

# Hypertension

What is a normal blood pressure?

**A normal blood pressure reading is considered 120/80 – if blood pressure reaches 130/90 or higher, then it is considered hypertension.**

## Common signs and symptoms

Hypertension can often be asymptomatic. However, if symptoms do occur, they can present as:

- Headache
- Fatigue
- Vision problems
- Chest pain
- Difficulty breathing
- Pounding in the chest, neck or ears
- Nosebleeds

## What is hypertension?

Hypertension is commonly referred to as high blood pressure. Blood pressure is the result of two forces – the first force (systolic pressure) occurs as the heart pumps blood into the arteries. The second force (diastolic pressure) created by the heart resting between beats. Blood pressure is calculated as two numbers: the systolic pressure over the diastolic pressure.

## Causes of hypertension

The cause of hypertension is not always known, in which case, a doctor will diagnose primary hypertension. However, hypertension can also be caused by other medical conditions, such as kidney disease and obesity. A high fat diet, drinking a lot of alcohol and smoking tobacco can also increase the risk of hypertension. There are also rare tumours that cause hypertension.

## What happens during a hypertensive crisis?

A hypertensive crisis occurs when blood pressure spikes, which can cause organ damage. There are two types of hypertensive crises – a hypertensive urgency, where the blood pressure reaches 180/110 or higher, or a hypertensive emergency, where blood pressure is so high that organ damage can occur, and blood pressure must be reduced immediately.

## What are the risks of hypertension to my health?

Hypertension increases the workload of the heart and blood vessels, forcing them to work harder and less efficiently. Over time, high blood pressure damages the tissue inside the arteries, allowing cholesterol to form plaque along the tiny tears inside the artery walls. Over time, the more plaque and damage increases, the narrower the arteries become, further increasing blood pressure. This can further harm your heart as well as leading to other conditions like arrhythmia, heart attack, stroke and kidney failure.

### How is hypertension treated?

Doctors will often recommend lifestyle changes, like eating a diet with less salt, getting regular physical activity, maintaining a healthy weight/losing weight and limiting alcohol and tobacco intake. They may also recommend reducing stress using relaxation techniques. Antihypertensive medications may be used in conjunction with lifestyle adjustments. There are several different types of antihypertensive medications, including diuretics, beta-blockers and vasodilators. The choice of medication depends on the individual and any pre-existing medical conditions.

### How does hypertension lead to heart failure?

Hypertension can lead to heart failure as it adds to the heart's workload, which can lead to the heart thickening and becoming larger to cope with the high pressures. The larger the heart becomes, the harder it needs to work to meet the body's demands for oxygen and nutrients.

### How does hypertension lead to stroke?

Hypertension damages arteries throughout the body, which creates conditions where the arteries can burst or clog more easily. A stroke occurs when a blood vessel to the brain is either blocked by a clot (ischemic stroke) or bursts (hemorrhagic stroke). When that happens, part of the brain is no longer receiving the blood and oxygen it needs, so it starts to die. This can affect cognitive function or paralysed limbs.



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