

A Brief Note on Diabetes Mellitus

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Diabetes mellitus, sometimes known as diabetes, is a collection of metabolic illnesses defined by a persistently high blood sugar level. Frequent urination, increased thirst, and increased appetite are common symptoms. Diabetes, if left untreated, can lead to a slew of health issues. Diabetic ketoacidosis, hyperosmolar hyperglycaemia, and mortality are examples of acute complications. Cardiovascular disease, stroke, chronic renal disease, foot ulcers, nerve damage, eye damage, and cognitive impairment are all serious long-term consequences.

Description

Diabetes is caused by either a lack of insulin production by the pancreas or a lack of insulin response by the body's cells. Insulin is a hormone that aids in the transport of glucose from food into cells for use as energy. Diabetes mellitus is divided into three types: Type 1 diabetes is caused by the loss of beta cells in the pancreas, which prevents the pancreas from producing adequate insulin. Previously, this condition was known as "insulin-dependent diabetes mellitus" or "juvenile diabetes." An autoimmune reaction causes the death of beta cells. This autoimmune response's cause is unknown. Type 1 diabetes most commonly manifests in childhood or adolescence, however it can also manifest in adulthood [1].

Insulin resistance, a disease in which cells do not respond appropriately to insulin, is the starting point for type 2 diabetes. A shortage of insulin may occur as the condition advances. Previously, this condition was known as "non-insulin-dependent diabetes mellitus" or "adult-onset diabetes." While type 2 diabetes is more common in older persons, an increase in the incidence of obesity among youngsters has resulted in an increase in type 2 diabetes diagnoses among adolescents. A combination of excessive body weight and insufficient exercise is the most typical cause.

Gestational diabetes is the third most common kind of diabetes, and it develops when pregnant women who have never had diabetes develop high blood sugar levels. Blood sugar levels in women with gestational diabetes normally return to normal shortly after birth. If you've experienced gestational diabetes, though, you're more likely to develop type 2 diabetes [2].

Insulin injections are required to manage type 1 diabetes. Type 2 diabetes can be prevented and treated by eating a healthy diet, exercising regularly, maintaining a healthy weight, and not smoking. Type 2 diabetes can be managed with or without insulin and oral anti diabetic medicines. It is critical for patients with the condition to keep their blood pressure under control and to maintain good foot and eye care. Low blood sugar can be caused by insulin and some oral medicines. In those with type 2 diabetes, weight loss surgery is occasionally a successful treatment option. Gestational diabetes normally goes away after the baby is born.

Diabetes affected an estimated 463 million individuals globally in 2019, with type 2 diabetes accounting for about 90% of cases. Women and males have similar rates. Rates are expected to grow further in the future, based on current trends. Diabetes more than doubles a person's risk of dying young. Diabetes claimed the lives of approximately 4.2 million people in 2019. It is the world's seventh leading cause of death.

In 2017, the global economic cost of diabetes-related medical expenses was predicted to be US\$727 billion. Diabetes cost over \$327 billion in the United States in 2017. Diabetes patients spend 2.3 times more on medical care than non-diabetics [3].

Unintended weight loss, polyuria, polydipsia and polyphagia are all common indications of untreated diabetes. In type 1 diabetes, symptoms may appear quickly, whereas in type 2 diabetes, symptoms normally appear considerably more slowly and may be faint or absent. Although not specific to diabetes, a number of other signs and symptoms can indicate the disease's beginning. They include blurred vision, headaches, lethargy, poor wound healing, and itchy skin, in addition to the usual symptoms listed above. High blood glucose levels for an extended period of time can promote glucose absorption in the lens of the eye, leading in changes in its shape and visual alterations. Diabetic retinopathy can potentially cause long-term vision loss. Diabetic dermadromes refer to a group of skin rashes that can emerge as a result of diabetes [4].

Low blood sugar caused by treatment is prevalent in persons with type 1 and type 2 diabetes, depending on the medicine they're taking. The majority of cases are minor and do not qualify as medical emergencies. In mild cases, symptoms include discomfort, sweating, shaking, and increased appetite; in more severe cases, symptoms include confusion, changes in behaviour such as aggressiveness, convulsions, unconsciousness, and, in rare circumstances, permanent brain damage or death. Rapid breathing, sweating, and chilly, pale skin are all symptoms of low blood sugar, but they aren't always present. Self-treatment for mild to moderate cases involves eating or drinking something high in quickly absorbed carbs. Severe cases can result in unconsciousness, which requires intravenous glucose or glucagon infusions [5].

Acknowledgement

None

Conflict of Interest

None

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Received: 03-May-2022, Manuscript No. JDCE-22-62627; Editor assigned: 06-May-2022, PreQC No. JDCE-22-62627 (PQ); Reviewed: 20-May-2022, QC No. JDCE-22-62627; Revised: 23-May-2022, Manuscript No. JDCE-22-62627 (R); Published: 30-May-2022, DOI: 10.4172/jdce.1000153

Citation: Lui L (2022) A Brief Note on Diabetes Mellitus. *J Diabetes Clin Prac* 5: 153.

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