

What is diabetes & why is it critical

India is often referred to as the ‘Diabetes Capital of the World’, as it accounts for 17% per cent of the total number of diabetes patients in the world. More than 50% of people are unaware of their diabetic status which leads to health complications. If not detected or treated early, it can cause blindness, kidney failure, heart attack or stroke among other problems.

Glucose is an important energy source for our brain, muscles and tissues to perform daily functions. Insulin helps manage its absorption. Diabetes is a condition that happens when your blood sugar (glucose) is higher than required. *(See the range below)

It develops when your pancreas does not make enough insulin or any at all, or when your body is not responding properly to the effects of insulin. Diabetes affects people of all ages. Most forms of diabetes are chronic (lifelong), and all forms are manageable with regular monitoring, medications and lifestyle changes.

Types of Diabetes:

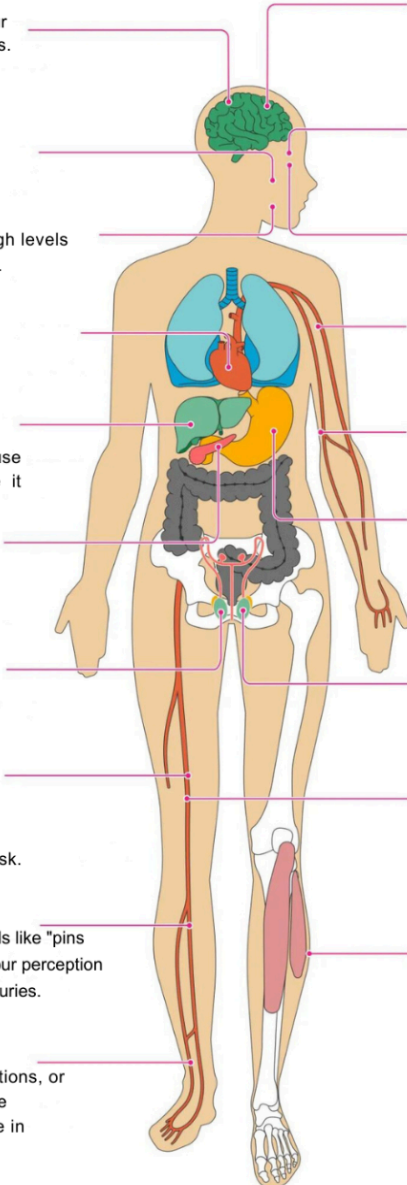
Diabetes is of different types with short-term and long-term implications for treatment:

1. Prediabetes is a condition where blood sugar levels are higher than normal but not high enough to be diagnosed as Type 2 diabetes. It is a warning sign that indicates an increased risk of developing diabetes and related health problems.
2. Type 2 diabetes is when your body does not use insulin well or produce enough insulin and can not keep blood sugar at normal levels. This is the most common of diabetes.
3. Type 1 diabetes is caused by an autoimmune reaction. Where the body destroys insulin-producing cells in the pancreas. Prevalent more in children & young adults.
4. There are other types of diabetes such as gestational (pregnancy) diabetes, and others that have different implications for treatment.

What is the harm caused by diabetes?

Long-term complications of diabetes develop gradually and may be disabling or even life-threatening. The longer you have diabetes — and the less controlled your blood sugar — the higher the risk of complications: Heart attack, stroke, Kidney damage, Eye problems, Foot problems, infections or slow wound healing, Sexual dysfunction, Mental health issues etc.

Complications of Diabetes



Risk of stroke
Risk of stroke for someone with diabetes is four times higher than for someone without diabetes.

Extreme thirst
Extreme thirst is often one of the first noticeable symptoms of diabetes.

Sweet-smelling breath
Breath that has a sweet scent may indicate high levels of ketones, a serious complication of diabetes.

Risk of heart disease
High blood pressure and damaged blood vessels put added strain on the heart, increasing the risk of cardiovascular disease.

Fatigue and lack of energy
Overall kidney and pancreas problems can cause you to feel more tired. This can also make it harder for you to concentrate.

Pancreas malfunction
A poorly functioning or nonfunctioning pancreas will not produce the insulin your body needs to convert glucose into energy.

Excessive urination
Having to urinate frequently may be an early warning sign to concentrate.

Damaged blood vessels
Too much glucose in your system can cause restricted blood flow, leading to a variety of symptoms and damage to the blood vessels. Smokers with diabetes are at an even higher risk.

Nerve damage
Diabetes causes nerve damage, which often feels like "pins and needles." Damaged nerves can also alter your perception of heat, cold, and pain, increasing your risk of injuries.

Foot problems
Diabetes increases your risk of calluses, infections, or ulcers of the foot. This can be caused by nerve damage from high blood sugar and a decrease in circulation to your feet.

Loss of consciousness
Without treatment, diabetic ketoacidosis can lead to loss of consciousness.

Visual disturbances
Damaged blood vessels in the eyes can cause visual disturbances like floaters. If left untreated, this can lead to blindness.

Cataracts and glaucoma
If you have diabetes you have an increased risk of cataracts and glaucoma compared with people who do not have diabetes.

Risk of infections
Diabetes can also raise your risk of bacterial, fungal, and yeast infections. Your feet are the most vulnerable to infection.

High blood pressure
If you have diabetes, you are at increased risk of developing high blood pressure.

Gastroparesis
Poor blood sugar management can cause delayed emptying of food from the stomach. This can cause bloating, heartburn, and nausea.

Protein in the urine
High levels of protein in your urine may mean your kidneys have some damage and are not functioning well.

Ketoacidosis
To make up for the lack of insulin, your body uses other hormones to turn fat into energy. This produces high levels of toxic acids called ketones, which can be life-threatening.

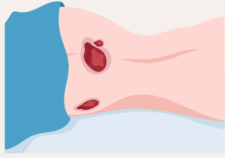
Dry, cracked skin
Uncontrolled, high blood sugar causes the body to lose fluids at a faster rate. This can lead to dry, cracked skin, especially on the feet.

***Source: www.healthline.com**

What are the common signs & symptoms of diabetes?

Diabetes symptoms depend on how high your blood sugar is. People with prediabetes, gestational diabetes or type 2 diabetes, may not have any symptoms at all or you may not notice them since they develop slowly. Measuring your diabetes is the only way to know whether you have it or not. In type 1 diabetes, symptoms tend to come on quickly and be more severe. Common symptoms of diabetes.

Common Symptoms of Diabetes



Slow-healing sores or Frequent infections



Tingling or Numbness in hands or feet




Unexplained weight loss



Frequent urination



Increased hunger



Blurred vision



Excessive thirst



Mood irritability and fatigue



Dry or itchy skin

Diabetes symptoms can vary depending on the type and severity of the condition, with some individuals showing no symptoms at all.

Who is likely to get diabetes?

Factors that increase the risk for diabetes include having a family history of a parent or sibling with diabetes, gestational diabetes, prediabetes, high blood pressure, high cholesterol, and being physically inactive or obese/overweight. Both men & women can get diabetes, adults above 45 are more likely to be affected however the incidence is among people between 20-45 years of age.

What are the tests for checking diabetes?

Diabetes can be checked by blood tests. Tests for type 1 and type 2 diabetes and prediabetes:

- **Haemoglobin A1c (HbA1c) Test:** This test measures your average blood sugar level over the past 2-3 months. An HbA1c level of 6.5% or higher indicates diabetes.
- **Random blood sugar test.** A blood sample will be taken at any random time irrespective of when you last ate. No matter when you last ate, a blood sugar level of 200(mg/dL) — 11.1 (mmol/L) or higher suggests diabetes.
- **Fasting blood sugar test.** A blood sample will be taken after the gap of 10-12 hours after your last meal. A fasting blood sugar level of 99 mg/dL or lower is normal, 100 to 125 mg/dL indicates you have prediabetes, and 126 mg/dL or higher indicates diabetes.
- **Oral glucose tolerance test (OGTT):** This test involves fasting overnight and then drinking a sugary solution. Blood sugar levels are measured before and two hours after drinking the solution. A blood sugar level of 200 mg/dL or higher two hours after drinking the solution indicates diabetes*

Result*	A1C Test	Fasting Blood Sugar Test	Glucose Tolerance Test	Random Blood Sugar Test
Diabetes	6.5% or above	126 mg/dL or above	200 mg/dL or above	200 mg/dL or above
Prediabetes	5.7 – 6.4%	100 – 125 mg/dL	140 – 199 mg/dL	N/A
Normal	Below 5.7%	99 mg/dL or below	140 mg/dL or below	N/A

Source - [American Diabetes Association](#)

Results for gestational diabetes can be different. Ask your healthcare provider what your results mean

*mg/dl- milligrams per deciliter and millimoles per litre (mmol/L)

Can diabetes be treated?

Depending on what type of diabetes you have, the doctor can prescribe a combination of medications, insulin and lifestyle changes for your treatment. Do not self-medicate or adjust the insulin doses independently. Follow professional advice always.

Medication: Seek your doctor's advice for a comprehensive treatment plan.

A variety of medicines is available, however, the doctor will customise the salt, doses, and timings of intake, to suit the patient's overall condition. Remember to inform the doctor of other medications that you normally take. Do not self-medicate, miss or adjust doses independently. Never copy or try medicines that your friends or family members take. Keep sufficient stock of your diabetes medicines handy at all times especially while travelling. If diabetes is unchecked for a long time it can result in serious consequences.

Insulin:

Insulin is a hormone that helps regulate blood sugar levels by facilitating glucose uptake into cells. Insulin can not be taken orally.

- People with **Type 1 diabetes** must take insulin as replacement therapy to cause their body (Pancreas) not to produce insulin.
- Some people with **Type 2 diabetes** may eventually require insulin therapy if oral medications and lifestyle changes are not sufficient to control blood sugar levels.
- Insulin therapy is not typically used to treat **Prediabetes** since the body can still produce insulin and blood sugar levels are not significantly elevated.

Lifestyle changes:

You can not prevent Type 1- autoimmune and genetic forms of diabetes as of the data available yet. But you can prevent and manage Prediabetes & Type 2 diabetes even if it runs in your family with these lifestyle changes:

1. **Ensure diet and nutrition** are balanced with fibre, whole grains, fruits, protein and vegetables. Limit the intake of sugary and processed foods such as white rice, white bread, pasta, soda, candy etc.

Diabetes - Causes, Symptoms, Treatment, Management & Prevention

2. **Engage in Physical Activity** regularly, including 30 minutes of aerobic exercises such as brisk walking, cycling or swimming a day at least five days a week and strength training.
3. **Get adequate sleep** (typically 7 to 9 hours) and seek treatment for sleep disorders, if recommended by your physician.
4. **Avoid tobacco and limit alcohol:** Avoiding tobacco is important for individuals with diabetes. Moderate alcohol intake, if permitted by healthcare providers, is advised.
5. **Keep your feet healthy:** Wash your feet in warm (not hot) water & check them regularly. Never go barefoot to avoid injury, trim your toenails properly, and do foot-friendly activities like walking, bike riding, or swimming to keep blood flowing.
6. **Maintain gaps in between meals:** Practise [intermittent fasting](#) of 4-5 hour gaps between meals & snacks. This fasting period allows our bodies to process glucose efficiently and prevents unnecessary spikes.

Regular monitoring of diabetes is a must for treatment. You can monitor your blood sugar level with a [continuous glucose monitor](#) (CGM). Early detection, proper management, and a proactive lifestyle can make a significant difference in effectively handling diabetes.

To know more:

- [Blood sugar testing: why, when and how-Mayo Clinic](#)
- [Diabetes diet: Should I avoid sweet fruits?-Mayo Clinic](#)

My Health, My Responsibility