

# Complications of Diabetes in the United States

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Diabetes is associated with an increased risk for a number of serious, sometimes life-threatening complications and certain populations experience an even greater threat. Good diabetes control can help reduce your risk, however many people are not even aware that they have diabetes until they develop one of its complications.

## Heart disease and stroke

- Heart disease and stroke account for about 65 percent of deaths in people with diabetes.
- Adults with diabetes have heart disease death rates about two to four times higher than adults without diabetes.
- The risk for stroke is two to four times higher and the risk of death from stroke is 2.8 times higher among people with diabetes.

Deaths from heart disease have decreased significantly among men with diabetes in recent years, but that trend has not been true in women. From 1971 to 2000, the rate of death from heart disease among men with diabetes decreased from 16.8 deaths per 1,000 men to 8.1 deaths per 1,000. Among women with diabetes, however, deaths from heart disease did not decline from 1971 to 2000, and the difference in death rate from all causes between diabetic and non-diabetic women more than doubled, from a difference of 8.3 to 18.2 annual deaths per 1,000 women (Gregg et al., *Annals of Internal Medicine*, 2007).

## High blood pressure

- About 73 percent of adults with diabetes have blood pressure greater than or equal to 130/80 millimeters of mercury (mm Hg) or use prescription medications for hypertension.

## Blindness

- Diabetic retinopathy causes 12,000 to 24,000 new cases of blindness each year making diabetes the leading cause of new cases of blindness in adults 20-74 years of age.
- In people with type 1 diabetes, therapy that keeps blood sugar levels as close to normal as possible reduces damage to the eyes by 76 percent (*New England Journal of Medicine*, September 30, 1993). Experts believe that these results can also be applied to those with type 2 diabetes.

## **Kidney Disease**

- Diabetes is the leading cause of kidney failure, accounting for 44 percent of new cases in 2005.
- In 2005, 46,739 people with diabetes began treatment for end-stage renal disease (ESRD).
- In 2002, a total of 178,689 people with ESRD due to diabetes were living on chronic dialysis or with a kidney transplant.
- In people with type 1 diabetes, therapy that keeps blood sugar levels as close to normal as possible reduces damage to the kidneys by 35-56 percent (*New England Journal of Medicine*, September 30, 1993). Experts believe that these results can also be applied to those with type 2 diabetes.

## **Nervous system disease**

- About 60-70 percent 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 and other nerve problems.
- Almost 30 percent of people with diabetes ages 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 percent of non-traumatic lower-limb amputations occur in people with diabetes.
- In 2004, about 71,000 non-traumatic lower-limb amputations were performed in people with diabetes.
- The rate of amputation for people with diabetes is 10 times higher than for people without 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.
- Almost one-third of people with diabetes have severe periodontal disease with loss of attachment of the gums to the teeth measuring 5 millimeters or more.
- Persons with poorly controlled diabetes (A1c greater than 9 percent) were nearly three times more likely to have severe periodontitis than those without diabetes.

## **Complications of pregnancy**

- Poorly controlled diabetes before conception and during the first trimester of pregnancy can cause major birth defects in 5-10 percent of pregnancies and spontaneous abortions in 15-20 percent of pregnancies.

- Poorly controlled diabetes during the second and third trimesters of pregnancy can result in excessively large babies, posing a risk to both mothers and children.

### **Sexual Dysfunction**

- Diabetes significantly increases the risk for sexual dysfunction in both men and women.

### **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 and, once they acquire these illnesses, often have worse prognoses. For example, they are more likely to die with pneumonia or influenza than people who do not have diabetes.
- Persons with diabetes ages 60 or older are two to three times more likely to report an inability to walk one-quarter of a mile, climb stairs or do housework; or to use a mobility aid compared with persons without diabetes in the same age group.

*Source: American Diabetes Association. <http://www.diabetes.org/diabetes-statistics/complications.jsp>*