



2011 National Diabetes Fact Sheet

Return to the [Table of Contents \(factsheet11.htm\)](#)

Diagnosed and undiagnosed diabetes in the United States, all ages, 2010

Total: 25.8 million people, or 8.3% of the U.S. population, have diabetes.

Diagnosed: 18.8 million people

Undiagnosed: 7.0 million people

Estimation Methods

The estimates in this fact sheet were derived from various data systems of the Centers for Disease Control and Prevention (CDC), the Indian Health Service's (IHS) National Patient Information Reporting System (NPIRS), the U.S. Renal Data System of the National Institutes of Health (NIH), the U.S. Census Bureau, and published studies. The estimated percentages and the total number of people with diabetes and prediabetes were derived from 2005–2008 National Health and Nutrition Examination Survey (NHANES), 2007–2009 National Health Interview Survey (NHIS), 2009 IHS data, and 2010 U.S. resident population estimates. The diabetes and prediabetes estimates from NHANES were applied to the 2010 U.S. resident population estimates to derive the estimated number of adults with diabetes or prediabetes. The methods used to generate the estimates for the fact sheet may vary over time and need to be considered before comparing fact sheets. In contrast to the 2007 National Diabetes Fact Sheet, which used fasting glucose data to estimate undiagnosed diabetes and prediabetes, the 2011 National Diabetes Fact Sheet uses both fasting glucose and hemoglobin A1c (A1c) levels (factsheet11/popup1.htm) to derive estimates for undiagnosed diabetes (factsheet11/tables1_2.htm) and prediabetes. These tests were chosen because they are most frequently used in clinical practice.

Diagnosed and undiagnosed diabetes among people aged 20 years or older, United States, 2010

Age 20 years or older: 25.6 million, or 11.3% of all people in this age group, have diabetes.

Age 60 years or older: 10.9 million, or 26.9% of all people in this age group, have diabetes.

Men: 13.0 million, or 11.8% of all men aged 20 years or older, have diabetes.

Women: 12.6 million, or 10.8% of all women aged 20 years or older, have diabetes.

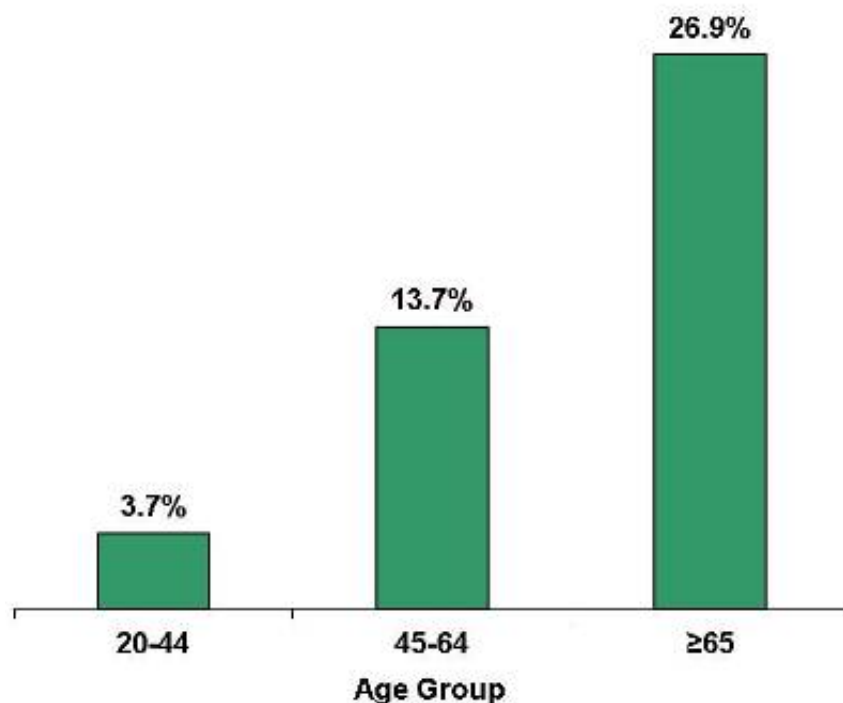
Non-Hispanic whites: 15.7 million, or 10.2% of all non-Hispanic whites aged 20 years or older, have diabetes.

Non-Hispanic blacks: 4.9 million, or 18.7% of all non-Hispanic blacks aged 20 years or older, have diabetes.

Sufficient data are not available to estimate the total prevalence of diabetes (diagnosed and undiagnosed) for other U.S. racial/ethnic minority populations.

Estimated percentage of people aged 20 years or

older with diagnosed and undiagnosed diabetes, by age group, United States, 2005–2008



[\(figuretext11.htm#fig2\)](#)

Source: 2005–2008 National Health and Nutrition Examination Survey.

[Detailed information \(figuretext11.htm#fig2\)](#) about this graph is available.

Diagnosed diabetes in people younger than 20 years of age, United States, 2010

About 215,000 people younger than 20 years have diabetes (type 1 or type 2). This represents 0.26% of all people in this age group. Estimates of undiagnosed diabetes are unavailable for this age group.

Racial and ethnic differences in diagnosed diabetes

National estimates of diagnosed diabetes for some but not all minority groups are available from national survey data and from the IHS NPIRS, which includes data for approximately 1.9 million American Indians and Alaska Natives in the United States who receive health care from the IHS. Differences in diabetes prevalence by race/ethnicity are partially attributable to age differences. Adjustment for age makes results from racial/ethnic groups more comparable.

- Data from the 2009 IHS NPIRS indicate that 14.2% of American Indians and Alaska Natives aged 20 years or older who received care from IHS had diagnosed diabetes. After adjusting for population age differences, 16.1% of the total adult population served by IHS had diagnosed diabetes, with rates varying by region from 5.5% among Alaska Native adults to 33.5% among American Indian adults in southern Arizona.
- After adjusting for population age differences, 2007–2009 national survey data for people aged 20 years or older indicate that 7.1% of non-Hispanic whites, 8.4% of Asian Americans, 11.8% of Hispanics, and 12.6% of non-Hispanic blacks had diagnosed diabetes. Among Hispanics, rates were 7.6% for both Cubans and for Central and South Americans, 13.3% for Mexican Americans,

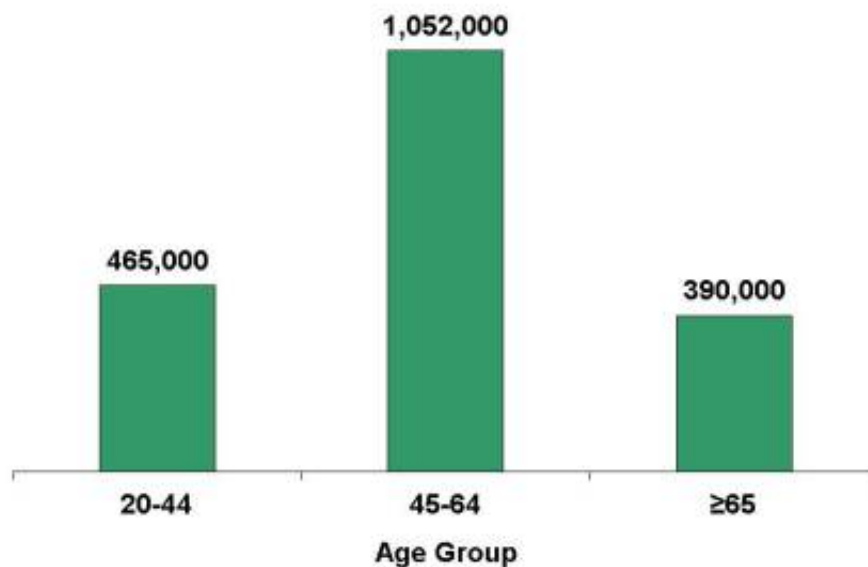
and 13.8% for Puerto Ricans.

- Compared to non-Hispanic white adults, the risk of diagnosed diabetes was 18% higher among Asian Americans, 66% higher among Hispanics, and 77% higher among non-Hispanic blacks. Among Hispanics compared to non-Hispanic white adults, the risk of diagnosed diabetes was about the same for Cubans and for Central and South Americans, 87% higher for Mexican Americans, and 94% higher for Puerto Ricans.

New cases of diagnosed diabetes among people aged 20 years or older, United States, 2010

About 1.9 million people aged 20 years or older were newly diagnosed with diabetes in 2010.

Estimated number of new cases of diagnosed diabetes among people aged 20 years or older, by age group, United States, 2010



[\(figuretext11.htm#fig3\)](#)

Source: 2007–2009 National Health Interview Survey estimates projected to year 2010.

[Detailed information \(figuretext11.htm#fig3\)](#) about this graph is available.

New cases of diagnosed diabetes among people younger than 20 years of age, United States, 2002–2005

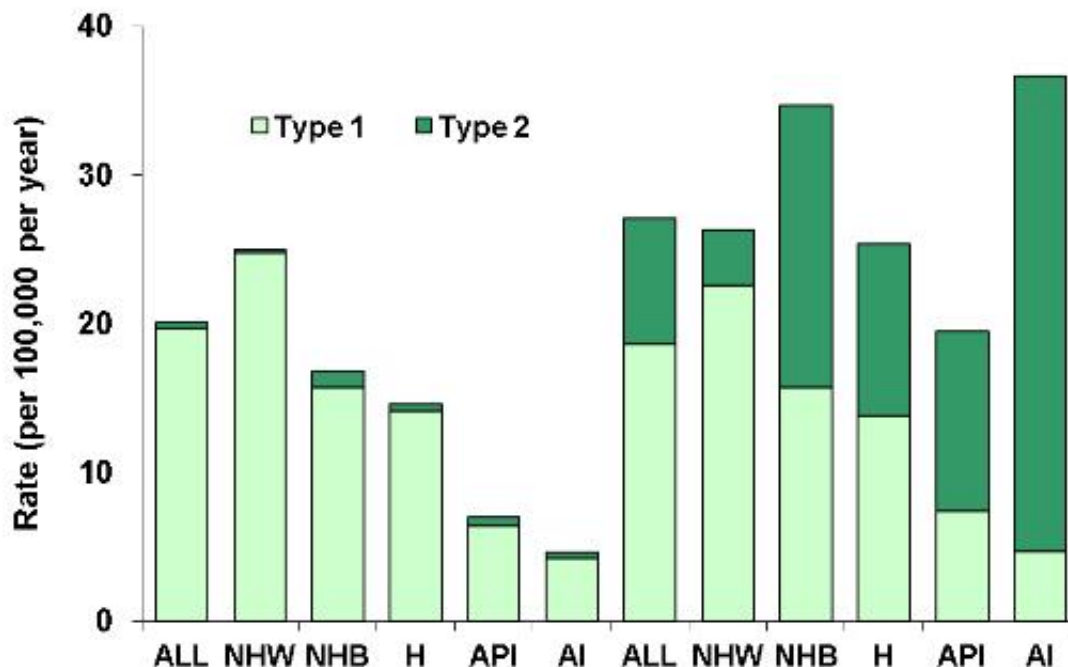
SEARCH for Diabetes in Youth is a multicenter study funded by CDC and NIH to examine diabetes (type 1 and type 2) among children and adolescents in the United States. SEARCH findings for the communities studied include the following:

- During 2002–2005, 15,600 youth were newly diagnosed with type 1 diabetes annually, and 3,600 youth were newly diagnosed with type 2 diabetes annually.
- Among youth aged <10 years, the rate of new cases was 19.7 per 100,000 each year for type 1 diabetes and 0.4 per 100,000 for type 2 diabetes. Among youth aged 10 years or older, the rate of new cases was 18.6 per 100,000 each year for type 1 diabetes and 8.5 per 100,000 for type 2 diabetes.
- Non-Hispanic white youth had the highest rate of new cases of type 1 diabetes (24.8 per

100,000 per year among those younger than 10 years and 22.6 per 100,000 per year among those aged 10–19 years).

- Type 2 diabetes was extremely rare among youth aged <10 years. While still infrequent, rates were greater among youth aged 10–19 years than in younger children, with higher rates among U.S. minority populations than in non-Hispanic whites.
- Among non-Hispanic white youth aged 10–19 years, the rate of new cases was higher for type 1 than for type 2 diabetes. For Asian/Pacific Islander and American Indian youth aged 10–19 years, the opposite was true—the rate of new cases was greater for type 2 than for type 1 diabetes. Among non-Hispanic black and Hispanic youth aged 10–19 years, the rates of new cases of type 1 and type 2 diabetes were similar.

Rate of new cases of type 1 and type 2 diabetes among youth aged < 20 years, by race/ethnicity, 2002–2005



[\(figuretext11.htm#fig4\)](#)

Source: SEARCH for Diabetes in Youth Study

NHW=non-Hispanic whites; NHB=non-Hispanic blacks; H=Hispanics;
API=Asians/Pacific Islanders; AI=American Indians

[Detailed information \(figuretext11.htm#fig4\)](#) about this graph is available.

Prediabetes among people aged 20 years or older, United States, 2010

- Prediabetes is a condition in which individuals have blood glucose or A1c levels higher than normal ([factsheet11/popup2.htm](#)) but not high enough to be classified as diabetes. People with prediabetes have an increased risk of developing type 2 diabetes, heart disease, and stroke.
- Studies have shown that people with prediabetes who lose weight and increase their physical activity can prevent or delay type 2 diabetes and in some cases return their blood glucose levels to normal.
- In 2005–2008, based on fasting glucose or A1c levels, 35% of U.S. adults aged 20 years or older had prediabetes (50% of those aged 65 years or older). Applying this percentage to the entire U.S. population in 2010 yields an estimated 79 million Americans aged 20 years or older with prediabetes.
- On the basis of fasting glucose or A1c levels, and after adjusting for population age differences,

the percentage of U.S. adults aged 20 years or older with prediabetes in 2005–2008 was similar for non-Hispanic whites (35%), non-Hispanic blacks (35%), and Mexican Americans (36%).

- Using a different data source than for other race/ethnicity groups, a different age group, and a different definition on the basis of fasting glucose levels only, and after adjusting for population age differences, 20% of American Indians aged 15 years or older had prediabetes in 2001–2004.

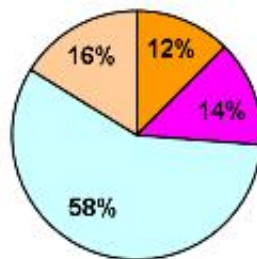
Gestational diabetes in the United States

- Reported rates of gestational diabetes range from 2% to 10% of pregnancies.
- Immediately after pregnancy, 5% to 10% of women with gestational diabetes are found to have diabetes, usually type 2.
- Women who have had gestational diabetes have a 35% to 60% chance of developing diabetes in the next 10–20 years.
- New diagnostic criteria for gestational diabetes will increase the proportion of women diagnosed with gestational diabetes. Using these new diagnostic criteria, an international, multicenter study of gestational diabetes found that 18% of the pregnancies were affected by gestational diabetes.

Treatment of diabetes in the United States, 2007–2009

Among adults with diagnosed diabetes (type 1 or type 2), 12% take insulin only, 14% take both insulin and oral medication, 58% take oral medication only, and 16% do not take either insulin or oral medication.

Percentage of adults with diagnosed diabetes receiving treatment with insulin or oral medication, United States, 2007–2009



■ Insulin only ■ Insulin and oral medication □ Oral medication only □ No medication

[\(figuretext11.htm#fig1\)](#)

Source: 2007–2009 National Health Interview Survey.

[Detailed information \(figuretext11.htm#fig1\)](#) about this graph is available.

Deaths among people with diabetes, United States, 2007

- Diabetes was the seventh leading cause of death based on U.S. death certificates in 2007. This ranking is based on the 71,382 death certificates in 2007 in which diabetes was the underlying cause of death. Diabetes was a contributing cause of death in an additional 160,022 death certificates for a total of 231,404 certificates in 2007 in which diabetes appeared as any-listed cause of death.
- Diabetes is likely to be underreported as a cause of death. Studies have found that about 35% to 40% of decedents with diabetes had it listed anywhere on the death certificate and about 10% to 15% had it listed as the underlying cause of death.

- Overall, the risk for death among people with diabetes is about twice that of people of similar age but without diabetes.
-

Estimated diabetes costs in the United States, 2007

Total (direct and indirect): \$174 billion

Direct medical costs: \$116 billion

- After adjusting for population age and sex differences, average medical expenditures among people with diagnosed diabetes were 2.3 times higher than what expenditures would be in the absence of diabetes.

Indirect costs: \$58 billion (disability, work loss, premature mortality)

Complications of diabetes in the United States

Heart disease and stroke

- In 2004, heart disease was noted on 68% of diabetes-related death certificates among people aged 65 years or older.
- In 2004, stroke was noted on 16% of diabetes-related death certificates among people aged 65 years or older.
- Adults with diabetes have heart disease death rates about 2 to 4 times higher than adults without diabetes.
- The risk for stroke is 2 to 4 times higher among people with diabetes.

Hypertension

- In 2005–2008, of adults aged 20 years or older with self-reported diabetes, 67% had blood pressure greater than or equal to 140/90 millimeters of mercury (mmHg) or used prescription medications for hypertension.

Blindness and eye problems

- Diabetes is the leading cause of new cases of blindness among adults aged 20–74 years.
- In 2005–2008, 4.2 million (28.5%) people with diabetes aged 40 years or older had diabetic retinopathy, and of these, 655,000 (4.4% of those with diabetes) had advanced diabetic retinopathy that could lead to severe vision loss.

Kidney disease

- Diabetes is the leading cause of kidney failure, accounting for 44% of all new cases of kidney failure in 2008.
- In 2008, 48,374 people with diabetes began treatment for end-stage kidney disease.
- In 2008, a total of 202,290 people with end-stage kidney disease due to diabetes were living on chronic dialysis or with a kidney transplant.

Nervous system disease

- About 60% to 70% of people with diabetes have mild to severe forms of nervous system damage. The results of such damage include impaired sensation or pain in the feet or hands, slowed digestion of food in the stomach, carpal tunnel syndrome, erectile dysfunction, or other nerve problems.
- Almost 30% of people with diabetes aged 40 years or older have impaired sensation in the feet

(i.e., at least one area that lacks feeling).

- Severe forms of diabetic nerve disease are a major contributing cause of lower-extremity amputations.

Amputations

- More than 60% of nontraumatic lower-limb amputations occur in people with diabetes
- In 2006, about 65,700 nontraumatic lower-limb amputations were performed in people with diabetes.

Dental disease

- Periodontal (gum) disease is more common in people with diabetes. Among young adults, those with diabetes have about twice the risk of those without diabetes.
- Adults aged 45 years or older with poorly controlled diabetes ($A1c > 9\%$) were 2.9 times more likely to have severe periodontitis than those without diabetes. The likelihood was even greater (4.6 times) among smokers with poorly controlled diabetes.
- About one-third of people with diabetes have severe periodontal disease consisting of loss of attachment (5 millimeters or more) of the gums to the teeth.

Complications of pregnancy

- Poorly controlled diabetes before conception and during the first trimester of pregnancy among women with type 1 diabetes can cause major birth defects in 5% to 10% of pregnancies and spontaneous abortions in 15% to 20% of pregnancies. On the other hand, for a woman with pre-existing diabetes, optimizing blood glucose levels before and during early pregnancy can reduce the risk of birth defects in their infants.
- Poorly controlled diabetes during the second and third trimesters of pregnancy can result in excessively large babies, posing a risk to both mother and child.

Other complications

- Uncontrolled diabetes often leads to biochemical imbalances that can cause acute life-threatening events, such as diabetic ketoacidosis and hyperosmolar (nonketotic) coma.
- People with diabetes are more susceptible to many other illnesses. Once they acquire these illnesses, they often have worse prognoses. For example, they are more likely to die with pneumonia or influenza than people who do not have diabetes.
- People with diabetes aged 60 years or older are 2–3 times more likely to report an inability to walk one-quarter of a mile, climb stairs, or do housework compared with people without diabetes in the same age group.
- People with diabetes are twice as likely to have depression, which can complicate diabetes management, than people without diabetes. In addition, depression is associated with a 60% increased risk of developing type 2 diabetes.

Preventing diabetes complications

As indicated above, diabetes can affect many parts of the body and can lead to serious complications such as blindness, kidney damage, and lower-limb amputations. Working together, people with diabetes, their support network, and their health care providers can reduce the occurrence of these and other diabetes complications by controlling the levels of blood glucose, blood pressure, and blood lipids, and by receiving other preventive care practices in a timely manner.

Glucose control

- Studies in the United States and abroad have found that improved glycemic control benefits

people with either type 1 or type 2 diabetes. In general, every percentage point drop in A1c blood test results (e.g., from 8.0% to 7.0%) can reduce the risk of microvascular complications (eye, kidney, and nerve diseases) by 40%. The absolute difference in risk may vary for certain subgroups of people.

- In patients with type 1 diabetes, intensive insulin therapy has long-term beneficial effects on the risk of cardiovascular disease.

Blood pressure control

- Blood pressure control reduces the risk of cardiovascular disease (heart disease or stroke) among people with diabetes by 33% to 50%, and the risk of microvascular complications (eye, kidney, and nerve diseases) by approximately 33%.
- In general, for every 10 mmHg reduction in systolic blood pressure, the risk for any complication related to diabetes is reduced by 12%.
- No benefit of reducing systolic blood pressure below 140 mmHg has been demonstrated in randomized clinical trials.
- Reducing diastolic blood pressure from 90 mmHg to 80 mmHg in people with diabetes reduces the risk of major cardiovascular events by 50%.

Control of blood lipids

- Improved control of LDL cholesterol can reduce cardiovascular complications by 20% to 50%.

Preventive care practices for eyes, feet, and kidneys

- Detecting and treating diabetic eye disease with laser therapy can reduce the development of severe vision loss by an estimated 50% to 60%.
- About 65% of adults with diabetes and poor vision can be helped by appropriate eyeglasses.
- Comprehensive foot care programs, i.e., that include risk assessment, foot-care education and preventive therapy, treatment of foot problems, and referral to specialists, can reduce amputation rates by 45% to 85%.
- Detecting and treating early diabetic kidney disease by lowering blood pressure can reduce the decline in kidney function by 30% to 70%. Treatment with particular medications for hypertension called angiotensin-converting enzyme inhibitors (ACEIs) and angiotensin receptor blockers (ARBs) is more effective in reducing the decline in kidney function than is treatment with other blood pressure lowering drugs.
- In addition to lowering blood pressure, ARBs and ACEIs reduce proteinuria, a risk factor for developing kidney disease, by about 35%.

Page last reviewed: January 20, 2011

Page last updated: January 20, 2011

Content source: [National Center for Chronic Disease Prevention and Health Promotion, Division of Diabetes Translation](#)

Centers for Disease Control and Prevention 1600 Clifton Rd. Atlanta, GA 30333, USA
800-CDC-INFO (800-232-4636) TTY: (888) 232-6348, 24 Hours/Every Day -
cdcinfo@cdc.gov

