

Prevention Status Report | 2013

Nutrition, Physical Activity, and Obesity

Missouri

The Prevention Status Reports (PSRs) highlight—for all 50 states and the District of Columbia—the status of public health policies and practices designed to prevent or reduce important health problems. This report focuses on nutrition, physical activity, and obesity and briefly describes why they are a public health problem, both for Missouri and the United States as a whole. It also provides an overview of solutions (i.e., evidence-based or expert-recommended policy and practice options) for addressing nutrition, physical activity, and obesity and reports the status of these solutions in Missouri.

PSR Framework

The PSRs follow a simple framework:

- Describe the public health **problem** using public health data
- Identify potential **solutions** to the problem drawn from research and expert recommendations
- Report the **status** of those solutions for each state and the District of Columbia

Criteria for Selection of Policies and Practices

The policies and practices included in the PSRs were selected because they

- Can be monitored using state-level data that are readily available for most states and the District of Columbia
- Meet one or more of the following criteria:
 - Supported by systematic review(s) of scientific evidence of effectiveness (e.g., *The Guide to Community Preventive Services*)
 - Explicitly cited in a national strategy or national action plan (e.g., *Healthy People 2020*)
 - Recommended by a recognized expert body, panel, organization, study, or report with an evidence-based focus (e.g., Institute of Medicine)

Ratings

The PSRs use a simple, three-level rating scale to provide a practical assessment of the status of policies and practices in each state and the District of Columbia. It is important to note that the ratings reflect the *status of policies and practices* and do not reflect the *status of efforts* by state health departments, other state agencies, or other organizations to establish or strengthen those policies and practices. Strategies for improving public health vary by individual state needs, resources, and public health priorities.

More Information

For more information about public health activities in Missouri, visit the Missouri Department of Health and Senior Services website (<http://health.mo.gov/index.php>). For additional resources and to view reports for other health topics, visit the CDC website (<http://www.cdc.gov/stltpublichealth/psr/>).

Suggested Citation

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PSR | 2013

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Centers for Disease Control and Prevention
Office for State, Tribal, Local and Territorial Support

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Public Health Problem

 Poor diet and physical inactivity contribute to many serious and costly health conditions, including obesity, heart disease, diabetes, some cancers, unhealthy cholesterol levels, and high blood pressure (1,2).

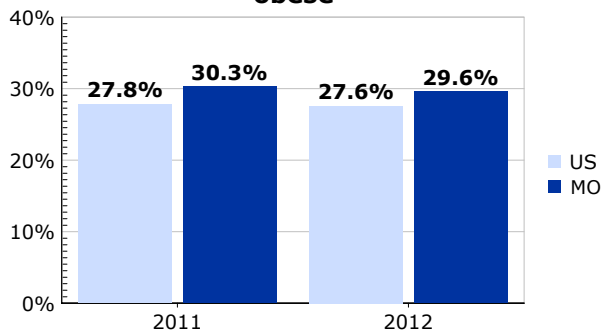
Obesity is associated with increased blood pressure; unhealthy cholesterol levels; chronic diseases such as heart disease, diabetes, some cancers, and osteoarthritis; complications of pregnancy; and premature death (3).

Children who are not breastfed are at greater risk for various health problems, including childhood infections and obesity (4).

 During 2009-2010, based on data from the National Health and Nutrition Examination Survey, approximately 17% of children and adolescents and 36% of adults were obese (5).

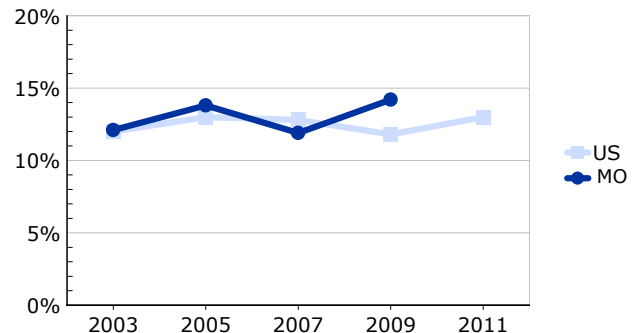
 US medical costs associated with adult obesity were approximately \$147 billion in 2008 (6).

Percentage of adults who were obese



Source: Behavioral Risk Factor Surveillance System (7)

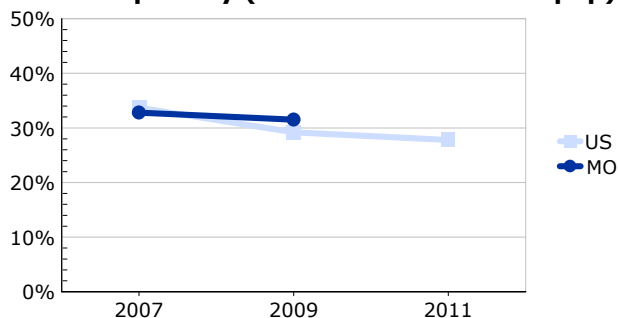
Percentage of high school students who were obese



Source: Youth Risk Behavior Surveillance System (8)

Note: Missouri data were not available for one or more years from the source used for this chart. Similar data may be available from another national or state source.

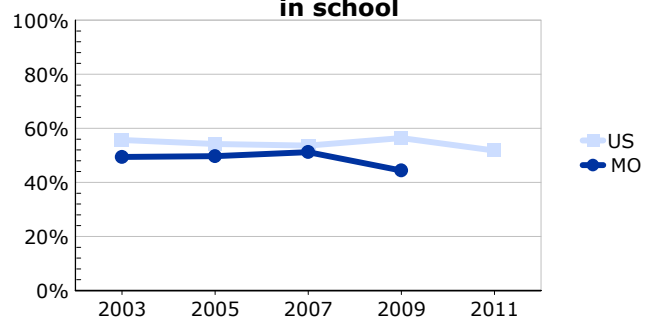
Percentage of high school students who drank a can, bottle, or glass of soda or pop at least one time per day (excludes diet soda or pop)



Source: Youth Risk Behavior Surveillance System (8)

Note: Missouri data were not available for one or more years from the source used for this chart. Similar data may be available from another national or state source.

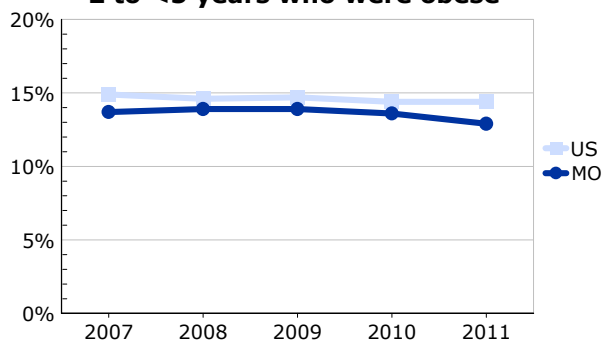
Percentage of high school students who attended physical education classes on one or more days in an average week when they were in school



Source: Youth Risk Behavior Surveillance System (8)

Note: Missouri data were not available for one or more years from the source used for this chart. Similar data may be available from another national or state source.

Percentage of low-income children aged 2 to <5 years who were obese



Source: Pediatric Nutrition Surveillance System (9)

Policy and Practice Solutions

This report focuses on policies and practices recommended by the Institute of Medicine, Community Preventive Services Task Force, US Surgeon General, CDC, and other expert bodies. The recommendations are based on expert judgment or evidence from scientific studies that the policies and practices can improve diet, increase breastfeeding, increase physical activity, or reduce obesity (10–17). These policies and practices include 1) implementing nutrition standards to limit the availability of less nutritious foods and beverages in schools, 2) implementing nutrition standards for foods and beverages in government facilities, 3) including nutrition and physical activity standards in state regulations of licensed childcare facilities, 4) establishing physical education time requirements in high schools, and 5) promoting evidence-based practices that support breastfeeding in hospitals and birth centers.

Additional strategies to prevent obesity and promote healthy eating, physical activity, and breastfeeding have been supported by scientific evidence or expert judgment (11–15,17). For information about why certain indicators were selected, and for links to additional data and resources, visit the CDC website (<http://www.cdc.gov/stltpublichealth/psr/npao/>).

Status of Policy and Practice Solutions in Missouri

Secondary schools not selling less nutritious foods and beverages

In 2012, 34.5% of secondary schools in Missouri did not sell the following items in vending machines or at school stores, canteens, or snack bars: candy, baked goods that are not low in fat, salty snacks that are not low in fat, soda pop, or fruit drinks that are not 100% juice (18).

In addition to providing school meals, many schools offer foods and beverages in other venues, such as school stores, canteens, snack bars, vending machines, and classrooms. The Institute of Medicine recommends nutrition standards for such foods and beverages (10), and CDC recommends that schools limit the availability of less nutritious foods and beverages and ensure that “only nutritious and appealing foods and beverages are provided in all food venues in schools” (15).

Rating	Percentage of secondary schools that did not sell less nutritious foods and beverages in selected venues:
Green	≥66.6%
Yellow	50.0%–66.5%
Red	<50.0%

Prevention Status Report | 2013

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State nutrition standards policy for foods and beverages sold or provided by state government agencies

In 2012, Missouri did not have a nutrition standards policy for foods and beverages sold or provided by state government agencies (19).

The Institute of Medicine recommends that government agencies implement “strong nutrition standards for all foods and beverages sold or provided through the government” and ensure “that healthy options are available in all places frequented by the public” to reduce the availability of less healthful foods and beverages and increase the availability of more healthful options (11). For purposes of this report, strong policies are those that meet the following criteria: 1) apply to at least 90% of government agencies in the state executive branch; 2) cover all food purchased, contracted, distributed, or sold by government agencies in the state executive branch; 3) provide quantifiable standards for foods or nutrients (e.g., set a maximum for the amount of sodium a food item can include); and 4) set minimal standards that limit sodium content, fat content, and the availability of high-calorie, low-nutrient foods and beverages.



Rating	State nutrition standards policy
Green	Met all criteria
Yellow	Met some but not all criteria
Red	Did not exist

Inclusion of nutrition and physical activity standards in state regulations of licensed childcare facilities

In 2012, Missouri state regulations for licensed childcare facilities included 10.6% of the 47 components of standards for infant feeding, nutrition, physical activity, and screen time (20).

The Institute of Medicine has recommended including specific requirements related to physical activity, sedentary activity, and child feeding in childcare regulations (12). The American Academy of Pediatrics, American Public Health Association, and National Resource Center for Health and Safety in Child Care and Early Education have identified 47 components that childcare regulatory agencies and childcare providers should include in standards for infant feeding, nutrition, physical activity, and screen time in licensed childcare settings (16).



Rating	Percentage of components included in state regulations:
Green	≥80.0%
Yellow	70.0%–79.9%
Red	<70.0%

State physical education time requirement for high school students

In 2012, Missouri did not have a physical education time requirement for high school students (21).

The Community Preventive Services Task Force recommends the implementation of quality physical education programs that increase the length of, or activity levels in, school-based physical education classes (13). This recommendation is based on strong evidence of such programs’ effectiveness in improving physical activity levels and physical fitness among school-aged children and adolescents (13). CDC and the National Association for Sport and Physical Education recommend that high school students receive at least 225 minutes of physical education per week (15,17). States and the District of Columbia can help increase physical activity among high school students by setting minimum requirements for time spent in physical education.



Rating	State had
Green	A mandate for minutes per week that high school students must participate in physical education
Yellow	N/A
Red	No mandate for minutes per week that high school students must participate in physical education

Prevention Status Report | 2013

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Average birth facility score for breastfeeding support

In 2011, Missouri had a birth facility score of 66 out of a possible 100 (22).

The US Surgeon General recommends that maternity care practices throughout the United States fully support breastfeeding (14). A review of evidence by the Cochrane Collaboration found that institutional changes in maternity care practices effectively increased breastfeeding initiation and duration rates (23). CDC's National Survey of Maternity Practices in Infant Nutrition and Care assesses and scores the extent to which hospitals and birth centers implement multiple evidence-based strategies that support breastfeeding (22).

Rating	State average birth facility score for breastfeeding support:
Green	≥80.0%
Yellow	70.0%–79.9%
Red	<70.0%

Simplified Rating System

A more detailed explanation of the rating system for nutrition, physical activity, and obesity is available at <http://www.cdc.gov/stltpublichealth/psr/npao/>.

Green

The policy or practice is established in accordance with supporting evidence and/or expert recommendations or is widely implemented.

Yellow

The policy or practice is established in partial accordance with supporting evidence and/or expert recommendations or is not as widely implemented as at the green rating level.

Red

The policy or practice is either absent or not established in accordance with supporting evidence and/or expert recommendations or is not widely implemented.

Indicator Definitions

Secondary schools not selling less nutritious foods and beverages: Percentage of middle schools and high schools that did not allow students to purchase less nutritious foods and beverages from vending machines, school stores, canteens, and snack bars. For a school to be identified as not selling less nutritious foods and beverages, the school principal had to respond "no" to each item when asked whether students could purchase the following five items: 1) chocolate candy; 2) other kinds of candy; 3) salty snacks that are high in fat, such as regular potato chips; 4) cookies, crackers, cakes, pastries, or other baked goods that are high in fat; and 5) soda pop or fruit drinks that are not 100% juice. Data were provided for 45 states and the District of Columbia and represented only those states that participated in the survey and had an overall school response rate of at least 70% (18).

State nutrition standards policy for foods and beverages sold or provided by state government agencies: The presence of statewide nutrition standards for select foods or nutrients that cover foods and beverages purchased, contracted, distributed, or sold by government agencies in the state executive branch. Information was obtained using a search of the *Westlaw* database (19). State policies captured are statutes, regulations, and administrative guidance. Data were updated November 2012. The search results did not indicate whether a policy was implemented, only whether it existed.

Inclusion of nutrition and physical activity standards in state regulations of licensed childcare facilities: Inclusion of 47 recommended components of standards in regulations for infant feeding, nutrition, physical activity, and screen time in childcare settings (16). State regulations were considered to have included a component if the regulation fully met the requirements of the component across all childcare entities licensed by the state.

State physical education time requirement for high school students: A state mandate for minimum number of minutes per week that high school students must participate in physical education (21).

Average birth facility score for breastfeeding support: The state birth facility score for breastfeeding represents the average score across participating birth facilities in a state. Each participating birth facility, based on its response to a self-administered survey, was scored on multiple evidence-based practices that support breastfeeding across seven categories: 1) labor and delivery, 2) breastfeeding assistance, 3) mother-newborn contact, 4) newborn feeding practices, 5) breastfeeding support after discharge, 6) nurse/birth attendant breastfeeding training and education, and 7) structural and organizational factors related to breastfeeding (22). The total score can range from 0 to 100, with a higher score representing more support. The national average score across all states was 70.

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