

# WHAT IS DIABETES?

With diabetes, the body is not able to use glucose (sugar) for energy. When sugar builds up in the blood it is called high blood sugar or hyperglycemia. Diabetes is a lifelong condition that cannot be cured. However, it can be controlled.

There are several types of diabetes:

- Prediabetes
- Gestational Diabetes
- Type 1 Diabetes
- Type 2 Diabetes
- Latent Autoimmune Diabetes of Adulthood (LADA)

## Diagnosing Diabetes

There are several ways to test for diabetes:

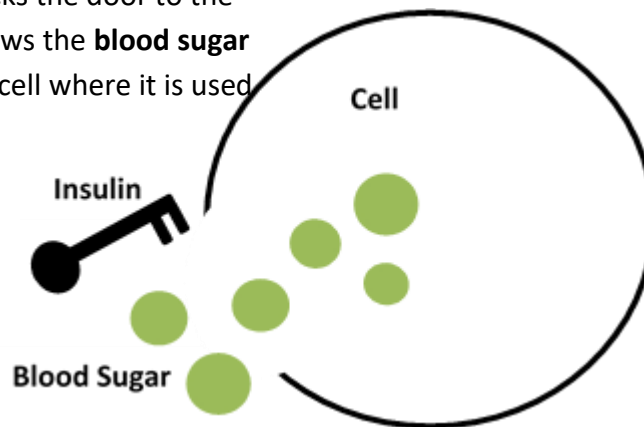
- **Hemoglobin A1C test:** shows a 2-3 month average of all blood sugar levels.
- **Fasting glucose test:** shows blood sugar level after no food or drink for 8 or more hours.
- **Random glucose test:** may be done any time of the day.
- **2-hour oral glucose tolerance test (OGTT):** shows blood sugar level two hours after drinking 75 grams of glucose.

Diagnosis	A1C	Fasting Test	Random Test	OGTT
Diabetes	6.5% or higher	126 mg/dL or higher	200 mg/dL or higher	200 mg/dL or higher
Prediabetes	5.7%-6.4%	100-125 mg/dL	140-199 mg/dL	140-199 mg/dL
No Diabetes	Less than 5.7%	Less than 100 mg/dL	Less than 140 mg/dL	Less than 140 mg/dL

## How the Body Uses Energy

When you eat, your body breaks down most food into sugar to be used for energy. The sugar then enters the bloodstream, causing the pancreas to release insulin. Insulin is a hormone that opens the cells in our body, like a key opening a door. Once the cells are open, the sugar can move from the blood into the cells. Once sugar is in the cells it can be used for energy. With diabetes, either the pancreas does not make enough insulin OR the insulin does not work the way it should. This leads to the sugar staying in the blood, causing high blood sugar levels.

**Insulin** unlocks the door to the cell. This allows the **blood sugar** to enter the cell where it is used for energy.



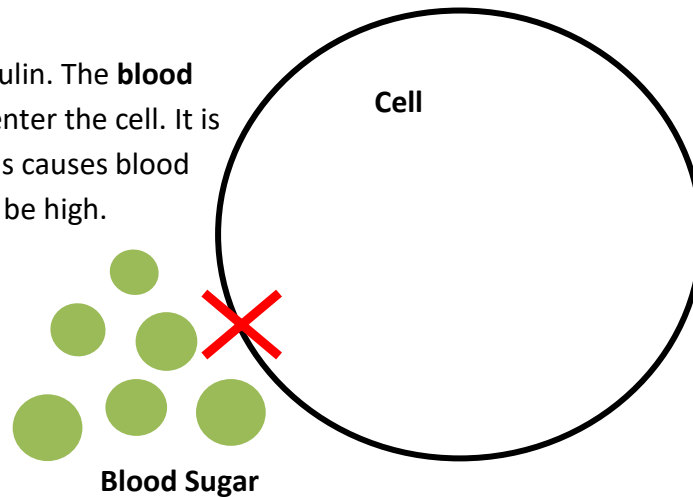
## Prediabetes

Prediabetes describes higher than normal blood sugar levels but not as high as diabetes. Prediabetes increases your risk for developing type 2 diabetes. A healthy lifestyle may help to delay or prevent type 2 diabetes.

## Type 1 Diabetes

Type 1 diabetes is an autoimmune disorder where the immune system attacks certain cells of the pancreas. These are the cells that make insulin. When these cells are destroyed, they cannot make insulin. Without insulin, sugar builds up in the bloodstream. Type 1 diabetes accounts for about 5-10% of all diabetes.

There is no insulin. The **blood sugar** cannot enter the cell. It is locked out. This causes blood sugar levels to be high.



Type 1 diabetes can develop very quickly. Symptoms include:

- Increased hunger
- Increased thirst
- Unplanned weight loss
- Behavior changes
- Feeling tired
- Increased urination

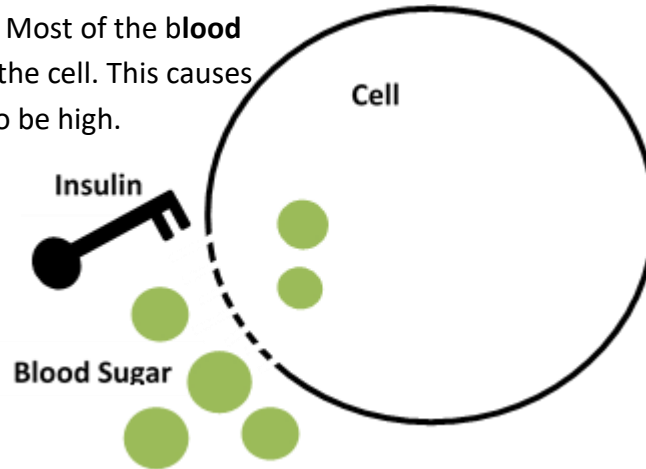
Type 1 diabetes is usually diagnosed before age 30. The exact cause of type 1 diabetes is unknown. Risk factors for developing type 1 diabetes include:

- Family history
- Certain racial groups: Caucasian

## Type 2 Diabetes

Type 2 diabetes is a condition where the pancreas is producing insulin but the insulin is not used properly (insulin resistance). Insulin tries to open the cells to let sugar in. The cells do not open causing blood sugar levels to rise. It is as if you have the key but the lock is broken and you cannot get in. Over time, the pancreas may also start making less insulin (insulin deficiency). Type 2 diabetes accounts for 90-95% of all diabetes.

**Insulin** tries to unlock the cell. The cell does not open well. Most of the **blood sugar** cannot enter the cell. This causes blood sugar levels to be high.



Symptoms of type 2 diabetes include:

- Increased hunger
- Increased thirst
- Increased urination
- Blurred vision
- Frequent infections
- Feeling tired
- Dry, itchy skin
- Problems with sexual function
- Slow healing cuts and sores
- Numbness or tingling in hands or feet

Risk factors for developing type 2 diabetes include:

- Being age 45 or older
- Being overweight
- Family history (parent, sibling, or child)
- History of prediabetes
- Diabetes during pregnancy (gestational diabetes)
- Little or no regular physical activity
- Heart disease
- High blood pressure
- Low HDL cholesterol
- High triglycerides
- Polycystic ovary syndrome (PCOS)
- Acanthosis nigricans (dark, thickened skin around neck or armpits)
- Belong to certain ethnic groups: African-American, Asian-American, Latino or Hispanic-American, Native American, or Pacific Islander

## **Latent Autoimmune Diabetes of Adulthood (LADA)**

LADA has aspects of both type 1 and type 2 diabetes. It is also called type 1.5 diabetes. It is a slow progressing form of autoimmune diabetes (Type 1). People with LADA have insulin resistance, but at levels, less than in type 2 diabetes. LADA is usually diagnosed at 25 years of age or older in individuals without a family history of type 2 diabetes. Initial treatment may include oral medicines. Over time, treatment with insulin is needed to manage blood sugar levels.