



# High-Normal Blood Pressure and Risk of Cardiovascular Disease in Women

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## Abstract

Despite being the primary cause of death for women globally, cardiovascular disease (CVD) is nevertheless underdiagnosed and undertreated. According to recent research, high-normal blood pressure (120–139/80–89 mmHg), which was previously thought to be non-pathological, dramatically raises the risk of cardiovascular events in women. This review looks at the relationship between high blood pressure and cardiovascular risk in women and is based on original research evidence, especially large cohort studies. Results show that women with high-normal blood pressure had a higher risk of developing hypertension and suffering from poor cardiovascular outcomes. To lower the burden of disease and enhance women's cardiovascular health, early detection, ongoing monitoring, and lifestyle changes are crucial tactics.

## Introduction

### Background

Cardiovascular disease is acknowledged as the primary cause of death for women and is a significant worldwide health issue [4]. Despite its high incidence, women's CVD diagnosis and awareness are frequently insufficient. One of the most significant modifiable risk factors affecting cardiovascular health is blood pressure. Heart function and vascular integrity can be negatively impacted over time by even small increases in blood pressure. Research has indicated that women are especially susceptible because of physiological and hormonal abnormalities.

### Blood Pressure Categories

Normal, high-normal, and hypertensive blood pressure are particularly common categories. A stage in between normal and hypertension occurs as high-normal blood pressure, which is characterized as systolic levels between 120 and 139 mmHg and diastolic values between 80 and 89 mmHg. AHA Recent research has shown that people in this category are more likely to acquire cardiovascular problems than people with appropriate blood pressure levels, despite the fact that they were previously thought to be innocuous

### Evidence from Original Research

The Women's Health Study, conducted by [1]. Robust evidence from the Women's Health Study, large prospective cohort research involving over 39,000 women, indicated that high-normal blood pressure considerably elevates the risk of cardiovascular incidents. The study observed a gradual increase in cardiovascular risk corresponding to rising blood pressure levels. Women classified with high-normal blood pressure were also more prone to developing hypertension over time, which in turn heightened their vulnerability to heart disease. These results clearly demonstrate that high-normal blood pressure serves as an independent and significant predictor of cardiovascular outcomes in women

### Pathophysiology

The connection between high-normal blood pressure and cardiovascular disease can be understood through various biological processes. Increased blood pressure causes endothelial dysfunction by harming the inner layer of blood vessels and decreasing nitric oxide availability, which hinders vasodilation [2, 4]. Moreover, heightened arterial stiffness diminishes vascular flexibility, resulting in an increased cardiac workload. Persistent inflammation and oxidative stress exacerbate vascular harm and atherosclerosis. In females, hormonal fluctuations, especially the reduction of estrogen following menopause, diminish cardiovascular safeguarding and heighten susceptibility to hypertension-related issues

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### Risk Factors in Women

Women with high-normal blood pressure frequently exhibit other cardiovascular risk factors that heighten their susceptibility to disease. These comprise obesity, diabetes, dyslipidemia, lack of physical activity, and mental stress [3, 4]. Additionally, pregnancy-related issues like gestational hypertension and preeclampsia greatly increase long-term cardiovascular risk in women. These factors come together to produce a cumulative effect, heightening the chances of negative cardiovascular results

### Clinical Importance

Elevated-normal blood pressure should not be regarded as a harmless issue [1, 3]. Rather, it ought to be considered a preliminary indicator of heart disease. Timely detection and action are vital to avert the advancement to hypertension. Healthcare professionals ought to focus on regular screenings, educating patients, and promoting lifestyle changes to lower cardiovascular risk in women. Preventive measures at this point can greatly enhance long-term health results

### Conclusion

High-normal blood pressure is a significant and often overlooked risk factor for cardiovascular disease in women. Evidence from

original research studies demonstrates that even modest elevations in blood pressure can increase the risk of future hypertension and cardiovascular events. Early diagnosis, preventive strategies, and lifestyle modifications are essential to reduce disease burden. Increased awareness among healthcare professionals and women themselves is crucial for improving cardiovascular health outcomes.

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