

www.thecommunityguide.org

# WHAT WORKS

# **Obesity Prevention and Control**

**Evidence-Based Interventions for Your Community** 



n the United States, more than one-third of adults and about 17 percent of children were obese during 2011-2014. Being obese increases the risk of developing chronic health problems like heart disease, stroke, diabetes, and certain cancers. This fact sheet provides proven intervention strategies—including programs and services—to reverse the U.S. obesity epidemic. It can help decision makers in both public and private sectors make choices about what interventions are best for their communities.

This fact sheet summarizes information in The Guide to Community Preventive Services (The Community Guide), an evidence-based resource of what works in public health. Use the information in this fact sheet to select from the following intervention strategies you can adapt for your community to

- Decrease the amount of time people spend in front of a computer or television screen.
- Use electronic or mobile technology to support coaching or counseling for weight loss or maintenance.
- Develop worksite programs for weight loss.
- Increase the availability of healthier foods and beverages in schools.

Community
Preventive Services
Task Force

The Community Guide provides evidence-based findings and recommendations from the Community Preventive Services Task Force (CPSTF) about preventive services and programs to improve health. The CPSTF—an independent, nonfederal panel of public health and prevention experts—bases its findings on systematic reviews of the scientific literature. Learn more about The Community Guide and what works to prevent obesity by visiting <a href="https://www.thecommunityguide.org/topic/obesity">www.thecommunityguide.org/topic/obesity</a>.

# THE PUBLIC HEALTH CHALLENGE

# Obesity is common, serious, and costly

- About 36% of adults and 17% of children and adolescents are obese.<sup>1</sup>
- Obesity affects all race/ethnicity groups, with higher rates among African-American and Hispanic children and adults.<sup>3, 4</sup>
- An estimated 1 in 8 preschool children from low income households is obese.<sup>5</sup>
- Approximately 300,000 deaths each year are attributed to obesity.<sup>6</sup>
- Medical costs associated with obesity were estimated at \$147 billion in 2008.<sup>7</sup>





## Obesity increases the risk of health conditions such as<sup>2</sup>



Heart disease



Type 2 diabetes



Respiratory problems, sleep apnea



Stroke

Mental illness such as clinical depression, anxiety, and other mental disorders<sup>8,9</sup>



Arthritis



Endometrial, breast, prostate, and colon cancers



All states have an obesity rate of more than 15%, the national goal.<sup>10</sup>

For more information on obesity in the United States, including state-by-state data, see www.cdc. gov/obesity/data.

Source: Behavioral Risk Factor Surveillance System (BRFSS)

\*Prevalence reflects <u>BRFSS</u> methodological changes in 2011. These estimates should not be compared to previous years.

#### SUMMARIZING THE CPSTF FINDINGS

All CPSTF findings for obesity prevention and control are available online at www.thecommunityguide.org/topic/obesity. Some of the findings are described below.

- Multicomponent interventions to increase the availability of healthier foods and beverages in schools. Meal interventions and fruit and snack interventions aim to provide healthier foods and beverages that are appealing to students and limit access to less healthy options. These interventions include school meal policies that ensure school breakfasts or lunches meet nutrition requirements and programs that provide fresh fruit and vegetables to students during lunch or snack. Healthy food and beverage marketing strategies for these interventions may include placing healthier foods and beverages where they are easy to select, offering taste tests, and pricing healthier foods and beverages at a lower cost.
- Interventions to reduce screen time. Spending less time watching TV, video, or DVDs, playing video or computer games, and surfing the internet can help people lose weight. Behavioral interventions—classes aimed at improving knowledge, attitudes, or skills—can reduce screen time by more than 36 minutes a day and result in modest weight loss among children and adolescents. These classes may include skills building, goal setting, reinforcement techniques, and family support encouragement.

- Technology-supported coaching or counseling interventions. Using technology in coaching or counseling interventions can help people to eat less, lose weight, and maintain the weight loss for 12 to 18 months. Technology-supported components include computerbased interfaces (such as computer kiosks, software programs, email, or the Internet), video conferencing, personal digital assistants, pagers, pedometers that "sync" with computers, and computerized telephone system interventions,
- Interventions in specific settings. Worksite nutrition and physical activity programs can help employees lose weight by improving their dietary and physical activity habits. These programs can include one or more approaches to support behavior changes, ranging from informational and educational to behavioral and social, as well as to policy and environmental strategies (improving access to healthy foods on-site and offering more opportunities for physical activity).

# PUTTING THE CPSTF FINDINGS TO WORK

As a public health decision maker, practitioner, community leader, or someone who can influence the health of your community, you can use The Community Guide to create a blueprint for success.

- Identify your community's needs. Review the intervention strategies recommended by the CPSTF and determine which ones best match your needs. Develop evidence-based programs, services, and policies that support weight loss efforts and create environments to help maintain a healthy weight.
- See how other communities have applied the CPSTF recommendations and other intervention strategies for preventing and controlling obesity. Get ideas from their success stories at www.thecommunityguide.org/content/ the-community-guide-in-action.



- Explore obesity programs at Cancer Control P.L.A.N.E.T.'s Research-tested Intervention Program (RTIPs). These community-based and clinical programs have been evaluated, found to be effective, and published in a peer-reviewed journal. Visit https://rtips.cancer.gov/rtips/rtips.
- Find tools and resources and learn more about how CDC's Division of Nutrition, Physical Activity, and Obesity supports obesity prevention programs at www.cdc.gov/nccdphp/dnpao/state-local-programs/index.html.
- ✓ Consult Partnership for Prevention's worksite health resources at www.prevent.org/Topics/Worksite-Health. aspx to learn about promoting health in the workplace.

# THE COMMUNITY GUIDE IN ACTION



# **Worksite Wellness to Control Overweight and Obesity**

The Dow Chemical Company (Dow) often uses findings and recommendations in The Community Guide to develop its worksite wellness programs. For example, to help control overweight and obesity among its 52,000 employees, Dow focuses on interventions to improve access to healthy foods. One strategy the company has implemented is to color code serving utensils in the cafeteria salad bar to help diners make healthier food choices. A green label indicates a food is a highly nutritious "go," a yellow label cautions moderation, and a red label warns diners to "stop" before eating too much of a high-fat food. As one component in a comprehensive worksite health strategy, interventions like this have helped Dow save millions in healthcare costs. Read more about this story at www.thecommunityguide.org/stories/investing-worksite-wellness-employees.



# **Mobilizing Funding Support to Battle Overweight and Obesity**

The Western Maryland Health System (WMHS) took aim at the increasing rates of adult and childhood obesity in its community through a comprehensive action plan focused on behavioral, social, and environmental change. WMHS used evidence-based findings and recommendations in The Community Guide to secure partnerships and funding for local activities, including a television "turn off challenge" and two walking groups. WMHS has found that using a combination of interventions and involving partners from different sectors of the community increases the likelihood that messages will take hold. Read more on this story at www.thecommunityguide.org/stories/maryland-businesses-support-worksite-wellness-effort-combat-chronic-disease.

## FOR MORE INFORMATION

The Community Guide: Obesity Prevention and Control www.thecommunityguide.org/topic/obesity

**Division of Nutrition, Physical Activity, and Obesity, CDC** www.cdc.gov/nccdphp/dnpao/

CDC's Vital Signs: Obesity Rises Among Adults www.cdc.gov/vitalsigns/AdultObesity/

CDC Prevention Research Center: Center for Training and Research Translation, University of North Carolina at Chapel Hill

http://centertrt.org/

**Healthy People 2020 Resources on Physical Activity** www.healthypeople.gov/2020/topics-objectives/topic/physical-activity



# **REFERENCES**

- <sup>1</sup> Ogden CL, Carroll MD, Fryar CD, Flegal KM. Prevalence of obesity among adults and youth in the United States, 2011–2014. NCHS data brief, no 219. National Center for Health Statistics. 2015. Available at <a href="https://www.cdc.gov/nchs/products/databriefs/db219.htm">https://www.cdc.gov/nchs/products/databriefs/db219.htm</a>.
- <sup>2</sup> National Heart, Lung, and Blood Institute. Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults: The Evidence Report. NIH publication no. 98-4083. Bethesda, MD. 1998. Available at <a href="http://www.nhlbi.nih.gov/guidelines/obesity/ob\_gdlns.pdf">http://www.nhlbi.nih.gov/guidelines/obesity/ob\_gdlns.pdf</a>.
- <sup>3</sup> Ogden CL, Carroll MD. Prevalence of Obesity Among Children and Adolescents: United States, Trends 1963–1965 Through 2007–2008. NCHS Health E-Stat. National Center for Health Statistics. 2010. Available at <a href="http://www.cdc.gov/nchs/data/hestat/obesity-child-07-08/htm">http://www.cdc.gov/nchs/data/hestat/obesity-child-07-08/htm</a>.
- Flegal KM, Carroll MD, Kit BK, Ogden CL. Prevalence of obesity and trends in the distribution of body mass index among US adults, 1999-2010. JAMA. 2012;307(5):491-497.

- <sup>5</sup> Centers for Disease Control and Prevention. Vital Signs: Obesity Among Low-Income, Preschool-aged Children–United States, 2008-2011. MMWR Morb Mortal Wkly Rep 2013;62(31)629-634. Available at <a href="https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6231a4.">https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6231a4.</a>
- <sup>6</sup> U.S. Surgeon General. Overweight and Obesity: At a Glance. U.S. Department of Health and Human Services. Available at https://www.ncbi.nlm.nih.gov/books/NBK44660/.
- <sup>7</sup> Finkelstein EA, Trogdon JG, Cohen JW, Dietz W. Annual medical spending attributable to obesity: payer- and service-specific estimates. Health Affairs. 2009;28(5):w822-w831.
- <sup>8</sup>Kasen, Stephanie, et al. "Obesity and psychopathology in women: a three decade prospective study." International Journal of Obesity 32.3 (2008): 558-566.
- 9 Luppino, Floriana S., et al. "Overweight, obesity, and depression: a systematic review and meta-analysis of longitudinal studies." Archives of general psychiatry 67.3 (2010): 220-229.





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# **CPSTF FINDINGS ON OBESITY PREVENTION AND CONTROL**

The Community Preventive Services Task Force (CPSTF) has released the following findings on what works in public health to prevent and control obesity. These findings are compiled in The Guide to Community Preventive Services (The Community Guide) and listed in the table below. Use the findings to identify strategies and interventions you could use for your community.

Legend for CPSTF Findings:



Recommended



Insufficient Evidence



Recommended Against

(See reverse for detailed descriptions.)

Intervention	CPSTF Finding	
Interventions in Community Settings		
Behavioral Interventions to Reduce Screen Time Among Children		
Increasing Water Access in Schools	$\Diamond$	
Meal and Fruit and Vegetable Snack Interventions to Increase Healthier Foods and Beverages Provided by Schools		
Multicomponent Interventions to Increase Availability of Healthier Foods and Beverages in Schools		
Supporting Healthier Snack Foods and Beverages Sold or Offered as Rewards in Schools	<b>\langle</b>	
Worksite Programs		
Technology-Supported Multicomponent Coaching or Counseling Interventions		
To Reduce Weight		
To Maintain Weight Loss		

Intervention	CPSTF Finding	
Provider-Oriented Interventions		
Provider Education	<b>\Q</b>	
Provider Education with a Patient Intervention	<b>\Q</b>	
Provider Feedback	<b>\Q</b>	
Provider Reminders	<b>\Q</b>	
Multicomponent Provider Intervention	<b>\limits</b>	
Multicomponent Provider Intervention with Patient Interventions	<b>\Q</b>	

For each intervention, a summary of the systematic review, included studies, evidence gaps, and journal publications can be found on the Obesity section of the website at <a href="https://www.thecommunityguide.org/topic/obesity">www.thecommunityguide.org/topic/obesity</a>. Other related resources for this topic include one pagers and Community Guide in Action stories.

### UNDERSTANDING THE FINDINGS

The CPSTF bases its findings and recommendations on systematic reviews of the scientific literature. With oversight from the CPSTF, scientists and subject matter experts from the Centers for Disease Control and Prevention conduct these reviews in collaboration with a wide range of government, academic, policy, and practice-based partners. Based on the strength of the evidence, the CPSTF assigns each intervention to one of the categories below.

Category	Description	lcon
Recommended	There is strong or sufficient evidence that the intervention strategy is <b>effective</b> . This finding is based on the number of studies, how well the studies were designed and carried out, and the consistency and strength of the results.	
Insufficient Evidence	There is <b>not enough evidence</b> to determine whether the intervention strategy is effective. This does not mean the intervention does not work. There is not enough research available or the results are too inconsistent to make a firm conclusion about the intervention strategy's effectiveness. The CPSTF encourages those who use interventions with insufficient evidence to evaluate their efforts.	<b>♦</b>
Recommended Against	There is strong or sufficient evidence that the intervention strategy is harmful or not effective.	<b>A</b>

### **EVALUATING THE EVIDENCE**

- CPSTF findings are based on systematic reviews of all relevant, high-quality evidence. Systematic reviews
  are conducted in accordance with the highest international standards, using a transparent and replicable
  methodology that accounts for the complexities of real-world public health interventions.
- Systematic review science teams, coordinated by CDC scientists, evaluate the strengths and limitations of all
  relevant high-quality evidence to assess whether programs, services, and other interventions are effective in
  improving health at the population level.
- Review teams determine whether findings are applicable to different U.S. population groups and settings; highlights possible harms, potential benefits, and implementation considerations; and identifies evidence gaps and areas for future research.
- A separate team of economists conducts systematic economic analyses for recommended intervention approaches. They look at cost, cost effectiveness, and cost-benefit analyses to provide public health professionals with information they need to make decisions and allocate funding.

Visit the "Our Methodology" page on The Community Guide website at www.thecommunityguide.org/about/our-methodology for more information about the methods used to conduct the systematic reviews and the criteria the CPSTF uses to make findings and recommendations.