

Obesity State

A special publication from:
Missouri Department of Health and Senior Services
Bureau of Health Promotion
573-522-2820

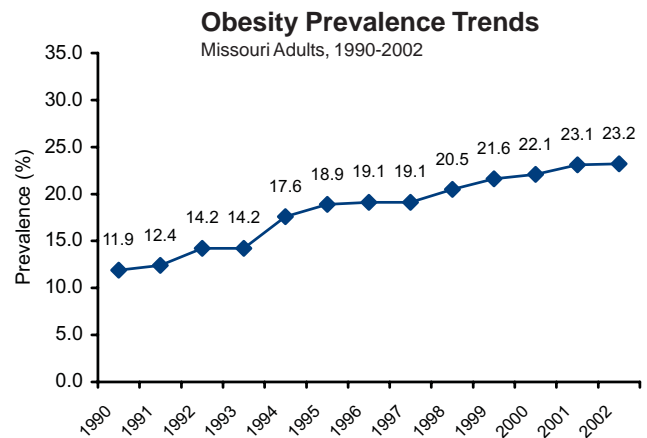
A Closer Look at Obesity in Missouri

Obesity is on the rise in Missouri

The obesity epidemic is one of the most important health challenges facing Missouri and the entire nation.

Obesity rates are increasing.

- More than half of all Missouri adults are overweight and more than 23 percent are obese.^{1,2}
- In 1986, less than 10 percent of Missouri adults were obese. In 2004, close to one in four were obese. These rates are likely to be underestimated since height and weight, which are used to calculate obesity, are “self-reported.”



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

Obesity is associated with an increased risk of:

- Premature death
- Type 2 diabetes
- Heart disease
- Stroke
- Hypertension
- Gallbladder disease
- Osteoarthritis (degeneration of cartilage and bone in joints)
- Sleep apnea
- Asthma
- Breathing problems
- Cancer (endometrial, colon, kidney, gallbladder and postmenopausal breast cancer)
- High blood cholesterol
- Complications of pregnancy
- Menstrual irregularities
- Hirsutism (presence of excess body and facial hair)
- Stress incontinence (urine leakage caused by weak pelvic-floor muscles)
- Increase surgical risk
- Psychological disorders such as depression
- Psychological difficulties due to social stigmatization

Obesity is costly.

Obesity reduces economic productivity, increases the risk for chronic disease and premature death and drives up medical expenses. Everyone pays the price:

- Total annual health care costs attributed to adult obesity in Missouri are estimated at \$1.6 billion!
- More than half of these costs are paid by Medicare (\$454 million) and Medicaid (\$413 million).³
- People who are obese spend 36 percent more on medical expenses each year compared to adults with a healthy weight.¹

Obesity can lead to illness.

Obese people are more likely report poor physical and mental health.^{1,4}

- More than 30 medical conditions are associated with overweight and obesity.⁴
- Between 1988 and 2002, diagnosed diabetes jumped from 4.9 to 7.3 percent; more than 80 percent of people with diabetes are overweight.⁴
- For every two pound increase in weight, the risk of developing arthritis increases by nine to 13 percent.⁴
- Obese women are more likely to have health problems during pregnancy, labor and delivery.⁴

Overweight Children Could Face Lifelong Health Problems

Overweight is now the most common medical condition of childhood.⁵

Children are in danger of serious long-term conditions.

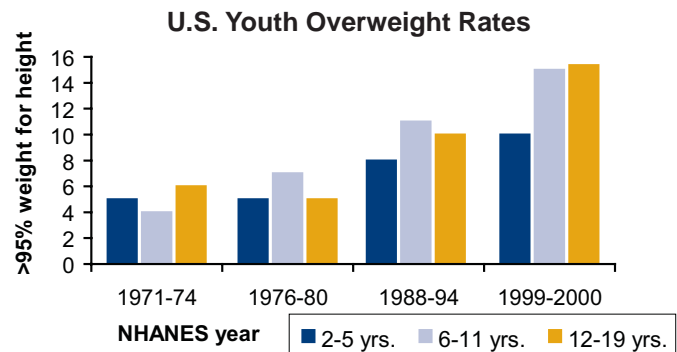
- Over the past several decades, the number of overweight children has quadrupled among 6 to 11 year olds and tripled among 12 to 19 year olds.⁶
- The number of overweight preschoolers, ages 2 to 5, has doubled since 1970.⁷
- All children are at risk, but minority children are at greatest risk. African American and Hispanic children are most likely to be overweight.^{1,8}
- Overweight children are more likely to have high cholesterol and high blood pressure - risk factors for heart disease. They are also more likely to develop Type 2 diabetes, which previously had only been seen in overweight adults.⁴

If obesity persists:

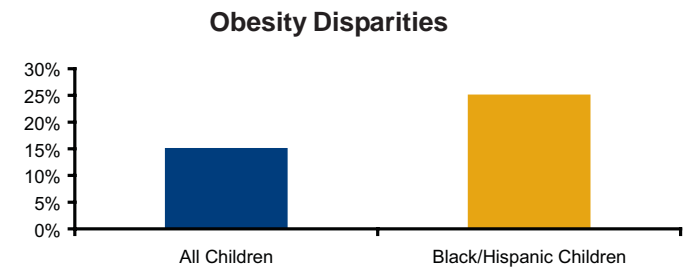
- Overweight children are more likely to be obese adults.⁹
- Obese teens have a 70 to 80 percent chance of remaining obese into adulthood.⁹

If trends do not change:

- One in three children born in the United States in 2000 will have diabetes at some time in their lives; the resulting medical problems will be of most concern for minorities and those with low incomes who have limited access to health care.¹⁰
- The lifetime costs of these diseases are staggering.
- Increases in obesity may result in a shorter life expectancy for youth today as compared to their parents.¹¹



Source: JAMA 288 (14); Oct. 9, 2002



Prevalence of obesity among American Indian Children: 30% of 7 year olds.

Source: Am. J. Clin Nutr. 2003; NIH. National Inst. of Env. Health Sciences. U.S. Dept. HHS

What is Missouri Doing to Battle its Obesity Problem?

The Missouri Department of Health and Senior Services is dedicated to easing the burden of obesity to improve quality of life and reduce health care costs. The Missouri Council on Activity and Nutrition (MoCAN) has developed the *Healthy Missourians Initiative: Missouri's Nutrition and Physical Activity Plan* to address this vital health issue.

The overall goal of the plan is to decrease obesity among children, youth and adults. The plan recommends:

- Increasing opportunities to adopt physical activity and nutritional habits that promote good health.
- Increasing the effectiveness of messages that result in the public improving nutritional habits and increasing physical activity.
- Increasing support for health care systems to promote physical activity and nutritional habits that prevent and control obesity and chronic disease.
- Increasing state-level public policies that promote physical activity and nutritional habits to prevent obesity and chronic disease.

Many Factors Can Contribute to Obesity

Obesity is complex – although genetics can predispose some individuals to overweight and obesity, environment and behavioral factors also play a critical role.^{1,12} Key factors that lead to weight gain include:

Community environment

- The environment is more conducive to obesity than to healthy weight. For example, a person may choose not to walk to work because of a lack of sidewalks. Another example is eating establishments serving larger portion sizes than are needed by most people.

Too few babies breastfed

- Research shows that breastfeeding offers babies protection against childhood obesity and related chronic diseases.
- At 62.4 percent, Missouri is far below the Healthy People 2010 recommended breastfeeding rate of 75 percent for newborns.

Too much screen time

- National surveys have shown a positive association between the number of hours children watch television and prevalence of overweight.^{5,13}

Not enough physical activity

- Being physically active reduces the risk of obesity; it is a proven way to maintain a healthy weight and reduce risk for chronic diseases, such as heart disease, diabetes and cancer.¹
- Less than half of Missouri adults meet the recommended level of physical activity of moderate intensity for at least 30 minutes on five or more days of the week or physical activity of vigorous intensity for 20 minutes or more on three or more days per week.¹
- Physical education classes are ideal for teaching students about how to be physically active for life. But only about one third of Missouri students have daily physical education classes.¹

Too many calories

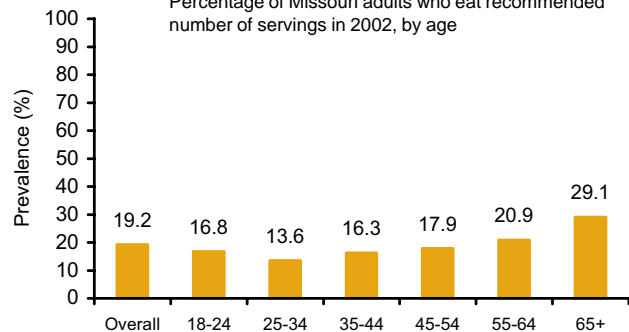
- Portion sizes have increased over the past several decades; when more is served, more is consumed.^{1,17,18}
- Sweetened beverages - including soft drinks, fruit drinks and sport drinks - contribute to children and adults becoming overweight.^{1,19,20} Each 12-ounce sugared soft drink consumed daily has been associated with a 60 percent increase in a child's risk of obesity.²⁰

Too few fruits and vegetables

- Less than 20 percent of Missouri adults and fewer than 25 percent of Missouri high school students eat the recommended servings of fruits and vegetables - five or more servings per day.^{1,15}
- The high cost of fruits and vegetables is related to excessive weight gain by elementary-age children.¹⁶

Fruit and Vegetable Consumption

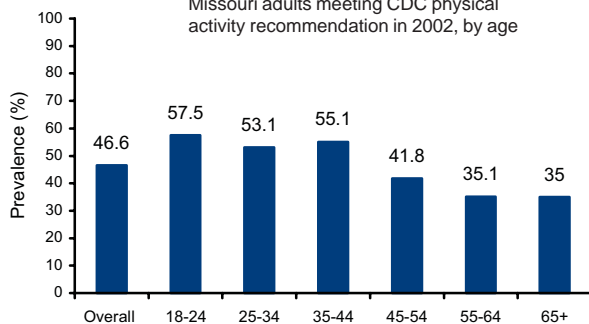
Percentage of Missouri adults who eat recommended number of servings in 2002, by age



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

Adult Physical Activity

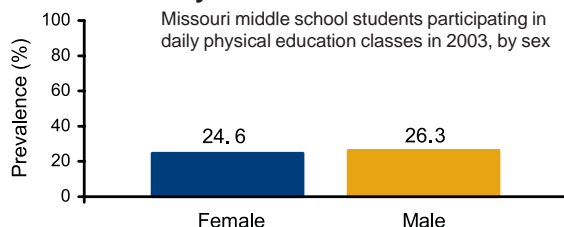
Missouri adults meeting CDC physical activity recommendation in 2002, by age



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

Physical Education

Missouri middle school students participating in daily physical education classes in 2003, by sex



Source: Youth Tobacco Survey, Missouri Department of Health and Senior Services

Reducing the Risk

To reduce the risk of obesity, the Centers for Disease Control and Prevention recommends impacting all levels of social structure that influence people's behavior. Five primary levels of social structure and examples of impact include:

1. **Public policy:** Laws, policies and regulations that fund alternative transportation or subsidize farmers' markets.
2. **Community:** Access to safe sidewalks and green space.
3. **Institutions and organizations:** Worksite wellness programs.
4. **Interpersonal:** Family and peer support and encouragement for a healthier lifestyle.
5. **Individual:** Personal understanding of the benefits of a healthy lifestyle.

Public Policy is Essential

Policy makers have an important role in Missouri's fight against obesity by supporting policies that provide for improved physical activity and nutrition environments for all Missourians. This support is essential to the success of Missouri's Nutrition and Physical Activity Plan. Examples of this type of support include:

- Strengthen state policies that support opportunities for children and youth to develop healthy nutrition and physical activity practices such as increasing state requirements for physical education, providing adequate recess time and decreasing access to nutrient-poor, high-calorie vending and ala carte foods in schools.
- Promote state policies and support for healthy nutrition and physical activity practices such as tax incentives for communities and employers that increase support for physical activity; support for Medicaid coverage of prevention and treatment of obesity; and subsidizing farmers' markets.

Conclusion

Overweight and obesity are serious and growing burdens for individuals, the health care system and society. Implementing Missouri's Nutrition and Physical Activity Plan is essential to reduce the obesity epidemic and its associated costs for all Missourians.

References:

1. Preventing Obesity and Other Chronic Diseases; Missouri's Nutrition and Physical Activity Plan, 2005.
2. Overweight and Obesity: Obesity Trends: U.S. Obesity Trends 1985-2004, BRFSS, Centers for Disease Control and Prevention; <http://www.cdc.gov/nccdphp/dnpa/obesity/trend/maps/>.
3. Finkelstein EA, Fiebelkorn IC, Wang G. "State-level estimates of annual medical expenditures attributable to obesity." *Obesity Research*. 2004; 12 (1): 18-24.
4. The Surgeon General's Call to Action to Prevent and Decrease Overweight and Obesity, 2001. <http://www.surgeongeneral.gov/topics/obesity/calltoaction/toc.htm>.
5. American Academy of Pediatrics, Committee on Nutrition. "Prevention of pediatric overweight and obesity." *Pediatrics*. 2003; 112:424. <http://aappolicy.aappublications.org/cgi/content/full/pediatrics;112/2/424>.
6. "Prevalence of overweight among children and adolescents ages 6-19 years." Centers for Disease Control and Prevention/National Center for Health Statistics, NHES and NHANES.
7. "U.S. Youth Overweight Rates," *Journal of the American Medical Association* 288 (14); Oct. 9, 2002.
8. "Obesity and the Environment," National Institute of Environmental Health Sciences, July 2005. <http://www.niehs.nih.gov/oc/factsheets/pdf/obesity.pdf>.
9. Whitaker, R.C., et al. "Predicting Obesity in Young Adulthood from Childhood and Parental Obesity;" *New England Journal of Medicine*. 1997; 337: 869-873.
10. Proceedings of the Roundtable on Understanding the Paradox of Hunger and Obesity, Food Research and Action Center, November 22, 2004; <http://www.frac.org/pdf/proceedings05.pdf>.
11. Olshansky, S.J., et al. "A potential decline in life expectancy in the United States in the 21st century;" *New England Journal of Medicine*; 2005; 352: 1138-1145.
12. Swinburn, B.S., et al. "Diet, nutrition and the prevention of excess weight gain and obesity." *Public Health Nutrition*. 2004; 7 (1A):123-46.
13. Anderson, R. et al. "Relationship of physical activity and TV watching with body weight and level of fatness among children: Results from the Third National Health and Nutrition Examination Survey." *Journal of the American Medical Association*. 1998; 279 (12): 938-942.
14. Jeffery, R.W., and Utter, J. "The Changing Environment and Population Obesity in the United States." *Obesity Research*, 2003; 11:12S-22S. http://www.obesityresearch.org/cgi/content/full/11/suppl_1/12S.
15. "Percentage of high school students who ate five or more servings of fruits and vegetables per day during the seven days preceding the survey – Missouri and United States, 1995-2003." Missouri Department of Elementary and Secondary Education: Youth Risk Behavior Survey, 1995-2003.
16. Metropolitan Area Food Prices and Children's Weight Gain. Economic Research Service, USDA; Friday, December 30, 2005. <http://www.ers.usda.gov/Publications/CCR14/>.
17. Portion Distortion! Do You Know How Food Portions Have Changed in 20 Years? National Heart, Lung and Blood Institute, Department of Health and Human Services, National Institutes of Health, 2003, 2004. <http://hin.nhlbi.nih.gov/portion/>.
18. Rolls, B.J. et al. "Portion size of food affects energy intake in normal-weight and overweight men and women." *American Journal of Clinical Nutrition*. 2002; 76 (6): 1207-13.
19. Kears D.R. and Heorr, S.I. "Beverage choices related to U.S. adult obesity," NHANES III. The Fourth International Conference on Dietary Assessment Methods. H.2.2.26.2000.
20. Ludwig D.S., et al. "Relation between consumption of sugar-sweetened drinks and childhood obesity." *Lancet*. 2001; 357:505-8.

AN EQUAL OPPORTUNITY/AFFIRMATIVE ACTION EMPLOYER Services provided on a nondiscriminatory basis.

Missouri's Nutrition and Physical Activity Plan can be found at: www.dhss.mo.gov/Obesity/index.html.