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Diabetes Basics

Diabetes is a disease that makes it next to impossible for a person's body to convert the sugar it receives from food into energy. Normally, insulin is produced in the pancreas, and this insulin is needed to get the sugar into the cells for use as fuel. For a person living with diabetes, either the body doesn't produce enough insulin, or the body is unable to use the insulin that is produced. Without usable insulin, the body cannot get the energy it needs to function. This is what diabetes is all about—the inability of a person's body to get the energy it needs from food.

Signs and Symptoms

Millions of people have type 2 diabetes and don't even know it. By the time they are diagnosed, they have already lived with it for years, undiagnosed and untreated. How can this be? Many people exhibit no signs or symptoms of diabetes, and some of the symptoms they may have are mild enough to go unnoticed. Other times, people notice the symptoms, but they do not seem serious enough to cause them to contact a physician. In these cases, diabetes goes untreated for years, or until they visit a doctor for an ailment that developed as a result of their diabetes, such as blurred vision or numb fingers.

Early detection of diabetes is important because it can help prevent complications and damage to the body. According to the National Institute of Diabetes and Digestive & Kidney Diseases (NIDDK), all adults forty-five years old or older should get tested for diabetes, regardless of

whether they have noticed any symptoms. People younger than forty-five should get tested if they display symptoms or if they have any of the high-risk characteristics that make them more prone to developing the disease.

In recent years, you may have heard the term “pre-diabetes.” Pre-diabetes is used to classify people who are at a severe risk for developing type 2 diabetes. Fortunately, by making lifestyle changes such as eating healthier, adding moderate exercise or physical activity to their daily lives, and losing excess weight, people considered to be pre-diabetic can slow down or even prevent the onset of type 2 diabetes.

If you or a family member are experiencing the following symptoms, then you should consult a physician and get tested for diabetes as soon as possible.

- Increased or extreme hunger
- Increased urination
- Increased or excessive thirst
- Constant fatigue
- Changes in vision, such as blurred vision
- Unexpected weight loss
- Tingling or numbness in hands, fingers, or feet
- Cuts and sores that do not heal as quickly as they used to
- Higher incidence of infections

Types of Diabetes

There are two major types of diabetes, type 2 and type 1, as well as a third type called gestational diabetes, which occurs during a small percentage of pregnancies.

Type 2 diabetes is the most common form of diabetes, accounting for up to 95 percent of all cases. Formerly known as non-insulin-dependent diabetes mellitus (NIDDM) and as adult-onset diabetes, type 2 diabetes appears most often in middle-aged adults. However, there has been a disturbing trend in which young adults and adolescents are now developing it.

People develop type 2 diabetes because their pancreas either stops producing enough insulin to function, or because their body is no longer able to use the insulin it is producing (known as insulin resistance). Who is most at risk of developing type 2 diabetes?

- People who are overweight or obese
- People forty-five years old or older

- People with a family history of diabetes
- People who are African American, Hispanic American, Native American, Asian American, or Pacific Islanders
- People who get little or no physical activity or exercise
- People with low HDL levels and high LDL levels
- Women who have delivered a baby weighing over nine pounds at birth

Type 1 diabetes accounts for about 5 percent of all cases of diabetes. Also commonly referred to as juvenile diabetes, or insulin-dependent diabetes mellitus (IDDM), it typically begins early in life with children and young adults suffering from an insulin deficiency.

The immune system of people with type 1 diabetes destroys the insulin-producing beta cells that are normally found in the pancreas. Because of this, people living with type 1 diabetes produce little or no insulin. They are therefore required to take insulin injections every day to replace the insulin their body is lacking.

The risk factors for developing type 1 diabetes are not as easily defined as those for type 2 diabetes, but they may include genetic and environmental factors.

Gestational diabetes develops in up to 5 percent of all pregnancies, but it usually goes away once the pregnancy has ended. However, women who develop gestational diabetes are at a higher risk of developing type 2 diabetes as they get older.

While the exact reason for developing gestational diabetes is not known, it is most common in women who have a family history of diabetes, who are obese when they get pregnant, or who are from a more diabetes-prone ethnic group. Hormones and hormonal changes at about the twenty-fourth week of pregnancy cause insulin resistance and can also lead to gestational diabetes. Women with gestational diabetes must take special precautions during pregnancy and work closely with their physicians to ensure a safe pregnancy.

Complications from Diabetes

People living with diabetes are at an increased risk for developing other health conditions or complications. The most common complications include heart disease, infections, nerve damage (neuropathy), kidney disease (nephropathy), and eye disease (retinopathy).

If you are a person with diabetes, any time you experience unexplained problems, such as headaches, blurred vision, or some of the

symptoms mentioned earlier in this chapter, you should contact your doctor as soon as possible. It is important to stay in tune with your body and to be aware of possible warning signs alerting you about untreated health problems.

The best way to reduce the risk of complications is by controlling blood glucose levels. You can also reduce complications by eliminating high-risk behaviors that can lead to poor health. Add physical activity to your daily routine, quit smoking, lose excess weight, reduce your alcohol consumption, and eat healthier by cutting down on foods high in cholesterol, calories, and fat.

If you have already developed complications or have other health problems, then it is important that you closely follow the advice of your physician to help delay or prevent conditions from developing or worsening.

Treating Diabetes

The overall goal of diabetes treatment is to keep blood glucose levels as close to normal as possible. Keeping blood glucose levels under control reduces the risk of developing the life-threatening complications mentioned earlier, which is why it is so important to consistently test and monitor blood glucose levels.

When people with diabetes test their blood, they are actually testing to see how much sugar (glucose) has built up in their blood. When insulin is either ineffective or not being produced at all, glucose builds up in the blood and passes out of the body in the urine without being used. Even though the blood is loaded with glucose, the glucose doesn't make it into the cells and the body ends up losing its main source of energy. Testing blood sugar levels may not be pleasant and it may not always be convenient, but it is a very effective way to see how the body is reacting to the food people eat, the lifestyle they live, and the medications or treatments they have been prescribed.

Treatment of type 2 diabetes involves blood glucose level testing, a personalized meal plan, or diet and exercise. Prescribed oral medications or insulin may also be used to help control blood glucose levels.

Treatment of type 1 diabetes involves multiple daily injections of insulin, which are balanced with meals and daily activities. It includes frequent blood glucose level testing and a carefully designed and scheduled diet.

Managing Your Diabetes

It is important to remember that diabetes management needs to be addressed on an individual basis and that what may be good for one person with diabetes may not be good for another. Educating yourself on how to manage your diabetes is the best way to stay healthy. By sticking to a healthy diet, engaging in physical activity, and keeping a close eye on your health through frequent self-examination and regularly scheduled professional health examinations, you can effectively manage your diabetes and minimize complications.

To best manage your diabetes, you should organize a team of health care professionals so they can help you develop a personal diabetes-management plan that addresses personal issues such as lifestyle, diet, existing or developing health conditions, and medical care. Putting together a comprehensive, qualified team that you feel comfortable with may seem like a lot of work to go through, but it is definitely worth it. By providing you with information, resources, and coordinated treatment, your health care team can work together to help you manage your diabetes effectively.

In addition to your personal physician, a well-rounded health care team may include the following specialized professionals:

- Certified Diabetes Educator (C.D.E.)
- Certified Fitness Specialist
- Certified Wound Specialist
- Dermatologist
- Dietitian
- Neurologist
- Ophthalmologist
- Optometrist
- Pharmacist
- Podiatrist
- Psychologist or psychiatrist

We suggest that you begin by personally meeting with a Certified Diabetes Educator. A C.D.E. can help you get started and should be able to personally recommend other qualified professionals in your area.

For a more detailed look at the professionals whom you should include on your team, including additional resources relating to each specific profession, take a look at the Health Care Professionals section in the back of the book.