

# Unmasking the silent threat: How diabetes causes heart diseases

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## Introduction

Diabetes mellitus, a chronic metabolic disorder characterized by elevated blood sugar levels, has become a global health concern of epidemic proportions. Beyond the immediate challenges posed by diabetes, there is a deeper and often silent threat lurking in the shadows: an increased risk of heart diseases. In this article, we will explore the intricate relationship between diabetes and heart diseases, the underlying mechanisms, risk factors, and strategies to mitigate this deadly connection. Cardiovascular diseases, which include heart disease and stroke, are the leading causes of death among individuals with diabetes. The risk of CVD is approximately two to four times higher in people with diabetes compared to those without the condition.

## Description

Type 2 diabetes, the most common form of diabetes, is often associated with insulin resistance, where the body's cells do not respond effectively to insulin. This insulin resistance plays a central role in the development of both diabetes and heart diseases. High blood sugar levels can damage the inner lining of blood vessels (endothelium), leading to the accumulation of fatty deposits and inflammation. This process, known as atherosclerosis, narrows and hardens the arteries, increasing the risk of heart attacks and strokes. Diabetes is often accompanied by hypertension (high blood pressure), which further strains the heart and increases the risk of heart diseases. Diabetes can lead to unfavorable changes in blood lipid profiles, characterized by elevated triglycerides and low levels of high-density lipoprotein cholesterol. These lipid abnormalities contribute to the development of atherosclerosis. Chronic inflammation is a common feature of both diabetes and heart diseases. Inflammation within the arterial walls can accelerate atherosclerosis. Diabetes can enhance platelet aggregation and increase the risk of blood clots, which may

lead to heart attacks or strokes.

Numerous risk factors contribute to the development of both diabetes and heart diseases: Excess body weight, especially around the abdomen, is a common risk factor for both conditions. Obesity is often linked to insulin resistance, hypertension, and dyslipidemia. A sedentary lifestyle can worsen insulin resistance, promote weight gain, and increase the risk of heart diseases. Diets high in sugar, saturated and trans fats, and low in fiber can contribute to both diabetes and heart diseases. Family history plays a significant role in the risk of both conditions, suggesting a genetic predisposition. Managing blood glucose levels within target ranges is essential to reduce the risk of heart diseases in individuals with diabetes. This includes medication, insulin therapy, dietary modifications, and regular monitoring.

Hypertension should be treated and controlled to prevent complications. Lifestyle changes, such as dietary modifications and physical activity, are crucial, as are prescribed medications when necessary. Addressing unfavorable lipid profiles with dietary changes, exercise, and medication can reduce the risk of atherosclerosis.

## Conclusion

Maintaining a healthy weight, engaging in regular physical activity, adopting a heart-healthy diet, and quitting smoking are essential for both diabetes management and heart disease prevention. Diabetes is not solely a condition characterized by elevated blood sugar levels; it is also a significant risk factor for heart diseases. Understanding the intricate connection between diabetes and heart diseases is essential for healthcare professionals and individuals with diabetes. By diligently managing blood glucose levels, addressing risk factors, and adopting a heart-healthy lifestyle, it is possible to mitigate the impact of diabetes on heart health and reduce the risk of devastating cardiovascular complications.

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Received: 01 August 2023, Manuscript No. ajdm-23-115955;

Editor assigned: 03 August 2023, Pre QC No ajdm-23-

115955 (PQ); Reviewed: 17 August 2023, QC No ajdm-23-

115955; Revised: 22 August 2023, Manuscript No. ajdm-

23-115955 (R); Published: 29 August 2023, DOI: 10.54931/

AJDM-31.4.8.