Type I &Type II Diabetes mellitus

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Type 1 diabetes is a chronic disease. In type 1 diabetes, cells in the pancreas that make insulin are destroyed, and the body is unable to make insulin.

Insulin is a hormone that helps our body's cells use glucose for energy. Our body gets glucose from the food we eat. Insulin allows the glucose to pass from our blood into our body's cells.

When the cells have enough, our liver and muscle tissues store the extra glucose, also called blood sugar, in the form of glycogen. It's broken down into blood sugar and released when we need energy between meals, during exercise, or while we sleep.

In type 1 diabetes, the body is unable to process glucose, due to the lack of insulin. Glucose from our food can't make its way into the cells. This leaves too much glucose circulating in our blood. High blood sugar levels can lead to both short-term and long-term problems.

Symptoms of type 1 diabetes:

The following are symptoms of type 1 diabetes:

excessive hunger

excessive thirst

blurred vision

fatigue

frequent urination

dramatic weight loss in a short period of time

A person might also develop ketoacidosis, a complication of diabetes. Symptoms of this condition include:

rapid breathing

dry skin and mouth

flushed face

fruity breath odor

nausea

vomiting or stomach pain

Types of Diabetes:

Diabetes mellitus is classified into two different types:

In Type 1 diabetes, previously called insulin-dependent diabetes mellitus (IDDM for short) and juvenile-onset diabetes, the body may either produce insulin in very small amounts or it may not produce insulin at all.

While in Type 2 diabetes, formerly known as non-insulin-dependent diabetes mellitus (NIDDM for short) and adult-onset diabetes, the body's weak balance between insulin production and the ability of cells to use insulin goes awry. This may result from insulin resistance in which cells fail to use insulin properly often times combined with an absolute insulin deficiency.

Type 1 vs. type 2 diabetes:

There are two main types of diabetes: type 1 and type 2. They have similar symptoms, and over time, they can lead to many of the same complications. However, they are very different diseases.

Type 1 diabetes is the result of the body not producing insulin on its own. Taking insulin is necessary for survival, to move glucose from the bloodstream into the body's cells.

For people with type 2 diabetes, the cells have stopped responding well to insulin. The body struggles to move glucose from the blood into the cells, despite adequate levels of the hormone. Eventually, their bodies may stop making adequate insulin entirely.

Type 1 diabetes develops very quickly, and symptoms are obvious. For people with type 2 diabetes, the condition can develop over many years. In fact, a person with type 2 diabetes may not know they have it until they have a complication.

The two types of diabetes are caused by different things. They also have unique risk factors.

Causes type 1 diabetes:

The exact cause of type 1 diabetes is unknown. However, it's thought to be an autoimmune disease. The body's immune system mistakenly attacks beta cells in the pancreas. These are the cells that make insulin.

Genetic and environmental elements, such as viruses, may play a role.

Causes of type 2 diabetes:

In type 2 diabetes, the body's cells start to resist the effects of insulin. In time, the body stops producing enough insulin, so it can no longer use glucose effectively.

This means glucose cannot enter the cells. Instead, it builds up in the blood.

This is called insulin resistance.

It can happen when the person always or often has high blood glucose. When the body's cells are overexposed to insulin, they become less responsive to it, or maybe they no longer respond at all.

Symptoms may take years to appear. People may use medications, diet, and exercise from the early stages to reduce the risk or slow the disease.

In the early stages, a person with type 2 diabetes does not need supplemental insulin. As the disease progresses, however, they may need it to manage their blood glucose levels in order to stay healthy.

Risk factors for type 2 diabetes include:

having a family member with type 2 diabetes

having obesity

smoking

following an unhealthful diet

a lack of exercise

the use of some medications, including some anti-seizure drugs and some medications for HIV

People from certain ethnic groups are more likely to develop type 2 diabetes. These include Black and Hispanic people, Native American Indians and Native Alaskans, Pacific Islanders, and some people of Asian origin, according to the CDC.

Diagnosis of type 1&2 diabetes:

Type 1 diabetes is usually diagnosed through a series of tests.. Some can be conducted quickly, while others require hours of preparation or monitoring.

Type 1 diabetes often develops quickly. People are diagnosed if they meet one of the following criteria:

fasting blood sugar > 126 mg/dL on two separate tests

random blood sugar > 200 mg/dL, along with symptoms of diabetes

hemoglobin A1c > 6.5 on two separate tests

These criteria are also used to diagnose type 2 diabetes. In fact, people with type 1 diabetes are sometimes misdiagnosed as having type 2.

Type 1 diabetes treatment:

Insulin

Metformin

Metformin is a type of oral diabetes medication. Metformin helps lower sugar in the blood by reducing sugar production in the liver.

Vaccines

The tuberculosis vaccine may hold promise as a treatment for people with type 1 diabetes. A very small study found that people with type 1

who received two injections of the bacillus Calmette-Guérin (BCG) vaccine saw their blood sugar levels stabilize for at least five years.

Diet and exercise

People with type 1 diabetes should eat regular meals and snacks to keep blood sugar stable.

Exercise also helps lower blood sugar levels.

Type 1 diabetes risk factors

Family history

Several genes have been linked to this condition. However, not everyone who has these genes develops type 1 diabetes.

Race

Race may be a risk factor for type 1 diabetes. It's more common in white people than in people of other races.

Environmental factors

Some viruses may trigger type 1 diabetes. It's unclear which ones might be the culprits.

Likewise, people from cold climates are more likely to have type 1 diabetes. Doctors also diagnose more cases of type 1 in winter than they do in summer.

What is hyperglycemia?

Hyperglycemia, or high blood glucose, occurs when there is too much sugar in the blood. This happens when your body has too little insulin (the hormone that transports glucose into the blood), or if your body

can't use insulin properly. The condition is most often linked with diabetes.

Hyperglycemia is blood glucose greater than 125 mg/dL (milligrams per deciliter) while fasting (not eating for at least eight hours; a person with a fasting blood glucose greater than 125 mg/dL has diabetes).

A person has impaired glucose tolerance, or pre-diabetes, with a fasting blood glucose of 100 mg/dL to 125 mg/dL.

A person has hyperglycemia if their blood glucose is greater than 180 mg/dL one to two hours after eating.

If you have hyperglycemia and it’s untreated for long periods of time, you can damage your nerves, blood vessels, tissues and organs. Damage to blood vessels can increase your risk of heart attack and stroke, and nerve damage may also lead to eye damage, kidney damage and non-healing wounds.