

Week 6 RUA:

Pathophysiological Processes Paper –  
Hypertension



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Pathophysiology

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## Introduction

Blood pressure is the blood pushing against your arterial walls. Two figures define blood pressure: the first number is the systolic pressure, which gauges the artery pressure per minute during heartbeats. Secondary pressure, then, is diastolic pressure that gauges the pressure of your arteries during cardiac relaxation between beats CDC, 2021. If your blood pressure is 120/80 mmHg, it is said to be normal; any results above that range are labeled as either high blood pressure or hypertension. Two stages of hypertension exist: 80–89 mmHg, the diastolic pressure, or the lower value; and 130–139 mmHg, the systolic blood pressure, or the higher value.

Anything above those numbers is categorized as stage two hypertension and is a crucial stage that has to be addressed; for instance, a value of 140/90 mmHg is classified as the estimated proportions of adults living with hypertension falling between one of three, of which one-third remains undiagnosed, with some people who have their condition unmonitored (Harrison, et al., 2021). African Americans are the most among the groups prescribed medication.

## Etiology and Risk Factors

Although the specific cause of hypertension is unknown, some medical disorders and poor living choices can, over time, lead to illness. Renal diseases, adrenal diseases, thyroid diseases, and, more crucially, obstructive sleep apnea (OSA) are linked to secondary hypertension (Harrison, et al., 2021). Men are more affected by hypertension and have a more severe kind than women; so, hypertension increases with age; subsequently, the incidence in women increases after middle age or menopause. Apart from age, alcohol intake, lack of exercise, heredity, excess salt intake, obesity, drugs, and reduced reaction level, all these factors raise the risk for hypertension (Harrison, et al., 2021).

High blood pressure has complicated causes ranging from hereditary to environmental to societal elements. Ninety to ninety-five percent of those with primary hypertension cannot identify their exact etiology. Still, genes and lifestyle decisions could have some influence. The last 5–10% of instances are secondary hypertension, brought on by other medical conditions such as kidney disease, endocrine difficulties, or specific medication use (Swisher, et al., 2023). High blood pressure has controllable as well as nonchangeable risk factors. The risk increases with a family history of high blood pressure, primarily due to genetics. Age is another quite crucial element. As arteries get stiffer and vascular resistance rises, the probability rises as well. Men and women differ as well. Men are more likely to have high blood pressure prior to age 55; women who have gone through menopause are more likely to have it beyond menopause. The risk is substantially raised by lifestyle choices that include eating too much salt, being overweight, not being active, and consuming too much alcohol. Environmental factors, such as stress levels and socioeconomic status, also contribute to high blood pressure. High blood