

RESEARCH: Diabetes

Research by the Center for Disease Control (CDC) and reported by the Office of Minority Health indicates the following:ⁱ

- American Indian/Alaska Native (AIAN) adults are almost three times more likely than non-Hispanic white adults to be diagnosed with diabetes.
- In 2018, AIANs were 2.3 times more likely than non-Hispanic whites to die from diabetes.
- In 2017, AIANs were twice as likely to be diagnosed with end stage renal disease than non-Hispanic whites

So many American Indians suffer with diabetes – Elders, adults, and youth alike. 44% of Elders participating in PWNA’s Breakfast in the Bag program on the Rosebud Sioux Reservation self-identified as diabetic in 2021. Of those, 13% are also Veterans. Listening to two Elders illustrates how this food service helps them manage their diabetes:ⁱⁱ

“I run out of money and food second half of the month. I am a diabetic and worry about getting sick. I really appreciate this program.” – Rosebud Elder, 78 years old

“I have several grandkids living with me, and I am diabetic with health issues. The food provides for my diet, and I am on a fixed income, so this helps me a great deal.” – Upper Cut Meat Elder, 70 years old

Complications Arising from Diabetes

According to the CDC,ⁱⁱⁱ “Diabetes complications often share the same risk factors, and one complication can make other complications worse. For example, many people with diabetes also have high blood pressure, which in turn worsens eye and kidney diseases. Diabetes tends to lower HDL (“good”) cholesterol and raise triglycerides (a kind of blood fat) and LDL (“bad”) cholesterol. These changes can increase the risk for heart disease and stroke. Smoking *doubles* the risk of heart disease in people with diabetes.” As the CDC notes, these complications may include:

- Heart disease and stroke: People with diabetes are twice as likely to have heart disease or a stroke as people without diabetes.
- Blindness and other eye problems: Damage to blood vessels in the retina, clouding of the lens (cataract) and increase in fluid pressure in the eye (glaucoma)
- Kidney disease: High blood sugar levels can damage the kidneys and cause chronic kidney disease (CKD) that, if untreated, can lead to kidney failure and the need for regular dialysis or a kidney transplant to survive. CKD impacts 1 in 3 adults with diabetes.
- Nerve damage (neuropathy): One of the most common diabetes complications, nerve damage often affects the feet and lungs, causing numbness and pain. It can also affect digestion, blood vessels and heart.
- Amputations: Diabetes-related damage to blood vessels and nerves can lead to serious, hard-to-treat infections, especially in the feet, making amputation necessary to stop the spread of infection.
- Gum disease can lead to tooth loss increased blood sugar, making diabetes harder to manage and increasing the risk of type 2 diabetes.
- Diabetes increases the risk of depression overall, and increasingly as more diabetes-related health problems develop.

- Gestational diabetes during pregnancy can cause serious complications for mothers and their infants, such as preeclampsia (high blood pressure caused by pregnancy), injury from giving birth and birth defects.

Mortality Rates Related to Diabetes

In 2020, diabetes was the 8th leading cause of death in the US, taking 102,188 lives (or 31 deaths per 100,000 people). It is suspected that even more deaths occurred that did not list diabetes as a factor, which makes sense when you consider all the ways diabetes can affect one’s health. In comparison, the 2017 National Vital Statistics Report by the CDC shows diabetes is the 4th leading cause of death among American Indian/Alaska Natives.^{iv}

| Death Rates Among Native Americans | | | |
|-------------------------------------------------------------|--------------------------------------------|--------------------|------------------------------------------------|
| Age-adjusted diabetes death rates per 100,000 (2018) | | | |
| | Non-Hispanic American Indian/Alaska Native | Non-Hispanic White | Non-Hispanic AIAN/ to Non-Hispanic White Ratio |
| Male | 50.6 | 24.3 | 2.1 |
| Female | 37.3 | 14.3 | 2.6 |
| Total | 43.7 | 18.9 | 2.3 |

^vSource: CDC 2021. National Vital Statistics Report, Vol. 69, No. 13. Table 10.

Cost of Diabetes

The economic toll associated with diabetes is devastating as well. For communities already faced with low incomes and limited job opportunities, access to nutritional food and preventative/responsive medical care is much more of a challenge. In March 2018, the American Diabetes Association detailed the costs of diabetes in America, as follows:

- \$327 billion: Total cost of diagnosed diabetes in the United States in 2017
- \$237 billion was for direct medical costs
- \$90 billion was linked to reduced productivity

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

The prevalence of diabetes is different throughout different Indian communities. In the film “Bad Sugar,” PBS cites “the Pima and Tohono O’odham Indians of southern Arizona have arguably the highest rates of Type 2 diabetes in the world. A century ago, the disease was virtually unknown here, but the subsequent diversion of river water destroyed farms and traditional ways, plunging local tribes into poverty and dependence.”^{vii} And diabetes took hold. In addition, “diabetes has emerged as a serious health problem in the Navajo nation, the largest Indigenous tribe in the U.S.... Navajos with diabetes almost certainly face a diminished quality of life if their diabetes is not managed properly. Aside from genetics, the incidence of diabetes is highly correlated with income, poor diet, and limited physical exercise. A review of the literature also implicates dietary shifts initiated by historical events and contemporary trends... The Navajos have a tradition of farming and therefore expanding Navajo diabetes interventions to include the promotion of community and home gardens provides multiple opportunities.”^{viii}

So, what we have is American Indians with smaller populations, higher incidences of diabetes than any other ethnic group in the U.S. and more at risk than everyone else in the country. Diabetes dwells among us, but it's more pressing for First Americans, and the number with pre-diabetes is also growing.

ⁱ <https://minorityhealth.hhs.gov/omh/browse.aspx?lvl=4&lvlid=33>

ⁱⁱ PWNA Breakfast in the Bag Participant list 2021

ⁱⁱⁱ <https://www.cdc.gov/diabetes/library/features/prevent-complications.html>

^{iv} https://www.cdc.gov/nchs/data/nvsr/nvsr68/nvsr68_06-508.pdf

^v https://www.cdc.gov/nchs/data/nvsr/nvsr68/nvsr68_06-508.pdf

^{vi} <https://www.diabetes.org/resources/statistics/statistics-about-diabetes>

^{vii} https://www.pbs.org/unnaturalcauses/hour_03.htm

^{viii} [Diabetes on the Navajo nation: what role can gardening and agriculture extension play to reduce it? - PubMed \(nih.gov\)](#)