

# Epidemiology of Diabetes

Course Title: Epidemiology 1  
 Semester: 1st 2223  
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1

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2

## Epidemiology of Diabetes public health significance and magnitude of the problem <sup>(2)</sup>

Recent epidemiological studies have clarified trends in the prevalence and incidence of diabetes. They have deepened our understanding of the effects of co-morbidities on neuropathy, heart attacks, strokes, and eye and kidney injury.



3

## Epidemiology of Diabetes public health significance and magnitude of the problem <sup>(2)</sup>

According to the population that was examined, and the methodologies used, the study showed that the prevalence rate is 13.4%, meaning that the number of people with diabetes aged 15 years and over reaches 1,745,532 males and females, and this percentage increases with age to reach approximately 51% for those with diabetes over 65 years old.



4

## Frequency of Diabetes<sup>(6)</sup>

Data from diabetes figures showed remarkable growth over the past two decades in the Gulf. Gulf Cooperation Council countries. In Saudi Arabia, the prevalence of diabetes was estimated to be between 9% and 22% from 1980 to 2008, with reports issued in 2016 that the number of Saudi patients with diabetes is estimated at 7 million while the number of other patients is estimated.



5

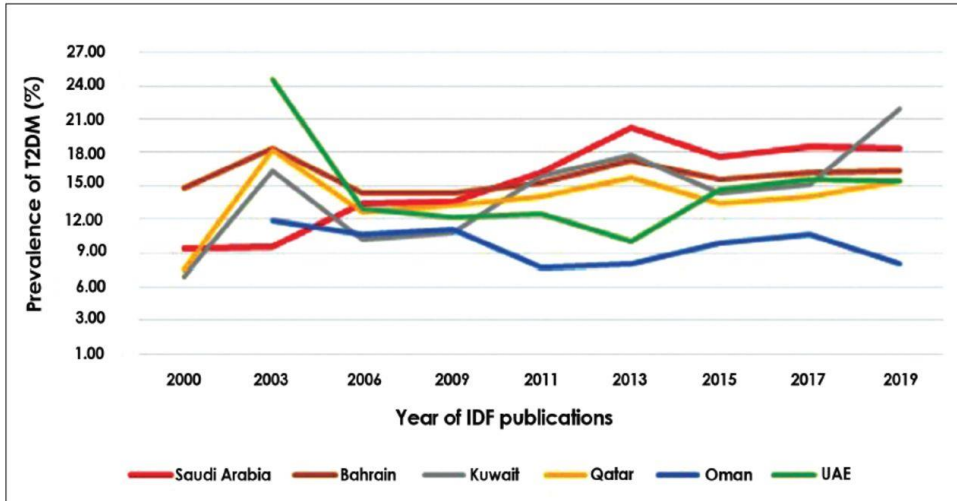
## Frequency of Diabetes<sup>(6)</sup>

The increase in the number of diabetic patients is due to eating unhealthy food based on white sugar and rich in fat, in addition to the lack of exercise and movement due to urbanization and a large number of cars and transportation.



6

## Frequency of Diabetes <sup>(6)</sup>

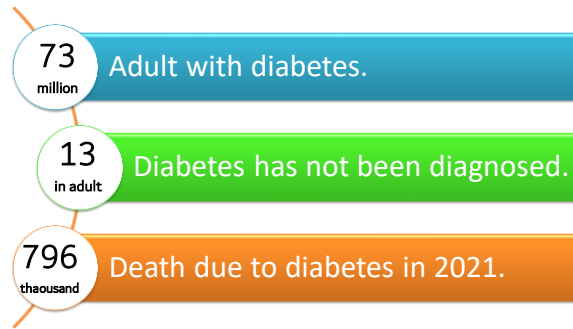


7

The study showed that men are more likely to develop diabetes than women because of an underlying biological feature in men, and the nature of fat distribution in the body of both sexes differs; Where male bodies tend to store fat in the liver and around the abdomen, which makes them more susceptible to diabetes, while women are distributed harmoniously in safe areas such as the thighs and chest and therefore are less likely unless the accumulation of fat increases in places that are not safe for them, and this means the consistent distribution of fat in Women's bodies say that having diabetes requires them to store more harmful fats in "unsafe" areas of the body.<sup>(7)</sup>

8

## Key global results for 2021<sup>(7)</sup>



9

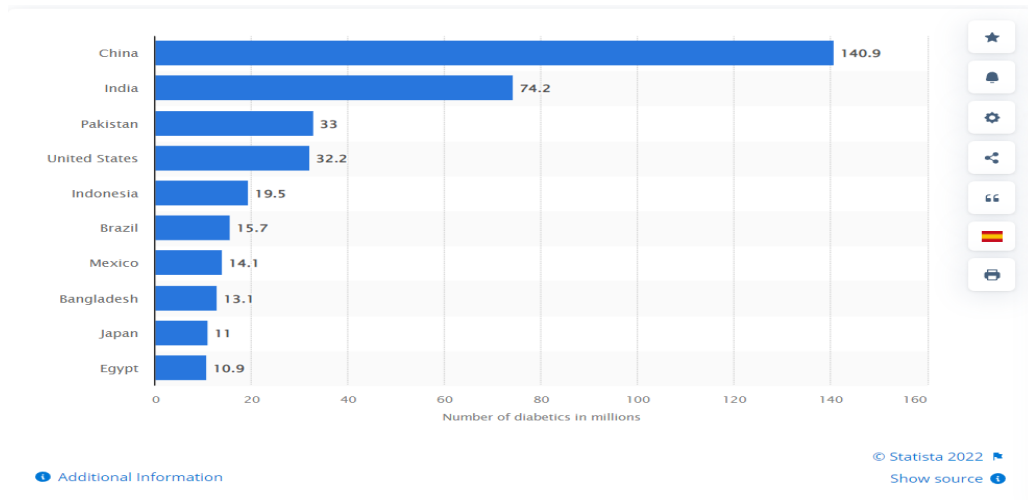
## Pattern of Diabetes<sup>(5)</sup>

China is the country with the highest number of diabetics worldwide, with around 141 million people suffering from the disease. By the year 2045, it is predicted that China will have around 174 million people with diabetes.



10

## Pattern of Diabetes <sup>(5)</sup>



11

## How and why the disease occurs <sup>(2)</sup>



Diabetes is a chronic disease that occurs when the pancreas cannot produce enough insulin, or when the body cannot use insulin effectively, it produces insulin, a hormone that controls the level of glucose in the blood.

12

## How and why the disease occurs <sup>(2)</sup>

Diabetes causes high blood sugar, also known as high blood glucose, is a common consequence of poor blood sugar control, and over time leads to severe damage to many of the body's systems, especially the nerves and blood vessels



13

## Risk Factors of Diabetes <sup>(3)</sup>



**Are overweight:** Excessive accumulation of fat in the body prevents the secretion of hormones that transport insulin to cells, which causes insulin resistance.

**Are 45 years or older:** Hormones play a major role in the development of an autoimmune condition in old age.

**Genetics :**The heredity of the endocrine disease may be a cause of diabetes, as the endocrine glands secrete many hormones that help regulate blood sugar.

14

## Risk Factors of Diabetes <sup>(3)</sup>



**Are physically active less than 3 times a week:** Because lack of physical activity does not improve blood sugar levels

**Hypertension:** High blood pressure and diabetes share the same risk factors, and they are closely related to whether a person develops both .

**Smoking:** Nicotine changes the way the body's cells respond to insulin; a condition known as insulin resistance. It also increases triglycerides linked to insulin resistance .

15



### The reason for the increase in the number of diabetics in Saudi Arabia: <sup>(3)</sup>

Eating unhealthy food based on white sugar and rich in fat.

Lack of exercise and movement due to urbanization and the large number of cars and means of transportation, which led to the lack of movement.

Bad habits like smoking.

16



## Prevention and control<sup>(2)</sup>



Lifestyle measures have been shown to be effective in preventing or delaying type 2 diabetes mellitus. To help prevent type 2 diabetes and its complications, people should:

Work to achieve and maintain a healthy weight:

Physical activity - at least 30 minutes of moderate and regular physical activity most days of the week. Weight control requires more physical activity:

eating a healthy diet while limiting sugary substances and saturated fats:

Avoid tobacco use, as smoking increases the risk of cardiovascular disease.

17

## References

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18