishments.....	8
Reportable Outcomes.....	9
Conclusions.....	13
References.....	14
Appendices.....	15

Introduction

The primary purpose of this study is to reduce the proportion of Soldiers at Ft. Bragg who fail to meet Army requirements for body fat defined by AR 600-9, the Army Weight Control Program (AWCP), and fitness standards defined by FM 21-20, Physical Fitness Training, Army Physical Fitness Test (APFT). The study has been designed to: 1) be a non-clinical, population-based intervention for military personnel, 2) analyze data that the military routinely collects during APFT and height/weight testing (AWCP) for purposes other than this research, 3) meet the standards of “no greater than minimal risk” research, and 4) be conducted with anonymity of participants.

To reduce the proportion of Soldiers who fail to meet body fat (AWCP) and fitness (APFT) standards, an environmental/internet-based intervention will be provided to Soldiers at Ft. Bragg. The Military Services Fitness Database (MSFD) was developed to be provided to Ft. Bragg to measure the effectiveness of the environmental/internet-based intervention. The original plans to install the current version of the MSFD base wide at Ft. Bragg have become implausible for reasons outside control of the research team. In response, an alternative plan of action was developed and is discussed in later sections.

It is hypothesized that over the two years of intervention, the percentage of Soldiers who fail to meet body fat and fitness standards will decrease significantly at Ft. Bragg. The development of both the MSFD and the environmental/internet-based intervention occurred in close collaboration with the military, particularly United States Army Research Institute of Environmental Medicine (USARIEM) and Womack Army Medical Center (WAMC).

Body

Military Services Fitness Database (MSFD) and Data Collection

The MSFD is an electronic database that records and stores body weight/body fat and APFT results of military personnel. Data for this population-based study are derived from the military's standard operating procedures for the collection of APFT data. These data were to be analyzed to determine if a nonclinical, environmental/internet-based intervention reduces the proportion of Soldiers who fail to meet fat and fitness standards established by the U.S. Army. Through pilot testing, the MSFD was modified to incorporate the requests and suggestions of military personnel. The command of Ft. Bragg preferred to utilize an alternative database to collect the data and therefore, the MSFD was not allowed to be deployed across the entire Ft. Bragg base. In response, The Pennington Biomedical Research Center (PBRC) research team, USARIEM, and the G6, XVIII Airborne Corps formed a partnership with FusionNet, which is being developed by the XVIII Airborne Corps Knowledge Management Office to streamline data collection and storage in the military. Source-code from the MSFD was provided for inclusion in the FusionNet application to capture AWCP and APFT data and generate reports. Once FusionNet is implemented, the data collected would be provided to PBRC at scheduled intervals for statistical analysis to determine the efficacy of the H.E.A.L.T.H. (Healthy Eating, Activity, and Lifestyle Training Headquarters) web application. The fielding of FusionNet has been delayed due to the Global War on Terror and at this time there is no specified date as to when FusionNet will be released. A backup plan was implemented to collect data, by way of the Tasking Office, from PT Cards (DA Form 705) from units within the 82nd Airborne Corps and continued use of the MSFD within Womack Army Medical Center's (WAMC) Alpha, Bravo, and Dentac companies. In July 2005, the PBRC research

team traveled to Ft. Bragg to input data from the 82nd Airborne Corps PT cards. Total number of records collected was 3,604 with PT test dates between July 2004 through June 2005. After statistical analysis, the data proved to be of poor quality with 8.4% of the records missing height and weight of Soldiers, and 41% of the records of overweight Soldiers missing estimates of body fat. Polling of the research team led to a consensus of opinion that the allowable amount of missing data should only be 5%. Based on this opinion, the team strived to collect higher quality data in Spring 2005, but this tasking yielded data from less than 1,500 Soldiers. After much deliberation, this approach was abandoned but we have continued to collect APFT data from Soldiers in WAMC's Alpha, Bravo, and Dentac companies, and these data will be supplemented by collecting information about the Soldier's height, weight, fatness, and PT scores through the internet based intervention that is described below. Some fields will be automatically collected as the Soldier goes through the internet intervention algorithms and uses the tools, while others will be self report collected by the Soldier opting to answer questions about him or herself. Appendix A lists the data that will be collected.

Environmental/Internet-Based Intervention

The intervention, consisting of an environmental component and an internet (website) component, is designed to promote healthy nutrition and physical fitness to every Soldier at Ft. Bragg. The intervention provides users with a safe and effective means to manage body weight, through use of established resources and a website called H.E.A.L.T.H., which provides credible information on nutrition, physical fitness, and weight management. The internet component of the intervention will be launched July 24, 2006. The environmental promotion program has continually been developed in close consultation with representatives from the Nutrition Care Division (NCD), WAMC Public Affairs Office, and Information Services Office, Ft. Bragg, NC. Furthermore, a

relationship has been formed with the Ft. Bragg Army Morale, Welfare, and Recreation (MWR) office to aid in promoting the internet intervention on base. MWR has multiple outlets, and a variety of media formats such as fitness and family events held on base, and distribution of flyers and brochures, to disseminate information to Soldiers. Appendix B describes the promotion and website launch plan.

In preparation for the launch, the website was pilot tested with collaborators including: The US Center for Health Promotion and Preventative (USACHPPM), USARIEM, WAMC NCD leaders, and Weigh to Stay participants. In response to the pilot testers' critiques and suggestions, the H.E.A.L.T.H. website has undergone reorganization. In January 2006 a contract with a website design company was developed to aid in the website reorganization by improving its' aesthetics, human interface quality, and merging of the nutrition and fitness plans to create a "one stop shopping" planner and calendar where the Soldier can find his/her personal information. Adding a site search, glossary, and a Frequently Asked Questions section are other improvements being made to the site.

A family section has also been added to the site that can be utilized by spouses or family members of a Soldier. The family member registers as a civilian, but will have access to the same nutrition and fitness tools as the Soldier. Including the family will foster additional support for the Soldier to lead a healthy lifestyle. An important component of the website is lifestyle modification. The health experts guiding the development of the H.E.A.L.T.H. website recognize that behavioral/lifestyle change is the most effective method of achieving long-term weight goals. These lifestyle modification goals will assist Soldiers in identifying and discontinuing unhealthy eating and exercise habits. Topics such as exercise/food monitoring and behavioral contracting were originally presented as modules, but are now imbedded throughout the site as a "natural" part

of the plan as a whole. The user will be able to track their weight, monitor their compliance of the nutrition and fitness plans, and lifestyle modification goals by visiting the “My H.E.A.L.T.H.” section of the site. In this section the Soldier is prompted to update their statistical information (weight, height etc.) every week or month depending on the information needed. Appendix C illustrates some of the screen shots from the website.

Key Research Accomplishments

- Developed the research team by recruiting and hiring the following new employee:
 - Kimberly Bowen M.Ed. – program coordinator; hired to replace the outgoing program coordinator
- Poster presented at NAASO’s 2005 Annual Scientific Meeting: “Military Services Fitness Database (MSFD): A computerized Tracking System for Body Weight, Fatness, and Fitness Data of Soldiers.
- Planned paper for submission to Military Medicine: “Military Services Fitness Database: Development of a Computerized Physical Fitness and Weight Management Database for the U.S. Army.”
- Beta and pilot tested the website. In June 2005, A group of 8 soldiers at USARIEM (including COL Gaston Bathalon and MAJ Lori Sigrist) Beta tested the site and provided detailed and valid comments regarding the usability of the site and the tools within.
- Conducted statistical analyses on APFT data collected, via the MSFD, from WAMC’s Alpha, Bravo, and Dentac companies. Time points are: October 2003 or “Time 1”, April 2004 or “Time 2”, October 2004 or “Time 3”, April 2005 or “Time 4”, and October 2005 or “Time 5”.
- 1 SGT (Ret) Robin Barnes (Health Promotion Specialist from PBRC), briefed the following groups regarding the website:

- Newly assigned WAMC NCD staff
 - XVIII Airborne Corps Acting Command Sergeant Major
 - WAMC Key Leaders Brief: 3 Hospital CSMs and 12 NCOs
 - WAMC/USAREIM Unit Fitness Leader's Brief: Targeted Training NCOs and MFTs
 - WAMC NCD Weigh to Stay Program Brief; approximately 500 total Soldiers
 - Key Leaders Forum Brief: CSMs at Pre Primary Leadership Post Briefing and approximately 50 NCOs
 - Key Leaders Forum Brief: CSM Allen host
- Meetings and travel details are highlighted in Appendix D
 - Yearly continuing review report approved by PBRC IRB May 2006 and submitted to HSRRB.

Reportable Outcomes

Data from the APFT test were collected via the MSFD from WAMC's Alpha, Bravo, and Dentac companies. Dates covered in this pilot testing: October 2003 or "Time 1", April 2004 or "Time 2", October 2004 or "Time 3", April 2005 or "Time 4", and October 2005 or "Time 5". A total of 1710 Soldier's records were recorded by the MSFD. Of this number, 684 Soldier's data were collected for at least 3 time points (423 Male and 261 Female).

Figures 1–7 depict the findings from this two year longitudinal study of changes in Soldier's body weight, fatness estimates, and pass/fail status. Figure 1 summarizes mean body weight over five time periods for the entire sample ($n = 684$), men ($n = 423$) and women ($n = 261$), separately. It is evident that there is a general trend for gradual weight gain for the sample, and for men and women over time. These changes are statistically significant ($p < .05$).

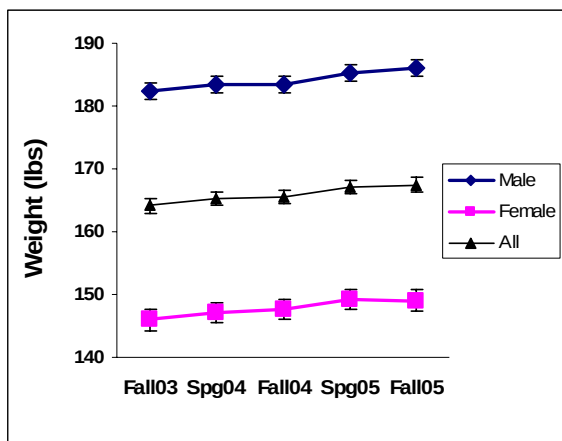


Fig1: Body weight over two years by gender

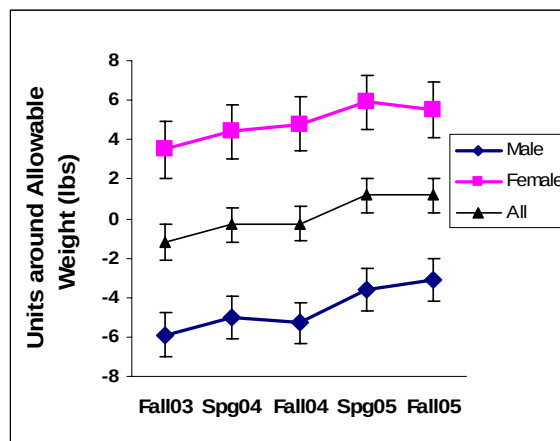


Fig2: Body weight deviation over two years by gender

Figure 2 summarizes the same information, expressed as a deviation from the maximum allowable screening weight. This approach corrects for gender and changes in age. Over the course of two years, women averaged between 3.5 - 5.5 lbs over their screening table weight, while men averaged between 3 - 6 lbs under their screening table weight. Over time, males on average approached their screening table weight while women continue to exceed their weight by a greater number of pounds.

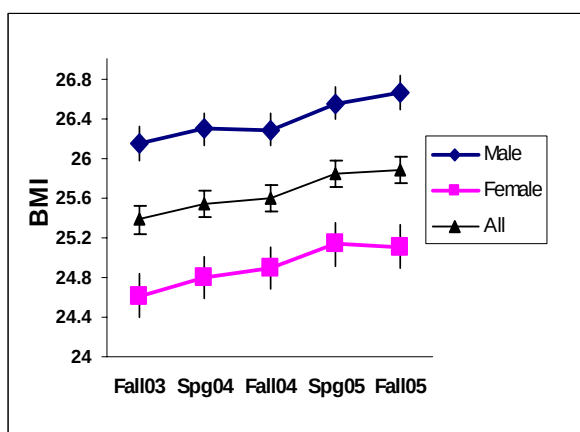


Fig3: BMI over two years by gender

Figure 3 summarizes the same information, expressed as body mass index ($BMI = kg/m^2$) on average increased over two years for both men and women. The women were approaching the “overweight” BMI (25 - 29.9) while the men could be classified as “overweight” by conventional

standards for civilians. As shown in Figures 2 and 3, the sample gradually increased body weight and BMI.

Figure 4 summarizes the proportion of men who: 1) were not taped because they did not exceed the maximum allowable screening weight and therefore passed 2) were taped, and failed 3) were taped and passed, and 4) those who should have been taped because they exceeded the maximum allowable table weight, but were not taped (possible fail). A steady trend of about 65% of males were not taped, while more men were taped over time but passing, and between 4% to 8% were taped and failed.

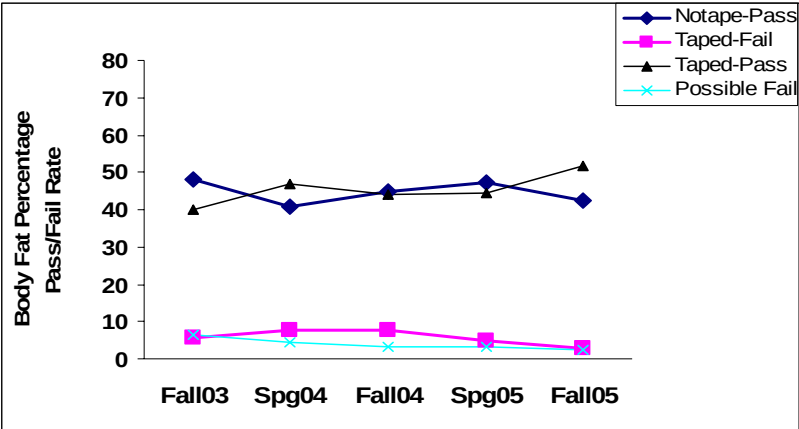


Fig4: Male body fat percent measurement percentage and pass/fail rate

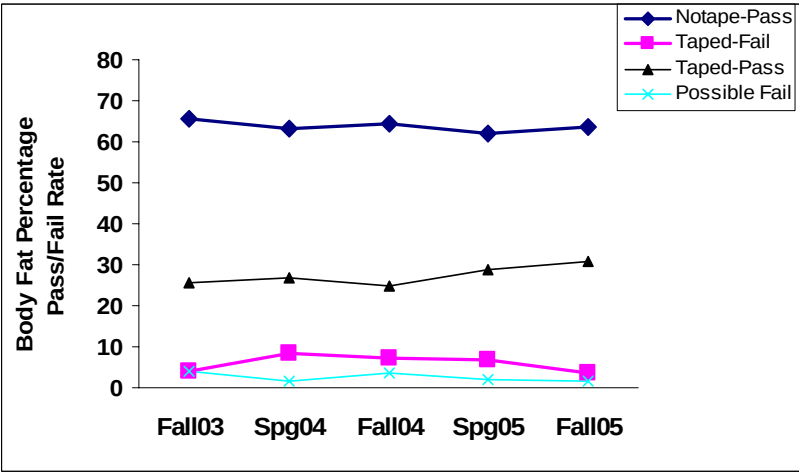


Fig5: Female body fat percent measurement percentage and pass/fail rate

Figure 5 summarizes the same data for women. When compared to Figure 4, Figure 5 shows a higher percent of women than men were taped, but the percent of failures was similar to the men. The observation that more women than men are taped is consistent with the data shown in Figure 2 that indicates that on average women exceed their maximum allowable screening weight, but men, on average, are below that criterion. A positive finding from the findings, illustrated in Figures 4 and 5, is that the failure rate for body fatness is consistently below 10%, even when considering the “possible failure” category as failing.

Figure 6 summarizes mean body fat percent estimates for men categorized as those who passed versus failed, i.e., fatness exceeded criterion. Overall, the two groups differed and the overfat (fail) group had approximately 5% to 6% extra fat tissue in comparison to men who were taped but failed.

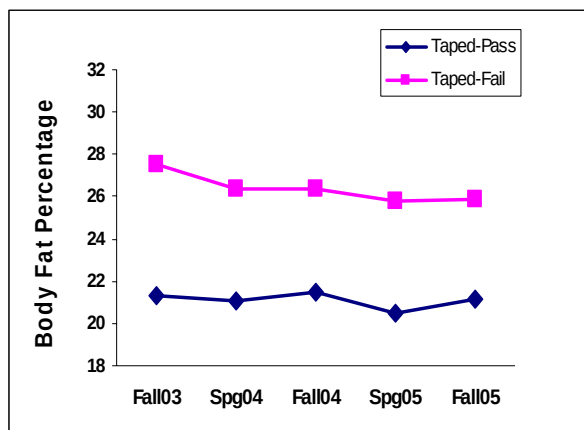


Fig6: Male body fat percent means over time.

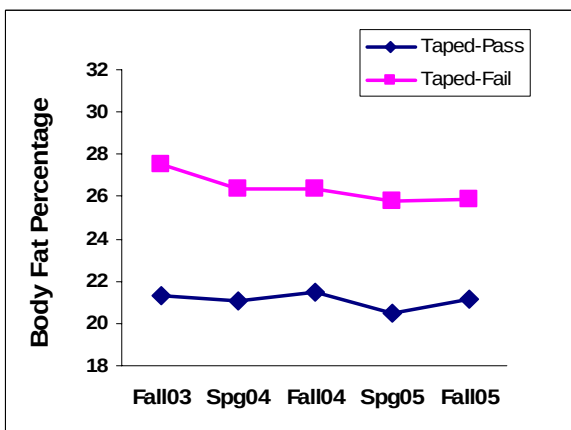


Fig7: Female body fat percent means over time.

Figure 7 depicts the mean fatness estimates for women. Those who failed (exceeded the fatness criterion) had approximately 5% to 8% excess body fat in comparison to those who failed. A positive finding was that fatness estimated of male and female Soldiers who failed, were lower in Fall 2005 in comparison to Fall 2003. Collectively, these data illustrate the potential power of

computerized database for capturing and summarizing population trends of body weight, and fatness. These data will be presented in the planned paper and served as the focus of the presentation at NAASO in 2005.

Conclusions:

After beta and pilot testing by both Soldiers and civilians, and making enhancements based on the critiques, The H.E.A.L.T.H. website is nearing completion and will be launched July 24, 2006. The MSFD/FusionNet collaboration is still anticipated but due to uncertainty, the data from Alpha, Bravo, and Dentac will continue to be collected via the MSFD with supplement self report data coming from the website. The timeline what will guide the implementation of the H.E.A.L.T.H. intervention is shown in Figure 8.

<u>Measurement Periods</u>						
<u>Baseline 1</u>	<u>Baseline 2</u>	<u>Baseline 3</u>	<u>Time 1</u>	<u>Time 2</u>	<u>Time 3</u>	<u>Time 4</u>
Spring 05	Fall 05	Spring 06	Fall 06	Spring 07	Fall 07	Spring 08

➤ Initiation of H.E.A.L.T.H. intervention (July 2006)

Data collection will continue for two years after implementation to test the efficacy of the intervention. To complete the project, an extra 6 months will be needed from the original timeframe. The data collection for the project should be concluded in the Spring of 2008. No additional costs will be required to complete the project on this schedule.

References

Allen, H. R., Han, H., Martin, C., Stewart, T., & Williamson, D. (2005, October). *Military Services Fitness Database (MSFD): A Computerized Tracking System for Body Weight, Fatness, and Fitness Data of Soldiers*. Poster session presented at NAASO's Annual Scientific Meeting, Vancouver, BC.

U.S. Department of the Army (1987). *The Army Weight Control Program* (Army Regulation 600-9). Washington, DC: Government Printing Office.

U.S. Department of the Army (1992). *Physical Fitness Training* (Army Field Manual 21-20). Washington, DC: Government Printing Office.

Appendix A

Data Potentially Collected from H.E.A.L.T.H

Collected by Algorithms and Tools

Gender
Age
Height
Weight
Body fat
TEE
Physical activity level
Physical activity prescription
Physical activity completed
Meal plan
Self-monitoring of food intake
Self-monitoring of physical activity

Tracking over Time

Weight
BMI
Body fat
Meal plan
Meal monitoring
Physical activity monitoring

Survey

User Satisfaction Survey

Collect Throughout website

Personal

Heredity for overweight (weight status of parents, siblings, grandparents)
Smoking history
Drinking history
Country of birth
Country where raised
Race- ethnicity

Education

Education level

Work

Combat, Combat Support, or Combat Service Support
Rank
Physical activity at work

Lifestyles

Leisure time

Number of hours of TV per week

Use of computer per week

Weight History

Weight measurement routines

Weight history- previous losses and gains

Number of times lost over 10lb, 20lb?

Army and Weight information

APFT pass/fail- a field for total score and or a field for pass/fail

If on army weight control program

Personal weight goal (and time they want to achieve it)

Number of years in army

Weight when joined army

Number of dieting attempts since joined the army

In Special Interest or family section

BMA- Body image interactive assessment- need to load application on site

Utilization Collection

Pages visited

Number of visits

Time spent on site per visit

Quiz results

Relationships

Logins correlated with BMI and/or weight over time

Number of weight updates correlated with weight loss over time

Self monitoring of food intake correlated with weight loss over time

Self-monitoring of physical activity correlated with weight loss over time

Preparing a meal plan correlated with weight loss over time

Preparing a physical activity plan correlated with weight loss over time

Setting behavioral goals correlated with weight loss over time

Compliance with behavioral goals correlated with weight loss over time

Data related to prompts

Potential Prompts

Group promotion emails

Site records birthdays

Site prompts update on weight once per week

Site prompts update on physical activity plan once per month

Site provides encouraging messages for weight loss

Site provides encouraging messages for compliance

Appendix B

Promotion and Website Launch Plan

Promotion Plan:

1) MWR events and media already occurring at Ft. Bragg:

- Logo and website URL placed on three different Running Trails brochures totaling 90,000.
- Logo and advertisement in Summer issue of quarterly publication, MWR "In Motion Magazine"; distributed to 40,000 Soldiers

2) MWR sponsored events on base; slated to begin July 2006:

- Place banners in all 11 Ft. Bragg Fitness Facilities, and Sports USA restaurant.
- Place brochures and flyers in Ft. Bragg New Comers Packet for new incoming Soldiers; approximately 200 Soldiers every two weeks
- Post banner at Soldier Support Center
- Place logo and URL on MWR website
- Paraglide Newspaper Ads: ad will run every other week, Thursday through Sunday
- Fayetteville.com and Paraglide website banner ad

3) Events and media occurring at WAMC slated to begin July - August 2006:

- Post posters and flyers in various locations
- WAMC Daily Bulletin: announcement of the launch; runs for 10 days
- WAMC Bi-Monthly Flyer: Hospital Heartbeat Newsletter
- POA Announcement: brief narrative announcing launch; heard while on hold when calling the hospital
- Retiree Appreciation Day: Article in Paraglide (WAMC PAO)
- WAMC NCD Unit Nutrition Educator's Seminars: Quarterly briefings

Website Launch Plan:

1) July 24th: WAMC and Ft. Bragg "Media Blitz"

- Interview with Paraglide, WAMC PAO
- Photo-op with WAMC and Ft. Bragg VIPS
- Live interaction with volunteer Soldiers as they log into H.E.A.L.T.H
- Meeting with MWR

2) July 25th: Army H.E.A.L.T.H. Executive Committee Meeting

Appendix C Examples of Website Pages

HOME PAGE



Appendix C (continued)

“my Calendar”

ARMY

H.E.A.L.T.H.

Healthy Eating Activity Lifestyle Training Headquarters



[Home](#) | [my H.E.A.L.T.H.](#) | [Army Weight Standards](#) | [Nutrition](#) | [Fitness](#) | [Contributors](#) | [Help](#)

Welcome:
testredirect
[Log-Out](#)

my H.E.A.L.T.H. Tools

Nutrition/Fitness
[my H.E.A.L.T.H.](#)
[my Calendar](#)
[my Meal Plan](#)
[my Workout Plan](#)

Worksheets
[Target Heart Rate Calculator](#)
[Strength Workout Card](#)
[Cardio Workout Card](#)
[Problem Solving Worksheet](#)
[Printable Daily Food Log Sheet](#)
[Behavioral Contracts](#)

Links
[JumpStart](#)

Reports
[Weight History](#)
[Calorie History](#)

my Calendar

my Calendar is a month at a glance view of your meal and workout planning. Select a link in the calendar to get a detailed view of your plans for any day you need to see.

Sun	Mon	Tue	Wed	Thu	Fri	Sat
30	1	2 Menu Work Out	3 Menu Work Out	4 Menu	5 Menu Work Out	6 Work Out
7	8 Menu Work Out	9	10 Work Out	11	12 Work Out	13
14 Menu	15 Menu Work Out	16 Work Out	17	18	19 Work Out	20 Work Out
21	22 Menu Work Out	23 Menu Work Out	24 Menu	25 Menu Work Out	26 Menu	27 Work Out
28	29	30	31	1	2	3

To reach your goal, it is recommended that you work out at least 5 days a week.

To lose 1 pound per week you should try to consume 1,400 kilocalories this day.

Website Privacy Policy | © 2006 Pennington Biomedical Research Center

Appendix C (continued)

“my H.E.A.L.T.H.”

ARMY

H.E.A.L.T.H.

Healthy Eating Activity Lifestyle Training Headquarters

[Home](#) | [my H.E.A.L.T.H.](#) | [Army Weight Standards](#) | [Nutrition](#) | [Fitness](#) | [Contributors](#) | [Help](#)

Welcome:

testredirect

[Log-Out](#)

my H.E.A.L.T.H. Tools

Nutrition/Fitness

[my H.E.A.L.T.H.](#)
[my Calendar](#)
[my Meal Plan](#)
[my Workout Plan](#)

Worksheets

[Target Heart Rate Calculator](#)
[Strength Workout Card](#)
[Cardio Workout Card](#)
[Problem Solving Worksheet](#)
[Printable Daily Food Log Sheet](#)
[Behavioral Contracts](#)

Links

[JumpStart](#)

Reports

[Weight History](#)
[Calorie History](#)

Monday, May 22, 2006

my H.E.A.L.T.H.

Quick View Meal Plan

Breakfast

- Cereal, ready-to-eat, NFS - 1 cup
- Milk, calcium fortified, cow's, fluid, skim or nonfat - 1 fl oz
- Raisins - 1 miniature box (.5 oz)
- Orange juice, freshly squeezed - 1 fl oz

Lunch

- Spaghetti with tomato sauce and chicken or turkey - 1 cup
- Roll, whole wheat, NS as to 100% - 1 pan, dinner, or small roll (2" square, 2" high)
- Broccoli, cooked, from fresh, fat not added in cooking - 1 cup, fresh, cut stalks
- Margarine, whipped, tub, salted - 1 tablespoon

Dinner

- Tortellini, cheese-filled, no sauce - 1 cup
- Caesar salad (with romaine) - 1 cup
- Caesar dressing, low-calorie - 1 tablespoon
- Corn, yellow, cooked, from canned, fat not added in cooking - 1 cup

[Click here to see your full meal plan!](#)

Lifestyle Goals:

[Change Goals!](#)

- Drink 8 glasses of water per day
- Get a workout buddy
- Keep a food log

[Update your weight in 5 days.](#)

Quick View Workout Plan

You have no workout activities scheduled for today.

[Click here to see your full workout plan!](#)

Website Privacy Policy | © 2006 Pennington Biomedical Research Center

20

Appendix C (continued)

“my Meal Plan”

ARMY
H.E.A.L.T.H.
Healthy Eating Activity Lifestyle Training Headquarters

[Home](#) | [my H.E.A.L.T.H.](#) | [Army Weight Standards](#) | [Nutrition](#) | [Fitness](#) | [Contributors](#) | [Help](#)

Welcome:
testredirect
[Log-Out](#)

my H.E.A.L.T.H. Tools

Nutrition/Fitness
[my H.E.A.L.T.H.](#)
[my Calendar](#)
[my Meal Plan](#)
[my Workout Plan](#)

Worksheets
[Target Heart Rate Calculator](#)
[Strength Workout Card](#)
[Cardio Workout Card](#)
[Problem Solving Worksheet](#)
[Printable Daily Food Log Sheet](#)
[Behavioral Contracts](#)

Links
[JumpStart](#)

Reports
[Weight History](#)
[Calorie History](#)

Monday, May 22, 2006

my Meal Plan

[Print](#) | [Copy This Plan](#) | [Create My Own Meal Plan](#)

			Kcals	Pro(g)	Fat(g)	Carbs (g)
Breakfast						
Cereal, ready-to-eat, NFS	1 cup	✗	141	3.2	0.8	32.9
Milk, calcium fortified, cow's, fluid, skim or nonfat	8x[1 fl oz]	✗	87	8.4	0.4	12.0
Raisins	1 miniature box (.5 oz)	✗	42	0.5	0.1	11.1
Orange juice, freshly squeezed	6x[1 fl oz]	✗	84	1.3	0.4	19.3
Breakfast Totals			353	13.3	1.7	75.3
Lunch						
Spaghetti with tomato sauce and chicken or turkey	1 cup	✗	267	18.5	5.9	33.7
Roll, whole wheat, NS as to 100%	1 pan, dinner, or small roll (2" square, 2" high)	✗	76	2.4	1.8	12.9
Broccoli, cooked, from fresh, fat not added in cooking	0.5x[1 cup, fresh, cut stalks]	✗	22	2.3	0.3	3.9
Margarine, whipped, tub, salted	0.5x[1 tablespoon]	✗	34	0.0	3.8	0.0
Lunch Totals			399	23.3	11.7	50.6
Dinner						
Tortellini, cheese-filled, no sauce	0.5x[1 cup]	✗	177	7.8	4.2	27.1
Caesar salad (with romaine)	1 cup	✗	167	5.4	13.9	6.1
Caesar dressing, low-calorie	1.5x[1 tablespoon]	✗	25	0.1	1.0	4.2
Corn, yellow, cooked, from canned, fat not added in cooking	0.67x[1 cup]	✗	89	2.9	1.1	20.4
Dinner Totals			458	16.2	20.2	57.8
Snack						
Banana, raw	1 medium (7" to 7-7/8" long)	✗	109	1.2	0.6	27.6
Peanut butter	1 tablespoon	✗	95	4.0	8.2	3.1
Snack Totals			203	5.2	8.7	30.7
Total			1,414	58.0	42.3	214.4

To **lose 1 pound per week** you should try to consume **1,400** kilocalories this day. You should consume **14 fewer kilocalories** to reach your prescribed kilocalorie level.

Website Privacy Policy | © 2006 Pennington Biomedical Research Center

Appendix C (continued)

“my Weight”

ARMY

H.E.A.L.T.H.

Healthy Eating Activity Lifestyle Training Headquarters



[Home](#) | [my H.E.A.L.T.H.](#) | [Army Weight Standards](#) | [Nutrition](#) | [Fitness](#) | [Contributors](#) | [Help](#)

Welcome:
testredirect
[Log-Out](#)

my H.E.A.L.T.H. Tools

Nutrition/Fitness
[my H.E.A.L.T.H.](#)
[my Calendar](#)
[my Meal Plan](#)
[my Workout Plan](#)

Worksheets
[Target Heart Rate Calculator](#)
[Strength Workout Card](#)
[Cardio Workout Card](#)
[Problem Solving Worksheet](#)
[Printable Daily Food Log Sheet](#)
[Behavioral Contracts](#)

Links
[JumpStart](#)

Reports
[Weight History](#)
[Calorie History](#)

my Weight

Keep track of your progress by entering your new weight each week.

Last recorded weight: 175 lbs on May 15

My weight: lbs

My percent body fat:
[I want to enter my circumference measurements to compute my % body fat.](#)
[I already know my % body fat & want to enter it.](#)

Your current height is	5 feet 6.00 inches
Your current weight is	175 lbs
Your AR600-9 Screening Table Weight is	150 lbs
The AR600-9 recommended weight is	143 lbs
To maintain your current weight, you need to consume	1,900 kilocalories per day

Your current weight is above your Screening Table Weight.

143 lbs150 lbs

Your Weight 

Website Privacy Policy | © 2006 Pennington Biomedical Research Center

Appendix C (continued)

Workout planner

Microsoft Internet Explorer
Daily Exercise Schedule - Microsoft Internet Explorer

View Pictures View Descriptions View Pictures & Descriptions Print

5/24/2006

Strength Workouts

Choose from these alternatives if you don't like the given exercise Update

Chest Press with Dumbbells on Stability Ball - Alternate Arm

Description:
Sit on the stability ball with dumbbells in your hands. Slowly roll onto the ball until your shoulder blades are on the middle of the ball. Raise your hips up with your feet shoulder width apart. Start with dumbbells in hands, elbows bent, at shoulder level. Extend one dumbbell straight up above your chest while keeping the other dumbbell at shoulder level. Slowly lower the extended arm while extending the opposite arm. Repeat for the desired number of repetitions. 1 repetition = performing the exercise once on the right and once on the left.

Reps: 8-12 reps with each arm

Benefits: Strengthening of pectorals



Appendix D

Summary of Travel

6/05	Ft. Bragg, NC	Ray Allen	- Complete data entry software for July PT data entry trip.
7/05	Ft. Bragg, NC	Ray Allen Carolyn Brinkley Danielle Bellotte Sean Marshall	- Enter Army Physical Fitness Test Scorecard data obtained from XVIII Airborne Corps units into PBRC database (PTCard). - Discuss ability to link the PTCARD database with XVIII Airborne Corps G6 FusionNet database using encrypted unique identifier (last 4 of SSN and initials of first and last name) with SGT Parris. - Meet with newly assigned WAMC NCD staff regarding H.E.A.L.T.H. - Briefing to the XVIII Airborne Corps Acting Command Sergeant Major by 1SG (RET) Robin Barnes, Health Promotion Specialist (PBRC).
9/05	Ft. Bragg, NC	Ray Allen Carolyn Brinkley	- Launch the H.E.A.L.T.H. 'Jumpstart' pilot test in collaboration with NCD staff. - Outline guidance for second XVIII Airborne Corps APFT card tasking (base line data point #3). - Determine status of FusionNet. - Finalize plans for dissemination of environmental promotional plan. - Prepare upcoming Army Executive Committee Meeting.
10/05	Boston, MA	Executive Committee	Executive Committee Meeting- to update the Executive Committee of the progress made on H.E.A.L.T.H.
11/05	Ft. Bragg, NC	Ray Allen Carolyn Brinkley	- Finalize tasking to XVIII Airborne Corps to obtain APFT data from 1 July 2005 – 31 December 2005 via hard or electronic copy. - Finalize purchase order with MWR and develop additional concepts for advertisement of H.E.A.L.T.H. - Debrief NCD staff regarding the H.E.A.L.T.H. 'Jumpstart' pilot project. - Review NCD Beta test of H.E.A.L.T.H.
12/05	Ft. Bragg, NC	Ray Allen Carolyn Brinkley Tiffany Stewart	- Reviewed website and worked on iterations of it for launch - Met with COL Joanna Reagan, of NCD, and discussed website features/function and how we could integrate it into Weigh To Stay once study was launched.