



“Knowledge exists
to be imparted.”

— Ralph Waldo Emerson

The Obesity “Epidemic”

Throughout recent history, each generation tends to live longer and be healthier than the one before it. It comes as a shock, then, to realize that the trends in today’s child population put our children on track to become the first generation to live shorter, less healthy lives than their parents. The country’s rising obesity rates have been called an epidemic by many, implying that obesity is a contagious disease that spreads through the population. It certainly seems an apt metaphor, but apart from fundamental differences in the way they are spread (there is no “obesity bacteria”), there is one crucial difference: epidemics are illnesses that are responded to in a systemic fashion, through publicly-available vaccines and other precautionary measures, and carry little or no stigma. Obesity, on the other hand, has up until now been seen as a private problem.

Montana has so far evaded the brunt of this epidemic. The rates of overweight and obese people are lower in Montana than in the rest of the country, while activity levels remain higher than the national average. We also spend less time inside, in front of a television, computer, or video game. While one-half of children nationally have a television in their bedroom, only 36 percent of Montana children do (Table 1, page 3).

Two factors figure at the forefront of the obesity and overweight issue: diet and physical activity.

Diet

The equation is a simple one: when calorie intake exceeds calorie expenditure, the result is overweight and obese people. Over the last few decades, the American diet has skewed toward large portions that are high in fat, sugar, and calories, and short on fruits, vegetables, and whole grains (Table 6). Consumption of high-sugar drinks such as soda and fruit drinks has increased greatly over the past few decades, while milk consumption is experiencing a virtual free-fall. Children emulate the behaviors they see around them, both in terms of physical activity and diet. Poor nutrition in childhood has a documented impact on current and future health and development in children. Nutrition affects cognitive development, which is in turn connected to both social and emotional development. Children will carry the effects of poor

Table 6
Portion Distortion: 20 Years Ago vs. Today

Portion Distortion		
20 Years Ago	Difference	Today
Coffee w/whole milk and sugar 8-oz serving size 45 calories	305 calories	Mocha w/steamed milk and syrup 16-oz serving size 350 calories
Muffin 1.5 oz serving size 210 calories	290 calories	Muffin 4 oz serving size 500 calories
Pepperoni Pizza 2 slices 500 calories	350 calories	Pepperoni Pizza 2 slices 850 calories
Chicken Caesar Salad 1 1/2 cup serving size 390 calories	400 calories	Chicken Caesar Salad 3 1/2 cup serving size 790 calories
Popcorn 5-cup serving size 270 calories	360 calories	Popcorn 11-cup serving size 630 calories
Chicken Stir-Fry 2-cup serving size 435 calories	430 calories	Chicken Stir-Fry 4 1/2 cup serving size 865 calories

Source: Trust for America's Health.

nutrition and obesity with them for the rest of their lives. Being overweight shortens people's lives and deteriorates quality of life through associated health problems such as heart disease and Type 2 diabetes, which are far more costly to treat than to prevent. Helping children to be healthy now saves money and lives in the long run.

The concept of "competing foods" in schools is worth visiting as part of a diet discussion. While public schools are making important contributions to combat hunger through their school lunch and breakfast programs, these efforts are compromised by the availability of unhealthy food and drink choices through vending machines and school stores. When children are taught about good nutrition in the classroom but are surrounded by options of poor nutritional quality, the mixed message they receive is that good nutrition is not important. Particularly for children, the importance of positive role models





Georgia Elementary School Success Story

The Brown Mill Elementary School in Lithonia, GA, has been sugar-free for over 10 years. The school's nutrition program was completely overhauled in 1998, with the result that test scores, truancy rates, and counselor referral rates all improved. The school day starts with an hour of physical activity, such as jumping jacks or dance, followed by a nutritious breakfast provided to all students. Initially met with strong opposition upon implementation, it has now been replicated in at least 17 other Georgia schools with great success.

should not be underestimated. School districts can foster a health-conscious environment through increased physical activity and limiting access to unhealthy food choices, while adults should be encouraged to consider the impact their choices may have on other members of the family. There are many examples of schools working to improve this situation, though there are numerous social, cultural, and political barriers that have to be addressed for these efforts to have wide-spread success.

Physical Activity

It is recommended that children and adolescents engage in at least 60 minutes of physical activity daily, including aerobic, muscle-strengthening, and bone-strengthening activity. School-based physical activity interventions prolong the duration of physical activity, reduce blood cholesterol, and time spent in front of a television or computer screen, and increase physical fitness levels.

Yet, only about one-third of high school students meet the recommended levels of physical activity. Just over half of high school students have physical education (PE) at least once a week, while only 30 percent have PE daily.

Budget and time constraints have forced many school systems to eliminate PE altogether, or severely curtail its offering, to focus on core academic subjects, allowing for more time to prepare for standardized tests. This happens despite the positive effects of physical activity on brain function being well-documented, with a number of studies showing that aerobic activity improves cognition and in-school academic performance.

Children's surrounding environments also make a difference on their activity level. Those who live in neighborhoods with more green space are less likely to be overweight, as are children who live near parks and recreation areas. For each additional park located within half a mile of their home, the likelihood of walking to school more than doubles among girls, while leisure walking

among boys increases by 60 percent. On the other hand, children who live farther away from parks and recreation areas are likely to have lower activity levels overall, with more time spent in front of a TV or computer screen.

Risk Factors

One of the risk factors involved in the obesity epidemic is poverty. As is the case in so many other areas of life, living in poverty puts people at higher risk, in this case for obesity. Of the numerous factors that affect obesity rates, many are compounded, if not caused, by poverty.

Putting healthful and nutritious food on the table is becoming increasingly expensive, and frequently a family is faced with the choice between enough food and healthy food. In this trade-off between food quantity and quality, the result is a diet that fails to promote health and avert obesity. Regrettably, the cheapest foods available in many low-income neighborhoods are highly processed and high in fat, salt, and sugar, due to poor access to supermarkets, chain grocery stores, and healthful food products. The proximity of a fast-food restaurant, either near home or near school, further compounds this effect.

Additionally, poverty exacerbates an already difficult situation as poor neighborhoods often lack the physical infrastructure that would encourage physical activity. Residents in these areas are faced with limited options for indoor physical activity, while outdoor facilities such as parks, sidewalks, and walking areas can be unsafe, in disrepair, or non-existent.

Other risk factors include genetic, physiological, and life-stage issues, such as metabolism, childbearing, obese parents, and medication side effects. Psychological factors associated with obesity include body image concerns, stress eating, and substituting eating for other unhealthy behaviors such as smoking.

Health Implications

Obesity and physical inactivity have a number of health impacts, many of which do not provide an immediate association, but are none the less a significant burden on society.

- Mood disorders such as depression and anxiety increase along with weight. Compared to normal-weight students, obese students are 32 percent more likely to have attempted suicide, to have seriously

considered suicide, or to have a plan to attempt suicide. Obesity increases the odds of developing dementia and Alzheimer's disease later in life.

- Overweight and physically inactive people are more likely to develop heart disease (a leading cause of death in the U.S. and in Montana), to have high blood pressure, high levels of blood fats, or suffer a stroke or a heart attack.
- The increasing occurrence of Type 2 diabetes in children is largely driven by obesity, and while traditionally a disease in mature adults, it now accounts for up to 45 percent of new pediatric diabetes cases.
- Cancer, another leading cause of death, occurs with increasing frequency in people that are overweight or obese. It is speculated that fat cells affect overall cell growth in a person's body.
- Being overweight or obese also increases the risk of development and progression of kidney disease and arthritis, as well as increased health risks during pregnancy and higher rates of associated Cesarean delivery.

Healthy child development is the foundation for community and economic development. Rather than dismiss the obesity problem as a personal one, it literally pays to provide children with a healthy environment in which to grow and develop to their full potential.

