

# Understanding Diabetes: Causes, Symptoms, and Treatment

Cigdem Bozkir\*

Namık Kemal University, Turkey

## DESCRIPTION

Diabetes is a chronic condition that affects millions of people around the world. It occurs when the body is unable to properly regulate the amount of glucose (sugar) in the blood. This can be due to a variety of factors, including genetics, lifestyle choices, and other health conditions. In this article, we will explore the causes, symptoms, and treatment options for diabetes.

## Types of diabetes

There are three main types of diabetes: Type 1, Type 2, and gestational diabetes.

**Type 1 diabetes:** It is an autoimmune disease that occurs when the body's immune system attacks and destroys the cells in the pancreas that produce insulin. Insulin is a hormone that regulates blood sugar levels. Type 1 diabetes usually develops in childhood or early adulthood and requires lifelong insulin therapy [1].

**Type 2 diabetes:** It is the most common form of diabetes and occurs when the body is unable to properly use insulin or does not produce enough insulin to regulate blood sugar levels. Type 2 diabetes can be caused by a variety of factors, including genetics, obesity, and lifestyle choices such as poor diet and lack of exercise [2].

**Gestational diabetes:** It occurs during pregnancy and usually goes away after delivery. However, women who develop gestational diabetes are at an increased risk of developing Type 2 diabetes later in life [3].

## Causes of diabetes

The causes of diabetes can vary depending on the type of diabetes.

**Type 1 diabetes:** It is believed to be caused by a combination of genetic and environmental factors, although the exact cause is not yet fully understood.

**Type 2 diabetes:** It is often caused by a combination of genetic and lifestyle factors. Some of the factors that can increase the risk of developing Type 2 diabetes include being overweight or

obese, having a family history of diabetes, and leading a sedentary lifestyle.

**Gestational diabetes:** It is caused by hormonal changes that occur during pregnancy, which can make it difficult for the body to properly use insulin. Women who are overweight or obese, have a family history of diabetes, or have previously had gestational diabetes are at an increased risk of developing gestational diabetes during pregnancy [4].

## Symptoms of diabetes

The symptoms of diabetes can vary depending on the type of diabetes and the severity of the condition. Some common symptoms of diabetes include: [5]

- Increased thirst
- Frequent urination
- Fatigue
- Blurred vision
- Slow-healing cuts or bruises
- Tingling or numbness in the hands or feet
- Unexplained weight loss

In Type 1 diabetes, symptoms usually develop quickly and can be severe. In Type 2 diabetes, symptoms may develop slowly over time and may not be as noticeable.

Gestational diabetes often does not cause any symptoms, which is why it is important for pregnant women to be screened for the condition.

## Complications of diabetes

If left untreated, diabetes can lead to a range of health complications. High blood sugar levels can damage the blood vessels and nerves in the body, which can lead to: [6]

- Heart disease and stroke
- Kidney disease
- Eye disease and vision loss
- Nerve damage and numbness in the hands and feet
- Wound healing problems
- Dental problems
- Erectile dysfunction

**Correspondence to:** Cigdem Bozkir, Namık Kemal University, Turkey, E-mail: bozkircigdem@windowslive.com

**Received:** 04-Oct -2022, Manuscript No. LDAMR-22-23523; **Editor assigned:** 06-Oct -2022, PreQC No. LDAMR-22-23523 (PQ); **Reviewed:** 20-Oct-2022, QC No. LDAMR-22-23523; **Revised:** 27-Oct -2022, Manuscript No. LDAMR-22-23523 (R); **Published:** 03-Nov-2022, DOI: 10.12715/2564-8942.22.02.007

**Citation:** Bozkir C (2022) Understanding Diabetes: Causes, Symptoms, and Treatment. J Adv Med Res.02.007.

**Copyright:** © 2022 Bozkir C. This is an open - access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

## Diagnosis of diabetes

Diabetes is typically diagnosed through a blood test that measures the amount of glucose in the blood. The most common blood test used to diagnose diabetes is called the A1C test, which measures the average blood glucose levels over the past 2-3 months [7].

Other tests that may be used to diagnose diabetes include a fasting plasma glucose test, a random plasma glucose test, and an oral glucose tolerance test.

## Treatment of diabetes

The treatment of diabetes depends on the type of diabetes and the severity of the condition.

In Type 1 diabetes, treatment typically involves insulin therapy, which is administered through injections or an insulin pump. Some people with Type 1 diabetes may also need to monitor their blood sugar levels regularly and adjust their insulin doses accordingly [8].

In Type 2 diabetes, treatment may involve lifestyle changes such as weight loss, regular exercise, and a healthy diet. Some people with Type 2 diabetes may also need to take medication to help regulate their blood sugar levels.

For gestational diabetes, treatment may involve monitoring blood sugar levels regularly and making lifestyle changes such as a healthy diet and regular exercise.

## CONCLUSION

In conclusion, diabetes is a chronic condition that affects millions of people worldwide. It can lead to a range of complications if not managed properly, including heart disease, kidney damage, nerve damage, and blindness. However, with

proper treatment and management, people with diabetes can live long, healthy lives.

It is important for individuals to understand the causes, symptoms, and treatment options for diabetes, as well as to adopt healthy lifestyle habits that can help to manage the condition. This includes regular exercise, a healthy diet, and regular check-ups with a healthcare provider.

By taking a proactive approach to managing diabetes, individuals can reduce their risk of developing complications and improve their overall quality of life. With the right support and resources, individuals with diabetes can lead fulfilling and healthy lives, despite the challenges posed by this condition.

## REFERENCES

1. Honeycutt AA, Boyle JP, Broglio KR, et al. A dynamic Markov model for forecasting diabetes prevalence in the United States through 2050. *Health Care Management Science*. 2003;6:155-164.
2. Sterman J. *Systems Thinking and Modeling for a Complex World*. Business Dynamics. 2000.
3. Harris MI. Classification, diagnostic criteria, and screening for diabetes. *Diabetes in America*. 1995;2:15-36.
4. Fleishman A, Johnsen S, Systrom DM, et al. Effects of a nucleoside reverse transcriptase inhibitor, stavudine, on glucose disposal and mitochondrial function in muscle of healthy adults. *Am J Physiol Endocrinol Metab*. 2007;292:E1666-E1673.
5. Bouchard PH, Sai P, Reach G, Caubarrere I, Ganeval D, Assa R. Diabetes mellitus following pentamidine-induced hypoglycemia in humans. *Diabetes*. 1982;31(1):40-45.
6. Waskin H, Stehr-Green JK, Helmick CG, Sattler FR. Risk factors for hypoglycemia associated with pentamidine therapy for *Pneumocystis pneumonia*. *JAMA*. 1988;260(3):345-347.
7. Sands M, Kron MA, Borown RB. Pentamidine: A review. *Review of Infectious Diseases*. 1985;7(5):625-634.
8. Inzucchi S, Maggs D, Spollet G, Page S, Rife F, Walton V, et al. Efficacy and metabolic effects of metformin and troglitazone in type II diabetes mellitus. *N Engl J Med*. 1998;338(13):867-872.