



WHAT WORKS

Diabetes Prevention and Control

Evidence-Based Interventions for Your Community



In 2015, over 30 million Americans had diabetes and an estimated 1.5 million new cases were diagnosed among adults aged 18 years or older. Diabetes is currently the seventh leading cause of death in the United States. Along with those who have been diagnosed with diabetes, there are an additional 84 million Americans who have prediabetes, which means that they are at increased risk of developing type 2 diabetes. One out of every three Americans have diabetes or prediabetes, and this percentage is growing.¹

This fact provides proven intervention strategies—including programs and services—to develop successful diabetes prevention and control interventions. It can help decision makers in both public and private sectors make choices about what intervention strategies 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 this information to select from the following intervention strategies you can adapt for your community to

- Implement combined diet and physical activity promotion programs to prevent type 2 diabetes for people at increased risk. These can include counseling, coaching, or a combination of both.
- Develop case management interventions in order to coordinate and provide healthcare for all people affected by diabetes.
- Engage community health workers in diabetes prevention programs to improve glycemic control and weight-related outcomes for people at increased risk for type 2 diabetes.
- Develop intensive lifestyle interventions for patients with type 2 diabetes to improve glycemic control and support dietary modification, regular physical activity, and weight management.
- Develop team-based care interventions to help patients manage type 2 diabetes and improve blood glucose, blood pressure, and lipid levels.

THE PUBLIC HEALTH CHALLENGE

The prevalence and incidence of diabetes is rising

- Over the last 20 years, the number of **adults with diabetes** has **more than tripled** as the American population has aged and become overweight and obese.²
- **Risk factors** for type 2 diabetes include being overweight, having a family history of diabetes, having gestational diabetes or having a baby weighing more than 9 pounds at birth.³
- Without weight loss and moderate physical activity, many people with **prediabetes** will develop **type 2 diabetes** within **five years**.³



Type 2 diabetes can often be prevented



Eating smaller portions and healthy foods can help prevent or delay diabetes diagnoses.⁴



Physical activity can help control blood glucose levels, weight, and blood pressure, as well as raise “good” cholesterol and lower “bad” cholesterol.⁵

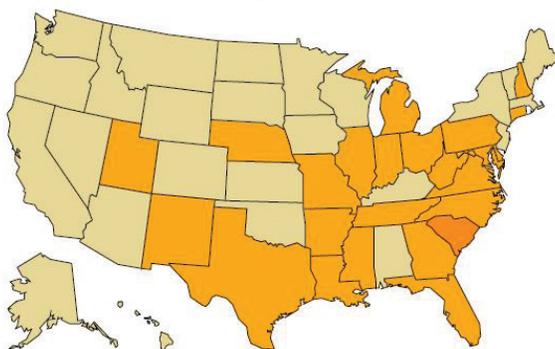


Losing just a small amount of weight (between 5 and 7 percent of total body weight) can prevent or delay type 2 diabetes for those who are at high risk for the disease.⁶

In 1994, the prevalence of diagnosed diabetes was less than 6% in most states. By 2015, there were 27 states with a prevalence of more than 9%.

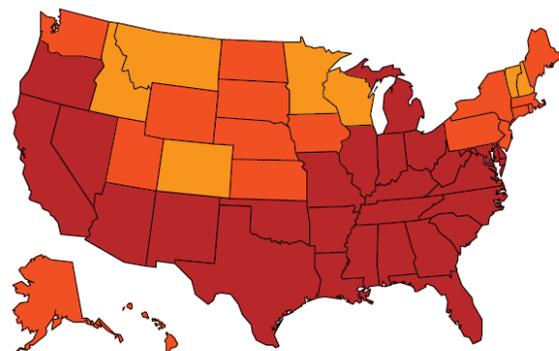
Age-Adjusted Prevalence of Diagnosed Diabetes Among US Adults

1994



Age-Adjusted Prevalence of Diagnosed Diabetes Among US Adults

2015



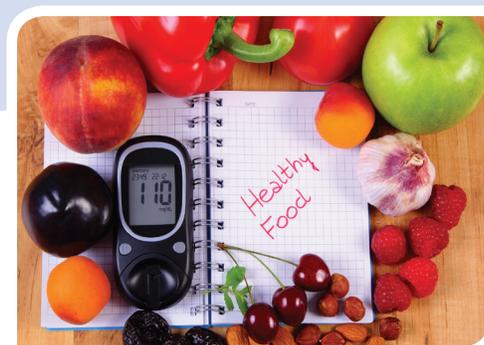
Source: www.cdc.gov/brfss

For more findings on diabetes in the U.S. or in your state, see www.cdc.gov/diabetes.

SUMMARIZING THE CPSTF FINDINGS

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

- **Combined diet and physical activity promotion programs** are effective in reducing new-onset diabetes. These programs also improve diabetes and cardiovascular disease risk factors, including overweight, high blood glucose, and high blood pressure. They are designed to prevent type 2 diabetes among people who are at increased risk for the disease. Combined diet and physical activity programs actively encourage people to improve their diet and increase their physical activity.
- **Team-based care** is a health systems-level, organizational intervention that assigns a multidisciplinary team to help patients manage type 2 diabetes. Each team includes the patient, the patient's primary care provider (not necessarily a physician), and one or more health professionals. The team helps patients get appropriate medical tests, use medications to manage risk factors, adhere to treatment, and make healthy behavior and lifestyle choices.
- **Interventions engaging community health workers for diabetes prevention** improves blood sugar control and weight-related outcomes for people at increased risk for type 2 diabetes. Community health workers are frontline public health workers who serve as a bridge between underserved communities and healthcare systems. Programs may include education about diabetes prevention and lifestyle changes, or counseling for people at higher risk for diabetes.
- **Intensive lifestyle interventions** helps type 2 diabetes patients improve glycemic control and reduce risk factors for cardiovascular disease. Patients with type 2 diabetes receive counseling and support to help them change their diet or level of physical activity. Programs provide ongoing counseling, coaching, or individualized guidance on dietary modifications, regular exercise, or both. Patients must interact with program staff multiple times over a period of six months or longer.



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. Adopt, adapt, or develop evidence-based diabetes prevention and control campaigns to support your programs and services.
- ✓ See how other communities have applied the CPSTF recommendations for diabetes prevention and control at www.thecommunityguide.org/content/the-community-guide-in-action. Get ideas from their Community Guide in Action stories
- ✓ Explore CDC's **National Diabetes Prevention Program** at www.cdc.gov/diabetes/prevention to learn more about their evidence-based lifestyle change program for preventing type 2 diabetes. Find out how federal agencies, community organizations, employers, insurers, and others work together to reduce diabetes.
- ✓ Use **CDC's strategies to prevent and control diabetes** at www.cdc.gov/diabetes/pubs/pdf/PublicHealthCompendium.pdf to develop programs for individuals, employers, and communities.
- ✓ Visit the **Society for Public Health Education (SOPHE)** website at www.sophe.org/Sophe/PDF/Diabetes_toolkitrevised.pdf to access a toolkit designed to provide tips and resources for planning and promoting interventions designed to empower communities to reduce the risk of diabetes.
- ✓ Consult **Partnership for Prevention's diabetes self-management education (DSME) program** at www.prevent.org/downloadStart.aspx?id=16 to find evidence-based practices for diabetes control and prevention.

THE COMMUNITY GUIDE IN ACTION

Combating Diabetes through Worksite Wellness Efforts



In 2010, the Maryland Department of Health and Mental Hygiene (DHMH) defined obesity and diabetes as priority health concern areas and launched an initiative focusing on worksite wellness across the state. Using findings from the Community Guide as a basis on which to assess and influence change in employees' health, the DHMH developed a program called Healthiest Maryland. This program worked to create a culture of wellness in the workplace where the healthiest choice is an easy one. The DHMH used Task Force findings such as point-of-decision prompts to encourage stair use, worksite programs to control and reduce overweight and obesity, and diabetes disease management programs. Early results of the program show enthusiasm for Healthiest Maryland with more than 150 businesses, employing more than 180,000 employees, committed to the initiative. Read more on this story at www.thecommunityguide.org/stories/maryland-businesses-support-worksite-wellness-effort-combat-chronic-disease.

Putting it all Together: Preventing Diabetes with Clinical and Community-Based Evidence

Of the eighty-six million Americans with prediabetes, nine out of 10 don't know they have it. Prediabetes can lead to heart disease, stroke, and type 2 diabetes. The American Medical Association partnered with the CDC in 2016 to launch the national Prevent Diabetes STAT™ campaign to help manage prediabetes and its associated health risks. Using Task Force recommendations on evidence-based programs, Prevent Diabetes STAT™ aims to reduce the number of individuals with prediabetes who develop type 2 diabetes. Read more about this story at <https://www.thecommunityguide.org/stories/putting-it-all-together-preventing-diabetes-clinical-and-community-based-evidence>. Read more about this story at www.thecommunityguide.org/stories/putting-it-all-together-preventing-diabetes-clinical-and-community-based-evidence.



FOR MORE INFORMATION

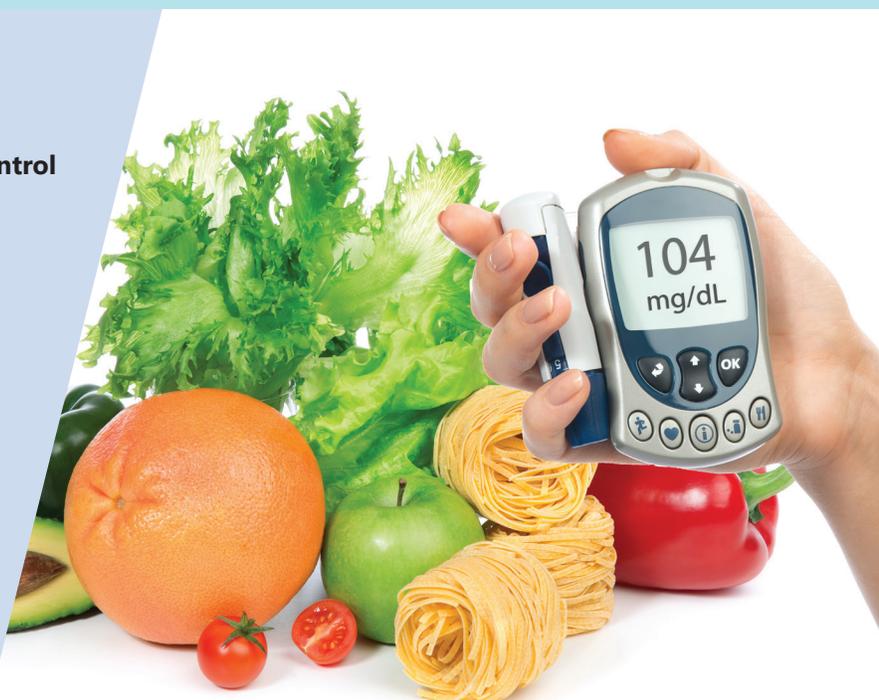
The Community Guide: Diabetes Prevention and Control
www.thecommunityguide.org/topic/diabetes

Diabetes Public Health Resource, CDC
www.cdc.gov/diabetes

**Office of Disease Prevention and Health Promotion
U.S. Department of Health & Human Services**
www.health.gov

**National Diabetes Education Program
National Institute of Health**
www.ndep.nih.gov

American Diabetes Association
www.diabetes.org



REFERENCES

¹Centers for Disease Control and Prevention. National Diabetes Statistics Report, 2017. Atlanta, GA: Centers for Disease Control and Prevention, U.S. Dept of Health and Human Services; 2017.

²Centers for Disease Control and Prevention. National Diabetes Education Program. Diabetes Prevention Program What is Prediabetes and Are You at Risk. Retrieved from www.cdc.gov/diabetes/ndep/people-risk-diabetes/index.html.

³Centers for Disease Control and Prevention. (2017). Basics About Diabetes. *Diabetes Home*. Retrieved from <https://www.cdc.gov/diabetes/basics/diabetes.htm>

⁴Centers for Disease Control and Prevention. (2016). Managing Diabetes—Eat Right. *Diabetes Home*. Retrieved from <https://www.cdc.gov/diabetes/managing/eatright.html>.

⁵Centers for Disease Control and Prevention. (2016). Managing Diabetes—Be Active. *Diabetes Home*. Retrieved from <https://www.cdc.gov/diabetes/managing/beactive.html>.

⁶Centers for Disease Control and Prevention. Managing Diabetes—Prevent Diabetes. *Diabetes Home*. Retrieved from <https://www.cdc.gov/diabetes/prevention/index.html>.



CPSTF FINDINGS FOR DIABETES PREVENTION AND CONTROL

The Community Preventive Services Task Force (CPSTF) has released the following findings on what works in public health to prevent cardiovascular disease. 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
Combined Diet and Physical Activity Promotion Programs to Prevent Type 2 Diabetes Among People at Increased Risk	
Intensive Lifestyle Interventions for Patients with Type 2 Diabetes	
Interventions Engaging Community Health Workers for Diabetes Management	
Interventions Engaging Community Health Workers for Diabetes Prevention	
Lifestyle Interventions to Reduce the Risk of Gestational Diabetes	
Mobile Phone Applications Used Within Healthcare Systems for Type 1 Diabetes Self-Management	
Mobile Phone Applications Used Within Healthcare Systems for Type 2 Diabetes Self-Management	
Team-Based Care for Patients with Type 2 Diabetes	

For each intervention, a summary of the systematic review, included studies, evidence gaps, and journal publications can be found on the Diabetes Prevention and Control section of the website at www.thecommunityguide.org/topic/diabetes. Other related resources 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	Icon
Recommended	There is strong or sufficient evidence that the intervention strategy is effective . 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 not enough evidence 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.	
Recommended Against	There is strong or sufficient evidence that the intervention strategy is harmful or not effective .	

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.