

**Office of Integrated Health
Health & Safety Information**

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Type 2 Diabetes

June 28, 2017

What is [Topic]?

When you eat, some of the food is broken down into sugar, or glucose, which our body then turns into energy. An organ near the stomach, called the pancreas, makes a hormone called insulin which helps move sugar from your blood into your cells. Your body's cells need sugar for energy. The sugar from food makes your blood sugar level go up. Insulin, on the other hand, lowers our blood sugar level by helping the sugar move into your cells from your blood.

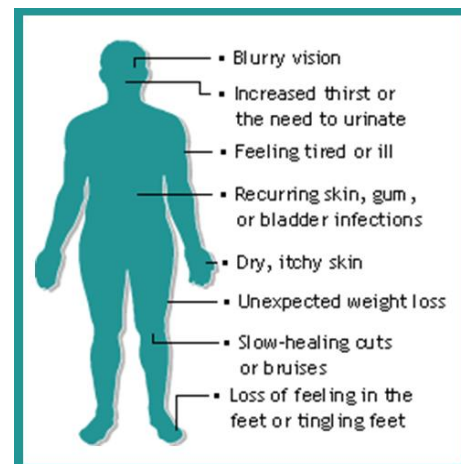
If you have type 2 diabetes, your body does not properly use insulin, this is called insulin resistance. Insulin resistance occurs when a cell does not properly allow insulin in to it. This causes sugar to remain in the blood stream which leads to problems.

The effect of diabetes can cause serious health complications including heart disease, blindness, kidney failure, and lower-extremity amputations. The CDC notes that diabetes is the seventh leading cause of death in the United States (<https://www.cdc.gov/diabetes>).

Signs and Symptoms

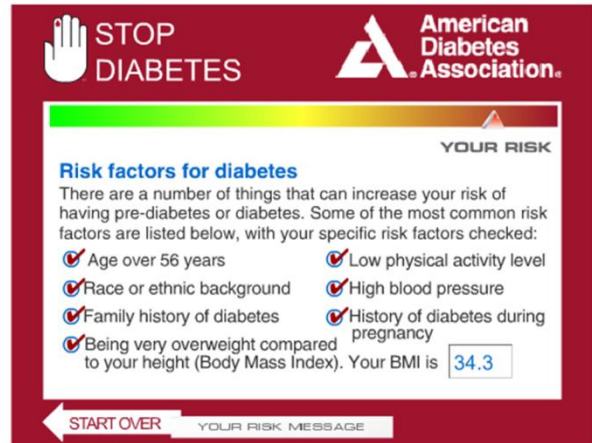
The following are signs and symptoms of diabetes.

- Frequent urination
- Excessive thirst
- Unexplained weight loss
- Extreme hunger
- Sudden vision changes
- Tingling or numbness in hands or feet
- Feeling very tired much of the time
- Very dry skin
- Sores that are slow to heal
- More infections than usual



Risk Factors

Certain factors increase your risk of developing type 2 diabetes. These risk factors include: being over 45 years of age, obesity, family history of diabetes, prior history of gestational diabetes (diabetes during pregnancy), impaired glucose tolerance, physical inactivity, and race/ethnicity. African Americans, Hispanic/Latino Americans, American Indians, and some Asia Americans and Pacific Islanders are at particularly high risk for type 2 Diabetes (<https://www.cdc.gov/diabetes>).



The graphic is a red-bordered box with a white background. At the top left, it says "STOP DIABETES" with a hand icon. At the top right is the American Diabetes Association logo. Below this is a yellow-to-red gradient bar labeled "YOUR RISK". The main text reads "Risk factors for diabetes" and "There are a number of things that can increase your risk of having pre-diabetes or diabetes. Some of the most common risk factors are listed below, with your specific risk factors checked:". It lists seven factors with red checkmarks: Age over 56 years, Race or ethnic background, Family history of diabetes, Being very overweight compared to your height (Body Mass Index), Low physical activity level, High blood pressure, and History of diabetes during pregnancy. The BMI value is shown as 34.3 in a box. At the bottom, there is a "START OVER" button and a "YOUR RISK MESSAGE" label.

Complications of Type 2 Diabetes

Complications from diabetes can be minimized by properly controlling blood sugar levels. Unfortunately, diabetes can affect many major organs, including your heart, blood vessels, nerves, eyes and kidneys.

- Heart and blood vessel disease- Having diabetes can increase the risk of various cardiovascular problems, such as coronary artery disease with chest pain (angina), heart attack, stroke, narrowing of arteries (atherosclerosis), and high blood pressure
- Nerve damage (Neuropathy)- The walls of the tiny blood vessels (capillaries) that nourish your nerves can be injured with excess sugar in your blood, especially in the legs. This can cause tingling, numbness, burning or pain that usually begins at the tips of the toes or fingers and gradually spreads.
- Kidney damage (Nephropathy)- Diabetes can cause damage to the millions of tiny blood vessel clusters that filter waste from your blood. Severe damage can lead to kidney failure or irreversible end-stage kidney disease. This could eventually require dialysis or a kidney transplant.
- Eye Damage- Diabetes can cause diabetic retinopathy (damage to the blood vessels of the retina), which could potentially lead to blindness. Diabetes also increases the risk of other serious vision conditions, such as cataracts and glaucoma.
- Foot Damage- Nerve damage in the feet or poor blood flow to the feet increases the risk of various foot complications. Cuts and blisters can become serious infections, which may heal poorly. Severe damage may require amputation of toe, foot, or leg.
- Hearing Impairment
- Skin Conditions

Management of Type 2 Diabetes

Regular physical activity, healthy eating, and blood glucose testing are the basic therapies for type 2 diabetes. Some people may also require oral medications to control their blood glucose levels. People with diabetes should see a health care provider to monitor the control of their diabetes and help them learn to manage their diabetes. Other provider that may be involved in care of people with diabetes may include, endocrinologist who may specialize in diabetes care; ophthalmologist for eye exams; podiatrists for routine foot care; and dietitians and diabetes educators who teach the skills needed for daily diabetes management (<https://www.cdc.gov/diabetes>).

Recommendations

Awareness of risk is important. Be alert to symptoms of changes in a person's health status and seek guidance from a health professional for any changes. With a change in any person's health status, that results in acute care through an ED visit, Urgent Care visit, or hospitalization, be sure to follow up on any recommended changes from the PCP or licensed provider.

You should also consider including the following in the individuals care plan:

- Attend regular appointments with a health care provider including specialists, as recommended.
 - Attend a diabetic education class or program at your local hospital or health care facility.
 - Consult with a Registered Nurse for further education and to write protocols when needed.
 - Consult with a Dietitian or Nutritionist (as prescribed by a health care provider) for meal planning. They can often help you establish or modify your existing menus to meet the person's needs and wants.
 - Consult with a Physical or Recreational therapist under Therapeutic Consultation to assist in developing a plan for regular physical activity after discussing with health care provider.
 - Maintain a proper schedule for checking blood sugars, drinking water and other fluids, eating meals and snacks and taking medications to help control blood sugar levels.
 - Have a risk management plan for home and the community.
 - Follow all protocols and guidance from health professionals.
 - Assure competency of the staff for implementing all recommendations made by health care providers.
 - Check out information designed for individuals with DD and help them review it. An example is at <https://blog.thearc.org/2012/11/14/get-the-facts-on-diabetes-and-people-with-idd/>
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Resources

<https://www.diabetes.org>

<http://www.mayoclinic.org/diseases-conditions/type-2-diabetes/home/ovc-20169860>

<https://www.cdc.gov/diabetes/home/index.html>
