Diabetes in Minnesota

What is Diabetes
Diabetes is a set of diseases that occurs when glucose (sugar) builds up in your blood. It is caused by problems with insulin, a hormone that helps your body use glucose. Glucose provides energy to your body. It is found in carbohydrates in food.¹

Common Types of Diabetes
Type 1 develops when the pancreas (an organ near your stomach) stops making insulin. Type 1 often starts in childhood, but adults can develop it.¹

Type 2 develops when the pancreas slows down its production of insulin or the body cannot use the insulin. Type 2 diabetes is on the rise worldwide. About 95 percent of all diabetes cases are type 2.¹ Most cases occur among adults.

Gestational diabetes (GDM) affects women during pregnancy and usually goes away after pregnancy. Between 2-10% of women have had GDM.¹

How many adults in Minnesota have diabetes?
In 2013, 7.4% of Minnesota adults (about 310,000)² have been diagnosed with diabetes (type 1 or 2). Around 18,000 new cases are diagnosed in Minnesota each year (2010).²

Around 1 in 4 people with diabetes do not know that they have the disease.³ Including people who do not know they have diabetes, the true number of adults with diabetes in Minnesota may be around 9 percent.

Who is at risk for diabetes?
Type 1 diabetes: We know some genes that can increase risk of type 1 diabetes, but we do not know what triggers it or how to prevent it. Having a family history of type 1 may put you at greater risk.¹ Explore this link to learn more.

Also, non-Hispanic whites are more likely to experience type 1 diabetes than other ethnic groups.

Type 2 diabetes: Many people are at increased risk for type 2 diabetes:
- Older adults: Diabetes is more common among older adults.¹

![Graph showing percentage of Minnesota adults diagnosed with diabetes by age (2013)]

- Overweight and obese adults: About 3 of 5 adults (61%) in Minnesota were overweight or obese in 2013.¹ Use this on-line calculator to determine your BMI, a measure of overweight.
- Ethnic groups other than non-Hispanic white experience more type 2 diabetes.¹,³
- People with a family history of diabetes¹: shared lifestyle patterns like diet and exercise are important and genes may play a role too. Explore this link to learn more.
- **People with low levels of physical activity**: In 2013, only 20% of Minnesota adults regularly get all recommended physical activity, which includes: 1) muscle strengthening and 2) aerobic activity. Learn more and get ideas for including physical activity into your day.

- **Women who had GDM**: Between 35 and 60 percent of women who had GDM will develop type 2 diabetes later in life.

- **Adults with cardiovascular disease and cardiovascular risk factors**: In 2013, 27 percent of Minnesota adults reported having been diagnosed with high blood pressure and 34 percent have high cholesterol.

- **Adults with prediabetes**: 15-30% of people with prediabetes will develop type 2 diabetes within 5 years. As many as 37% of adults in Minnesota may have prediabetes.

**Are diabetes rates on the rise?**

<table>
<thead>
<tr>
<th>Year (2-3 year moving average)</th>
<th>Percentage % (age-adjusted)</th>
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<tbody>
<tr>
<td>1994</td>
<td>1.0</td>
</tr>
<tr>
<td>1997</td>
<td>1.6</td>
</tr>
<tr>
<td>2000</td>
<td>2.0</td>
</tr>
<tr>
<td>2003</td>
<td>2.4</td>
</tr>
<tr>
<td>2006</td>
<td>2.8</td>
</tr>
<tr>
<td>2009</td>
<td>3.2</td>
</tr>
<tr>
<td>2012</td>
<td>3.4</td>
</tr>
<tr>
<td>2015</td>
<td>3.6</td>
</tr>
<tr>
<td>2018</td>
<td>3.8</td>
</tr>
</tbody>
</table>

Minnesota rates increased between 1994 and 2010. New US data suggest the increases may have slowed for some groups. Increases may be due to:

- people with diabetes living longer, healthier lives than before
- improved detection of diabetes
- our population getting older and demographics changing (effects minimal in the chart)
- changes in diagnostic criteria, and
- increasing rates of obesity and risk factors

We also need to look at diabetes among people under 20 years of age. In the US, 0.22 percent of people under 20 have diagnosed diabetes versus 9.3 percent of adults. Diabetes is much less common in this age group and rates for all types are rising. Until recently, type 2 diabetes was rarely seen in children or youth. A new study suggests the number of type 2 cases among youth in the US increased 31% percent between 2001-09.

**Obesity and physical activity** are the only factors involved in increasing diabetes rates that we can change to lower risk. For ideas, click here.

**What are symptoms?**

Not everyone with diabetes experiences diabetes symptoms. However, if you experience any of the following symptoms listed here, please contact your health care team immediately.

For type 2 diabetes, people may experience no symptoms. Your health care team can run a blood test to tell you if you have type 2.

**If you are**

<table>
<thead>
<tr>
<th>Recommendations</th>
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</thead>
<tbody>
<tr>
<td>45 years old or older &amp; overweight</td>
</tr>
<tr>
<td>45 years old or older &amp; not overweight</td>
</tr>
<tr>
<td>18-44 years old, overweight or obese and have any of the following risk factors listed here</td>
</tr>
</tbody>
</table>

Also, you can take the Type 2 Diabetes Risk Test to see if you might be at risk. Talk with your health care provider if you have risk factors or are concerned about your diabetes risk.

**References**

1. National Diabetes Information Clearinghouse
2. CDC, Behavioral Risk Factor Surveillance Study
3. CDC, National Diabetes Fact Sheet 2014
4. CDC, Diabetes Data and Trends
5. CDC, Diabetes Public Health Resource: Prediabetes
6. Reuters, Diabetes rates may be leveling off overall: U.S. health officials 9/23/2014
8. Hamman RF et al. 2014 Diabetes Care 37(12):3336