Diabetes Awareness

Diabetes is a growing health problem in the United States and has risen about six-fold since 1950, now affecting approximately 20.8 million Americans. About one-third of those 20.8 million do not know that they have the disease. Diabetes-related health care costs total nearly $100 billion per year and are increasing. Diabetes contributes to over 200,000 deaths each year.

What is Diabetes?

Diabetes is the result of a lack of (or lack of sensitivity to) the protein hormone called insulin. Insulin that is secreted from the pancreas helps to regulate the amount of glucose in the human body.

Glucose is a simple sugar that provides the main source of energy to the body’s cells. The hormone glucagon works in conjunction with insulin to regulate the body’s glucose levels by raising the level of glucose when it becomes too low. A lack of insulin production results in an imbalance of glucose, which can have an effect on multiple organs of the body.
The image illustrates the regulation of blood sugar levels through the actions of insulin and glucagon. 

- **Liver**:
  - Glycogen to Glucose: Converts glycogen to glucose.
  - Glucose to Glycogen: Converts glucose to glycogen.

- **Pancreas**:
  - Insulin: Promotes the uptake of glucose from the blood into tissue cells (muscle, kidney, fat).
  - Drives the formation of glycogen from glucose.
  - Promotes glucagon release.

- **Glucagon**:
  - Stimulates the breakdown of glycogen.

- **Blood Sugar Levels**:
  - **High Blood Sugar**
    - Raises insulin release.
  - **Low Blood Sugar**
    - Lowers insulin release.

The diagram shows a circular flow of blood sugar, indicating how insulin and glucagon interact to regulate blood sugar levels.
### Types of Diabetes

**Type 1:** Also known as juvenile diabetes or insulin-dependent diabetes, this occurs in approximately 5-10% of people with diabetes, mostly children and adolescents. Type 1 diabetes is an autoimmune disease. An autoimmune disease results when the body’s system for fighting infection—the immune system—turns against a part of the body. In diabetes, the immune system attacks and destroys the insulin-producing beta cells in the pancreas. Type 1 diabetics are called “insulin-dependent” because their blood contains little to no insulin and they must give themselves injections of insulin on a regular basis.

**Type 2:** With this type of diabetes, the onset of the disease occurs later in life, usually at age 40 or more. The majority of diabetics—90 to 95%—have Type 2 diabetes. In Type 2 diabetics, the body does not use its own supply of insulin. It is thought that obesity plays a role in the development of this insulin resistance, but exactly how is not yet known.

**Gestational:** This type of diabetes is similar in nature to Type 2, and occurs in women who are pregnant. It is generally controlled with diet changes and occasionally insulin injections. Although the disease generally ends after delivery, women who had gestational diabetes have a 40-60% chance of developing permanent Type 2 diabetes.
Could I Have Diabetes?

Diabetics exhibit several (but not necessarily all) of the following symptoms:

- Excessive thirst
- Frequent urination
- Extreme hunger or constant eating
- Unexplained weight loss
- Presence of glucose in the urine
- Tiredness or fatigue
- Changes in vision
- Numbness or tingling in the extremities
- Slow-healing wounds or sores

You may be more at risk to develop Type 2 diabetes if you have a family history of the disease, or if you fall into one or more of the following categories:

- Older people
- Overweight and sedentary people
- African Americans, Alaska Natives, American Indians, Asian Americans, Native Hawaiians, some Pacific Islander Americans, and Hispanics/Latinos
Prevention of Diabetes

If you have abnormally high blood glucose levels, but not high enough to be diagnosed with diabetes, you have prediabetes. Prediabetics are at a high risk for Type 2 diabetes, heart disease, and stroke. By losing weight through regular exercise and changing your diet, you can avoid a diabetes diagnosis. Prediabetics who do not make diet or lifestyle changes generally develop Type 2 diabetes within 10 years.
Diabetes Treatments

Although there is no cure for diabetes, there are many ways that diabetics can keep their blood glucose levels under control. These include:

**Blood Glucose monitoring:** By regularly testing blood glucose levels, you will know if your blood has too much or too little glucose and whether you may need a change in your meal plan, physical activity plan, or medicines.

**Insulin Injections:** All Type 1 and many Type 2 and gestational diabetics take insulin injections to help control their blood glucose levels.

**Regular Exercise:** Exercise is beneficial to diabetics by keeping down weight and assisting insulin to lower blood glucose levels.

**Healthy Diet:** A diabetes meal plan will include breads, cereals, rice, and grains; fruits and vegetables; meat and meat substitutes; dairy products; and fats. A good diet controls weight and blood sugar levels.

Recently, a large study was published that suggested the **Mediterranean diet** could be a good alternative to a low-fat diet for reducing one’s risk for diabetes. This diet is based on the eating habits of people who live in the Mediterranean region. Their diets are high in vegetables, fruits, grains, beans, and fish. So, if you have prediabetes, this may be a good option for you.
Complications of Diabetes

Untreated or uncontrolled diabetes can lead to health complications, many of them serious.

- Eye Disease
  - Cataracts
  - Glaucoma
  - Retinal disorders
- High Blood Pressure
  - Hearing Loss
  - Dental Problems
- Kidney Disease
- Extremity Nerve Damage

Helpful Resources

- American Diabetes Association
- MedlinePlus
- Mayo Clinic
- American Heart Association

DIABEATTHIS
Health Awareness Festival

October 5, 2013
12PM-5PM
Texas Wesleyan University
Live music, free health screenings, silent auction, food, and activities

VISIT THE EVENT'S FACEBOOK PAGE