

Blood Pressure Guideline



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BLOOD PRESSURE GUIDELINE

WHAT IS BLOOD PRESSURE?

As blood circulates through the body, it exerts pressure on the walls of the arteries. Blood pressure is measured as a ratio: Systolic/Diastolic.

Systolic pressure is caused by the heart as it pushes blood out into the arteries. Diastolic pressure is the pressure inside the arteries when the heart relaxes. A normal blood pressure is around 120/80 (i.e. Systolic = 120, Diastolic = 80).

Your body maintains normal blood pressure by adjusting itself as needed.

- The heart will speed up and contract more frequently to increase blood pressure, or slow down when it needs to decrease pressure.
- Veins can expand to decrease blood pressure, and narrow to increase pressure.
- Arterioles expand to create less resistance to blood flow (lower blood pressure), and narrow to increase resistance (raise blood pressure).

Many factors interfere with – and overwhelm – the body's mechanisms for controlling blood pressure, and when blood pressure becomes too low or too high, severe health risks set in that may cause permanent organ damage or death.



HYPOTENSION (LOW BLOOD PRESSURE)

Low blood pressure can lead to vital organs such as the brain, heart, kidney and organs not functioning normally due to not receiving enough oxygen.

Low blood pressure can occur due to a number of reasons such as blood loss, dehydration, reduced heart output and certain medications.

Symptoms of low blood pressure

- A person with low blood pressure will likely experience light-headedness, dizziness, and can possibly faint.
- Insufficient blood pressure in the coronary arteries may cause severe chest pain or a heart attack.
- Insufficient blood-flow through the kidneys may cause build-up of waste inside the blood.

Controlling low blood pressure

Living a healthy lifestyle greatly reduces a person's risk of developing problems related to blood pressure control.

- Include more fruit, vegetables, whole grains and low-fat dairy foods. Increase potassium intake and eat less saturated fats.
- Decrease salt intake to 1.5mg a day.
- Maintain healthy weight through regular physical activity and a healthy diet.
- Limit alcohol intake.
- Don't smoke.
- Practise healthy methods of coping with stress such as exercise, deep breathing techniques and getting enough sleep.
- Have your blood pressure checked regularly.

HYPERTENSION (HIGH BLOOD PRESSURE)

Tension, anxiety and stress can cause the body to raise blood pressure temporarily, which is normal. But when blood pressure remains high over a long period of time, vital organs can be damaged and death can occur.

A blood pressure reading between 120/80 and 139/89 is called pre-hypertension. A reading of 140/90 or above is considered high.

A person with high blood pressure has a risk of developing heart disease, kidney disease, hardening of the arteries, eye damage, brain damage or a stroke.

High blood pressure is either essential or secondary. Secondary hypertension accounts for about 5% of hypertension cases, and is the result of an organ or bodily system that is not functioning properly.

Essential hypertension is diagnosed in 95% of hypertension cases and is caused by many different factors such as:

- **Age** – risk of high blood pressure increases with age.
- **Ethnicity** – Black people are more at risk of developing high blood pressure at an earlier age than Caucasian people.
- **Family history** – high blood pressure is hereditary.
- **Obesity** and hypertension are health risk factors which act in conjunction.
- **Smoking** – smoking raises blood pressure temporarily, and in the long term, chemicals contained in a cigarette damage the artery walls and cause them to narrow, thereby increasing blood pressure.
- **High salt (sodium) intake** – excessive salt intake (5.8g salt or more per day) causes the body to retain fluid.
- **Potassium deficiency** – potassium balances the sodium content in the cells.
- **Vitamin D deficiency** – Vitamin D plays a role in kidney function, which controls urine production and plays a role in the amount of water present in blood.
- **Excessive alcohol consumption** – heavy drinking damages the heart over time. It also raises blood pressure temporarily by causing the body to release hormones that increase blood flow and heart rate.
- **Stress** – high stress levels lead to temporary but dramatic blood pressure increases. This is aggravated if a person tries to cope with stress by eating, smoking or drinking.
- **Chronic conditions** – high cholesterol, diabetes, kidney disease and sleep apnoea increase a person's risk of developing high blood pressure.

Symptoms of high blood pressure

A person with high blood pressure may not show any symptoms at all, or may only experience symptoms after organ damage has already occurred.

When symptoms set in, a person will usually experience any of the following:

- Headache, dizziness, nausea, blurred vision and shortness of breath.
- More severely, a person may have a heart attack, stroke, kidney failure or impaired vision.



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