

# Short Notes on Type 2 Diabetes

Lisa Andrew\*

Department of Molecular Biology, University of Helsinki, Finland

## Description

Type 2 diabetes is characterized by a malfunction in the way the body regulates and utilises sugar (glucose) as a fuel. This long-term (chronic) condition causes an excess of sugar to circulate in the bloodstream. High blood sugar levels can eventually cause circulatory, nervous, and immune system problems. There are primarily two interrelated problems at work in type 2 diabetes. Your pancreas does not produce enough insulin, a hormone that regulates the movement of sugar into your cells, and your cells respond poorly to insulin, allowing you to consume less sugar.

Type 2 diabetes was previously referred to as adult-onset diabetes, but both type 1 and type 2 diabetes can begin in childhood or adulthood. Type 2 diabetes is more common in older adults, but an increase in the number of obese children has led to an increase in type 2 diabetes in younger people. Type 2 diabetes [1-3] has no cure, but losing weight, eating well, and exercising can help you manage the disease. If diet and exercise aren't enough to keep your blood sugar under control, you may need diabetes medication or insulin therapy. The signs and symptoms of type 2 diabetes often appear gradually. In fact, you could be living with type 2 diabetes for years without realising it. Increased thirst, frequent urination, and increased hunger are some of the signs and symptoms that may be present. Type 2 diabetes is caused primarily by two interconnected problems: cells in muscle, fat, and the liver become insulin resistant. These cells do not take in enough sugar because they do not interact normally with insulin. The pancreas is unable to produce enough insulin to keep blood sugar levels under control. It's unclear why this happens, but being overweight and inactive are major contributors.

Insulin is a hormone produced by a gland located behind and beneath the stomach (pancreas). Insulin controls how the body utilises sugar in the following ways, the pancreas secretes insulin in response to sugar in the bloodstream. Insulin circulates in your bloodstream, allowing sugar into your cells [4,5] The amount of sugar in your blood decreases. As a result of this decrease, the pancreas produces less insulin. Glucose, a sugar, is a primary source of energy for muscle and other tissue cells. The following are examples of how glucose is used and regulated. Glucose is obtained primarily from two sources: food and your liver.

Glucose enters the bloodstream and enters cells with the help of insulin. Your liver both stores and produces glucose. When your glucose levels are

low, such as when you haven't eaten in a while, the liver converts stored glycogen into glucose in order to keep your glucose levels within a normal range. This process does not work well in type 2 diabetes. Instead of entering your cells, sugar accumulates in your bloodstream. As blood sugar levels rise, the pancreas' insulin-producing beta cells produce more insulin. These cells eventually become impaired and are unable to produce enough insulin to meet the body's demands. In type 1 diabetes, the immune system destroys beta cells by mistake, leaving the body with little to no insulin.

Many major organs are affected by type 2 diabetes, including your heart, blood vessels, nerves, eyes, and kidneys. Furthermore, risk factors for diabetes are risk factors for other serious chronic diseases. Diabetes management and blood sugar control can reduce your risk of these complications or coexisting conditions. Diabetes complications and common comorbidities include heart and blood vessel disease. Diabetes is linked to an increased risk of heart disease, stroke, high blood pressure, and blood vessel narrowing (atherosclerosis).

## Conflict of Interest

None.

## References

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**How to cite this article:** Andrew, Lisa. "Short Notes on Type 2 Diabetes." *J Metabolic Synd* 11 (2022): 263.

\*Address for Correspondence: Lisa Andrew, Department of Molecular Biology, University of Helsinki, Finland, E-mail: LisaAndrew99@gmail.com

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**Received** 02-Feb-2022, Manuscript No. jms-22-58880; **Editor assigned:** 04-Feb-2022, PreQC No. P-58880; **Reviewed:** 16-Feb-2022, QC No. Q-58880; **Revised:** 21-Feb-2022, Manuscript No. R-58880; **Published:** 28-Feb-2022, DOI:10.37421/jms.2022.11.263.