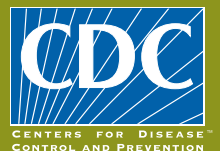
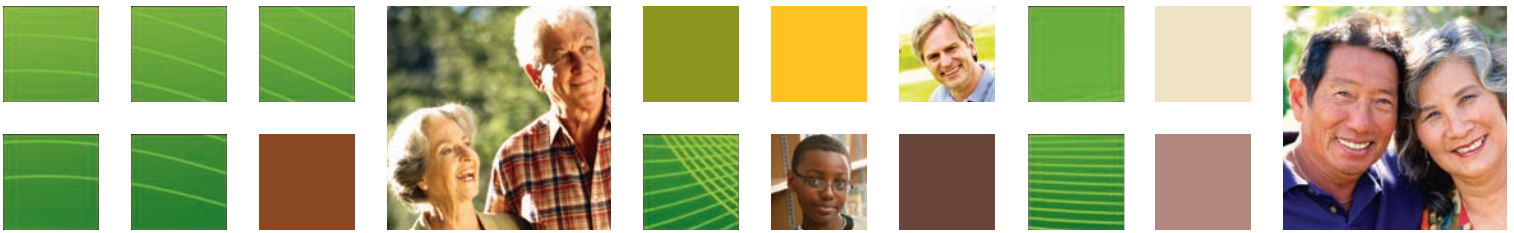


DIABETES
SUCSESSES AND
OPPORTUNITIES
FOR POPULATION-BASED
PREVENTION AND
CONTROL

AT A GLANCE
2010

NATIONAL CENTER FOR CHRONIC DISEASE PREVENTION AND HEALTH PROMOTION
IMPROVING HEALTH AND QUALITY OF LIFE FOR ALL PEOPLE





What Is Diabetes?

Diabetes is a disease in which the body has a shortage of insulin, a decreased ability to use insulin, or both. Insulin is a hormone that allows glucose (sugar) to enter cells and be converted to energy. When diabetes is not controlled, glucose and fats remain in the blood and, over time, damage vital organs.

- **Type 1 diabetes** usually is first diagnosed in children and young adults, although the disease can occur at any age. Type 1 may be autoimmune, genetic, or environmental and accounts for 5% of diabetes cases. There is no known way to prevent this type of diabetes.
- **Type 2 diabetes**, which is linked to obesity and physical inactivity, accounts for 90%–95% of diabetes cases and most often occurs in people older than 40. Type 2 is associated with older age, obesity, family history of diabetes, history of gestational diabetes, impaired glucose metabolism, physical inactivity, race, and ethnicity. Type 2 diabetes in children and adolescents, although still rare, is being diagnosed more frequently among American Indians, African Americans, Hispanics/Latinos, and Asians/Pacific Islanders.
- **Prediabetes** is a condition in which a person has blood glucose levels higher than normal but not high enough to be classified as diabetes. An estimated 57 million American adults had prediabetes in 2007. People with this condition have an increased risk of developing type 2 diabetes, heart disease, and stroke.
- **Gestational diabetes** is a form of glucose intolerance diagnosed during pregnancy. Gestational diabetes occurs more frequently among African Americans, Hispanics/Latinos, and American Indians. It is also more common in obese women and women with a family history of diabetes. Gestational diabetes requires treatment to normalize maternal blood glucose levels to avoid complications in the infant. Women who have had gestational diabetes have a 35%–60% chance of developing diabetes during the 10–20 years following their pregnancy.
- **Other types of diabetes** result from specific genetic conditions (such as maturity-onset diabetes of youth), surgery, medications, infections, pancreatic disease, and other illnesses. Other types of diabetes account for 1%–5% of all diagnosed cases.

Diabetes Is Common, Disabling, and Deadly

- 23.6 million people in the United States (7.8% of the total population) have diabetes. Of these, 5.7 million have undiagnosed diabetes.
- In 2007, about 1.6 million new cases of diabetes were diagnosed in people aged 20 years or older.
- African American, Hispanic, American Indian, and Alaska Native adults are twice as likely as white adults to have diabetes.
- If current trends continue, 1 in 3 Americans will develop diabetes sometime in their lifetime, and those with diabetes will lose, on average, 10–15 years of life.
- Diabetes is the leading cause of new cases of blindness, kidney failure, and nontraumatic lower-extremity amputations among adults.
- Diabetes was the sixth leading cause of death on U.S. death certificates in 2006. Overall, the risk for death among people with diabetes is about twice that of people without diabetes of similar age.
- In 1999–2000, 7% of U.S. adolescents aged 12–19 years had impaired fasting glucose (prediabetes), putting them at increased risk of developing type 2 diabetes, heart disease, and stroke.

Diabetes Is Costly

- Total costs (direct and indirect) of diabetes: \$174 billion.
- Direct medical costs: \$116 billion.
- Indirect costs (related to disability, work loss, premature death): \$58 billion.
- People with diagnosed diabetes have medical expenditures that are about 2.3 times higher than medical expenditures for people without diabetes.



Diabetes Is Preventable and Controllable

Recent studies show that lifestyle changes can prevent or delay the onset of type 2 diabetes among people at high risk.

- For people with prediabetes, lifestyle changes, including a 5%–7% weight loss and at least 150 minutes of physical activity per week, can reduce the rate of onset of type 2 diabetes by 58%.

Disability and premature death are not inevitable consequences of diabetes. By working with their support network and health care providers, people with diabetes can prevent premature death and disability by controlling their blood glucose, blood pressure, and blood lipids and by receiving other preventive care in a timely manner.

- Blood glucose control reduces the risk for eye, kidney, and nerve diseases among people with diabetes by about 40%.
- Blood pressure control reduces the risk for heart disease and stroke among people with diabetes by 33%–50%. It reduces the risk for eye, kidney, and nerve diseases by about 33%.
- Detecting and treating diabetic eye disease with laser therapy can reduce the risk for loss of eyesight by 50%–60%. Comprehensive foot care programs can reduce amputation rates by 45%–85%.

Important Achievements, But More to Do

There are encouraging outcomes to report in the effort to control the epidemic of diabetes. People with diabetes are living longer. The following also have decreased:

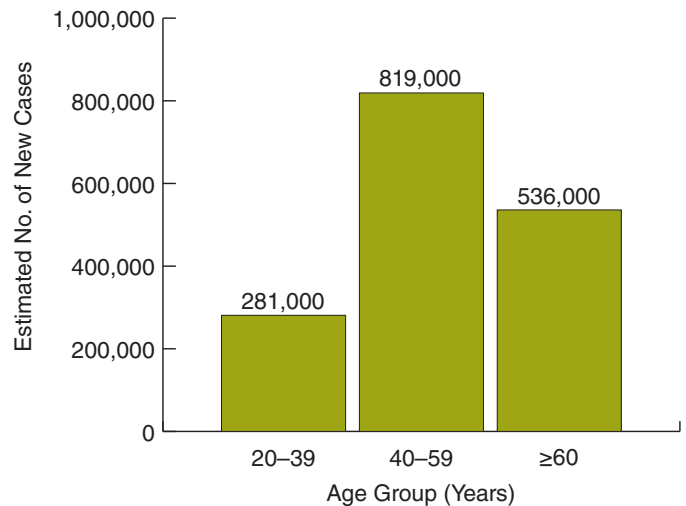
- The percentage of people with diabetes who are unaware that they have the disease.

CDC's Response

CDC works to reduce the preventable burden of diabetes through public health leadership, partnerships, research, policies, and programs that translate science into practice. Through its Division of Diabetes Translation (DDT), CDC is conducting the following activities to achieve this goal:

- Using public health surveillance to monitor the burden of diabetes across the United States.

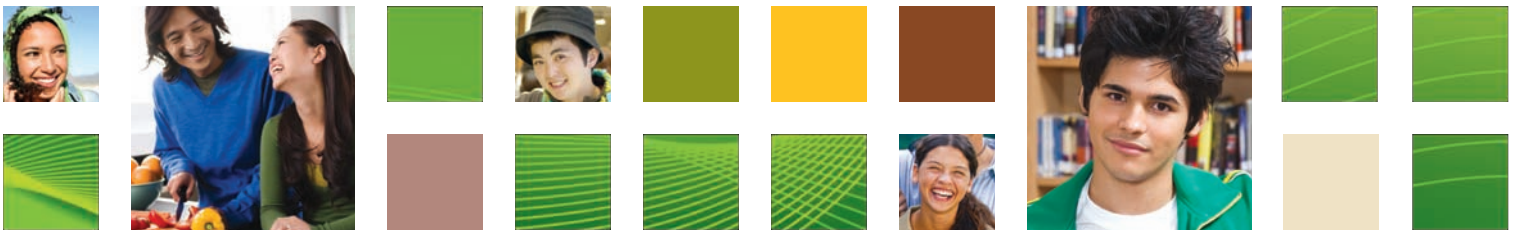
New Cases of Diagnosed Diabetes in People Aged 20 Years or Older, by Age Group, United States, 2007



Source: 2004–2006 National Health Interview Survey estimates projected to year 2007.

- Hospitalizations among people with diabetes.
- Cardiovascular disease death rates among people with diabetes.
- The prevalence of visual impairments among people with diabetes.
- The rate of new cases of kidney failure among people with diabetes.

- Conducting research that helps communities deliver findings in clinical and public health practice.
- Developing and maintaining effective state-based diabetes prevention and control programs.
- Closing health gaps among populations most severely affected by diabetes.



CDC's Response (continued)

Defining the Diabetes Burden

CDC's National Diabetes Surveillance System (NDSS) maintains diabetes-related data from national and state-based surveys. NDSS data are not available from any other source. They have been used to determine trends in diabetes and its complications, identify diabetes health service research needs, develop and monitor national health objectives, detect changes in health care practices, facilitate program planning and educational materials, and allocate resources. To view trends in national data, as well as data about your state or county, visit <http://apps.nccd.cdc.gov/DDTSTRS>.

Translating Research and Conducting New Research

CDC translates research findings from scientific studies and clinical trials for use by health care systems and communities. Special emphasis is placed on the elimination of health disparities among populations at higher risk. Examples of this translation include the following:

- **Translating Research Into Action for Diabetes (TRIAD).** A national, multicenter study, TRIAD aims to provide practical information on how to better implement effective treatments and provide better care for patients with diabetes in managed care settings in the United States.
- **Primary Prevention for People Most at Risk.** Building on information learned from past projects that translate research into action, CDC is establishing an evidence-based National Diabetes Prevention Program that will recognize and certify community-based lifestyle intervention programs for people who have a high risk of developing type 2 diabetes.

Developing Programs in States and U.S. Territories

CDC provides funding and technical assistance for diabetes prevention and control programs (DPCPs) in all 50 states, the District of Columbia, and 8 current and former U.S. territories.

These programs implement public health strategies such as

- Preventing diabetes among people at highest risk.
- Adopting diabetes care guidelines in health care delivery settings.
- Helping state Medicaid programs monitor quality care outcomes among people with diabetes.
- Educating providers and the public about optimal diabetes care and self-management.
- Involving communities in diabetes control activities.

Providing Education and Sharing Expertise

The National Diabetes Education Program (NDEP) and the Native Diabetes Wellness Program (NDWP) are two programs in DDT that focus on disparate populations. The NDEP, jointly led by CDC and the National Institutes of Health, develops and disseminates educational information on the prevention and control of diabetes for populations affected by diabetes, health care professionals, employers, and insurers.

The NDEP's educational resources and tools are available online in English, Spanish, and 15 Asian and Pacific Islander languages at <http://www.ndep.nih.gov>. The NDEP Web site also provides resources for specific audiences, such as health care professionals, businesses, schools, and community organizations.

The NDWP focuses on American Indian/Alaska Native and Pacific Islander populations who are disproportionately affected by diabetes. The NDWP and its partners are developing a series of books and graphic novels that use the native art of storytelling to teach adolescents about returning to traditional, healthy lifestyle practices. This series will complement the *Eagle Books* series for younger children. More than 2 million copies of the *Eagle Books* have been provided to schools, libraries, and other organizations. For more information on the books, go to <http://www.cdc.gov/diabetes/pubs/eagle.htm>.

For more information, please contact the Centers for Disease Control and Prevention
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