



Too Fat to Fight

Retired Military Leaders Want
Junk Food Out of America's Schools

A Report by



MISSION: READINESS
MILITARY LEADERS FOR KIDS



A Message from America's Retired Generals, Admirals and Civilian Military Leaders:

As retired Generals, Admirals, and other senior leaders of the United States Armed Forces, we know firsthand that national security must be America's top priority.

Our organization recently released a report citing Department of Defense data indicating that an alarming 75 percent of all young Americans 17 to 24 years of age are unable to join the military because they failed to graduate from high school, have criminal records, or are physically unfit.

Being overweight or obese turns out to be the leading medical reason why applicants fail to qualify for military service. Today, otherwise excellent recruit prospects, some of them with generations of sterling military service in their family history, are being turned away because they are just too overweight.

We have witnessed countless acts of bravery and courage during our time in the Armed Forces. We are deeply proud of the talent and commitment of the young men and women in uniform. Our standards are high because we clearly cannot have people in our command who are not up to the job. Too many lives depend on it.

To reduce America's obesity rates we must start with the basics. In addition to exercise, we know that maintaining a balanced diet is key to long-term health and fitness. We also know that the childhood years are critical to the formation of sound eating habits. Millions of children buy breakfast, lunch and snacks in school every day. Properly managed, the school environment can be instrumental in fostering healthful eating habits that will last a lifetime.

We are calling on Congress to pass new child nutrition legislation that would (a) get the junk food out of our schools; (b) support increased funding to improve nutritional standards and the quality of meals served in schools; and (c) provide more children access to effective programs that cut obesity.

If we don't take steps now to build a strong, healthy foundation for our young people, then it won't just be our military that pays the price – our nation as a whole will suffer also.

Very Respectfully,

Executive Advisory Council

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Sergeant Major of the Army Reserve Michele S. Jones (Ret.)
Master Chief Petty Officer of the Coast Guard Vincent W. Patton, III (Ret.)
Sergeant Major of the Army Jack L. Tilley (Ret.)

Civilian Leadership

Former Secretary of the Navy John H. Dalton
Former Under Secretary of the Army Joe R. Reeder



Too Fat to Fight

Retired Military Leaders Want Junk Food Out of America's Schools

Summary

MISSION: READINESS, an organization of retired senior military leaders, is warning Congress that at least nine million 17- to 24-year-olds in the United States are too fat to serve in the military. That is 27 percent of all young adults. Obesity rates among children and young adults have increased so dramatically that they threaten not only the overall health of America but also the future strength of our military. The group is calling on Congress to take immediate steps to remove junk food and any remaining high-calorie beverages from our schools, noting that these products are major contributors to childhood obesity.

The report cites a new analysis of data from the Centers for Disease Control and Prevention (CDC) showing an alarming increase in obesity rates among young adults across the country. During the past decade, the number of states with 40 percent of young adults considered by the CDC to be overweight or obese has risen from one state to 39. In three states – Kentucky, Alabama and Mississippi – more than half of young adults are overweight.

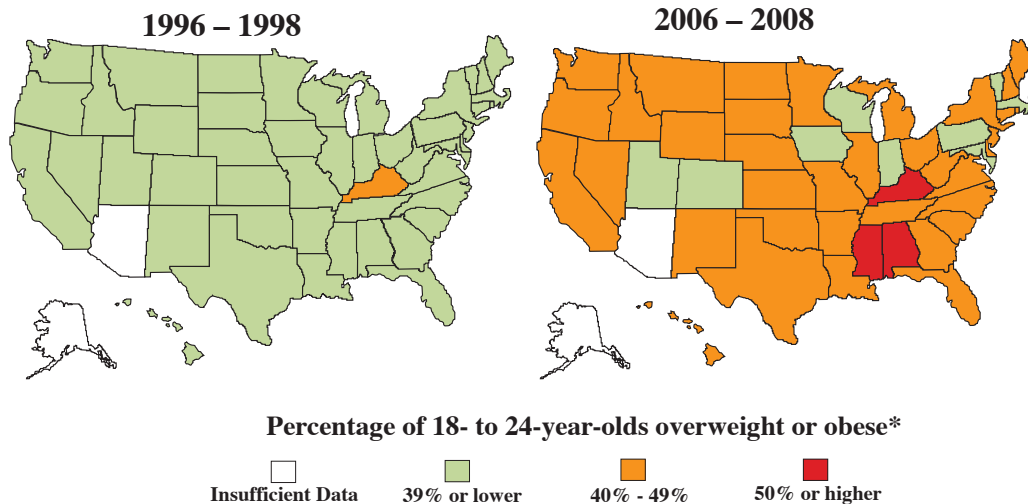
Military concerns about the fitness of our children are not new. In 1946, General Lewis Hershey was instrumental in convincing Congress to pass the original National School Lunch Act as a way to improve the nutrition of America's children, increase their height and weight, and ensure America's national security.

Today, as members of MISSION: READINESS, more than 100 retired generals and admirals are calling on Congress to reauthorize the Child Nutrition Act with the following changes:

- Allow the U.S. Department of Agriculture to adopt new nutrition standards that will get high-calorie, low-nutrition foods out of our schools;
- Support the administration's proposal for adequate funding to improve the quality of food available in schools and increase the number of children who have access to quality meals at school;
- Deploy proven school-based programs that enlist parents in helping children adopt life-long changes in their eating and exercise habits.

As retired U.S. Army General Johnnie E. Wilson says: *"Child obesity has become so serious in this country that military leaders are viewing this epidemic as a potential threat to our national security. We need America's service members to be in excellent physical condition because they have such an important job to do. Rigorous service standards are critical if we are to maintain the fighting readiness of our military."*

Over a ten-year period, the number of states with 40 percent or more of their young adults who were overweight or obese went from 1 to 39.



*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 1995, 1999 or 2005 were used to generate a pooled average for three years in order to have large enough samples. Alaska did not have data for either period and Arizona did not have data for the later period.

“Every month hundreds of otherwise excellent candidates for military service are turned away by recruiters because of weight problems. Since 1995, the proportion of recruits who failed their physical exams because they were overweight has risen by nearly 70 percent. We need to reverse this trend, and an excellent place to start is by improving the quality of food served in our schools.”

**General John M. Shalikashvili,
US Army (Ret.)
Former Chairman, Joint Chiefs of Staff**

Introduction

America's Military Leaders Have Sounded the Alarm in the Past

Military leaders have stood up 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.¹ Stunted growth from inadequate nutrition and poor health was so common that the young men who made it into the military during World War II were more than an inch and a half shorter, on average, than young American men today.² After the war ended, General Lewis Hershey, the military's Selective Service Director, delivered testimony that helped win passage of the National School Lunch Program.³ 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 healthful meals at school.

An Epidemic That Threatens National Security

Once again, America's retired military leaders are alerting Congress to a threat to national security. The basic fact is that too many young American men and women are too fat to fight.

The Army's estimate of who is too heavy to join the military:

The Army's Accessions Command, which carries the responsibility for recruiting and the initial training of new Army recruits, estimates that over 27 percent of all Americans 17 to 24 years of age — over nine million young men and women — are too heavy to join the military if they want to do so.⁴ The Army's estimate is based on the national survey conducted for it by the Lewin Group in 2005. The estimate uses a weight-for-height cutoff that allows somewhat higher weights than the cutoff used by civilian organizations, such as the National Institutes of Health.⁵

The number of recruits actually turned away after taking their



Credit: U.S. Army Sgt. Daniel Lucas, 2010

physicals has risen dramatically in the last decade. If a young man or woman seeking to enter the military is otherwise qualified but is obviously too heavy, a recruiter will not schedule a trip for that person to the regional Military Entrance Processing Center. But between 1995 and 2008, the military had 140,000 individuals who showed up at the centers for processing but failed their entrance physicals because they were too heavy.⁶ Being overweight is now by far the leading medical reason for rejection, and between 1995 and 2008, the proportion of potential recruits who failed their physicals each year because they were overweight rose nearly 70 percent.⁷

The CDC's national and state estimates for who is overweight or obese: The CDC uses a more standard cutoff in their definition of who is overweight. Using that cutoff and their own Behavior Risk Factor Surveillance

System data collected every year, the CDC found that 42 percent of young adults 18 to 24 years were either overweight or obese.⁸ That equals eleven million young adults. To be within the healthy weight range, those young people would have to lose almost 400 million total pounds.⁹

Over the past 30 years, while adult rates of obesity have doubled, childhood obesity rates have tripled.



A Matter of Life and Death



For office workers in civilian life, having a colleague who is overweight may raise the cost of their health care but is not likely to threaten their safety. But for military personnel the physical abilities of their colleagues can be the difference between life and death. Consider Corporal Todd Corbin:

Running through the line of fire, [Corporal Todd] Corbin grabbed his

wounded patrol leader and threw him over his shoulder. He then sprinted back to his Humvee, firing at enemies as he ran. Corbin ran back and forth several times through the kill zone, moving everyone he could out of the withering fire and loaded them into his vehicle."

For his bravery, Corporal Corbin received the Navy Cross in April of 2006.

Source: U.S. Defense Department *Heroes* website

Whichever measurement is used — the military's or the CDC's — it is beyond question that too many young Americans are overweight or obese. [See the map of CDC data on page 1] Within just a ten-year period ending in 2008, the number of states reporting that 40 percent or more of their young adults were overweight or obese went from just one state, Kentucky, to 39 states. And in three states — Kentucky, Mississippi and Alabama — over 50 percent of young adults had become overweight or obese within the decade.¹⁰ [See also the appendix on pp. 10 for a table of these data.]

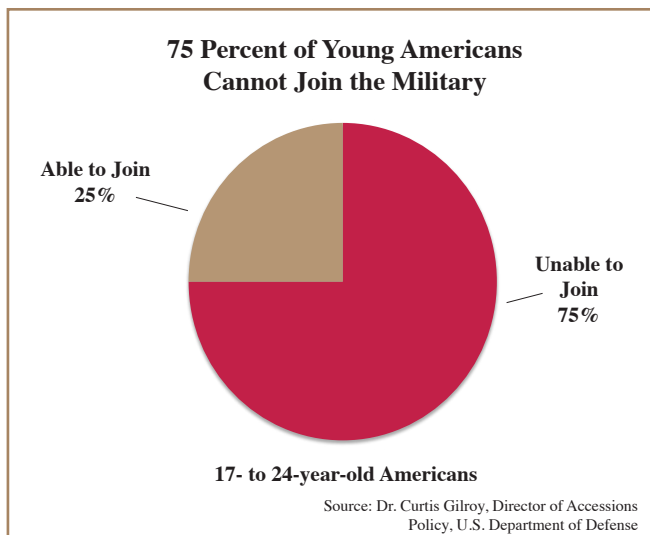
Childhood obesity rates have accelerated faster than adult obesity rates. Over the past 30 years, while adult rates of obesity have doubled, childhood obesity rates have tripled.¹¹ The *Journal of the American Dietary Association* reports that "Almost one-third of American children — nearly 23 million children and teens — are either overweight or obese."¹² Largely because of this epidemic of obesity, today's children may be the first generation of Americans to live shorter lives than their parents.¹³

Seventy-five percent of Americans 17 to 24 years old are unable to join the military for one or more reasons.¹⁴ A quarter of young Americans are currently not graduating from high school on time.¹⁵ Another 10 percent of Americans cannot join the military because of their criminal records.¹⁶ Some have other disqualifiers keeping them out and some have multiple reasons they cannot join.

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.¹⁷ The military will need to have more fit young men and women if it is going to find enough recruits with the excellent qualifications needed for a modern military.

"A failing economy is no formula for filling the ranks of a strong military. These longer-term eligibility problems are not going away."

**– Lieutenant General Norman R. Seip,
US Air Force (Ret.)**



The recent recession has temporarily reduced the challenges the nation's 15,000 military recruiters face in meeting their quotas for signing up qualified individuals.¹⁸ But recruiters remember the recent past when they could not sign up enough young men and women to meet the nation's needs.¹⁹

Under Secretary of Defense for Personnel and Readiness Clifford Stanley recently warned Congress about the need to avoid a "boom or bust" recruiting cycle.²⁰ And retired U.S. Air Force Lieutenant General Norman R. Seip has warned that "a failing economy is no formula for filling the ranks of a strong

The Challenge of Fighting Obesity

High numbers of obese and overweight young adults are clearly hurting our ability to build a strong military for the future. The many unhealthful food sources prevalent in America, combined with our hard-wired desire for sugar and fat, are leading millions of people toward obesity and unhealthy weight. The Food and Drug Administration commissioner under President George H. W. Bush, David Kessler, M.D., has tried to explain why this epidemic of obesity occurred and why it will be a national challenge to reverse. He reports that our desire for foods high in sugar, fat, and salt stems from when early human diets contained only about 10 percent fat and when sugars came primarily from modest amounts of ripe fruit:

Alone among the senses, taste is hardwired to brain cells that respond to pleasure. It prompts the strongest emotional response. ... [For animals] the breaking point at which [they] will no longer work for [a drink high in sugar and fat], ... is slightly lower than the breaking point for cocaine. Animals are willing to work almost as hard to get either.²⁵

It also turns out that lack of exercise is not the primary culprit. Although children and adults exercise less than they should, exercise patterns have not changed dramatically

in recent decades while obesity patterns have.²⁶ What has changed in recent years is the availability and lower prices of food products that are high in sugar, fat, and salt and the increased pressures on families' time. According to an article published by the Johns Hopkins Bloomberg School of Public Health, "Over the past two decades, Americans have increased their daily calorie intake by 250 to 300 calories, with approximately half of the additional calories coming from sugar-sweetened drinks."²⁷ As University of California, Berkeley professor Lorrene Ritchie explained in testimony before Congress, "Healthy food and beverage options generally require more time, money, energy and effort to consume than less healthy options."²⁸

Clearly, improving nutrition is crucial for tackling this problem. To reverse this epidemic of childhood and adult obesity will take a concerted effort by individuals, the private sector and various governmental and non-governmental agencies. If it were easy, more Americans would quickly become slim and stay slim, yet even in the military that does not always happen. Although the fundamental solution could not be simpler—take in fewer calories and burn off more calories through exercise—creating the right conditions to move a whole society to become more fit is a national challenge.

military, and these longer-term eligibility problems are not going away."²⁰

The military's – and America's – ongoing problems with weight: 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 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.²¹ That figure pales in comparison, however, to the cost of treating the obesity-related problems of military personnel and their families under the military's health care system, TRICARE, or the cost of treating obesity-related problems under the veterans' health care system.²²

Although estimates of the current costs of obesity vary, the costs associated with obesity-related heart disease, diabetes, cancer and other health problems are clearly increasing. The American Public Health Association projects, for example, that "left unchecked, obesity will add nearly \$344 billion to the nation's annual health care costs by 2018 and account for more than 21 percent of health care spending."²³

According to the most recent national surveys by the CDC, there are indications that childhood and adult obesity rates may be leveling off. But there is no consensus on whether this is just a plateau before rates increase again, or it is the

beginning of a reversal of this epidemic.²⁴ In any case, the current levels of obesity are much too high.

Schools Can Play an Important Role in Reversing the Epidemic

In order to address obesity, it is important to start early. The journal *Health Affairs* reports that "80 percent of children who were overweight at ages 10-15 were obese at age 25."²⁹ What children eat and drink at school is critically important. Other researchers writing for *Health Affairs* report that as much as 40 percent of children's daily calorie intake occurs at school.³⁰

This report focuses on three crucial issues now before Congress: reducing the high-calorie, low-nutrition foods available at schools; increasing access to healthier school meals; and helping schools take advantage of "teachable moments" to encourage children and their parents to adopt healthier eating habits that can last a lifetime.

How is junk food getting to our kids in schools? Although many schools are beginning to address this problem, in far too many districts many school-offered meals and the foods available for sale at schools are part of the problem, not part of the solution. More efforts are needed to get high-calorie, low-nutrition foods out of our schools. In an article published in March in *Health Affairs*, University of Minnesota researchers Nicole Larson and Mary Story reviewed the literature and



reported that, nationwide:

- “Nearly one in five elementary schools, one-third of middle schools, and half of all high schools have a **school store, canteen, or snack bar** where students can purchase food or beverages;
- **Vending machines** are available in 21 percent of elementary schools, 62 percent of middle schools, and 86 percent of high schools. ... [J]ust 20 percent of middle schools and 9 percent of high schools have only healthy options – foods that are high in nutrients relative to caloric content – available for purchase;
- **Students can purchase à la carte food or beverages** in two-thirds of elementary schools and roughly 80 percent of middle and high schools. ... Schools providing access to à la carte food and beverages nearly always have unhealthy options.”³¹ [emphasis added]

Larson and Story have also concluded that “nearly half of the states have no nutritional standards for [unhealthful foods sold in the schools], and only one has adopted most of the [Institute of Medicine] recommendations.”³²

The Institute of Medicine (IOM), part of the respected and independent National Academies of Sciences, was asked by Congress to develop standards for what foods and beverages should be allowed in schools. In 2007, IOM issued recommendations concerning competitive foods and in 2009 issued recommendations related to school meal programs.

There is promising news on the sugary-sodas front. A collaboration between the William J. Clinton Foundation, the American Heart Association and major beverage companies has resulted in a voluntary decrease of 88 percent (between 2004 and 2009) in the number of calories in beverages shipped by these companies to schools.³³ That is an important start in the process of getting all junk foods and high-calorie beverages out of the schools.



The snack food and beverage industries are to be commended for current efforts to voluntarily improve the nutrition of products sold in schools, but in the long run the only way to be certain that science-based guidelines are implemented nationwide is by setting national standards.

89 calories a day adds up: Although kids bring much of the junk food

“Over the past two decades, Americans have increased their daily calorie intake by 250 to 300 calories, with approximately half of the additional calories coming from sugar-sweetened drinks.”

Source: Powder, 2009, Johns Hopkins Public Health Magazine

and high-calorie beverages to school, the U.S. Department of Agriculture’s (USDA) recent school nutrition study showed that high-calorie, low-nutrition foods and beverages that are *obtained and consumed at school* contributed 89 calories to the daily energy intake of school children.³⁴ That may not seem like many calories, but as David Wallings noted in a *Health Affairs* article, “Over ten years, an extra 130 calories per day (less than what is in a twelve-ounce can of sugared soda) can spell the difference between a young child on her way to obesity and one who is not.”³⁵ An analysis of the USDA’s school nutrition study data further showed that:

School food policies and practices that limited the availability of [high-calorie] beverages were associated with reduced consumption of energy from sweetened beverages at secondary schools. Further, there was no evidence that students “made up” for consuming fewer sugar-sweetened beverages at school by consuming more of these beverages outside of school.³⁶

In addition, research shows that reducing high-calorie, low-nutrition foods and beverages sold in schools does not hurt a school’s bottom line. The sales of school lunches increase when junk food and sugary beverages are limited.³⁷

School efforts to teach students to eat healthful foods are seriously undermined when the school serves unhealthful foods or allows vending machines filled with high-calorie, low-nutrition snacks in the lunchroom. In short, schools must lead by example.

Successful School Interventions

There is evidence to show that intervening during school years and even earlier to provide healthful meals along with nutrition education and simple techniques to motivate children or their parents can reduce childhood weight gain.

Reducing by half the number of kids who become overweight: A peer-reviewed study published in *Pediatrics* documented a comprehensive intervention for Philadelphia students in grades four through six. This program not only improved the quality of the foods available in the schools, it also trained teachers to provide nutrition and exercise

education to their students and it experimented with rewarding the children with raffle tickets for prizes if they made wise choices both in what they ate from the school menu and what they brought to school to eat. Finally, the study took advantage of various opportunities to coach parents on ways to help their kids make wiser choices outside of school.

The researchers randomly assigned schools to participate or not. The program showed that, while reducing the number of children who were already fully obese was still a challenge, two years after the program began, the proportion of children who entered the overweight category dropped in half, from 15 percent to 7.5 percent. The total number of those who became or were already overweight (but not yet obese) decreased by 10.3 percent in the schools participating in the program while increasing by 25.9 percent in the schools not in the program. The study clearly shows that it is possible to reduce the number of children beginning to lose control of their weight.³⁸

Teaching Head Start children to adopt healthy habits of eating and exercise: Another successful program started with even younger children. This approach worked with Head Start children who were also eligible for USDA-funded school meals. It randomly assigned 12 Head Start programs to either receive the intervention or not. Children in the program classroom received lessons from puppets on healthy eating, and they increased their activity levels while their parents received newsletters and “homework” assignments, such as tracking their child’s vegetable and fruit consumption for a week. Parents who completed the homework assignments received a five-dollar grocery coupon for each assignment completed.

The control children not in the intervention received health education on different issues, but nothing targeting eating habits. Those children gained 16 percent more weight over the following two years than the children in the program. Over a lifetime, a successful intervention such as this that changes longer-term eating habits can play a role in keeping “young children off the trajectory toward obesity.”³⁹

Hunger and Obesity Co-Exist in America; School Lunches Can Help Solve Both Problems

The United States Department of Agriculture programs aimed at improving nutrition in America have richly deserved reputations for reducing the stunted growth and other health problems uncovered during World War II. Studies repeatedly

Food for Thought: The National School Lunch Act, 1946

“It is hereby declared to be the policy of Congress, *as a measure of national security*, to safeguard the health and well-being of the Nation’s children and to encourage the domestic consumption of nutritious agricultural commodities and other food, by assisting the States, through grants in aid and other means, in providing an adequate supply of food and other facilities for the establishment, maintenance, operation and expansion of nonprofit school lunch programs.” [emphasis added]

show, however, that too many low-income children still experience hunger in America.⁴⁰ The paradox for America’s food policy is that some of these children can also be obese. When their families do have money for food, what is cheapest and most available at “corner” grocery stores and fast food restaurants is too often high in calories and low in nutrition. School lunches and breakfasts help low-income families balance their budgets and avoid this “feast or famine” situation by ensuring their children routinely get enough food to eat, but also by making sure that the food they eat will be of high enough quality to help them realize their full potential and avoid obesity.⁴¹

Recent research by Rachel Tolbert Kimbro of Rice University and Elizabeth Rigby of the University of Texas at Houston, published in *Health Affairs*, provided strong evidence that “Receiving [government subsidized] meals at school or child care helps children, particularly low-income children, maintain a healthy weight. ... Expanding access to subsidized meals may be the most effective tool to use in combating obesity in poor children.”⁴²

The article showed that, at least for 3- to 5-year-old poor children, access to government-funded school lunches helped those children avoid excessive weight gain over the subsequent two years. The authors suggest that expanding access to these meals to more child care centers, to summer programs, and to all children in high-poverty Title I schools (not just those whose parents make it through the bureaucratic hurdles to qualify) would be one of the most promising ways to decrease childhood obesity.

While low-income and minority children are more likely to be overweight or obese, they are by no means the only ones becoming overweight or obese in America today. The problem impacts every classroom in the country. Obesity not only reduces career opportunities in the military for young adults, it also shortens lifespans, drives up health insurance costs, and may reduce civilian career opportunities because of bias against the obese or an inability to perform certain tasks.

BMI Calculator

For a simple way to calculate your Body Mass Index (BMI), a standard way of measuring the relationship of your weight to your height, go to a search engine and type in “National Institutes of Health, BMI Calculator.”



Next Steps for Congress

What needs to happen in the schools is relatively straightforward: take the junk food out of schools, improve the meals served, provide healthier meals to more kids, and offer programs that encourage kids to eat better and exercise more.

1) The CDC and others have called for the adoption of the Institute of Medicine's (IOM) guidelines for what foods should be served and sold in schools.⁴³ **The next step is for Congress, as part of the pending reauthorization of the Child Nutrition Act, to give the Secretary of Agriculture the authority to adopt those IOM standards.** That is a necessary first step in getting control of this epidemic of childhood and adult obesity.

2) **Congress also should provide meaningful increases in the school lunch funding so that:**

a) **schools will have enough funding to make their meals more nutritious and more inviting for all children.** Otherwise, children will not learn the crucial lesson that healthful meals can also be appetizing.

Improvements in the quality of school meals are needed, and that requires funding. [*The Journal of the American Dietetic Association*] concluded that "Given the serious and persistent budget constraints many school food service administrators face, it is not surprising that fresh fruits, vegetables, and whole grains are not offered daily. The fact is that fresh fruits and vegetables and whole-grain products cost more."⁴⁴ Funding to equip and train food-service professionals with the means to prepare more nutritious and appealing meals is also necessary.

b) **schools will be able to ensure that more children who are already eligible for free and reduced-price meals are actually signed up and receiving them.** This can be done by changes such as streamlining the paperless enrollment process. The research study by Kimbro and Rigby, discussed on page 6 argues this could help poorer young children receive healthier meals, thus significantly reducing their risk of routinely eating unhealthful lunches that can contribute to obesity.

3) Changing what food is available in the schools, and the quality of that food, however, are necessary but not sufficient steps. To fully address the current obesity epidemic, additional efforts are needed.⁴⁵ **Schools should also receive funding to implement proven programs to increase education on healthy eating and exercising and especially to utilize simple techniques to encourage children and families to adopt those healthy new habits.** More research is certainly needed to develop even better approaches, but there are existing proven approaches with solid scientific evaluations showing they can deliver results.

"80 percent of children who were overweight at ages 10-15 were obese at age 25."

Source: Frieden, Dietz, & Collins, 2010, Health Affairs

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 are again warning that America's children are at risk.

To begin reversing the epidemic of childhood obesity, Congress should:

- 1) **Get the junk food and high-calorie beverages out of our schools** by allowing the Secretary of Agriculture to adopt the Institute of Medicine standards for what can be served or marketed in schools.
- 2) **Increase funding for the school lunch programs.** This funding will help deliver healthier, lower-calorie meals to more poor children who are already eligible to receive them and to others from millions of families that purchase the meals. That can help the students control their weight now and – if the meals are more appetizing – reinforce the message that they can successfully adopt healthier life-long habits.
- 3) **Support the development, testing and deployment of proven public-health interventions** that can deliver the education and encouragement children and their parents need to adopt healthier life-long eating and exercise habits.

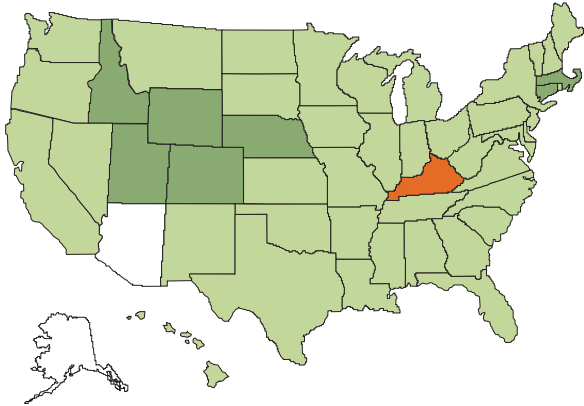
The United States military stands ready to protect the American people, but if our nation does not help ensure that future generations grow up to be healthy and fit, that will become increasingly difficult. The health of our children and our national security are at risk. America must act decisively.

Appendix

Over a ten-year period, the number of states with 40 percent or more of their young adults who were overweight or obese went from 1 to 39.

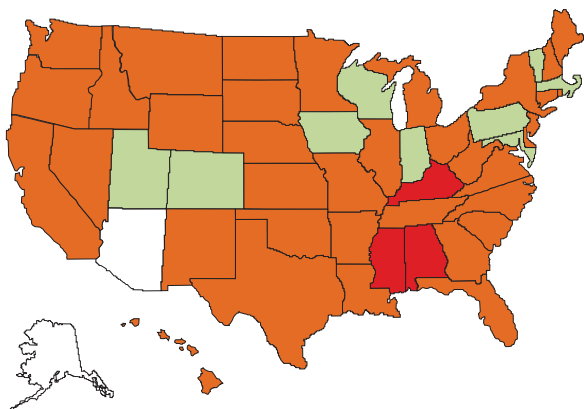
Percentage of 18- to 24-Year-Olds
Overweight or Obese

1996 - 1998



Insufficient Data 20% - 29% 30% - 39% 40% - 49% 50% or higher

2006 - 2008



Insufficient Data 20% - 29% 30% - 39% 40% - 49% 50% or higher

Overweight and Obese Men and Women, 18- to 24-Years-Old

(Based on the CDC's Behavioral Risk Factor Surveillance Survey)

Ranked by highest to lowest percentage for 2006-2008 (column A)	A) Percentage of 18- to 24-yr-olds overweight or obese (average percentage for 2006-2008) (a)	B) Percentage of 18- to 24-yr-olds overweight or obese (average percentage for 1996-1998) (a)	C) Total number of individuals overweight or obese, 2008
Kentucky	54.9%	40.8%	174,400
Alabama	51.2%	38.6%	218,400
Mississippi	50.1%	38.8%	98,500
South Dakota	48.4%	35.5%	37,600
West Virginia	48.1%	36.2%	72,200
Oklahoma	47.5%	31.0%	125,700
South Carolina (b)	47.5%	36.2%	182,100
Texas	47.3%	37.7%	1,079,700
North Carolina	46.6%	38.5%	357,900
North Dakota	46.5%	35.0%	37,100
Hawaii	45.9%	34.3%	51,200
Kansas	45.8%	35.8%	129,900
Arkansas	45.7%	37.2%	114,100
New Jersey	45.1%	33.3%	341,900
Tennessee	44.8%	32.6%	173,900
Rhode Island	44.2%	33.8%	39,000
Georgia	43.9%	34.4%	313,100
Delaware (b)	43.6%	30.8%	32,600
Missouri	43.3%	39.5%	223,300
Nebraska (b)	43.2%	29.9%	71,500
New Hampshire	43.1%	31.5%	45,200
Washington	43.1%	35.7%	258,400
Montana	42.6%	36.2%	33,200
Illinois	42.4%	32.8%	548,000
Michigan	42.1%	35.9%	401,600
New York	41.9%	33.3%	709,400
Wyoming	41.7%	26.7%	20,400
New Mexico (b)	41.6%	35.2%	71,300
Idaho	41.5%	29.1%	52,700
Virginia	41.4%	32.0%	265,400
Florida	41.3%	31.2%	407,900
Maine (b)	41.2%	38.4%	33,600
Nevada (b)	41.2%	30.0%	83,100
California	41.1%	34.8%	1,665,600
Minnesota	41.0%	35.0%	185,200
Louisiana	40.8%	35.7%	173,900
Connecticut	40.4%	27.4%	101,800
Ohio	40.4%	33.3%	410,700
Oregon	40.2%	34.5%	128,500
Iowa	39.9%	35.0%	101,400
Pennsylvania	39.6%	33.6%	458,400
Massachusetts	39.2%	28.8%	243,900
Vermont	39.2%	31.9%	24,100
Wisconsin	38.8%	31.9%	223,100
Indiana	38.6%	34.6%	212,800
Maryland	38.2%	33.7%	185,500
Colorado	36.8%	28.4%	162,700
Utah	33.1%	27.2%	98,900
United States	42.5%	33.4%	11,472,200

Alaska, Arizona and the District of Columbia did not have enough data for different years to provide comparison estimates.

SOURCE: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System

(a) To have large enough samples to compare the percentage of overweight and obese young adults between states, we averaged the data over three-year periods.

(b) To calculate the averages for three years of data for each state, data from the year immediately before or after the three-year period were used in place of any missed years for these states.



Weight That 18- to 24-Year-Olds Would Have to Lose in Order to Be at Normal Weight

Ranked by average pounds needed to lose, per person	Total number of individuals overweight or obese, 2008	Total pounds they would have to lose to reach a normal weight, 2008	Average pounds they would have to lose, per person, 2008
Alabama	218,400	10,000,000	46
Tennessee	173,900	7,200,000	41
Iowa	101,400	4,100,000	40
Ohio	410,700	16,600,000	40
Arkansas	114,100	4,600,000	40
Mississippi	98,500	3,900,000	40
Illinois	548,000	21,300,000	39
North Carolina	357,900	13,900,000	39
New Mexico	71,300	2,700,000	38
Michigan	401,600	15,200,000	38
Vermont	24,100	900,000	37
Delaware	32,600	1,200,000	37
Kentucky	174,400	6,400,000	37
Maryland	185,500	6,700,000	36
Wisconsin	223,100	7,900,000	35
North Dakota	37,100	1,300,000	35
Oklahoma	125,700	4,400,000	35
Missouri	223,300	7,800,000	35
New York	709,400	24,700,000	35
South Dakota	37,600	1,300,000	35
Pennsylvania	458,400	15,800,000	34
New Jersey	341,900	11,600,000	34
Georgia	313,100	10,500,000	34
Louisiana	173,900	5,800,000	33
Montana	33,200	1,100,000	33
Washington	258,400	8,500,000	33
Maine	33,600	1,100,000	33
Alaska	24,600	800,000	33
South Carolina	182,100	5,900,000	32
Texas	1,079,700	34,900,000	32
California	1,665,600	53,800,000	32
Indiana	212,800	6,800,000	32
Virginia	265,400	8,400,000	32
Florida	407,900	12,900,000	32
Minnesota	185,200	5,800,000	31
Massachusetts	243,900	7,600,000	31
Kansas	129,900	4,000,000	31
West Virginia	72,200	2,200,000	30
Wyoming	20,400	600,000	29
Nebraska	71,500	2,100,000	29
Utah	98,900	2,900,000	29
Hawaii	51,200	1,500,000	29
Oregon	128,500	3,700,000	29
New Hampshire	45,200	1,300,000	29
District of Columbia	17,400	500,000	29
Arizona	249,400	7,100,000	28
Rhode Island	39,000	1,100,000	28
Nevada	83,100	2,300,000	28
Idaho	52,700	1,400,000	27
Connecticut	101,800	2,600,000	26
Colorado	162,700	3,300,000	20
United States	11,472,200	390,000,000	34

Source: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System⁴⁶

The total number of individuals 18- to 24-years-old overweight or obese is for 2008 only, as is the average pounds they would need to lose to not be overweight, a Body Mass Index (BMI) equal to 24.9.



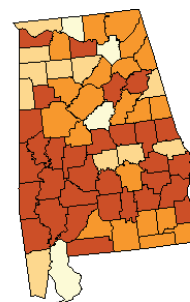
Estimated Annual Obesity Medical Expenditures by State*

State	Total cost for population
Alabama	\$1,320,000,000
Alaska	\$195,000,000
Arizona	\$752,000,000
Arkansas	\$663,000,000
California	\$7,675,000,000
Colorado	\$874,000,000
Connecticut	\$856,000,000
Delaware	\$207,000,000
District of Columbia	\$372,000,000
Florida	\$3,987,000,000
Georgia	\$2,133,000,000
Hawaii	\$290,000,000
Idaho	\$227,000,000
Illinois	\$3,439,000,000
Indiana	\$1,637,000,000
Iowa	\$783,000,000
Kansas	\$657,000,000
Kentucky	\$1,163,000,000
Louisiana	\$1,373,000,000
Maine	\$357,000,000
Maryland	\$1,533,000,000
Massachusetts	\$1,822,000,000
Michigan	\$2,931,000,000
Minnesota	\$1,307,000,000
Mississippi	\$757,000,000
Missouri	\$1,636,000,000
Montana	\$175,000,000
Nebraska	\$454,000,000
Nevada	\$337,000,000
New Hampshire	\$302,000,000
New Jersey	\$2,342,000,000
New Mexico	\$324,000,000
New York	\$6,080,000,000
North Carolina	\$2,138,000,000
North Dakota	\$209,000,000
Ohio	\$3,304,000,000
Oklahoma	\$854,000,000
Oregon	\$781,000,000
Pennsylvania	\$4,138,000,000
Rhode Island	\$305,000,000
South Carolina	\$1,060,000,000
South Dakota	\$195,000,000
Tennessee	\$1,840,000,000
Texas	\$5,340,000,000
Utah	\$393,000,000
Vermont	\$141,000,000
Virginia	\$1,641,000,000
Washington	\$1,330,000,000
West Virginia	\$588,000,000
Wisconsin	\$1,486,000,000
Wyoming	\$87,000,000
United States	\$75,051,000,000

*Average annual expenditures are for 1998 to 2000.

Source: Finkelstein, 2004, *Health Affairs*

Steps to get to the CDC's county-level obesity maps and tables:



For Example: Alabama

- 1) Use a search engine and enter "diabetes, data and trends." Click link.
- 2) Under county level estimates-obesity, click "state maps."
- 3) Dropdown menu: Select indicator (obesity), year and state. Click "Go."
- 4) Scroll down list to view data for desired counties.



Endnotes

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