

What Is Diabetes?

Our cells need sugar (glucose) to perform everyday actions. Think of it as the fuel for our engines. However, insulin is required in order for cells to take in glucose. Insulin acts like the cap for the fuel tank; no fuel can enter the tank until the cap is opened. The two main types of diabetes are Type 1 and Type 2. Type 1 diabetes results when the pancreas doesn't make insulin or doesn't make enough insulin to allow glucose to enter cells. This condition often presents during childhood and often runs in families. About 5 percent of all diabetes is Type 1.

With Type 2 diabetes, cells become resistant to insulin over time. Contrary to Type 1 diabetes, with Type 2 enough insulin is produced, but the insulin is ineffective in opening the fuel tank to allow the glucose to enter the cells. The result is a buildup of glucose in the blood. Type 2 diabetes accounts for about 95 percent of cases.

Who Is at Risk?

Risk factors for Type 2 diabetes include:

- Family history
- Ethnic background: African Americans, Hispanic Americans, Native Americans and Asian American are at higher risk
- Age: Half of adults ages 65 and over are prediabetic
- Overweight/Obesity: Almost everyone with Type 2 diabetes is overweight
- Sedentary/Little exercise

Diabetes Complications

- Cardiovascular disease: Diabetics are two times more likely than any other group to develop cardiovascular disease
- Kidney disease
- Blindness
- Nerve tissue damage: Leads to loss of sensation
- Amputations: As a result of increased risk of infection and loss of sensation

Prevention

Type 2 diabetes is largely influenced by weight and exercise, which is why diabetes rates are so closely correlated with obesity rates.

The good news is that weight and amount of exercise can be changed. In fact, a major study of prediabetics found that a diet and exercise program reduced the risk of developing diabetes by 58 percent. In comparison, medication reduced the risk by just 31 percent. Aim to reduce body weight to a normal level and get active for at least 150 minutes per week. Talk to your doctor about testing your blood sugar the next time you visit.



What Is Diabetes?

References

Jacqueline Berning, Donna Beshgetoor, Carol Byrd-Bredbenner and Gaile Moe, editors. *Wardlaw's Perspectives in Nutrition, Eighth Edition*. McGraw-Hill. 2009.

Centers for Disease Control and Prevention. www.cdc.gov/diabetes/. Accessed July 2016.

National Institute of Diabetes and Digestive and Kidney Diseases. http://diabetes.niddk.nih.gov/dm/pubs/preventionprogram/#results. Accessed July 2016.

"Preventing & Managing Diabetes at Work." Claire Blais. Presentation at Worksite Wellness Council of Massachusetts Annual Conference. Sept. 17, 2013.

"Statistics About Diabetes: Overall Numbers, Diabetes and Prediabetes." April 1, 2016. <a href="https://www.diabetes.org/diabetes-basics/diabe