



جامعة الإمام عبد الرحمن بن فيصل
IMAM ABDULRAHMAN BIN FAISAL UNIVERSITY

مستشفى الملك فهد الجامعي
King Fahad Hospital The University

What is Diabetes Mellitus?



What is diabetes mellitus?

Diabetes Mellitus occurs when the pancreas fails to secrete insulin partially or completely, or when there is resistance to the action of insulin in the body.

In a normal situation, the blood sugar level for a fasting person is less than 100 mg/dl and a non-fasting person is less than 140 mg/dl. Diabetes mellitus is confirmed when the result of the laboratory analysis is 126 mg/dl and more for the fasting person or 200 mg/dl and more for non- fasting person, in the presence of symptoms of high blood sugar.



What is the prevalence of diabetes?

- Diabetes Mellitus in the Kingdom of Saudi Arabia is estimated to affect **18.3%** of the population, according to the latest statistics of the International Diabetes Federation.
- The World Health Organization ranked the Kingdom of Saudi Arabia as **the second** in terms of prevalence in the Middle East.

What are the types of diabetes mellitus?

 Type 1 diabetes mellitus:

It usually appears at an early age or childhood due to the failure of the pancreas to produce insulin due to immune reaction and is treated using insulin.



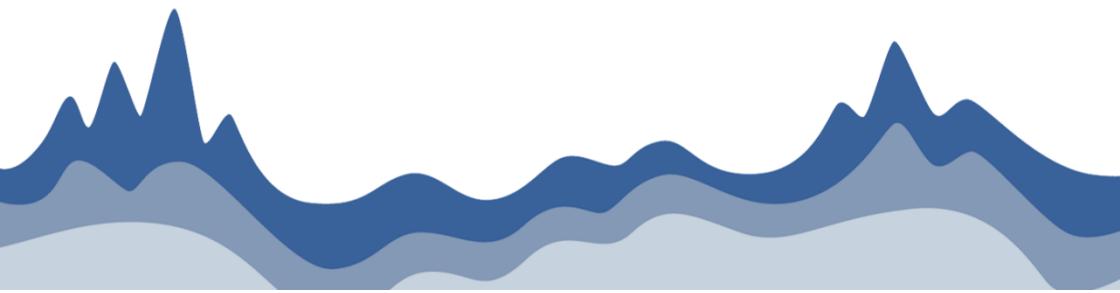
What are the types of diabetes mellitus?

Type 2 diabetes:

It often affects people who have overweight, obesity, or sedentary lifestyle, and it can affect any age, but more often in older persons. Treatment is through diet with the use of some types of oral and injectable medications, and the patient may need insulin at any stage or when other medications fail.

Other types of diabetes mellitus:

- Gestational diabetes mellitus: It occurs during pregnancy and results from the effect of hormones secreted by the placenta. This type usually disappears immediately after birth, and increases the risk type 2 diabetes in the future.



What are the types of diabetes mellitus?



Other types of diabetes mellitus:

- Diabetes Mellitus associated with some diseases: It occurs as a result of diseases affecting the pancreas and liver. In addition, the use of some medications that increase blood sugar or other disorders affecting other glands in the body.



What are the causes of diabetes mellitus?

There are several factors that predispose to the onset of the disease, including:

- Genetics, especially type 2 diabetes mellitus.
- Weight gain and lack of physical activity.
- Sedentary lifestyle.
- Some medications affecting the pancreas.
- Other disorders affecting pancreas like chronic pancreatitis and iron deposition.
- Over-secretion of other hormones that causes insulin resistance.



Who are the high-risk individuals to have diabetes mellitus ?

Those who have first degree relatives with diabetes mellitus.



Overweight or obesity.



Age above 40 years for type 2 diabetes mellitus.



Women gave birth to a baby weighing more than 4.5 kilograms or who had gestational diabetes mellitus.



What are the common symptoms of diabetes mellitus?

Frequent urinations



Frequent Thirst



Unintentional weight Loss



How can we prevent diabetes mellitus?

By changing your lifestyle to a healthy lifestyle, For example:

✚ Maintaining the ideal weight.

How can we prevent diabetes mellitus?

By changing your lifestyle to a healthy lifestyle, For example:

✚ Doing physical activities:

- Do moderate to strenuous aerobic exercise - such as brisk walking or swimming for a total of at least **150 minutes per week**.
- Resistance exercises at least **2-3** times a week, such as lifting weights.

✚ Eat healthy plant foods high in fiber, including:

- Fruits and vegetables such as tomatoes, peppers, leafy green vegetables, and broccoli.
- Legumes such as beans, peas, and lentils.

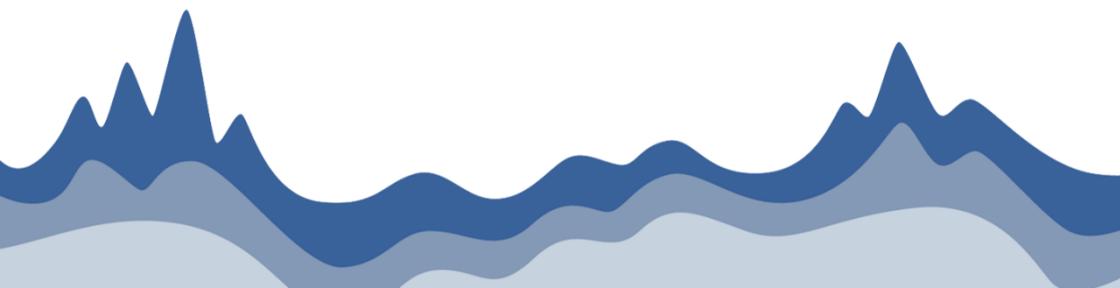
✚ Eat healthy fats, such as olive and sunflower oil.



How is diabetes mellitus diagnosed?

Diabetes mellitus is diagnosed through clinical symptoms and laboratory examination:

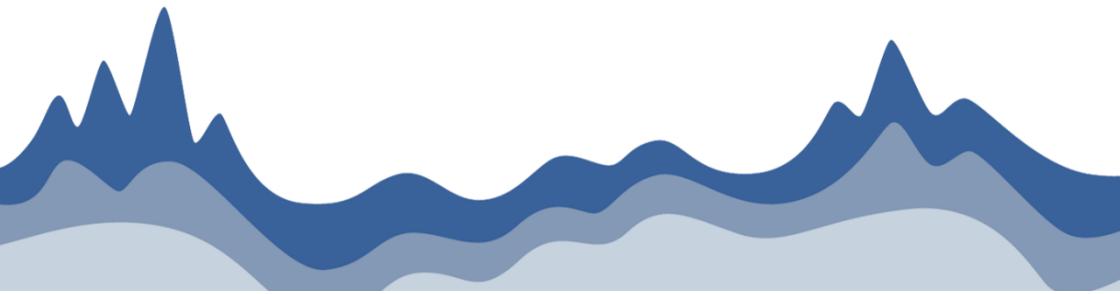
- ✚ Clinical symptoms: frequent urination, thirst, and weight loss.
- ✚ Laboratory examination: The normal fasting blood sugar level is less than 100 mg/dl. Diabetes mellitus is present if fasting blood sugar level is higher than or equal to 126 mg/dl, or if the random blood sugar test is 200 mg/dl or above with the presence of symptoms.
- ✚ Glycated hemoglobin test: Diabetes mellitus is present if it is greater than or equal to 6.5%.



How is diabetes mellitus diagnosed?

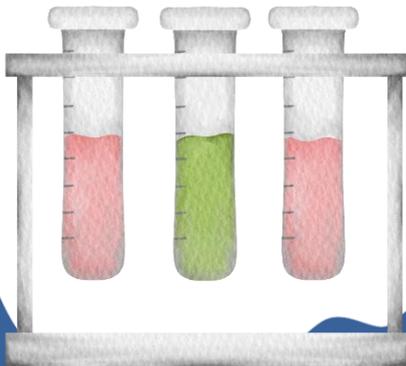
Diabetes mellitus is diagnosed through clinical symptoms and laboratory examination:

- ✚ Oral glucose tolerance test (OGTT): a special test after consuming a special solution containing sugar of about 75 gm with measurement of sugar after 2 hours. Diabetes mellitus is diagnosed if the reading above or equal 200 mg/dl.



What should I expect after diagnosis?

- If you are diagnosed with diabetes mellitus, your doctor may conduct other tests to distinguish between different types of diabetes mellitus, because each type of diabetes mellitus often requires different treatments.
- The health care provider will check your HbA1c levels at least twice a year and when making any changes in treatment. Your HbA1c goals may vary depending on your age and other factors, but for most people, according to the American Diabetes Association recommends HBA1C level of less than **7%**



Resources and References:

ADA and all pictures used from Canva.com

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Content of this booklets has been reviewed and approved by Endocrinology and Diabetes Consultants at King Fahad University Hospital.

Endocrinology and Diabetes
Health Awareness Unit
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