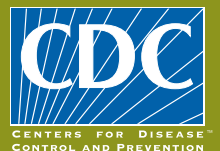


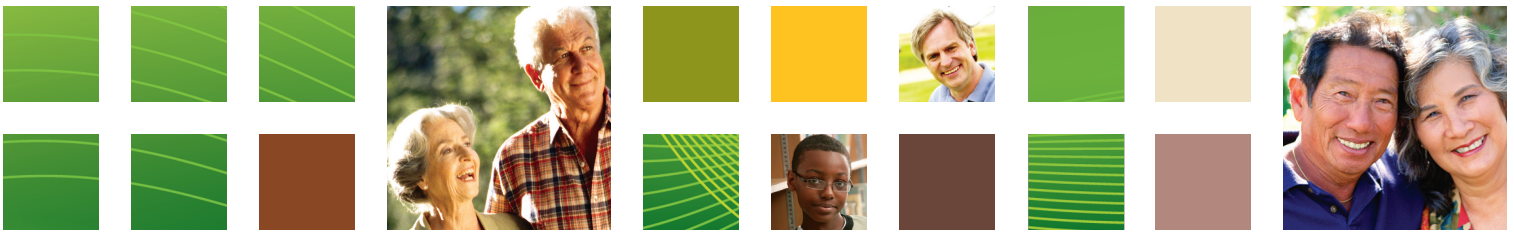
DIABETES

SUCSESSES AND
OPPORTUNITIES
FOR POPULATION-BASED
PREVENTION AND
CONTROL

AT A GLANCE
2009

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 or a decreased ability to use insulin, 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 strikes children and young adults, although the disease can appear at any age. Type 1 may be autoimmune, genetic, and/or environmental. 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 appears 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, Hispanic/Latino Americans, and Asian/Pacific Islanders.
- **Prediabetes** is a condition in which individuals have 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, Hispanic/Latino Americans, and American Indians. It is also more common among obese women and women with a family history of diabetes. During pregnancy, gestational diabetes requires treatment to normalize maternal blood glucose levels to avoid complications in the infant. Immediately after pregnancy, 5% to 10% of women with gestational diabetes are found to have type 2 diabetes. Women who have had gestational diabetes have a 40% to 60% chance of developing diabetes in the next 5–10 years.
- **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% to 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 are undiagnosed.
- 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 among adults (aged 20–74 years), kidney failure, and nontraumatic lower-extremity amputations.
- Diabetes was the seventh leading cause of death on U.S. death certificates in 2006. Overall, the risk of death among people with diabetes is about twice that of people without diabetes of similar age.
- In 1999–2000, 7.0% of U.S. adolescents aged 12–19 years had impaired fasting glucose.

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 the onset of type 2 diabetes among those at high risk.

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

Disability and premature death are not inevitable consequences of diabetes. Working together, people with diabetes, their support network, and their health care providers can reduce the occurrence of premature death and disability by controlling blood glucose, blood pressure and blood lipids, and by receiving other preventive care practices 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 also 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 about 50%–60%. Comprehensive foot care programs can reduce amputation rates by 45%–85%.

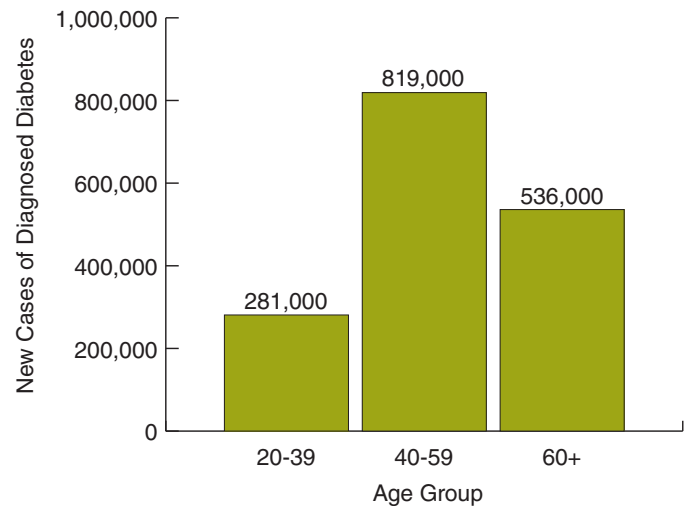
Important Achievements, But More to Do

There are encouraging outcomes to report in the effort to control the epidemic of diabetes. People with diabetes are living longer and we have also seen decreases in

- Hospitalizations among people with diabetes.

- Cardiovascular disease death rates among people with diabetes.
- The prevalence of visual impairments among people with diabetes.
- The percentage of people with diabetes who are unaware that they have the disease.

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



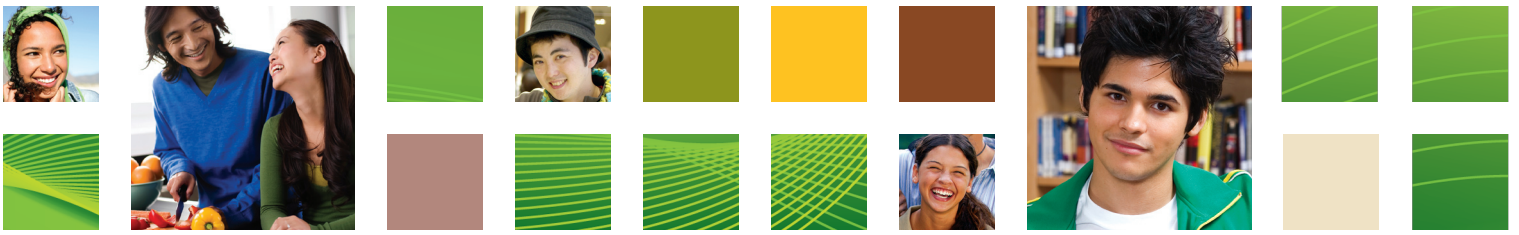
Source: 2004–2006 National Health Interview Survey estimates projected to year 2007.

CDC's Response

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

- Monitoring the diabetes burden through the use of public health surveillance.

- Conducting research that helps communities translate findings from clinical trials into 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, available from no other source, 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. For 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 clinical trials and scientific studies for use by health care systems and communities. Special emphasis is placed on the elimination of disparities. Examples of research in action include:

- **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 diabetic patients in U.S. managed care settings.
- **Primary Prevention for People Most at Risk.** CDC is conducting primary prevention pilot programs in five states to identify people at high risk for type 2 diabetes to develop policies to help these people reduce their risk, and to establish public health programs that will slow the diabetes epidemic.

Developing State- and U.S. Territory-Based Programs

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

These programs implement public health strategies such as

- Preventing diabetes among individuals at highest risk.
- Health care delivery settings adopting diabetes care guidelines.
- Helping state Medicaid programs monitor quality care outcomes among persons 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

Two programs in DDT that focus on disparate populations are the National Diabetes Education Program (NDEP) and the Native Diabetes Wellness Program (NDWP). The NDEP, jointly led by CDC and National Institutes of Health (NIH), develops and disseminates educational information on the prevention and control of diabetes for populations affected by diabetes, health care professionals, employers, and insurers. NDEP's educational resources and tools are available in English, Spanish, and 15 Asian and Pacific Islander languages at <http://www.ndep.nih.gov>. The NDEP Web site also provides resources that target specific audiences such as business and managed care companies and health care providers.

The NDWP focuses on the American Indian/Alaska Native and Pacific Islander populations who are disproportionately affected by diabetes. The NDWP and its partners developed a series of children's books (*Eagle Books*), which use the native art of storytelling to teach children about returning to traditional, healthy lifestyle practices. More than 2 million copies of *Eagle Books* have been provided to schools, libraries, and other organizations. More information on the books can be found at <http://www.cdc.gov/diabetes/pubs/eagle.htm>.

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