



Getting Fit to Serve

From the desk of
Shirnett Matthews, MD



Every 7 seconds
1 person dies
from diabetes

June 2015
Volume 1, Issue 3
PART 1

DIABESITY IN AMERICA

The Dangerous Diabetes-Obesity Connection

Diabetes mellitus refers to a group of diseases that affect how your body uses blood sugar (glucose). Glucose is vital to your health because it's an important source of energy for the cells that make up your muscles and tissues. It's also your brain's main source of fuel. If you have diabetes, no matter what type, it means you have too much glucose in your blood, although the causes may differ. Too much glucose can lead to serious health problems.

Why does diabetes develop? Diabetes occurs when the pancreas is no longer able to make insulin, or when your body cannot make good use of the insulin it produces.

What is insulin? A hormone made by the pancreas, that acts like a key to let glucose from the food we eat pass from the blood stream into the cells in the body to produce energy. **KEY POINT:** Insulin helps glucose get into the cells where it is used; if this doesn't happen, the glucose stays in the blood stream and causes damage.

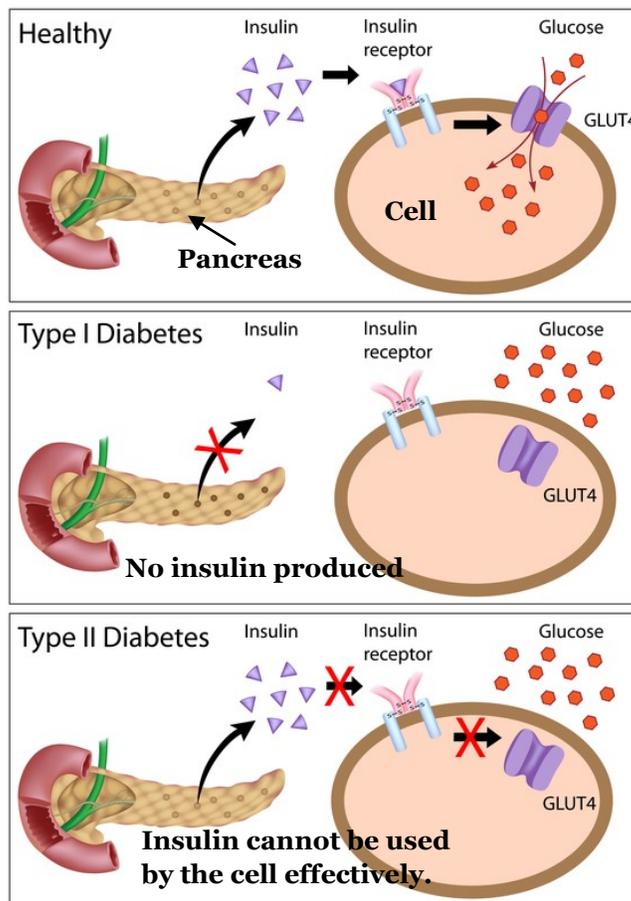
There are 3 main types of Diabetes:

Type 1 Diabetes: also called juvenile-onset diabetes. It is usually caused by an auto-immune reaction where the body's defense system attacks the cells that produce insulin. The reason this occurs is not fully understood. People with type 1 diabetes produce very little or no insulin. The disease may affect people of any age, but usually develops in children or young adults. People with this form of diabetes need injections of insulin every day in order to control the levels of glucose in their blood. If people with type 1 diabetes do not have access to insulin, they will die.

Type 2 diabetes: used to be called non-insulin dependent diabetes or adult-onset diabetes, and accounts for at least 90% of all cases of diabetes. It is characterized by insulin resistance and relative insulin deficiency (low-levels), either or both of which may be present at the time diabetes is diagnosed. The diagnosis of type 2 diabetes can occur at any age. Type 2 diabetes may remain undetected for many years and the diagnosis is often made when a complication appears or a routine blood or urine glucose test is done. It is often, but not always, **associated with overweight or obesity**, which itself can cause insulin resistance and lead to high blood glucose levels. People with type 2 diabetes can often initially manage their condition through exercise and diet. However, over time most people will require oral drugs and or insulin.

⇒ **Prediabetes:** means that your blood sugar level is higher than normal but not yet high enough to be classified as type 2 diabetes. Without intervention, prediabetes is likely to become type 2 diabetes in 10 years or less.

Gestational diabetes (GDM) is a form of diabetes consisting of high blood glucose levels during pregnancy. It develops in one in 25 pregnancies worldwide and is associated with complications to both mother and baby. GDM usually disappears after pregnancy but women with GDM and their children are at an increased risk of developing type 2 diabetes later in life. Approximately half of women with a history of GDM go on to develop type 2 diabetes within five to ten years after delivery.



RISK FACTORS FOR Type 2 DIABETES

PUTTING THINGS IN PERSPECTIVE

- In 1958—1.5 million Americans were diagnosed with diabetes.
- In 2012—29.1 million (9.3%) Americans were diagnosed with diabetes.
- In 2012, 86 million Americans, age 20 and older, had prediabetes; this is up from 79 million in 2010
- An additional 8.1 million Americans have diabetes but are undiagnosed.
- 1.7 million new diagnoses of diabetes were made in 2012
- Worldwide—387 million people have diabetes and if the current trends continue, more than 592 million people (worldwide) will have diabetes by 2035.
- Worldwide—46.3% remain undiagnosed.
- Diabetes is the 7th leading cause of death in the United States in 2010

DIABETES PREVENTION IS POSSIBLE
OBESITY IS PREVENTABLE!

Type 2: If you have this kind, your body can't use the insulin it makes. This is called insulin resistance. Type 2 usually affects adults, but it can begin at any time in your life. The main things that lead to it are:

- **Obesity or being overweight.** Research shows this is a top reason for type 2 diabetes. Because of the rise in obesity among U.S. children, this type is affecting more teenagers.
- **Impaired glucose tolerance.** Prediabetes is a milder form of this condition. It can be diagnosed with a simple blood test. If you have it, there's a strong chance you'll get type 2 diabetes.
- **Insulin resistance.** Type 2 diabetes often starts with cells that are resistant to insulin. That means your pancreas has to work extra hard to make enough insulin to meet your body's needs.
- **Ethnic background.** Diabetes happens more often in Hispanic/Latino Americans, African-Americans, Native Americans, Asian-Americans, Pacific Islanders, and Alaska natives.
- **High blood pressure.** That means blood pressure over 140/90.
- **Low levels of HDL ("good") cholesterol and high levels of triglycerides.**
- **Gestational diabetes.** If you had diabetes while you were pregnant, you had gestational diabetes. This raises your chances of getting type 2 diabetes later in life.
- **Sedentary lifestyle.** You exercise less than three times a week.
- **Family history.** You have a parent or sibling who has diabetes.
- **Polycystic ovary syndrome.** Women with polycystic ovary syndrome (PCOS) have a higher risk.
- **Age.** If you're over 45 and overweight or if you have symptoms of diabetes, talk to your doctor about a simple screening test.

WHAT'S YOUR FASTING BLOOD SUGAR LEVEL?

The American Diabetes Association recommends that all adults get their blood sugar levels checked regularly, especially people at increased risk because they have a family history of diabetes, are overweight, or live a sedentary lifestyle.

BLOOD GLUCOSE NORMS

| | FASTING BLOOD TEST | NONFASTING BLOOD TEST | A1C BLOOD TEST |
|--------------------|----------------------------|----------------------------|-----------------------|
| Normal | 70-99 mg/dL | < 200 mg/dL | <5.7% |
| Prediabetes | 100-125 mg/dL | ----- | 5.7%-6.4% |
| Diabetes | 126 mg/dL or higher | 200 mg/dL or higher | 6.5% or higher |

The Diabetes-Obesity Connection: Is there one? Most studies say YES!

The relationship between obesity and diabetes is of such interdependence that the term '**diabesity**' has been coined. Though there are identifiable risk factors for the development of both diabetes and obesity; it's becoming more and more clear that the conveniences of modern life also contribute to the development of both diseases. For example, sedentary lifestyles (reduced physical activity) and the popularity of high fat, high energy diets (think "Super Size Me") and convenient foods are known to lead to obesity – *but do they also cause diabetes?* Well, of the people diagnosed with type II diabetes, about 80 to 90 percent are also diagnosed as obese. This fact provides an interesting clue to the link between diabetes and obesity.

Being overweight places extra stress on your body in a variety of ways, including your body's ability to maintain proper blood glucose levels. In fact, being overweight can cause your body to become resistant to insulin. If you already have diabetes, this means you will need to take even more insulin to get sugar into your cells. And if you don't have diabetes, the prolonged effects of the insulin resistance can eventually cause you to develop the disease. (CDC)

What can you do? (more to come on PREVENTION in part 2)

LIFESTYLE RISK FACTORS FOR DIABETES and OBESITY: being overweight, lack of regular exercise, smoking, poor diet (low intake of fiber, high intake fats and sugars)

LIFESTYLE CHANGES TO PREVENT DIABETES AND OBESITY: get active, eat a well balanced diet (high fiber, low saturated fat, low trans fat, low sugar), no smoking or alcohol; decrease body fat.

Remember—FIGHT to be healthy! Run to win. The choice is yours! Choose Life and Live to your fullest.



Shirnett Matthews, MD