



# MISSION: READINESS

## MILITARY LEADERS FOR KIDS

# Unfit to Fight

## A Report on Pennsylvania

MISSION: READINESS is the organization of over 300 retired generals, admirals and other senior military leaders who support policies and investments that will help young Americans succeed in school and later in life, thus enabling more young adults to join the military if they choose to do so.

**Summary:** The retired generals, admirals and other senior military leaders of MISSION: READINESS are sounding the alarm about the future national security consequences of America's obesity epidemic. Currently, about one in four 17- to 24-year-olds in the United States is too overweight to serve in the military.

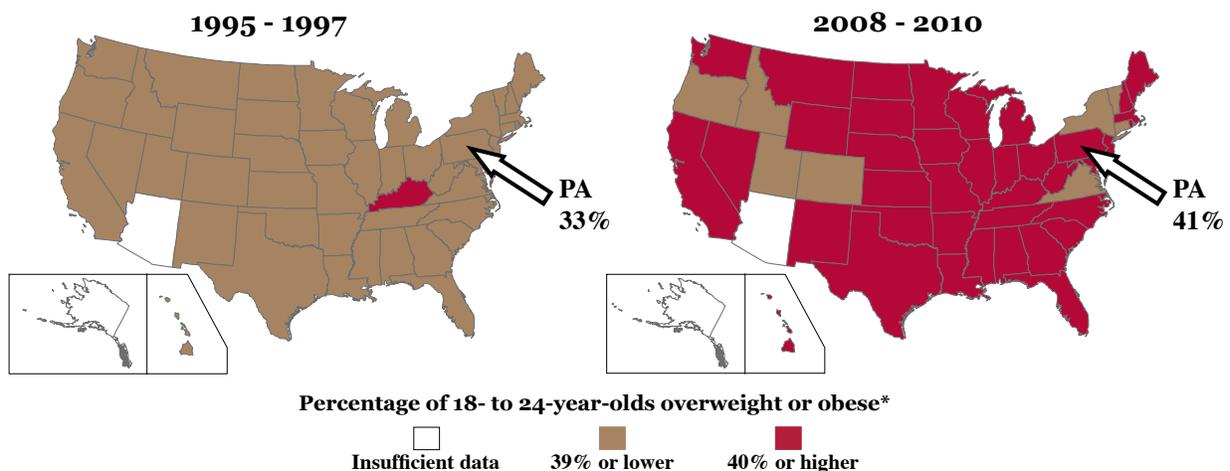
Obesity rates among children have tripled within three decades, threatening not only the overall health of America, but also the future strength of our military. The Centers for Disease Control and Prevention (CDC), using a wider definition of who is overweight than the military uses, concluded that over four out of ten young adults in Pennsylvania are either overweight or obese. According to an analysis of the data from the CDC during the thirteen-year period ending in 2010, the number of states with 40 percent or more young adults considered overweight or obese has risen from one state to 40. During that same period, Pennsylvania went from 33 percent of its young adults being overweight or obese to 41 percent – up by

almost a quarter. Poor physical fitness not only prevents individuals from enlisting in the military, it also contributes to increased injuries in our current force. In total, obesity-related problems of military personnel and their families cost the government over \$1 billion annually.

Federal and state action is needed to ensure that our schools are partnering with parents and communities in supporting policies that will turn the tide of childhood obesity by promoting lifelong healthy living – including establishing and reinforcing better nutrition and promoting more daily physical activity among our youth. Only 20 percent of high school seniors in Pennsylvania participate in daily physical education at school.

The retired generals, admirals and other senior military leaders of MISSION: READINESS believe that we can and must do more so that our child obesity crisis does not become more of a national security crisis.

**Over a thirteen-year period, the number of states with 40 percent or more of their young adults who were overweight or obese went from 1 to 40.**



\*Source: Centers for Disease Control and Prevention (CDC), Behavioral Risk Factor Surveillance System. If states were missing data for one or more years, data from 1998, 1999, 2005, 2006 or 2007 were used to generate a pooled average for three years in order to have large enough samples. Only states with enough data in both periods were included. Alaska did not have data for either period and Arizona did not have data for the later period.



## America's Military Leaders are Again Sounding the Alarm

Military leaders have spoken out before to make sure America's youth had proper nutrition for a healthy start in life. During World War II, the military discovered that at least 40 percent of rejected recruits were turned away for reasons related to poor nutrition.<sup>1</sup> The National School Lunch Program, established in 1946, helped improve the health and well-being of our nation by making sure children across America had access to healthier meals at school.

A new threat: surveys done for the Army and for the Centers for Disease Control and Prevention (CDC) show that about one in four young Americans is too heavy to join the military.<sup>2</sup>

The military makes allowances for young people who have extra muscle, not fat, or those who are close to the desired weight and can lose some of their excess weight in boot camp. So some potential recruits who fall into the overweight category may still qualify using the simple weight to height ratio – the Body Mass Index (BMI) – routinely used in national and state surveys. Still, it is alarming that, using those more typical cutoffs, the CDC's Behavioral Risk Factor Surveillance System found that 41 percent of young adults 18– to 24– years–old in Pennsylvania were either overweight or obese.<sup>3</sup> That equals over 474,000 young adults in the state. To be within the healthy weight range, a BMI of under 25, those young people would have to collectively lose over 16 million total pounds.<sup>4</sup> That is the equivalent of 134 Abrams tanks.<sup>5</sup>

**“Obesity is a national security issue. One in four young adults is now too overweight to join the military. As a result, military service is out of reach for millions of young Americans who otherwise might qualify. We need to reverse this trend.”**

– Lieutenant General Dennis L. Benchoff,  
US Army (Ret.)  
Former Chief of Staff,  
US Army Recruiting Command  
Adjunct Professor,  
Harrisburg Area Community College

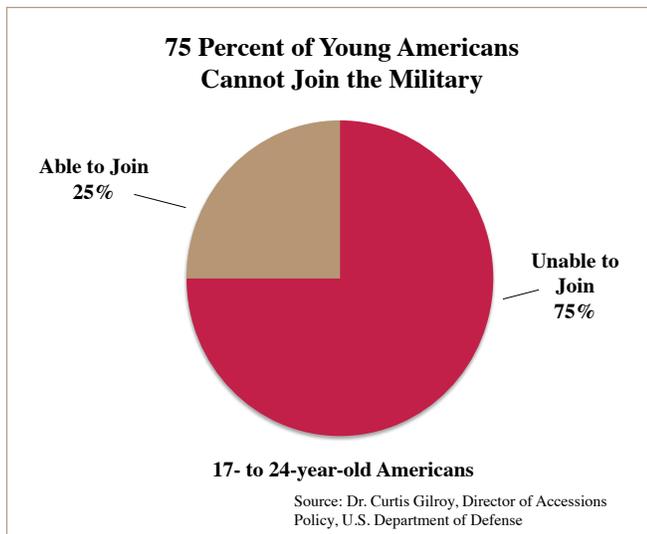


By any measure—the military's or various CDC surveys—it is beyond question that too many young people in Pennsylvania are overweight or obese. Within just a thirteen-year period ending in 2010, the number of states reporting that 40 percent or more of their young adults were overweight or obese went from just one state to 40.<sup>6</sup> [See the United States maps of CDC data on page 1.]

American childhood obesity rates have accelerated faster than adult obesity rates. Within 30 years, while adult rates of obesity doubled, childhood obesity rates tripled.<sup>7</sup> The Journal of the American Dietetic Association reported “almost one-third of American children – nearly 23 million children and teens – are either overweight or obese.”<sup>8</sup> Largely because of this epidemic of obesity, some scientists have warned that today's children may be the first generation of Americans to live shorter lives than their parents.<sup>9</sup>

When weight problems are combined with educational deficits, criminal records and other disqualifiers such as asthma or drug abuse, 75 percent of Americans 17- to 24-years-old are unable to join the military for one or more reasons.<sup>10</sup> A quarter of young Americans are currently not graduating from high school on time, and nearly one in four of those who do graduate and try to join the Army are not able to score well enough on the military's entrance exam.<sup>11</sup> Another ten percent of young Americans cannot join the military because of their criminal records.<sup>12</sup>

The military will need to have more fit young men and women if it is going to keep finding enough recruits with the excellent qualifications needed for a modern military.



The severe recession has temporarily reduced the challenges the nation's 15,000 military recruiters face in meeting their quotas for signing up qualified individuals.<sup>13</sup> But recruiters remember the recent past when they could not sign up enough young men and women to meet the nation's military needs, and future conflicts or a recovered economy may well make recruiting a challenge again.<sup>14</sup>

## Increased Injuries Due to Excess Fat or Poor Physical Fitness

When the military could not meet recruitment goals during the Iraq war, Congress increased the number of military recruiters, increased bonuses, and the Army experimented with letting in physically fit recruits who had more excess body fat.<sup>15</sup> The Army found that those overweight recruits were 47 percent more likely to experience a musculoskeletal injury (such as a sprain or stress fracture) and were 83 percent more likely to fail to make it through basic training with their peers – though most did successfully serve.<sup>16</sup> The Army has stopped allowing in those more overweight recruits.

Poor nutrition and a lack of physical exercise does not only limit who can get into the military, it also impacts those who do get in. Recent recruits have had, on average, more muscle mass than past recruits, but they also are carrying more body fat. There are unfit, if not overweight, recruits who can and do enter (the military does not test the physical fitness of recruits until they arrive at boot camp).<sup>17</sup> For example, in one study, 14 percent of new Army male recruits admitted they had not exercised or done any sports in a typical week prior to joining.<sup>18</sup>

Along with inadequate muscle mass, some recruits have low levels of bone density due to lack of exercise, low levels of calcium and/or inadequate access to Vitamin D.<sup>19</sup> We know from military research that less physically fit recruits are more prone to leg and ankle injuries.<sup>20</sup>

Serious and repeated injuries or failure to pass ongoing physical fitness tests during their service can prevent military personnel from being deployed with their unit or even result in their discharge. Of recruits who could not do 11 pushups upon entry, 45 percent did not complete boot camp.

Worse, during combat, soldiers were 79 percent more likely to be evacuated to Germany from Iraq or Afghanistan for serious sprains and stress fractures (musculoskeletal/connective tissue disorders) than for combat injuries.<sup>21</sup> Even very fit soldiers suffer sprains or fractures under combat conditions or during training, but the inadequate nutritional and physical fitness of some of the young men and women showing up for boot camp – along with the quarter who could not join because of their weight – is undeniably a national security issue.

## The Military's Ongoing Costs Due to America's Problems with Weight and Fitness

Unfortunately, the impact of weight problems on the military does not stop with those turned away. Every year, the military discharges over 1,200 first-term enlistees before



**No one blows a whistle to stop the war when a soldier goes down with a sprain or stress fracture. Being overweight and/or having muscles that are not as strong increases the risk of having a sprain or stress fracture.**



**A quarter of medical evacuations from Iraq and Afghanistan are for sprains, stress fractures and other musculoskeletal injuries – more than the 14 percent of evacuations for combat injuries. Being overweight or less fit increases the chances of having a sprain or stress fracture.**

their contracts are up because of weight problems. The military must then recruit and train their replacements at a cost of \$50,000 for each man or woman, thus spending more than \$60 million a year.<sup>22</sup> The additional medical expenses for soldiers on limited duty in the Army because of musculoskeletal injuries, caused in part by less fit or overweight soldiers, add up to half a billion dollars.<sup>23</sup> Another analysis shows that the military pays over \$1 billion per year for treating the obesity-related problems of military personnel and their families under the military's health care system, TRICARE, or the additional cost of treating obesity-related problems directly under the Veterans Administration health care system.<sup>24</sup>

## Schools Can Play an Important Role in Reversing the Epidemic

To avoid becoming obese, the key is to help kids to never put on the extra weight in the first place. Experts at the National Institutes of Health, and others, have concluded that to promote good health, it is recommended that children achieve 60 minutes of moderate-to-vigorous physical activity daily, along with reducing calorie intake from unhealthy, high-calorie foods and beverages. Because children spend so many hours at school and consume up to half of their daily calories from meals at school, experts also maintain that school is a logical partner in this effort to ensure lifelong healthy living in our next generation.<sup>25</sup>

While no one action will be sufficient to turn America's obesity epidemic around, there is solid evidence that real progress is possible from comprehensive efforts to change children's nutrition and exercise habits.

When New York City made a city-wide commitment to decrease obesity, the country's largest school district combined getting junk food out of its schools with other improvements in nutrition, physical activity and child- and parent-education. It found that rates of obesity among its K-8 students dropped by 5.5 percent district-wide in just four years. That included a 24 percent drop in rates of obesity among white 5- to 6-year old students along with significant drops in obesity for young minority children as well – proof that the earlier you start, the better.<sup>26</sup>

Other localities are also beginning to see progress. For example, the school district serving the Matanuska Valley, outside Anchorage, has for a number of years combined

### What elementary schools can do TODAY to get kids active - Recess Matters

Increased physical activity during the school day can be a crucial part of what works to reduce childhood obesity. The experts recommend that children should get 60 minutes of moderate to vigorous physical activity daily, and 30 minutes of that should take place at school to ensure children are becoming active enough each day. A study showed that boys (though not girls) who had the recommended amount of quality, active physical education (PE) time gained significantly less weight than their peers who did not have enough PE.<sup>27</sup>

Convincing schools to increase the quality and quantity of PE for all youth through high school to help them stay fit and control their weight will not happen overnight - especially in a tight economy. In the meantime, there are inexpensive and effective ways to increase physical activity in elementary

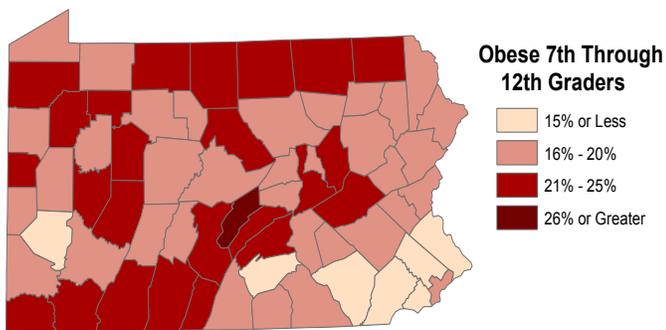
schools today - such as keeping children more active during recess periods through simply introducing play equipment (like hula hoops) and games that encourage everyone to keep active. A study following over 8,000 first graders up to the fifth grade showed that boys and girls who received the recommended recess time as they grew up gained significantly less weight than those who did not have enough recess time.<sup>28</sup>



Although most elementary schools offer some amount of recess time, Pennsylvania does not require schools to do so.



## Percent of Obese 7th Through 12th Graders, 2008-09 School Year



Note: Data is based on Body Mass Index (BMI) for age percentile  $\geq$  95th percentile. Those in this range are categorized as obese.

Source: Pennsylvania Department of Health

comprehensive efforts to improve school nutrition with efforts to increase physical activity, both as part of the regular school day and in the after-school hours through intramural sports and other activities. The district has seen the proportion of children with excess BMI scores drop from 32 percent in 2003 to 26 percent in 2010.

### Crucial Next Steps for Pennsylvania and the Nation

In 2010, Congress passed the Healthy, Hunger-Free Kids Act and the United States Department of Agriculture approved a new plan aimed at improving the nutrition in school breakfasts and lunches. This will help kids replace bad eating habits with healthy ones that can last a lifetime. But to finish the job, Pennsylvania and the U.S. Congress need to ensure that more is done.

At the state and local levels, policymakers should:

1. Continue efforts to improve the nutritional quality of food reaching our children in school by eliminating low-nutrient, high-calorie junk food in vending machines, in stores and at the end of the regular cafeteria lines and ensure our schools have the resources necessary to implement fresher, more nutritious and more desirable meals.
2. Ensure that children are more active at school and outside of school culminating in 60 minutes of moderate-to-vigorous physical activity daily. Progress in getting kids more physically active during the school day can be achieved quickly through a variety of flexible and cost-effective methods including: required active recess periods, elevating the quality and activity level in current Physical Education classes, more opportunities for activity before and after school, and even activity breaks during class can help. Only 20 percent of high

school seniors in Pennsylvania participate in daily physical education at school. Schools that do not have PE for all students should begin making plans for how they can accomplish that. Efforts to get children – and adults – more active should also include ongoing efforts over time to build sidewalks, bike paths and incorporate a range of options to promote more active living into short- and long-term city planning.

3. Local and state policymakers should encourage schools to improve physical education and health curriculums with evidence-based approaches to better equip students with knowledge on lifelong healthy living.

At the national level, Pennsylvania’s members of Congress should:

1. Support efforts to encourage states to develop a standard way of accurately measuring whether PE is offered in their schools, and whether it is active PE with enough moderate- to-vigorous physical activity.
2. Support modest funding for cafeteria equipment and food service worker training to help schools provide healthier meals.
3. Learn from a mistake Congress made last year in ordering the Agriculture Department to continue to treat tomato paste on pizza as a vegetable. Members should rely on the advice of top nutrition experts to help eliminate junk food sold in school cafeterias and vending machines so that our child obesity crisis does not become more of a national security crisis.

A number of initiatives are moving forward at the local, state and national levels to make progress in these areas. They deserve the enthusiastic support of all Pennsylvania policymakers.

#### PE can help academics

These days, the primary argument against PE is that it will cut into essential time for academic subjects. Studies have shown that, on the contrary, physical activity can assist students by enhancing their concentration and attention to their academic work.<sup>29</sup> A 2010 analysis of 14 studies reviewed by the Centers for Disease Control and Prevention looked into whether PE hurt academics. It found that “Increasing or maintaining time dedicated to physical education may help, and does not appear to adversely impact, academic performance.”<sup>30</sup> Other research shows that “more physically active and fit students have better grades and achievement test scores.”<sup>31</sup>



## Conclusion

After World War II, military leaders sounded the alarm about the health of America's children. The President and Congress heeded that warning by enacting the National School Lunch Program. Now, retired military leaders have again sounded the alarm, and Congress responded by passing the new Healthy, Hunger-Free Kids Act. This year, however, Pennsylvania policymakers need to keep this momentum moving forward by continuing to support efforts to help Pennsylvania children eat more healthy foods and be more physically active.

The United States military stands ready to protect the American people, but if we do not help ensure that future generations grow up to be healthy and fit, that will become increasingly difficult. The health of our children and our national security are both at risk. Decisive action by Pennsylvania's state and federal policymakers is crucial if we are to reverse the tripling of childhood obesity.

**“Turning the tide of obesity in this country will not be an easy task. Certainly, there is no single action that we as a nation can take to remedy this problem. However, it is clear that establishing lifelong healthy living habits, including proper nutrition and adequate daily physical activity, in our youth is essential in this battle. Parents AND schools must be partners in this effort.”**

– Brigadier General Michael A. Dunn, MD,  
US Army (Ret.)  
Former Commander,  
Walter Reed Health Care System  
Professor of Medicine,  
University of Pittsburgh School of Medicine



## Endnotes

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- 2 Center of Accessions Research (CAR), United States Army Accessions Command, Fort Knox, KY, data provided by Lt. Colonel Gregory Lamm, Chief, Marketing and Research Analysis Division, February 25, 2010; Cawley, J. & Maclean, J.C. (2010). *Unfit for service: The implications of rising obesity for US Military recruitment*. Cambridge, MA: National Bureau of Economic Research. The Accession Command's estimate that 27 percent of 17- to 24-year-old Americans are too heavy to join is based in part on a survey done for them by the Lewin Group in 2005. The National Bureau of Economic Research (NBER) study is an analysis of data from the National Health and Nutrition Examination Survey (NHANES) study. The NBER analysis looks at eligibility rates for males and females based on BMI and body fat and exclusion criteria for the different services. Based on the NBER analysis, we conclude that approximately 23 percent of adults eligible by age would not be able to join the Army because of excess body fat. Taking both studies into account, the NBER analysis of NHANES data and the Accessions Command's analysis, we conclude that approximately one quarter of young Americans would be too heavy to join the military if they chose to do so.
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