

The seal of the Defense Health Board is a circular emblem. It features a central figure of a caduceus (a staff with two snakes and wings) superimposed on a globe. The globe is light blue and green. The entire emblem is enclosed in a purple circular border. The word "DEFENSE" is written in white capital letters along the top arc of the border, and "HEALTH BOARD" is written along the bottom arc. Two white stars are positioned on the left and right sides of the border.

**Decision Brief :**  
**Obesity/Overweight in the Military**

**Dennis S. O' Leary, MD**

Defense Health Board  
November 18, 2013



# Overview

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- Problem Statement
- Terms of Reference
- Membership
- Timeline
- August 2013 Decision Brief Outcomes
- Structure of the Written Report
- Substantive Changes to the Report
- Findings & Recommendations



# Problem Statement

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- Consistent with national trends, rates of overweight and obesity within the U.S. military population also have increased over time, although rates of overweight have leveled off in recent years.
- Excessive weight and body fat disqualify some otherwise qualified individuals from military Service, preventing them from serving their country in a military capacity.
- Excessive weight and body fat among the Active Duty, National Guard, and Reserve populations reduces overall force fitness and readiness.



# Problem Statement (continued)

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- Data from 2007 show that the Department spent nearly \$1.1 billion annually treating obesity-related illness for Service members and their families.
- Children of parents who serve are likely to volunteer for Service themselves. As this cohort will be cared for through the Military Health System, it is important that efforts be made to ensure healthy weight not only for reasons of health but also to help support force readiness in the future.



# Terms of Reference

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April 20, 2012: Acting Under Secretary of Defense for Personnel and Readiness (USD P&R) endorsed a request by the Deputy Surgeon General of the Air Force that the DHB examine:

- 1) The effects of national trends in overweight and obesity on recruitment and retention of military personnel;
- 2) Best practices for maintaining healthy weight in Service members;
- 3) Optimal strategies for addressing overweight and obesity in DoD dependents and retirees; and
- 4) Strategies and best practices for ensuring that children of military personnel specifically, and the overall population more generally, achieve healthy weight.



# Membership

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The following DHB members participated in the investigation:

- Dr. Dennis O’Leary, Lead
- Dr. Eve Higginbotham
- Dr. John Groopman
- Dr. John Baldwin



# Timeline

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**July 2012:** Subset of DHB Members convened to begin investigation.

**September 2012 – May 2013:** Members received briefings from the Services and subject matter experts to inform findings and recommendations.

**May 2013- August 2013:** Members developed draft report, and refined findings and recommendations for the DHB's consideration.

**August 2013:** Members received an initial decision briefing on the draft final report.



# August 2013

## Decision Brief Suggestions

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**Board members requested consideration of the following issues:**

- A. 24-hour access to healthy food and physical fitness facilities on military installations.
- B. A DoD mandate for healthy nutritional standards for on-base food vendors.
- C. Education of potential recruits about healthy weight prior to service.
- D. The importance of good sleep hygiene.
- E. Greater emphasis on a systems approach to achieving healthy weight.

**Vote:**

Unanimous vote to approve the report's 15 recommendations with the provision that the recommendations may be revised prior to finalizing the report.



# Structure of the Written Report

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- Executive Summary
- Introduction
- Recruitment and Accessions
- Current Military Personnel
- DoD Retirees and Beneficiaries
- Children of Military Personnel
- Appendices



# Substantive Revisions to the Report

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**The following changes to the report were made following the August 2013 DHB meeting:**

- Revised Recommendations 4, 5, 9, 11, 12, and 14.
- Added a paragraph regarding the association between good sleep hygiene and maintaining a healthy weight.



# Findings & Recommendations

## Overview

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- Recruiting and Retaining a Fit Force
  - Recommendations 1-4
- Attaining and Maintaining Fitness Among Service Members
  - Recommendations 5-13
- Weight Management Among DoD Dependents
  - Recommendation 14
- Children of Active Duty and Retiree Military Personnel
  - Recommendation 15



# Finding # 1

## 1 of 2

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The Armed Forces have long required that potential recruits meet certain physical fitness standards before being admitted into one of the Services. Accession standards determine fitness for military service following a formalized screening process. The purpose of physical fitness standards for military service has always been to recruit Service members who are able to meet the physical demands of serving. The ability to attract and recruit a fit force from the U.S. population has been a leading concern of several recent reviews. Reflecting overweight and obesity trends in the U.S. population, the proportion of applicants and accessions to the Services who are overweight or obese has been increasing over time.



# Finding # 1

## 2 of 2

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The DHB reviewed the adequacy and appropriateness of current recruitment policies and standards with regard to weight and considered the implications of current trends on future Force requirements. It concludes that, presently, existing recruitment and accessions standards are appropriate and are not posing challenges to recruitment goals in the current environment. However, if recruitment demands increase, meeting recruitment goals could be more difficult, requiring that steps be taken to ensure that those who want to serve are able to meet fitness standards. Future planning requires systematic and regular review of trends in excess weight and body fat, scientific developments, and demographic changes in rates and how they align with regional and national recruitment rates.



# Recommendation # 1

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**There is currently no need to ease accession standards regarding overweight and obesity to meet recruitment targets. However, given the trends in the prevalence of overweight and obesity in the Nation, accession standards should be reassessed every three years to ensure that the ongoing objective of recruiting a fit force is met.**



## Finding # 2

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Despite the adequacy of current standards, lack of data regarding those who are turned away from recruitment centers because of overweight and obesity indicators creates challenges in assessing the actual recruitment losses related to these factors.



## Recommendation # 2

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**The Services should require recruitment centers to collect data regarding the total number of interested citizens applying and the proportion turned away because of an initial determination of unlikelihood to meet height-weight and/or body fat standards.**



## Finding # 3

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Recruiters should maintain a low threshold for determining whether potential recruits meet height and weight standards, and conduct measurements of body fat on a selective basis among recruits. These measurement efforts should not be labor-intensive for the recruiters and should not detract from the overall goal of engaging youth. The results of accessioning more individuals through this pilot project who are overweight according to BMI but meet the standards for body fat percentage should be evaluated against attrition rates.



## Recommendation # 3

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**DoD should launch a pilot project in selected Service recruitment centers to assess the feasibility of training recruiters to calculate body mass index and collect circumference taping measurements (in accordance with the instructions noted in DoD Instruction 1308.3) for potential recruits who appear to be overweight but who may have normal levels of body fat.**



## Finding # 4

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Certain military jobs or specialty areas may require more stringent fitness or body composition standards (e.g., Special Forces) based on differing physical demands, but the DHB does not advocate for easing requirements for any other specialist categories. A key tenet of military service is the need for readiness for any call to duty or action at all times. Specifically, any individual could be called up for deployment in a national security emergency or threat of war. Thus, it is incumbent upon the Services to ensure that even though a job may not typically require a certain level of fitness, Service members must be able to operate in any environment or circumstance and not be limited by physical constraints.



## Recommendation # 4

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The current accession standards of height-weight and/or body fat should be maintained as a minimal requirement for all positions in the military in the interest of ensuring the availability of an agile and responsive fighting force. The Services should be encouraged to **impose stricter\*** standards as needed based on meeting the needs of their missions.

\*Replaced: “continue the practice of raising existing”



## Finding # 5

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It was difficult for the DHB to determine with substantial certainty what portion of military personnel are overweight or obese, although various surveys tend to approximate each other. Data collection on weight varies across DoD population surveys, as do the measures used to indicate overweight and obesity. A more systematic, timely, and uniform methodology would enhance analysis of the adequacy of the fitness of the force. In response to this need, the DoD required the Services to establish an automated data registry. The Military Services Fitness Database was subsequently developed and successfully tested; however, the program was not implemented.



# Recommendation # 5

Revised

DoD should implement **an automated data registry\*** Department-wide, which would document baseline statistics and track **physical fitness**, weight for height and body fat percentages at the individual level over time. Although accession and retention standards differ across the Services, the methods for collecting and recording such data should be uniform.

Added text appears in red

\*Replaced: “Military Services Fitness Database”



## Finding # 6

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In addition to body fat/weight assessments, each Service deploys its own form of physical readiness test. Individuals who do not meet the standards can be involuntarily enrolled in a reconditioning program or discharged from service. Although the fitness requirements for service reasonably can vary among the Services based on mission, strategies for remediation could be standardized based on widely accepted evidence regarding effectiveness.



## Recommendation # 6

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**Although some customization of retention and physical fitness standards is necessary, the Services should, where possible, standardize remediation programs to reduce costs to the Department and ensure that only evidence-based interventions are implemented. Evaluation metrics should be developed prior to the initiation of any program.**



## Finding # 7

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It is widely accepted that weight gain is associated with smoking cessation in the military and elsewhere. This may keep smokers from attempting to quit because of concern about the possible effects on their weight. Evidence shows that ex-smokers weigh more on average than both non-smokers and current smokers, and that smokers weigh less than non-smokers. Although some interventions to prevent weight gain have demonstrated short-term success, there is as yet insufficient evidence regarding programs to prevent weight gain on a long-term basis among those who quit.



# Recommendation # 7

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**DoD should consider the confounding effects of smoking cessation on weight control and maintenance efforts, and develop strategies to mitigate the negative effects on weight associated with smoking cessation efforts.**



# Finding # 8

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DoD already has a number of technology-based programs to assist with weight loss and management. These technologies and applications can make health-related resources more readily accessible and enable Service members to easily track their fitness and progress toward weight loss and/or maintenance. The Defense Health Board was impressed with technology-based programs aimed at fitness and health already in use by the Services and encourages their broader use and evaluation.



# Recommendation # 8

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**DoD should continue to develop and promote technology-based approaches to improved fitness, with the additional aims of enhancing standardization of metrics and facilitating the analyses of effectiveness of such approaches.**



# Finding # 9

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The research literature on \* obesity in military populations reports that the most successful treatment interventions incorporate exercise, healthy eating information, **good sleep hygiene**, behavioral modification, self-monitoring, relapse prevention, and structured follow-up by trained personnel.

Removed “the correlated and treatment of”  
Added text appears in red



# Recommendation # 9

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To ensure personnel are receiving tailored and appropriate guidance regarding weight, DoD should require that **all** military treatment facility personnel receive enhanced training on effective counseling and support approaches to weight management in military patient populations.

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# Finding # 10

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Anecdotal evidence indicates that personnel often experience stigma when assigned to a weight loss remediation program. This can negatively influence their motivation to participate in these programs and their eventual ability to achieve and maintain weight loss goals. The development of Service-specific universal wellness programs applicable to all Service personnel might help mitigate this problem.



# Recommendation # 10

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**DoD should develop strategies to address the stigma often experienced by personnel assigned to weight remediation programs.**



# Finding # 11

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Although local, base-specific, and Service-specific programs and policies across DoD adequately address overweight, obesity, and failure to meet physical fitness standards, most have not been systematically evaluated in a standardized and independent manner. The Healthy Base Initiative, a demonstration project that is assessing 13 select installations, aims to create environments that enable sustainment of healthy lifestyles, using a multi-pronged approach that promotes healthy nutrition, physical activity, and tobacco-free living. This initiative provides an opportunity to develop a program that is based on lessons learned from existing programs while advancing knowledge of effectiveness based on prospectively developed, well-designed metrics.



# Recommendation # 11

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Before launching new **military fitness and nutrition** initiatives and campaigns, DoD should assess the effectiveness of existing campaigns. Future **initiatives\*** should be evidence-based with clear metrics prospectively developed for assessing effectiveness.

Added text appears in red

\*Replaced “campaigns”



## Finding # 12

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Numerous assessments of strategies for preventing overweight and obesity and maintaining healthy weight have endorsed system-based, multi-pronged, multi-leveled approaches. Effective military weight/fat loss programs should mirror approaches found to work in civilian populations, recognizing the unique challenges and opportunities in military populations.



# Recommendation # 12

**Original**

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**DoD should pursue a multi-dimensional, long-term approach to attaining and maintaining appropriate body weight (as defined by the Services' retention standards), with a focus on prevention, to ensure that Service members successfully achieve and sustain a healthy weight.**



# Recommendation # 12

**Revised (1 of 2)**

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**To ensure that Service members successfully achieve *and sustain* a healthy weight, DoD leadership at all levels should aggressively and persistently pursue a multi-dimensional, long-term approach that reflects the Services' retention standards and is consistent with the systems-approach strategies outlined by the Institute of Medicine in 2012 and the National Prevention Strategy of the U.S. Surgeon General.**



# Recommendation # 12

**Revised ( 2 of 2)**

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This requires that the Department take the following actions.

- a) Emphasize a focus on a lifetime course of health for military personnel, addressing all of the variables that influence healthy weight.
- b) Provide 24-hour access to healthy foods, physical fitness programs, and support for military personnel.
- c) Set nutritional standards for food offered through DoD dining facilities and by on-base contract vendors.**
- d) Facilitate access to healthcare providers appropriately trained in health and wellness management.

Added text appears in red



## Finding # 13

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Current data indicate that high rates of overweight and obesity are found in Veteran populations. Weight gain is greatest from the time of discharge from service and in the three years before discharge. Many factors contribute to this phenomenon, including lower levels of energy expenditure without a compensatory decrease in food intake, lack of incentives to manage and control weight, the change in the food environments, and stress or disability related to Service experiences. Discharge from military service creates a window of risk as well as an opportunity to prevent unhealthy weight gain in Veterans.



## Recommendation # 13

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**DoD's discharge/separation process should include a discussion about the potential for weight gain and programs and services available to prevent its occurrence. In particular, personnel diagnosed with PTSD or mental illness should receive appropriate counseling and follow-up services to prevent unhealthy weight gain.**



# Finding # 14

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Recent efforts focused on the growing rates of overweight and obesity in the military community include numerous base-specific campaigns as well as the Healthy Base Initiative. However, the Healthy Base Initiative is a time-limited demonstration project. Thus, it is important to adequately resource and evaluate the effort to determine its effectiveness and potential for expansion of those elements that prove to be successful.

Base-specific as well as DoD-wide programs need to be evidence-based and periodically assessed for effectiveness. The DHB recognizes the challenge of offering programs to such a complex population, one that varies by status, age, demography, Service, location, and provider environment. With so many moving parts, it is critical to maintain a sustained focus on these issues at the Department level, which has the vantage point to view the system in its entirety.



# Recommendation # 14

Revised ( 1 of 3)

**DoD should consistently embrace a systems approach in addressing overweight and obesity in its beneficiary and retiree populations, consistent with the strategies outlined by the Institute of Medicine in 2012 and the National Prevention Strategy of the U.S. Surgeon General.\* This requires that the Department take actions to:**

- a) **Emphasize a focus on a lifetime course of health for dependents and retirees, addressing all of the variables that influence healthy weight;**

\*New text indicated in red.



# Recommendation # 14

**Revised** ( 2 of 3)

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- b) Provide 24-hour\*** access to healthy foods, physical fitness programs, and support for military families living on or near military facilities;
- c) Facilitate access to healthcare providers appropriately trained in health and wellness management;**
- d) Promote seamless coordination of care as retirees transition from the DoD health system to the VA health systems, with a focus on prevention;**

**\*Replaced: “Improve”**



# Recommendation # 14

**Revised ( 3 of 3)**

- e) **Develop and sustain Department-level quality assessment and improvement activities that address large-scale population-based programs focused on health and wellness, particularly weight management; and**
- f) **Identify and prioritize interventions for those populations at greatest risk for unhealthy weight, for example, young military families lacking sufficient access to healthy foods or affordable and accessible weight management programs.**
- g) **Set nutritional standards for food offered through DoD dining facilities and by on-base contract vendors.**
- h) **Ensure that the physical environment of military installations supports the principles of a healthy lifestyle, such as bicycle paths and walkways.**

Added text appears in red



# Finding # 15

## 1 of 2

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Youth with a parent or parents who served in the military are twice as likely to consider military service as are children of those with no record of military service. As this cohort will be cared for through the Military Health System and be the recipient of installation-based services, such as childcare and child development centers, it is important that efforts be made to ensure healthy weight for these children not only for reasons of health but also to help support force readiness in the future.



# Finding # 15

## 2 of 2

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The Department is to be commended for efforts currently under way to address childhood obesity through the efforts of the Childhood Obesity Working Group, work tasked to the Clearinghouse for Military Family Readiness, and the Healthy Base Initiative. These activities will contribute to an increased focus on the health needs of children of Active Duty and retired military personnel receiving care and services through the military health system. However, efforts should go beyond the clinic and reach children in their communities on and around military installations.



## Recommendation # 15

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**In its ongoing efforts to improve the health of children and youth in the military community, DoD should, whenever possible, adopt best practices from childhood obesity programs developed and tested in the civilian population, and undertake rigorous evaluation of these best practices in military populations. In addition, DoD should review and develop opportunities to provide children of dependents opportunities for exposure to and education in healthy lifestyles, with a focus on nutrition and physical fitness.**



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**Questions?**