



Type 2 Diabetes in Native Communities

Type 2 diabetes is at an epidemic level among American Indians who have the highest prevalence of diabetes of any group. After adjusting for population age differences, 16.1 percent of the total adult population served by the Indian Health Service had been diagnosed with diabetes, with rates varying by region from 5.5 percent among Alaska Native adults to 33.5 percent among American Indian adults in southern Arizona.¹ Type 2 diabetes is the most common form of diabetes, accounting for 90-95 percent of diagnosed cases.

Native children and young adults are being diagnosed at an alarming level never seen before. According to the Centers for Disease Control, American Indian and Alaska Native youth aged 10-19 are nine times more likely to be diagnosed with type 2 diabetes compared to non-Hispanic whites.

There is little historical evidence of diabetes occurring in Native America prior to first European contact. Yet, today diabetes threatens the core of Native societies by disabling and shortening the lifespans of community members at an alarming rate. The long-term health consequences for American Indian, Alaskan Native and Native Hawaiian communities is the loss of a generation of caretakers of cultures, languages and people to this disease.

While a multitude of factors contribute to the high incidence of type 2 diabetes for Natives, the alarming statistics can be traced back to the change from pre-reservation traditional diets and lifestyles to more westernized sedentary lifestyles and foods. For example, many Native people went from active hunting and gathering to post-reservation diets with a troubling amount of refined white flour and fat, which leads to today's diabetes health crisis.

What is Type 2 Diabetes?

- ◆ With type 2 diabetes your body does not use insulin properly, which is called insulin resistance. In the beginning, your pancreas makes extra insulin to make up for it. Over time, it isn't able to keep up and can't make enough insulin to keep your blood glucose at normal levels.²
- ◆ High blood glucose damages nerves and blood vessels, leading to problems such as heart disease, stroke, blindness, kidney failure, and amputation.
- ◆ The most important way to treat type 2 diabetes is through diligent blood glucose control, diet and exercise. To learn more about symptoms, diagnosis and treatment, visit Medline Plus at www.nlm.nih.gov/medlineplus/ency/article/000313.htm.



1 Indian Health Service. Retrieved October 2013 from, www.ihs.gov/MedicalPrograms/Diabetes/.

2 American Diabetes Association. Retrieved October 2013 from, www.diabetes.org/diabetes-basics/type-2/.

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What is Pre-diabetes?³

- ◆ When your blood sugar levels are higher than normal, but not high enough to be diagnosed with diabetes;
- ◆ With pre-diabetes, you are at high risk of developing type 2 diabetes and also at increased risk of developing heart disease;
- ◆ Individuals with pre-diabetes are at increased risk of developing type 2 diabetes within a decade *unless* they adopt a healthier lifestyle that includes weight loss and more physical activity.

Did you know?

- ◆ The increasing rates of childhood obesity are the major reason for the growing prevalence of type 2 diabetes in youth. Being overweight is one of the strongest risk factors for the development of type 2 diabetes.⁴
- ◆ Between 1990 and 1998, the total number of American Indian and Alaska Native children, adolescents, and adults aged 35 and younger diagnosed with diabetes increased 71 percent.⁵
- ◆ Adults with diabetes are 2 to 4 times more likely to develop heart disease than those without diabetes.⁶
- ◆ The risk of stroke is 2 to 4 times higher among people with diabetes.⁷

Study shows how to delay and possibly prevent type 2 diabetes

- ◆ Type 2 diabetes can be managed or even prevented. With proper education, dietary changes and exercise, those who have been diagnosed can live long and active lives.
- ◆ A study by the National Diabetes Prevention Program of people at high risk for diabetes showed that by losing 5- to 7-percent of your total weight (or 10 to 14 pounds for a 200-pound person), you may delay and possibly prevent type 2 diabetes.
- ◆ The study showed how people who did moderate exercise and made dietary changes reduced their risk of getting type 2 diabetes by 58 percent.

3 Joslin Diabetes Center. Retrieved October 2013 from, www.joslin.org/info/what_is_pre_diabetes.html.

4 Special Diabetes Program for Indians: Type 2 Diabetes and Youth: Acting Now for Future Generations. Retrieved October 2013 from, www.ihs.gov/medicalprograms/diabetes/.

5 National Diabetes Prevention Program study. Findings published in the February 7, 2002, issue of the New England Journal of Medicine. Retrieved October 2013 from, <http://diabetes.niddk.nih.gov/dm/pubs/preventionprogram/>

6 Special Diabetes Program for Indians. Facts-at a Glance. Retrieved October 2013 from, www.ihs.gov/MedicalPrograms/Diabetes/HomeDocs/Resources/.

7 Special Diabetes Program for Indians. Facts-at a Glance. Retrieved October 2013 from, www.ihs.gov/MedicalPrograms/Diabetes/HomeDocs/Resources/.





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People who had positive results in the study made the following lifestyle changes:

- ◆ Exercised about 30 minutes a day, 5 days a week, usually by walking; and
- ◆ Lowered their intake of fat and calories.

Other prevention tips from the Centers for Disease Control include:

- ◆ Foot care programs that include regular examinations and patient education could prevent up to 85 percent of diabetes-related amputations.
- ◆ Blood pressure control reduces the risk of heart disease and stroke among people with diabetes by 33–50 percent and the risk of eye, kidney, and nerve diseases by about 33 percent.
- ◆ Detecting and treating diabetic eye disease with laser therapy can reduce the development of severe vision loss by an estimated 50–60 percent.

With moderate exercise and making healthier food choices, you and your family can reduce your risk of or prevent type 2 diabetes dramatically. There is also a movement in tribal communities to produce traditional foods that will lead to a reduction in type 2 diabetes. For example, the Centers for Disease Control launched a five-year program to use traditional foods and sustainable environmental practices to promote healthy lifestyles and prevent type 2 diabetes in Native communities. To learn more about how 17 tribal communities are using traditional foods and use sustainable ecological approaches to promote healthier communities, visit www.cdc.gov/diabetes/projects/ndwp/traditional-foods.htm.

For more information, visit:

- ◆ *10 ways to Prevent Type 2 Diabetes* <http://ndep.nih.gov/media/ten-ways-american-indians.pdf>
- ◆ Special Diabetes Program for Indians at the National Indian Health Board www.nihb.org/sdpi/sdpi_overview.php
- ◆ Center for Disease Control – *Keeping Track of Your Blood Glucose* www.cdc.gov/diabetes/pubs/tcyd/ktrack.htm
- ◆ Eagle Books, which were developed by the CDC Division of Diabetes Translation's Native Diabetes Wellness Program, and include diabetes prevention materials for children. www.cdc.gov/diabetes/pubs/eagle/index.html
- ◆ Native Diabetes Wellness Program www.cdc.gov/diabetes/projects/diabetes-wellness.htm





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- ◆ The National Diabetes Prevention Program's publication *Small Steps. Big Rewards. Your Game Plan to Prevent Type 2 Diabetes: Information for Patients*. This three-booklet package helps people assess their risk for developing diabetes and implement a program to prevent or delay the onset of the disease and it includes an activity tracker and a fat and calorie counter. <http://ndep.nih.gov/publications/PublicationDetail.aspx?PubId=71#page5>.
- ◆ Indian Health Service - Positive, inspirational personal videos and stories about diabetes prevention and management. www.ihs.gov/medicalprograms/diabetes/index.cfm?module=programsSDPIIdeasInspirations.
- ◆ The Indian Health Service offers free materials for families, adults, and youth. Here's a link to their easy-to-navigate online catalog. Examples include a publication titled *Using Wit and Wisdom to Live Well with Diabetes* and audio CD set and *A River Runs Through Us*, a 90-day journal and inspirations book. www.ihs.gov/MedicalPrograms/Diabetes/RESOURCES/Catalog/index.cfm?module=productDetails&productID=281

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