

The Hidden Dangers of Visceral Obesity: Unveiling the Silent Killer

Priyanka Sharma*

Department of Biotechnology, Kalinga Institute of Industrial Technology, India

Abstract

Millions of people around the world are affected by obesity, which is now a global epidemic. While the physical and psychological consequences of excess weight are well-documented, a lesser-known and more dangerous form of obesity lurks beneath the surface-visceral obesity. Unlike subcutaneous fat, which accumulates just beneath the skin, visceral fat surrounds vital organs in the abdominal cavity. This article aims to shed light on the hidden dangers of visceral obesity and emphasize the importance of addressing this silent killer.

Keywords: Visceral Obesity; Cardiovascular disease; Type 2 diabetes; Hypertension

Introduction

The greater part of the excess non-visceral fat is found just underneath the skin in a district called the hypodermis. This subcutaneous fat isn't connected with a significant number of the exemplary weight related pathologies, like coronary illness, malignant growth, and stroke, and some proof even proposes it very well may be defensive. The typically female (or gynecoid) pattern of body fat distribution around the hips, thighs, and buttocks is less harmful to health than visceral fat [1].

Subcutaneous fat, like all other fat organs, is active in the endocrine system because it makes the hormones leptin and resistin. Regression equations are commonly used to model the relationship between a person's total body fat and the subcutaneous adipose layer. These equations were rigorously tested on a variety of skinfolds, and two formulas were developed to calculate a person's body density for both men and women. These conditions present a converse relationship among's skinfolds and body thickness as the amount of skinfolds builds, the body thickness diminishes [2].

Literature Review

Understanding visceral obesity

Visceral fat, which is also known as intra-abdominal fat, is fat that is stored deep within the abdominal cavity around important organs like the liver, pancreas, and intestines. Unlike subcutaneous fat, which is relatively harmless and lies just beneath the skin, visceral fat is metabolically active and releases a range of harmful substances, including cytokines, hormones, and fatty acids. These substances contribute to chronic inflammation and interfere with the body's normal functioning, increasing the risk of various health conditions [3].

The health implications

1. Increased risk of cardiovascular disease: Visceral obesity has been strongly linked to cardiovascular disease, including heart attacks, stroke, and hypertension. The release of inflammatory substances from visceral fat can lead to the development of atherosclerosis, a condition characterized by the buildup of plaque in the arteries, ultimately restricting blood flow to the heart [4].

2. Insulin resistance and Type 2 diabetes: Visceral fat plays a significant role in the development of insulin resistance, a condition in which cells become less responsive to insulin. This leads to elevated blood sugar levels, increasing the risk of developing type 2 diabetes. Research shows that individuals with excess visceral fat are more likely

to develop insulin resistance and subsequently diabetes.

3. Metabolic syndrome: Visceral obesity is often a key component of metabolic syndrome, a cluster of conditions that include high blood pressure, high blood sugar, abnormal cholesterol levels, and excess abdominal fat. The presence of these conditions significantly increases the risk of cardiovascular disease, type 2 diabetes, and stroke.

4. Certain cancers: Studies have shown that visceral obesity is associated with an increased risk of several types of cancer, including breast, colorectal, and pancreatic cancer. The inflammatory substances released by visceral fat can promote the growth and spread of cancer cells, further emphasizing the importance of addressing this form of obesity.

Addressing visceral obesity

1. Regular exercise: Engaging in regular physical activity is essential for reducing visceral fat. Combining aerobic exercises, such as jogging or swimming, with strength training can help burn calories, build muscle mass, and promote overall weight loss.

2. Balanced diet: Adopting a healthy eating plan that focuses on whole grains, lean proteins, fruits, vegetables, and healthy fats can contribute to weight loss and reduce visceral fat accumulation. Avoiding sugary beverages, processed foods, and excessive alcohol consumption is crucial in preventing further fat deposition [5,6].

3. Stress management: Chronic stress can contribute to the accumulation of visceral fat. Engaging in stress-reducing activities such as meditation, yoga, or engaging in hobbies can help manage stress levels and reduce the risk of visceral obesity.

4. Regular health check-ups: Routine health check-ups, including body mass index (BMI) measurements, waist circumference assessments, and blood tests, can help identify the presence of visceral obesity and associated health risks. Early detection allows for timely intervention and the development of personalized treatment plans [7,8].

*Corresponding author: Priyanka Sharma, Department of Biotechnology, Kalinga Institute of Industrial Technology, India, E-mail: priya_sh@gmail.com

Received: 03-May-2023, Manuscript No. JOWT-23-99447; **Editor assigned:** 05-May-2023, PreQC No. JOWT-23- 99447 (PQ); **Reviewed:** 19-May-2023, QC No. JOWT-23-99447; **Revised:** 23-May-2023, Manuscript No. JOWT-23-99447 (R); **Published:** 30-May-2023, DOI: 10.4172/2165-7904.1000569

Citation: Sharma P (2023) The Hidden Dangers of Visceral Obesity: Unveiling the Silent Killer. J Obes Weight Loss Ther 13: 569.

Copyright: © 2023 Sharma P. 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.

5. Caloric deficit: Creating a caloric deficit through a combination of healthy eating and regular exercise is crucial for reducing visceral fat. Focus on consuming nutrient-dense foods and reducing overall calorie intake.

6. Regular exercise: Engage in a combination of cardiovascular exercises (such as running, cycling, or swimming) and strength training to burn calories, build muscle, and reduce visceral fat.

7. Healthy eating: Emphasize a balanced diet that includes whole grains, lean proteins, fruits, vegetables, and healthy fats.

8. Stress management: Incorporate stress-reducing techniques such as meditation, yoga, deep breathing exercises, or engaging in hobbies to manage stress levels. Chronic stress can contribute to visceral fat accumulation.

9. Sufficient sleep: Aim for seven to eight hours of quality sleep.

Discussion

Causes of visceral obesity

Poor diet: Consuming a diet high in processed foods, added sugars, unhealthy fats, and low in fiber can contribute to the development of visceral obesity. These dietary choices can lead to weight gain and an increase in visceral fat deposition [9].

Sedentary lifestyle: Lack of physical activity and a sedentary lifestyle can contribute to the accumulation of visceral fat. Engaging in regular exercise helps burn calories, reduce overall body fat, and minimize visceral fat storage.

Genetics: Some individuals may be genetically predisposed to store excess fat in the abdominal area, leading to a higher risk of visceral obesity. Genetic factors can influence hormone levels, metabolism, and fat distribution.

Hormonal changes: Hormonal imbalances, such as elevated cortisol levels (stress hormone) or reduced levels of growth hormone, can contribute to visceral fat accumulation. These imbalances can result from chronic stress, inadequate sleep, or certain medical conditions.

Health risks associated with visceral obesity

Cardiovascular disease: Visceral fat releases chemicals that promote inflammation and disrupt the balance of lipids in the blood. These factors contribute to the development of atherosclerosis, increasing the risk of heart attacks, stroke, and other cardiovascular conditions [10].

Insulin resistance and Type 2 diabetes: Visceral obesity is strongly associated with insulin resistance, a condition where cells become less responsive to insulin, leading to high blood sugar levels.

Metabolic syndrome: Visceral obesity is a key component of metabolic syndrome, which comprises a cluster of conditions, including high blood pressure, high blood sugar, abnormal cholesterol levels, and excess abdominal fat. This syndrome significantly raises the risk of developing cardiovascular disease, type 2 diabetes and stroke.

Non-alcoholic fatty liver disease (NAFLD): Visceral obesity is closely linked to NAFLD, a condition characterized by the accumulation of fat in the liver. NAFLD can progress to more severe conditions, such as liver inflammation (non-alcoholic steatohepatitis) and cirrhosis [11].

Respiratory problems: Excess visceral fat can impede lung

function and increase the risk of respiratory problems, including sleep apnea and shortness of breath.

Certain cancers: Visceral obesity has been associated with an increased risk of various cancers, including breast, colorectal, pancreatic, and liver cancer. The mechanisms underlying this link are still being researched, but chronic inflammation and hormonal changes are believed to play a role [12-14].

Conclusion

Visceral obesity poses a significant threat to our health, silently increasing the risk of numerous chronic conditions. Awareness about the hidden dangers of visceral fat is crucial for individuals to take proactive measures towards weight management, healthy lifestyle choices and regular medical check-ups by addressing visceral obesity. It is also referred to as central obesity or abdominal obesity is characterized by the accumulation of fat in the abdominal cavity particularly around the organs. It is often associated with an "apple-shaped" body where the majority of fat is carried around the waistline.

Acknowledgement

None

Conflict of Interest

None

References

- Després JP, Lemieux I, Bergeron J (2008) Abdominal obesity and the metabolic syndrome: contribution to global cardiometabolic risk. *Arterioscler Thromb Vasc Biol* 28: 1039-1049.
- Fox CS, Massaro JM, Hoffmann U, Pou KM, Maurovich-Horvat P, et al. (2007) Abdominal visceral and subcutaneous adipose tissue compartments: association with metabolic risk factors in the Framingham Heart Study. *Circulation* 116: 39-48.
- Ibrahim MM (2010) Subcutaneous and visceral adipose tissue: structural and functional differences. *Obesity Reviews* 11: 11-18.
- Kuk JL, Ardern CI (2008) Influence of age on the association between various measures of obesity and all-cause mortality. *J Am Geriatr Soc* 56: 87-92.
- Mathieu P, Pibarot P, Després JP (2009) Metabolic syndrome: the danger signal in atherosclerosis. *Vasc Health Risk Manag* 2: 285-302.
- Neeland IJ, Turer AT, Ayers CR, Powell-Wiley TM, Vega GL, et al. (2013) Dysfunctional adiposity and the risk of prediabetes and type 2 diabetes in obese adults. *Jama* 308: 1150-1159.
- Pou KM, Massaro JM, Hoffmann U, Vasan RS, Maurovich-Horvat P, et al. (2007) Visceral and subcutaneous adipose tissue volumes are cross-sectionally related to markers of inflammation and oxidative stress: the Framingham Heart Study. *Circulation* 116: 1234-1241.
- Samuel VT, Shulman GI (2018) The pathogenesis of insulin resistance: integrating signaling pathways and substrate flux. *J Clin Invest* 128: 425-436.
- Tankó LB, Bagge YZ, Alexandersen P, Christiansen C (2003) Peripheral adiposity exhibits an independent dominant antiatherogenic effect in elderly women. *Circulation* 107: 1626-1631.
- Tchernof A, Després JP (2013) Pathophysiology of human visceral obesity: an update. *Physiological Reviews* 93: 359-404.
- Wajchenberg BL (2000) Subcutaneous and visceral adipose tissue: their relation to the metabolic syndrome. *Endocr Rev* 21: 697-738.
- Albarracín D, Wang W, Leeper J (2009) Immediate increase in food intake following exercise messages. *Obesity (Silver Spring)* 17: 1451-1452.
- Weisberg SP, McCann D, Desai M, Rosenbaum M, Leibel RL, et al. (2003) Obesity is associated with macrophage accumulation in adipose tissue. *J Clin Invest* 112: 1796-1808.
- Zhang C, Rexrode KM, van Dam RM, Li TY, Hu FB (2008) Abdominal obesity and the risk of all-cause, cardiovascular, and cancer mortality: sixteen years of follow-up in US women. *Circulation* 117: 1658-1667.