



*The Diabetes Epidemic Among American Indians and Alaska Natives**

WHAT IS DIABETES?

- Diabetes is a chronic disease in which the body does not produce or properly use insulin, a hormone that is needed to convert sugar, starches, and other food into energy. It is associated with long-term complications that may affect a person's quality of life and is the leading cause of adult blindness, end-stage kidney disease, and amputations of the foot or leg due to nerve disease.
- Diabetes is one of the leading causes of death and disability in the United States. In 2002 the total cost (direct and indirect) of diabetes was \$132 billion.

WHAT ARE THE DIFFERENT TYPES OF DIABETES?

- **Type 1 diabetes** (formerly called juvenile diabetes) results when the body's immune system attacks and destroys its own insulin-producing beta cells in the pancreas. People with type 1 diabetes need daily injections of insulin to live. Symptoms of type 1 diabetes – increased thirst and urination, constant hunger, weight loss, blurred vision, and extreme fatigue – usually develop over a short period of time. If type 1 diabetes is not diagnosed and treated, a person can lapse into a life-threatening coma.
 - Type 1 diabetes is relatively rare in American Indians and Alaska Natives.
- **Type 2 diabetes** (formerly called adult-onset diabetes) occurs when the body doesn't make enough insulin or cannot use the insulin it makes effectively. The symptoms of type 2 diabetes – feeling tired or ill, unusual thirst, frequent urination especially at night, weight loss, blurred vision, frequent infections, and slow-healing wounds – develop gradually and are not as noticeable as in type 1 diabetes.
 - This is the most common form of diabetes among American Indians and Alaska Natives and was rarely diagnosed in children and adolescents. However, it is becoming increasingly common among American Indian children ages 10 and older
- **Gestational diabetes** develops during pregnancy. This type of diabetes disappears when the pregnancy is over, but women who have had gestational diabetes have a greater risk of developing type 2 diabetes later in their lives.

HOW MANY AMERICAN INDIANS AND ALASKA NATIVES HAVE DIABETES?

- On average, American Indians and Alaska Natives are 2.3 times more likely to have diabetes as non-Hispanic whites¹. About 14.9 percent of American Indians and Alaska Natives aged twenty years and older are receiving care from the Indian Health Service have diabetes.
- Rates of diabetes vary widely among Native American tribes, bands, pueblos and villages. At the regional level, diabetes is least common among Alaska Natives (8.2%) and most common among American Indians in the southeastern U.S. and southern Arizona (27.8% respectively).
- Available data may underestimate the true prevalence of diabetes in American Indians. For example, data from the Navajo Health and Nutrition Survey, published in 1997, showed that about 23 percent of Navajo adults had diabetes, one-third of whom had not yet been diagnosed.
- Among the Pima Indians of Arizona, about 50 percent of people between the ages of 30 and 64 have diabetes. Diabetes rates are highest in Pima children whose parents developed diabetes at an early age.
- Having risk factors for diabetes increases the chance that an American Indian or Alaska Native will develop diabetes. They include: being part of an ethnic group, a family history of diabetes, gestational diabetes, impaired glucose tolerance, obesity, and lack of physical activity.

HOW DO DIABETES-RELATED COMPLICATIONS AFFECT AMERICAN INDIANS AND ALASKA NATIVES?

- From 1984 to 1986, diabetes was the sixth leading cause of death among American Indians and Alaska Natives. Between 1986 and 1988, the death rate for diabetes in American Indians is estimated to be 4.3 times the rate in non-Hispanic whites.
- Diabetes contributes to several of the leading causes of death in American Indians: heart disease, cerebrovascular disease, pneumonia, and influenza.
- Rates of lower extremity amputation are high in some American Indians but vary by tribe.
- The incidence of periodontal disease is 2.6 times higher in Pima Indians with diabetes than in those without it.

WHAT IS THE LINK BETWEEN CARDIOVASCULAR DISEASE AND DIABETES?

- Diabetes is a major risk factor for cardiovascular disease in all American Indian populations, and cardiovascular disease is the leading cause of death. All heart-related deaths from 1975 to 1984 in Pima Indians occurred in those with diabetes¹.
- People with diabetes are 2 to 4 times more likely to have heart disease or suffer a stroke than people without diabetes.
- Middle-aged people with type 2 diabetes have the same high risk for heart attack as people without diabetes who already have had a heart attack.
- About 73 percent of people with diabetes also have high blood pressure.
- Smoking doubles the risk for heart disease in people with diabetes.

WHAT CAN AMERICAN INDIANS AND ALASKA NATIVES DO TO PREVENT HEART DISEASE OR STROKE AND OTHER DIABETES COMPLICATIONS?

- Diabetes is a self-managed disease. People with diabetes must take responsibility for their day-to-day care. The chances of having diabetes complications can be reduced or delayed significantly by keeping blood sugar, blood pressure, and cholesterol levels in the target range. The NDEP recommends the following targets for reducing risk of heart disease and stroke for people with diabetes (called the *ABCs of Diabetes*):
 - **Blood sugar**.....< 7 percent (check at least twice a year)
 - **Blood pressure**.....< 130/80 mmHg (check every doctor's visit)
 - **Cholesterol (LDL)**.....< 100 mg/dl (check once a year)
- People with diabetes can manage their disease by eating right amounts of a variety of healthy foods – vegetables & whole grain – getting regular physical activity, taking diabetes medicine as prescribed and testing blood sugar levels.
- Community education and support programs can help people with diabetes and their families to manage their diabetes.

CAN TYPE 2 DIABETES BE PREVENTED?

- YES! The Diabetes Prevention Program (DPP), an important trial sponsored by the National Institutes of Health, proved that type 2 diabetes can be delayed or prevented in people with pre-diabetes. Pre-diabetes is a condition where blood sugar levels are higher than normal, but not yet high enough for a diagnosis of diabetes.
- Risk factors for pre-diabetes include being overweight, having a family history of diabetes, high blood pressure and cholesterol, and being part of a racial or ethnic high risk group, including American Indians and Alaska Natives.
- To prevent diabetes, DPP participants:
 - Lost 5 to 7 percent of their body weight. That's 10 to 15 pounds in a person that weighs 200 pounds.
 - Were physically active for 30 minutes a day, 5 days a week. Most participants chose brisk walking.
 - Made healthier food choices and limited the amount of fat in their diet.

WHERE CAN I GO FOR MORE INFORMATION?

For more information about preventing and controlling diabetes, can call 1-800-438-5383 or visit the National Diabetes Education Program's website at www.ndep.nih.gov

*Adapted from National Diabetes Fact Sheet: General Information and national estimates on diabetes in the United States, 2003. Bethesda, MD. National Institute of Diabetes and Digestive and Kidney Diseases, NIH., 2003 and *Diabetes in American Indians and Alaska Natives Fact Sheet*, National Diabetes Information Clearinghouse, National Institute of Diabetes and Digestive and Kidney Diseases, NIH Publication No. 99-4551, April 1999.