Gender differences in cardiovascular disease

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Cardiovascular disease (CVD) are a major global health challenge, ranking as one of the leading causes of mortality worldwide. They encompass a broad spectrum of disorders affecting the heart and blood vessels, including coronary artery disease, stroke, heart failure, and peripheral artery disease. While both men and women are at risk of developing CVD, notable sex-related differences exist in terms of prevalence, symptom presentation, outcomes, and responses to treatment. Although women tend to have a lower incidence of acute cardiovascular events compared to men, their prognosis following such events is often worse, with a higher fatality rate and increased likelihood of long-term complications.

These sex-related differences are evident across a range of cardiovascular diseases, including aortic diseases, heart failure, stroke, and coronary heart disease. For example, women are more likely to experience non-traditional symptoms of heart attacks, such as nausea, shortness of breath, and fatigue, which can lead to delays in diagnosis and treatment. Additionally, women are more prone to developing certain types of heart failure and may experience worse outcomes after a stroke compared to men. Hormonal factors, genetic predispositions, and differences in risk factor profiles, such as cholesterol levels, blood pressure, and body composition, contribute to these disparities.

The recognition of these sex differences is essential for the effective management, diagnosis, therapy, and prevention of CVD. Tailoring cardiovascular care to account for these variations can improve outcomes for both men and women. For instance, preventive strategies such as lifestyle modifications, medication, and early interventions may need to be adjusted based on sex-specific risk profiles. Likewise, diagnostic tools and treatment protocols should be refined to better capture the unique manifestations of CVD in women, thereby reducing the risk of misdiagnosis and undertreatment.[1]

This paper aims to provide a comprehensive overview of sex-related variations in several prevalent cardiovascular diseases and to explore the potential mechanisms underlying these disparities. By understanding the biological, hormonal, and social factors that contribute to the differences in cardiovascular outcomes between men and women, we can improve risk assessment and develop more personalized approaches to care. Moreover, future research should focus on identifying and integrating sex-specific markers, such as hormonal levels or genetic factors, into current cardiovascular risk assessment models. This will ensure that both sexes receive the most accurate and effective care, ultimately reducing the burden of cardiovascular disease on a global scale.

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LITERATURE

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