

A Short Note on the Diabetes Mellitus and Types of Diabetes

Ciara Warfvinge*

Department of Digestive Diseases and Internal Medicine, Sant Orsola-Malpighi Hospital Bologna, Emilia-Romagna, Italy

DESCRIPTION

Diabetes mellitus, commonly referred to as diabetes, is a chronic metabolic disorder characterized by high levels of sugar (glucose) in the blood. The condition is caused by the body's inability to properly use or produce insulin, a hormone produced by the pancreas that regulates blood sugar levels. Without sufficient insulin, the body is unable to convert glucose from food into energy, resulting in an accumulation of glucose in the blood [1-3]. Diabetes is a significant public health issue globally, affecting millions of people. According to the International Diabetes Federation, there were approximately 463 million adults living with diabetes in 2019, and this number is expected to rise to 700 million by 2045. The condition can have severe consequences, including blindness, kidney disease, nerve damage, cardiovascular disease, and even death. Therefore, it is crucial to understand the causes, symptoms, and treatments of diabetes [4-6].

Types of diabetes

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

- Type 1 diabetes, also known as juvenile-onset diabetes or insulin-dependent diabetes, is an autoimmune disorder that occurs when the body's immune system attacks and destroys the insulin-producing cells in the pancreas. The body cannot produce insulin, and glucose levels in the blood rise to dangerous levels [7]. Type 1 diabetes is usually diagnosed in children and young adults and requires lifelong insulin therapy to manage blood sugar levels [8].
- Type 2 diabetes, also known as adult-onset diabetes or non-insulin-dependent diabetes, is a condition where the body becomes resistant to the effects of insulin or does not produce enough insulin to meet the body's needs. This type of diabetes is often associated with lifestyle factors, such as obesity, a sedentary lifestyle, and poor dietary choices [9]. Type 2 diabetes is the most common form of diabetes, accounting for about 90% of all cases, and is usually managed with lifestyle changes, medications, and sometimes insulin therapy.
- Gestational diabetes occurs during pregnancy when hormonal changes affect insulin sensitivity. The condition usually

resolves after giving birth, but women with gestational diabetes are at higher risk of developing type 2 diabetes later in life.

Causes of diabetes

The causes of diabetes are not fully understood, but several factors are known to increase the risk of developing the condition.

- Type 1 diabetes is believed to be caused by a combination of genetic and environmental factors. They identified several genes associated with an increased risk of Type 1 diabetes, but environmental factors, such as viral infections, may also play a role in triggering the disease [10].
- Type 2 diabetes is associated with lifestyle factors, such as being overweight or obese, physical inactivity, and an unhealthy diet. These factors can cause insulin resistance, which means the body's cells become less responsive to insulin, and glucose builds up in the blood. Genetics also play a role in type 2 diabetes, and having a family history of the condition increases the risk of developing it.
- Gestational diabetes is caused by hormonal changes that affect insulin sensitivity during pregnancy. Women who are overweight or obese before pregnancy, have a family history of diabetes, or have had gestational diabetes in a previous pregnancy are at higher risk of developing the condition.

Symptoms of diabetes

- Frequent urination
- Increased thirst
- Hunger
- Fatigue
- Blurred vision
- Slow healing of cuts or sores
- Weight loss (type 1 diabetes)
- Weight gain (type 2 diabetes)

CONCLUSION

The diabetes mellitus is a chronic metabolic disorder that affects millions of people worldwide. The two main types of diabetes are Type 1 and Type 2, with the latter being more common.

Correspondence to: Ciara Warfvinge, Department of Digestive Diseases and Internal Medicine, Sant Orsola-Malpighi Hospital Bologna, Emilia-Romagna, Italy, E-mail: Ciarawarv@uci.edu

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Diabetes can have a significant impact on a person's health, increasing the risk of cardiovascular disease, nerve damage, kidney failure, and blindness. However, with proper management, such as maintaining a healthy diet, regular exercise, and medication, individuals with diabetes can lead a healthy and fulfilling life. It is essential to detect diabetes early and to manage it effectively to prevent or minimize the risk of complications. Additionally, raising awareness and education about diabetes and its management is crucial in promoting healthy lifestyles and reducing the prevalence of diabetes worldwide.

REFERENCES

1. Reaven GM. Compensatory hyperinsulinemia and the development of an atherogenic lipoprotein profile: The price paid to maintain glucose homeostasis in insulin-resistant individuals. *Endocrinol Metab Clin North Am.* 2005;34(1):49-62.
2. Alberti KG, Zimmet P, Shaw J. The metabolic syndrome—a new worldwide definition. *Lancet.* 2005;366(9491):1059-1062.
3. Shulman GI. Cellular mechanisms of insulin resistance. *J Clin Invest.* 2000;106(2):171-176.
4. Tondt J, Yancy WS, Westman EC. Application of nutrient essentiality criteria to dietary carbohydrates. *Nutr Res Rev.* 2020;33(2):260-270.
5. Isbell JM, Tamboli RA, Hansen EN, Saliba J, Dunn JP, Phillips SE, et al. The importance of caloric restriction in the early improvements in insulin sensitivity after Roux-en-Y gastric bypass surgery. *Diabetes Care.* 2010;33(7):1438-1442.
6. Boren J, Chapman MJ, Krauss RM, Packard CJ, Bentzon JF, Binder CJ, et al. Low-density lipoproteins cause atherosclerotic cardiovascular disease: pathophysiological, genetic, and therapeutic insights: a consensus statement from the European Atherosclerosis Society Consensus Panel. *Eur Heart J.* 2020;41(24):2313-2330.
7. Petersen MC, Vatner DF, Shulman GI. Regulation of hepatic glucose metabolism in health and disease. *Nat Rev Endocrinol.* 2017;13(10):572-587.
8. Yancy Jr WS, Olsen MK, Guyton JR, Bakst RP, Westman EC. A low-carbohydrate, ketogenic diet versus a low-fat diet to treat obesity and hyperlipidemia: A randomized, controlled trial. *Ann Intern Med.* 2004;140(10):769-777.
9. Horton TJ, Drougas H, Brachey A, Reed GW, Peters JC, Hill JO. Fat and carbohydrate overfeeding in humans: different effects on energy storage. *Am J Clin Nutr.* 1995;62(1):19-29.
10. Mueckler M, Thorens B. The SLC2 (GLUT) family of membrane transporters. *Mol Aspects Med.* 2013;34(2-3):121-138.