

WHAT IS DIABETES?

Diabetes is a chronic disease characterized by elevated blood glucose (blood sugar). High levels of blood glucose result from inadequate production of insulin or a resistance to the effects of insulin, a hormone produced by the pancreas.¹

- **Type 1 Diabetes:** Occurs when the body is unable to produce insulin. It cannot be prevented and accounts for approximately 5% of all diagnosed cases of diabetes in adults.
- **Type 2 Diabetes:** Occurs when cells in the body become resistant to the effects of insulin. Type 2 Diabetes onset is more gradual than in Type 1 and can be prevented. This accounts for about 90-95% of all diagnosed cases of diabetes in adults.
- **Gestational Diabetes:** Develops during pregnancy and can lead to complications for the infant if not managed appropriately. It is usually diagnosed through prenatal screening. Women who develop gestational diabetes during pregnancy have significant risk for developing diabetes later in life.



Prediabetes (Borderline Diabetes): A condition in which the blood sugar levels or hemoglobin A1c (HbA1c) are higher than normal but not high enough to be classified as diabetes.

- 15-30% of people with prediabetes will develop Type 2 within 5 years.
- 9 out of 10 of those with prediabetes do not know they have it.

Diagnosis

Diabetes is diagnosed using several blood tests:

Test	Normal	Prediabetes	Diabetes
Fasting Plasma Glucose (FPG)	<100 mg/dL	100-125 mg/dL	>125 mg/dL
Oral Glucose Tolerance (OGTT)	<140 mg/dL	140-199 mg/dL	>199 mg/dL
HbA1c	<5.7%	5.7%-6.4%	>6.4%

Diabetes in Nebraska



Almost 1 in 11 (8.8%) Nebraska adults were diagnosed with diabetes in 2016.³



Only 6.0% of Nebraskan adults are aware of having prediabetes.³

Prevalence³

- There's no evidence of statistical change in percent of Nebraska adults with diabetes from 2012-2016. In 2016, Nebraska's diabetes rate was lower than the U.S. median (Figure 1).
- Prevalence of diabetes and prediabetes among Nebraska adults rises with increasing age, with the highest prevalence being among adults 55 years and older.
- Those with college degrees are less likely to have diabetes compared with less educated individuals (Figure 2).*
- Diabetes is higher among those with low income (Figure 2).*
- Non-Hispanic (NH) multiracial individuals have the highest age-adjusted rates of diabetes (15.0%), followed by NH American Indians (14.3%) and NH blacks (13.8%) (Figure 3).*

Figure 1: Diabetes Prevalence among Adults, 2012-2016

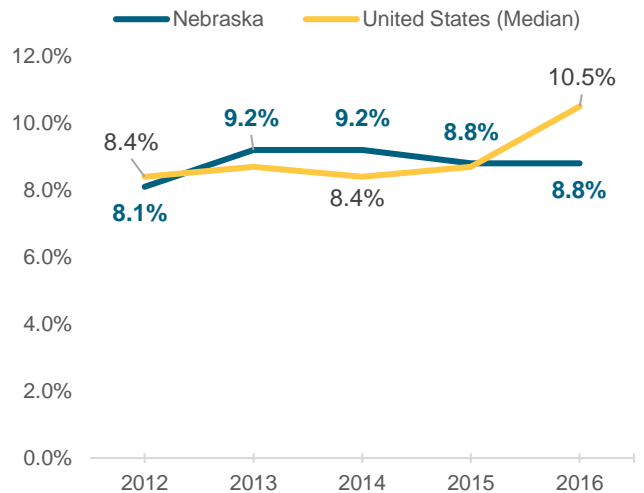


Figure 2: Age-Adjusted Prevalence of Diabetes and Prediabetes Among Adults by Education Level and Annual Household Income, 2012-2016

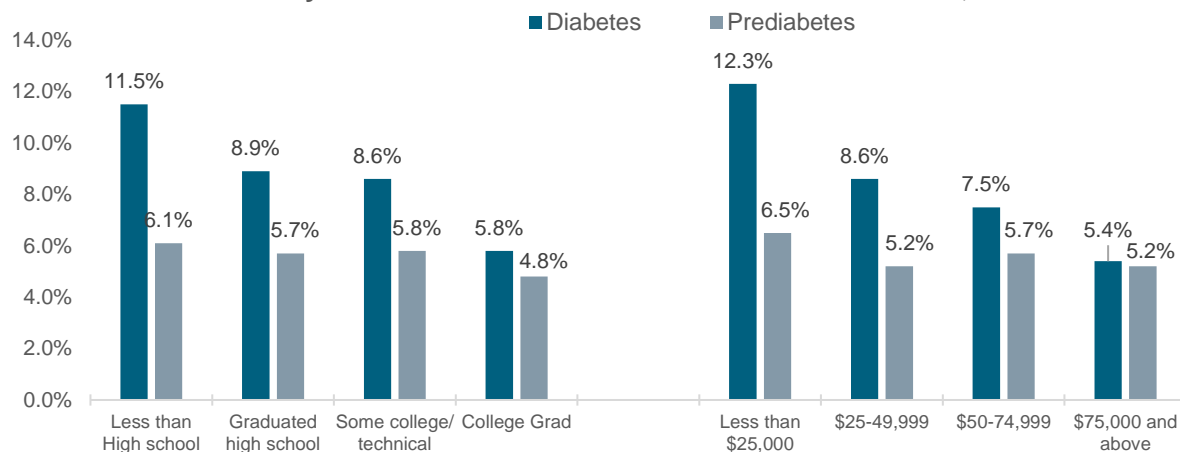
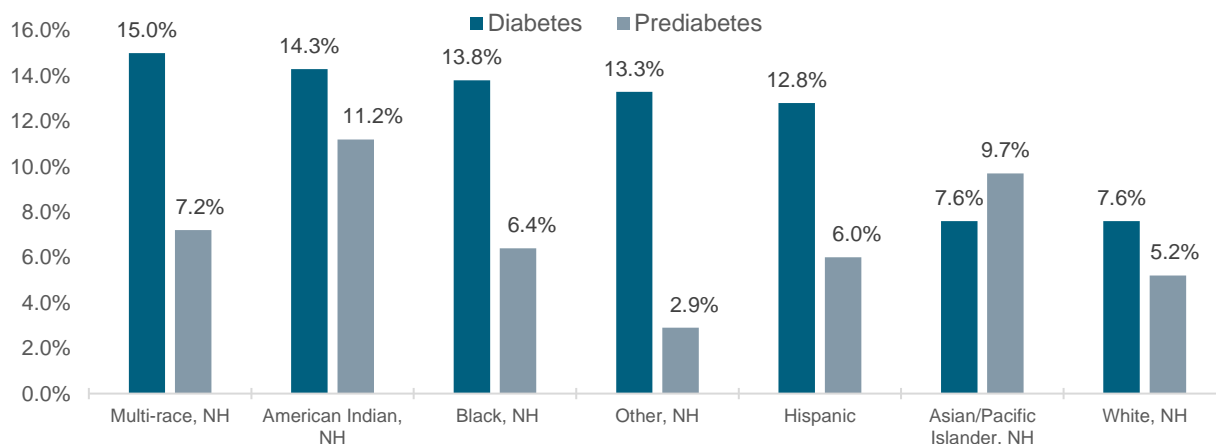


Figure 3: Age-Adjusted prevalence of Diabetes and Prediabetes Among Adults by Race/Ethnicity, 2012-2016



*Age-adjusted rate per 100,000 population (2000 U.S. standard population). Population estimates are calculated by the U.S. Department of Commerce, Bureau of the Census.
NH: Non-Hispanic

Prevalence (cont.)

- Prevalence of adverse health conditions is higher among adults with diabetes compared with those without (Figure 4).

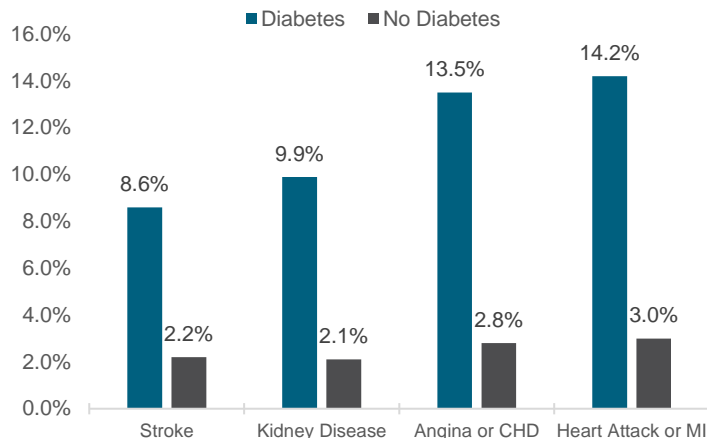
Hospitalization⁴

- In 2016, 2,327 inpatient hospitalizations occurred among Nebraska residents due to diabetes.

Mortality⁵

- Nebraska's top ten causes of death in 2016 included diabetes at #7.
- In 2016, diabetes claimed the lives of 501 (out of 16,207 deaths) residents in Nebraska.

Figure 4: Percentage of Nebraska Adults with Diabetes Who Report Having Other Health Conditions, 2016³



Risk Factors for Diabetes

- Non-modifiable risk factors** for diabetes include age, a family history of Type 2 Diabetes and race/ethnicity.
- Modifiable risk factors** for diabetes include being obese or overweight, physical inactivity, high blood pressure, high blood cholesterol and smoking.
- Additional risk factors specific to women include gestational diabetes and having a baby weighing more than 9 pounds.

The American Diabetes Association (ADA) Diabetes Risk Test (DRT) questionnaire assesses an individual's risk of developing Type 2 Diabetes. A cumulative score of 5 or higher is categorized as "High Risk"

<p>1 How old are you?</p> <p>Less than 40 years (0 points) 40—49 years (1 point) 50—59 years (2 points) 60 years or older (3 points)</p>	<p>Write your score in the box.</p> <input type="text"/>	<table border="1"> <thead> <tr> <th>Height</th> <th colspan="3">Weight (lbs.)</th> </tr> </thead> <tbody> <tr><td>4' 10"</td><td>119-142</td><td>143-190</td><td>191+</td></tr> <tr><td>4' 11"</td><td>124-147</td><td>148-197</td><td>198+</td></tr> <tr><td>5' 0"</td><td>128-152</td><td>153-203</td><td>204+</td></tr> <tr><td>5' 1"</td><td>132-157</td><td>158-210</td><td>211+</td></tr> <tr><td>5' 2"</td><td>136-163</td><td>164-217</td><td>218+</td></tr> <tr><td>5' 3"</td><td>141-168</td><td>169-224</td><td>225+</td></tr> <tr><td>5' 4"</td><td>145-173</td><td>174-231</td><td>232+</td></tr> <tr><td>5' 5"</td><td>150-179</td><td>180-239</td><td>240+</td></tr> <tr><td>5' 6"</td><td>155-185</td><td>186-246</td><td>247+</td></tr> <tr><td>5' 7"</td><td>159-190</td><td>191-254</td><td>255+</td></tr> <tr><td>5' 8"</td><td>164-196</td><td>197-261</td><td>262+</td></tr> <tr><td>5' 9"</td><td>169-202</td><td>203-269</td><td>270+</td></tr> <tr><td>5' 10"</td><td>174-208</td><td>209-277</td><td>278+</td></tr> <tr><td>5' 11"</td><td>179-214</td><td>215-285</td><td>286+</td></tr> <tr><td>6' 0"</td><td>184-220</td><td>221-293</td><td>294+</td></tr> <tr><td>6' 1"</td><td>189-226</td><td>227-301</td><td>302+</td></tr> <tr><td>6' 2"</td><td>194-232</td><td>233-310</td><td>311+</td></tr> <tr><td>6' 3"</td><td>200-239</td><td>240-318</td><td>319+</td></tr> <tr><td>6' 4"</td><td>205-245</td><td>246-327</td><td>328+</td></tr> </tbody> </table>	Height	Weight (lbs.)			4' 10"	119-142	143-190	191+	4' 11"	124-147	148-197	198+	5' 0"	128-152	153-203	204+	5' 1"	132-157	158-210	211+	5' 2"	136-163	164-217	218+	5' 3"	141-168	169-224	225+	5' 4"	145-173	174-231	232+	5' 5"	150-179	180-239	240+	5' 6"	155-185	186-246	247+	5' 7"	159-190	191-254	255+	5' 8"	164-196	197-261	262+	5' 9"	169-202	203-269	270+	5' 10"	174-208	209-277	278+	5' 11"	179-214	215-285	286+	6' 0"	184-220	221-293	294+	6' 1"	189-226	227-301	302+	6' 2"	194-232	233-310	311+	6' 3"	200-239	240-318	319+	6' 4"	205-245	246-327	328+
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<p>2 Are you a man or a woman?</p> <p>Man (1 point) Woman (0 points)</p>	<input type="text"/>																																																																																	
<p>3 If you are a woman, have you ever been diagnosed with gestational diabetes?</p> <p>Yes (1 point) No (0 points)</p>	<input type="text"/>																																																																																	
<p>4 Do you have a mother, father, sister, or brother with diabetes?</p> <p>Yes (1 point) No (0 points)</p>	<input type="text"/>																																																																																	
<p>5 Have you ever been diagnosed with high blood pressure?</p> <p>Yes (1 point) No (0 points)</p>	<input type="text"/>																																																																																	
<p>6 Are you physically active?</p> <p>Yes (0 points) No (1 point)</p>	<input type="text"/>																																																																																	
<p>7 What is your weight status? (see chart at right)</p>	<input type="text"/>																																																																																	

(1 Point) (2 Points) (3 Points)

You weigh less than the amount in the left column (0 points)

CHD: Coronary Heart Disease; MI: Myocardial Infarction
For more information: <https://www.cdc.gov/diabetes/prevention/pdf/prediabetestest.pdf>

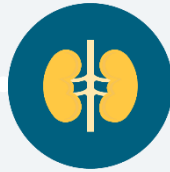
Health Impacts of Diabetes¹



Blindness



Heart disease



Kidney failure



Loss of toes, feet, or legs



Stroke

Diabetes Management

Early detection of prediabetes provides an opportunity to prevent or delay development of diabetes and related complications. Research studies found that healthy lifestyle modifications can prevent or delay type 2 diabetes among adults at high risk.^{7,8} Adults with diabetes should also follow a comprehensive care plan to control diabetes and prevent complications.^{7,8,9} The plan includes:

- Annual diabetes-focused doctor visit and follow-up per doctor's recommendation.
- Test your own blood sugar a number of times each day (self-monitor blood glucose).
- Check blood pressure (self-monitor blood pressure).
- Get an HbA1c test from health care providers about every three months.
- Take medication as prescribed.
- Participate in diabetes self-management class.

Nebraska Diabetes & Prediabetes Resources

- CDC's National Diabetes Prevention Program
- ADA or AADE's Diabetes Self-Management Education (DSME)
- Living Well with Diabetes (Diabetes Self-Management Program developed by Stanford)

For more information

Contact the **Chronic Disease Prevention and Control Program** at the Nebraska Department of Health and Human Services at: DHHS.CDPCprogram@Nebraska.gov or (402) 471-2102.

Or visit our website at www.partnersnhealth.ne.gov

Resources:

¹ Centers for Disease Control and Prevention. (2017). About Diabetes. <https://www.cdc.gov/diabetes/basics/diabetes.html>

² Centers for Disease Control and Prevention. (2017). National Diabetes Statistics Report, 2017. <https://www.cdc.gov/diabetes/pdfs/data/statistics/national-diabetes-statistics-report.pdf>

³ Nebraska Behavior Risk Factor Surveillance System (BRFSS). 2012-2016

⁴ Nebraska Hospital Discharge. 2016. ICD-10 CM codes E10-E13.

⁵ Nebraska Vital Statistics. 2016. ICD-10 codes E10-E14.

⁶ Centers for Disease Control and Prevention. (2017). Diabetes, Who's at Risk? <https://www.cdc.gov/diabetes/basics/risk-factors.html>

⁷ American Diabetes Association. Classification and diagnosis of diabetes. Sec. 2. Standards of medical Care in Diabetes-2016. Diabetes Care 2016;39(Suppl.1): S13-22. <https://care.diabetesjournals.org/site/misc/2016-Standards-of-Care.pdf>

⁸ Center for Disease Control and Prevention. Diabetes: Preventing diabetes. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2015. <https://www.cdc.gov/diabetes/basics/prevention.html>

⁹ Center for Disease Control and Prevention. Take charge of your diabetes. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2015. <https://www.cdc.gov/diabetes/pdfs/library/takechargeofyourdiabetes.pdf>