

Body composition and cardiovascular disease risk in postmenopausal women.

Antonino Smith*

National Research Council, Institute for Microelectronics and Microsystems (IMM-CNR), Catania, Italy

Introduction

Cardiovascular disease (CVD) remains a leading cause of mortality worldwide, and its prevalence increases with age. Postmenopausal women, in particular, are at a heightened risk of developing CVD due to various physiological changes that occur during this stage of life. One critical factor that plays a pivotal role in determining CVD risk in postmenopausal women is body composition. In this article, we will explore the intricate relationship between body composition and cardiovascular disease risk in postmenopausal women and the significance of understanding and managing this connection [1].

Before delving into the relationship between body composition and CVD risk, it's essential to understand the menopausal transition. Menopause typically occurs around the age of 50, marking the end of a woman's reproductive years. During this time, the ovaries stop producing oestrogen, leading to various physiological changes. These changes can have a profound impact on a woman's body composition and, subsequently, her CVD risk.

Body composition refers to the proportion of fat, muscle, and other tissues that make up a person's body. Traditionally, this has been assessed using metrics such as body mass index (BMI), which is a simple ratio of weight to height. However, body composition is far more complex than a single number. It encompasses various components, including visceral fat, subcutaneous fat, lean muscle mass, and bone density. The distribution of these components can vary significantly between individuals and can play a vital role in CVD risk. One of the most crucial aspects of body composition related to CVD risk in postmenopausal women is visceral fat. This type of fat accumulates deep within the abdominal cavity, surrounding vital organs such as the heart and liver. Visceral fat is metabolically active and can produce inflammatory substances that contribute to the development of atherosclerosis, a key driver of CVD [2].

Postmenopausal women are more prone to an increase in visceral fat due to hormonal changes. Estrogen, which declines during menopause, plays a protective role against visceral fat accumulation. As estrogen levels drop, fat tends to accumulate in the abdominal area, contributing to obesity and an increased risk of CVD.

While visceral fat is a significant concern, it's important to note that not all fat is created equal. Subcutaneous fat, which is stored just beneath the skin, is less metabolically active than visceral fat and has a weaker association with CVD risk. In fact, some studies suggest that postmenopausal women with higher subcutaneous fat may have a more favourable CVD risk profile than those with a higher proportion of visceral fat [3].

Body composition isn't just about fat; it also includes lean muscle mass and bone density. Maintaining a healthy level of lean muscle mass is vital for overall health, as it helps regulate metabolism and supports physical function. Additionally, strong bones are crucial to prevent fractures and osteoporosis, which can indirectly impact CVD risk by limiting physical activity. The decline in lean muscle mass and bone density is common in postmenopausal women. This change can lead to reduced physical activity, muscle weakness, and an increased risk of falls and fractures, all of which can affect cardiovascular health [4].

Lifestyle factors, such as diet and physical activity, play a significant role in shaping body composition and, subsequently, CVD risk in postmenopausal women. High-calorie diets and sedentary lifestyles can lead to weight gain and the accumulation of visceral fat. In contrast, a balanced diet and regular physical activity can help maintain healthy body composition and reduce CVD risk. Dietary choices are especially critical. A diet rich in fruits, vegetables, whole grains, and lean proteins can help manage weight and reduce inflammation, which is a common feature of CVD. Additionally, postmenopausal women should pay attention to their calcium and vitamin D intake to support bone health.

Physical activity is equally important. Regular exercise can help preserve lean muscle mass, maintain healthy bone density, and promote overall cardiovascular health. Aerobic exercise, strength training, and flexibility exercises can all contribute to a balanced body composition and reduced CVD risk. Hormone replacement therapy (HRT) is a medical intervention that can mitigate some of the adverse effects of menopause on body composition and CVD risk. HRT involves replacing the declining oestrogen levels with synthetic hormones. While HRT has been shown to have some positive effects on body composition and CVD risk, it's not without risks. The decision to use HRT should be made on an individual basis, considering

*Corresponding Author: Antonino Smith, National Research Council, Institute for Microelectronics and Microsystems (IMM-CNR), Catania, Italy. Email: smitha43@imm.cnr.it

Received: 12-Aug-2023, Manuscript No. AAJPHN-23-117931; Editor assigned: 15-Aug-2023, PreQC No. AAJPHN-23-117931 (PQ); Reviewed: 28-Aug-2023, QC No. AAJPHN-23-117931; Revised: 30-Aug-2023, Manuscript No. AAJPHN-23-117931 (R); Published: 06-Sep-2023, DOI:10.35841/aaajphn-6.5.166

a woman's medical history and the potential benefits and risks.

Postmenopausal women should be vigilant about monitoring their health, including their body composition and CVD risk factors. Regular check-ups with healthcare providers can help assess risk factors like blood pressure, cholesterol levels, and blood sugar. Furthermore, body composition can be assessed through techniques like Dual-energy X-ray Absorptiometry (DXA) scanning, which provides a more comprehensive view of fat and lean tissue distribution [5].

Conclusion

In conclusion, the relationship between body composition and cardiovascular disease risk in postmenopausal women is complex and multifaceted. Changes in fat distribution, lean muscle mass, and bone density can influence CVD risk, and lifestyle choices play a crucial role in managing these factors. By maintaining a balanced diet, engaging in regular physical activity, and considering hormone replacement therapy when appropriate, postmenopausal women can take proactive steps to mitigate their cardiovascular disease risk. Moreover, regular health monitoring is essential to catch and address any emerging risk factors. Understanding and managing

body composition can be a vital part of safeguarding the cardiovascular health of postmenopausal women.

References

1. Castelli W. Cholesterol and lipids in the risk of coronary artery disease—the Framingham Heart Study. *Can J Cardiol.* 1988;4:5A-10A.
2. Celermajer DS, Chow CK, Marijon E, et al. Cardiovascular disease in the developing world: Prevalences, patterns, and the potential of early disease detection. *J Am Coll Cardiol.* 2012;60(14):1207-16.
3. Crawford SL, Johannes CB. The epidemiology of cardiovascular disease in postmenopausal women. *J Clin Endocrinol Metab.* 1999;84(6):1803-12.
4. Papadopoulou SA, Kaski JC. Ischaemic heart disease in the ageing woman. *Best Pract Res Clin Obstet Gynaecol.* 2013;27(5):689-97.
5. Mendelsohn ME, Karas RH. The protective effects of oestrogen on the cardiovascular system. *N Engl J Med.* 1999;340(23):1801-11.