

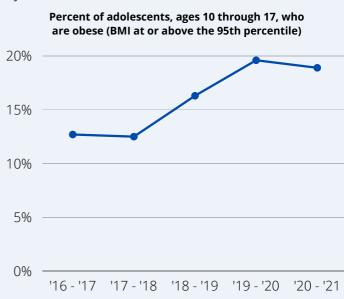
Missouri Title V Facts:

Obesity & Physical Activity

Background

Obesity is a serious chronic disease, and the prevalence of obesity continues to increase in the United States. Obesity is common, serious, and costly. This epidemic is putting a strain on American families, affecting overall health, health care costs, and economic productivity.

Missouri is one of the heaviest states in the country, with 37 percent of adults obese and 34 percent of children ages 10-17 overweight or obese.^{1,2} Childhood obesity is a strong predictor of adult obesity.³ It increases the risk of chronic diseases such as diabetes, and is estimated to decrease a person's lifespan by an average of 2-5 years.^{4, 5}



Source: National Survey of Children's Health

Nutrition & Food Security

Diets high in fruits and vegetables reduce the risk of many chronic diseases such as Type 2 diabetes, obesity, heart disease and stroke. Consumption of three or more fruits and vegetables a day, as opposed to less than one, was associated with decreased cardiovascular deaths.⁶ Reducing sugary drink consumption is a public health concern worldwide. It has little to no nutritional value and is associated with many adverse health outcomes. An eight-ounce serving of carbonated soda contains about 24-30 grams of added sugar, an amount above the recommendation for daily added sugar intake.⁷



Missourians do not have easy access to affordable and nutritious food.8

Barriers to regular consumption of fruits and vegetables include access to fresh produce, cost, perceived lack of preparation time and lack of cooking knowledge. Additionally, some Americans live in areas known as food deserts, where access to healthful foods is limited. Between 2019-2021, 12.0% of Missouri's population experienced food insecurity, with 5.6% percent experiencing very low food security, or hunger. Food deserts are spread all across Missouri.



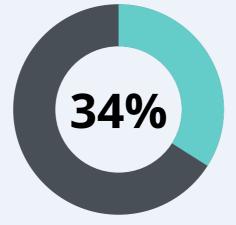
Physical Activity

Making sure youth stay physically active is important for many reasons. Not only is it one of the best ways to prevent childhood obesity but new evidence shows that the benefits of childhood physical activity can last long into someone's life.¹⁰ Physical activity early on allows young people to develop a healthy musculoskeletal structure, cardiovascular system, hand-eye coordination, and maintain a healthy body weight .¹¹,¹²

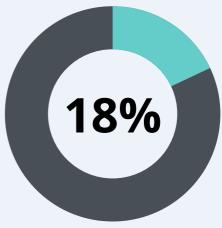
The United States Department of Health and Human Services recommend that children and adolescents ages 6 through 17 years do 60 minutes or more of moderate-to-vigorous physical activity daily.¹³ Only 23% of high school students in Missouri are taking 5 days of Physical Education with no differences seen between grades. Only 48% of high school students are physically active for at least one hour on five or more days. Looking at the demographic breakdown of this level of activity, male (55%) and white (53%) students outnumber female (42%) and black (34%) students respectively.¹⁴



Percent of children, ages
6 through 11, who are
physically active at least 60
minutes per day²



Percent of adolescents, ages
12 through 17, who are
physically active at least 60
minutes per day²



Source: National Survey of Children's Health

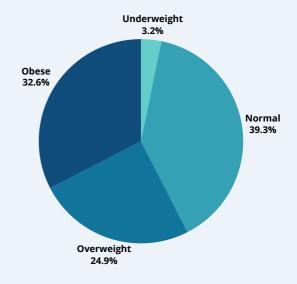
Maternal Physical Activity

Physical activity and maintaining a healthy weight are also important issues for women who are planning to get pregnant, or who might become pregnant. Research has shown that obesity during pregnancy can affect the health of both the mother and the child.¹⁵ The pre-pregnancy obesity rate in Missouri in 2021 was 33%, and an additional 25% were overweight.¹⁶ Prior to pregnancy, 27% of women said they were dieting to lose weight, while 39% said they were exercising 3 or more days per week.¹⁷

Being overweight or obese during pregnancy is linked to complications and poor pregnancy outcomes. For example, obesity during pregnancy is linked to high blood pressure and gestational diabetes in mothers — as well as stillbirth and preterm birth in infants. ¹⁸

Prepregnancy Weight Status by Body Mass Index in Missouri, 2021¹⁶





Research found that approximately one-third (32%) of women gained the amount of weight during pregnancy recommend and most women gained either too little or too much (21% too little, 48% too much).¹9 Gaining more than the recommended amount of weight in pregnancy is associated with having a baby who is born too large, which can lead to delivery complications, cesarean delivery, and obesity during childhood. Gaining more than the recommended amount of weight can also increase the amount of weight you hold on to after pregnancy, which can lead to obesity. Gaining less than the recommended amount of weight in pregnancy is associated with delivering a baby who is too small. Some babies born too small may have difficulty starting breastfeeding, may be at increased risk for illness, and may experience developmental delays.²0

References

- 1. Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division of Population Health. BRFSS Prevalence & Trends Data; 2021. [accessed December 22, 2022]. URL: https://www.cdc.gov/brfss/brfssprevalence/.NCHS.
- 2. Child and Adolescent Health Measurement Initiative. 2020-2021 National Survey of Children's Health (NSCH) data query. Data Resource Center for Child and Adolescent Health supported by Cooperative Agreement U59MC27866 from the U.S. Department of Health and Human Services, Health Resources and Services Administration's Maternal and Child Health Bureau (HRSA MCHB). www.childhealthdata.org. Accessed December 22, 2022.
- 3. Simmonds M, Llewellyn A, Owen CG, Woolacott N. Predicting adult obesity from childhood obesity: a systematic review and meta-analysis. Obes Rev. 2016;17(2):95-107. doi:10.1111/obr.12334.
- 4. Fontaine KR, Redden DT, Wang C, Westfall AO, Allison DB. Years of life lost due to obesity. JAMA. 2003;289(2):187-193. doi:10.1001/jama.289.2.187.
- 5. Tremmel M, Gerdtham UG, Nilsson PM, Saha S. Economic Burden of Obesity: A Systematic Literature Review. Int J Environ Res Public Health. 2017;14(4):435. Published 2017 Apr 19. doi:10.3390/ijerph14040435.
- 6. Aune D, Giovannucci E, Boffetta P, et al. Fruit and vegetable intake and the risk of cardiovascular disease, total cancer and all-cause mortality-a systematic review and dose-response meta-analysis of prospective studies. Int J Epidemiol. 2017;46(3):1029-1056. doi:10.1093/ije/dyw319.
- 7. American Heart Association (AHA). Added Sugar. 2022; Retrieved from https://www.heart.org/en/healthy-living/healthy-eating/eat-smart/sugar/added-sugars.
- 8. Ver Ploeg, Michele, Vince Breneman, Paula Dutko, Ryan Williams, Samantha Snyder, Chris Dicken, and Phil Kaufman. Access to Affordable and Nutritious Food: Updated Estimates of Distance to Supermarkets Using 2010 Data, ERR-143, U.S. Department of Agriculture, Economic Research Service; 2012
- 9. United States Department of Agriculture. Economic Research Service. Current Population Survey Food Security Supplement (CPS-FSS).
- 10. Centers for Disease Control and Prevention (2022) Health benefits of physical activity for children. Retrieved from https://www.cdc.gov/physicalactivity/basics/adults/health-benefits-of-physical-activity-for-children.html.
- 11. Hind K, Burrows M. Weight-bearing exercise and bone mineral accrual in children and adolescents: a review of controlled trials. Bone. 2007;40(1):14-27.
- 12. Center for Disease Control and Prevention (2022) Benefits of Physical Activity. Retrieved from https://www.cdc.gov/physicalactivity/basics/pa-health/index.htm.
- 13. U.S. Department of Health and Human Services (2018). Physical Activity Guidelines for Americans, 2nd edition. Washington, DC: U.S. Department of Health and Human Services.
- 14. Missouri Department of Health and Senior Services (DHSS), Office of Epidemiology. Youth Risk Behavior Survey, 2021.
- 15. March of Dimes (2020). Being overweight during pregnancy. Retrieved from https://www.marchofdimes.org/find-support/topics/pregnancy/being-overweight-during-pregnancy.
- 16. Missouri Department of Health and Senior Services (DHSS), Office of Epidemiology, Birth File, 2021.
- 17. Missouri Department of Health and Senior Services (DHSS), Office of Epidemiology. Pregnancy Risk Assessment Monitoring System, 2021.
- 18. Stubert, J., Reister, F., Hartmann, S., & Janni, W. (2018). The risks associated with obesity in pregnancy. Deutsches Ärzteblatt International, 115(16), 276.
- 19. Centers for Disease Control and Prevention. Weight Gain During Pregnancy. https://www.cdc.gov/reproductivehealth/maternalinfanthealth/pregnancy-weight-gain.htm
- 20. American College of Obstetricians and Gynecologists. ACOG committee opinion no. 548: weight gain during pregnancy. Obstet Gynecol. 2013;121(1):210-212. Medline:23262962 doi:10.1097/01.AOG.0000425668.87506.4c.

The 2021 Missouri Youth Risk Behavior Survey was conducted by the Missouri Department of Health and Senior Services with funding provided by a cooperative agreement between the U.S. Centers for Disease Control and Prevention and the Missouri Department of Elementary and Secondary Education.

This project was funded in part by the Missouri Department of Health and Senior Services Title V Maternal Child Health Services Block Grant and was supported by the Health Resources Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) under grant #04MC40144, Maternal and Child Health Services for \$12,299,305, of which \$0 is from non-governmental sources. This information or content and conclusions are those of the author and should not be construed as the official position or policy of, nor should any endorsements be inferred by HRSA, HHS or the U.S. Government.