

NEW-LIFESTYLES STEPS TO A HEALTHIER YOUSM TYPE 1 DIABETES FACTS

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Diabetes affects the lives of millions of Americans.

From a medical perspective, it is both a very serious and highly manageable chronic disease. People don't die from diabetes; they die from diabetes complications that arise as a result of poorly controlled blood sugar levels over a period of time. These serious diabetes-related health problems can include heart disease, stroke, compromised kidney function, problems with teeth and gums, blindness, nerve problems and poor blood circulation that can (at its worst) lead to amputation. The good news is there is a lot those with diabetes can do to take care of themselves to prevent complications and live a long healthy life. For someone with diabetes, knowing all there is to know about the disease and how to manage blood-sugar is vital.

There are several types of diabetes; however, this fact sheet will focus on Type 1 diabetes. Type 1 diabetes is also known as juvenile diabetes because it tends to present itself in young people during puberty around the ages of 10-14. Most common among Caucasians, about 10 percent of those with diabetes suffer from Type 1.

What is Type 1 diabetes?

Diabetes is a disease that affects the way the body uses digested food. During digestion, the carbohydrates (sugars) in food are absorbed in the intestines and put into the blood stream. There, hungry cells absorb the sugar in the blood stream with

the help of a hormone called insulin. In those who suffer from Type 1 diabetes, insulin is simply not available. With the insulin necessary to use the sugar in the bloodstream, cells starve and high levels of sugar remain in the bloodstream.

What role does the pancreas play in Type 1 diabetes?

Insulin is a hormone made by an organ about the size and shape of a small banana called the pancreas. Insulin helps the muscle cells in the body to take up and burn glucose effectively for energy. When a person has Type 1 diabetes, the immune system attacks insulin-producing beta cells in the pancreas. For this reason, Type 1 diabetes is classified as an autoimmune disease. Without the beta cells providing insulin, glucose builds up in the bloodstream, doing damage to the walls of the blood vessels and impeding vital body processes.

Doctors are not sure what triggers the body's immune system to suddenly attack insulin-producing beta cells in the pancreas. Typically, factors that can start an immune reaction include viruses, toxic chemicals and certain drugs. What is known is that Type 1 diabetes cannot be prevented, and its causes are most likely genetic and still largely unknown.

What are the signs or symptoms of diabetes?

The signs or symptoms of Type 1 diabetes are the same as for other types of diabetes. These symptoms include fatigue, extreme thirst, increased urination, blurry vision, wounds that won't seem to heal, sudden weight loss, getting more infections than usual and numb or tingling hands or feet. If someone experiences these symptoms, he or she should visit the doctor to check for elevated blood-sugar.



How is Type 1 treated?

When treating Type 1 diabetes, a doctor is essentially treating high blood glucose (hyperglycemia). The goal in treatment then is to normalize blood glucose levels between 80 mg/dL and 140 mg/dL. People with diabetes usually feel at their best when their blood sugar is in this range, which represents when insulin and blood sugar levels are well balanced.

In Type 1 diabetes, normalizing blood glucose levels means administering injections of insulin to simulate how the pancreas would function in a healthy person. There are many different devices available to deliver insulin other than syringes to make it easier for people with Type 1 diabetes to manage their own treatment. One such option is the insulin pump. About the size of a pager, insulin pumps are computerized devices worn on the belt that deliver insulin through a flexible plastic catheter which is inserted into the fatty tissue under the skin. Many people prefer this continuous system of insulin delivery over injections because it gives them better glucose control and less hassle. Diabetes researchers are hoping soon to find a cure for the disease. In the meantime, they are finding innovative ways using available advances in technology to improve the lives of those living with the chronic disease.

Part of diabetes management is also eating a healthy diet and getting sufficient exercise—both of which help to manage blood glucose levels. It's important for each individual with diabetes to find the right balance of medication, diet and physical activity that works for them.

How does someone test blood glucose levels?

People with diabetes test blood glucose levels with the use of a glucometer, sometimes called a blood glucose meter, which is a small digital device that uses special test strips and lancets. To use the glucometer, the individual pricks a fingertip with the lancet and places the drop of blood on the testing strip. The glucometer analyzes the blood on the testing strip and displays the blood sugar level.

Typically, individuals with Type 1 diabetes check their blood sugar level several times a day using a glucometer. They work out a schedule with

their doctor in order to be reassured that they are maintaining good diabetes control.

Can eating too much sugar cause diabetes?

No. This is a common myth associated with diabetes. People with diabetes follow special, well-rounded diets to ensure they are receiving the proper nutrition while limiting their intake of sugar and carbohydrates which the body breaks down into sugar. It takes special effort and awareness on the part of a person with diabetes to balance food, medicine and physical activity in such a way that normal blood sugar levels are maintained. People with Type 1 diabetes consult a specially-trained diabetes educator and dietitian to determine a meal plan that works best for them.

What is hypoglycemia?

Hypoglycemia is another term for low blood sugar—a common problem for people with diabetes. For individuals with diabetes, blood-sugar tested during hypoglycemia can range from 60-70 mg/dL or lower (a reading in this range would most likely be considered normal for people without diabetes). Hypoglycemia can happen without warning even when a person is taking great care to manage their diabetes. Despite being difficult to prevent, once someone experiences hypoglycemia, it should be treated quickly before the symptoms worsen.

The key to treating hypoglycemia is learning to recognize its symptoms—shakiness, dizziness, sweating, hunger, headache, pale skin color, sudden moodiness or crying for no apparent reason, difficulty paying attention, confusion, seizure, clumsiness and tingling sensations around the mouth. As soon as symptoms are recognized, a low blood glucose reaction should be treated by eating some form of sugar. The quickest way to treat hypoglycemia is by consuming some form of sugar like ½ cup of fruit juice or 5-6 pieces of hard candy. It's important to treat hypoglycemia quickly because if blood glucose levels become too low, a person will lose consciousness and require emergency assistance.

What are ketones? What is ketoacidosis?

Lacking insulin, the body can't use glucose for fuel and must break down fats to use for energy. When the body uses fat for energy, it produces poisonous acid byproducts called ketones. Since the body cannot tolerate large amounts of ketones in the blood, it releases them into the urine. Some ketones remain and continue to build up in the blood leading to a dangerous, life-threatening condition called ketoacidosis or diabetic coma. The symptoms of ketoacidosis include: shortness of breath, nausea and vomiting, severe dry mouth and breath that smells fruity. Since it is a very serious condition, ketoacidosis is treated in a hospital.

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