



Blood pressure is the force or pressure of the blood against the walls of the blood vessels.

- Arterial blood pressure is a measure of the pressure exerted by the blood as it flows through the arteries. It is the result of the ejection of blood from the left ventricle into the aorta.

Blood pressure is affected by various factors including

- Age: The pressure rises with age, reaching a peak at the onset of puberty, and then tends to decline.
- Exercise: Physical activity increases the cardiac output and hence the blood pressure.
- Stress: Stimulation of the sympathetic nervous system increases cardiac output and vasoconstriction of the arterioles, thus increasing the blood pressure.
- Race: African Americans tend to have higher blood pressures than European Americans. The exact reasons are unclear

Arterial blood pressure is measured with a sphygmomanometer.

- Blood pressure is recorded as a fraction:

systolic pressure over the diastolic pressure and expressed in millimeters of mercury (mm Hg).

- A typical blood pressure for a healthy adult is 120/80 mmHg.

How to measure blood pressure?

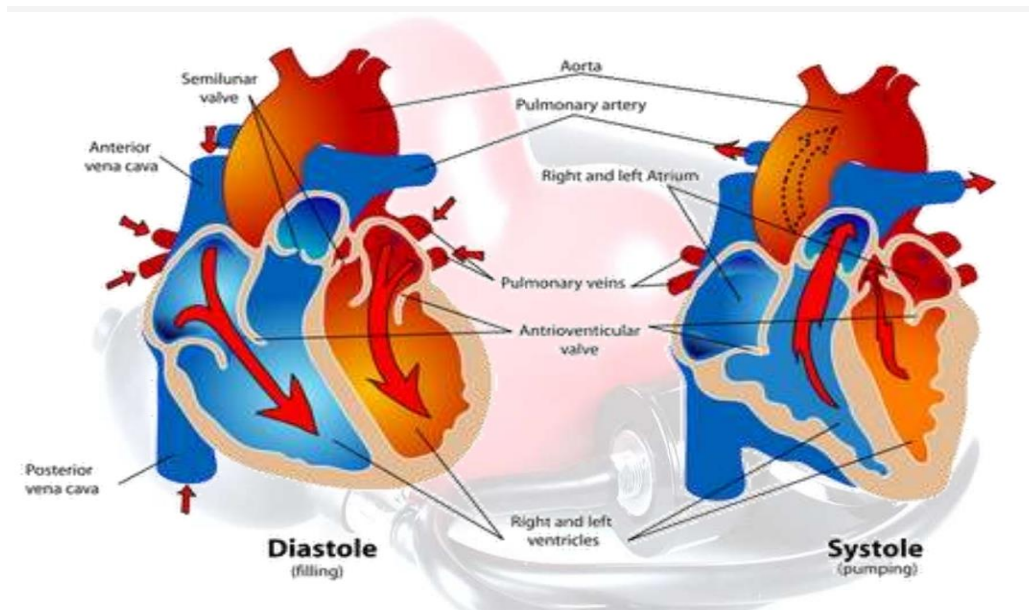
-Arterial pressure is most commonly measured via a sphygmomanometer, which historically used the height of a column of mercury to reflect the circulating pressure. Blood pressure values are generally reported in millimeters of mercury (mm Hg)



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- Measured by wrapping an inflatable pressure cuff around patient's upper arm. This cuff is part of a machine called a sphygmomanometer. It is best to measure blood pressure when you are relaxed and sitting





Regulation of blood pressure

1. Regulation by cardio vascular center
2. Neural regulation
3. Hormonal regulation
4. Auto regulation



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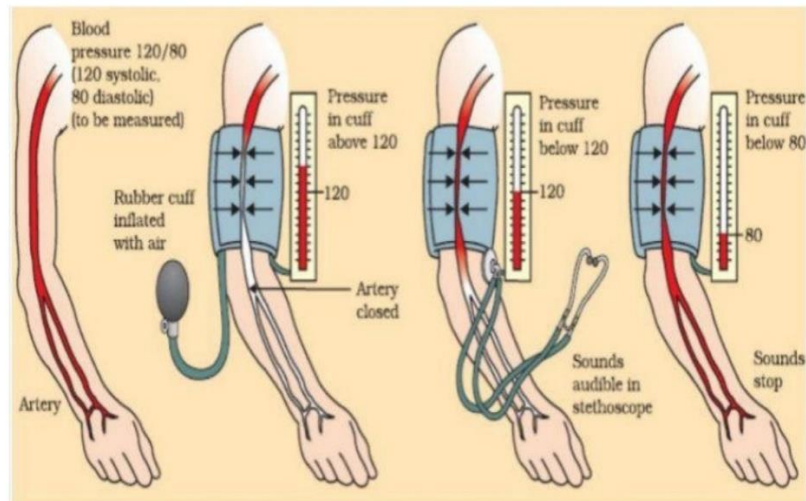
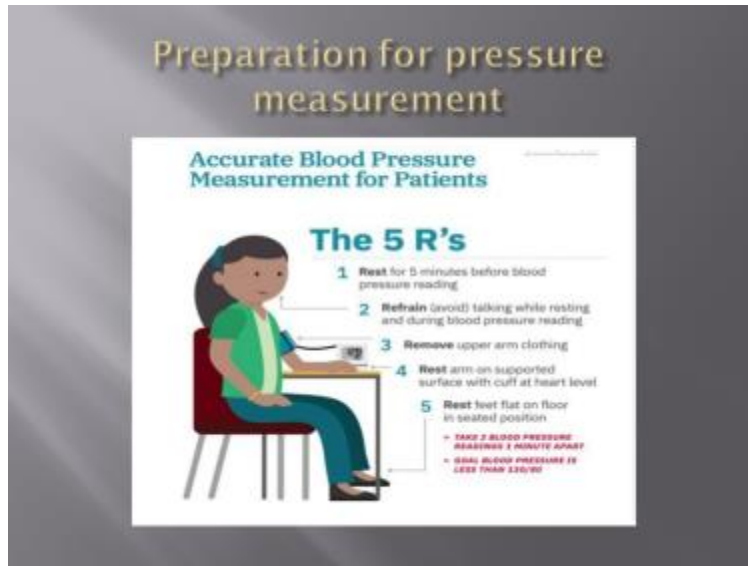
Methods of blood measurement

- Auscultatory method
- Palpatory method
- Oscillometry method
- Invasive method
- Noninvasive method
- Continuous noninvasive techniques (CNAP)

Preparation for pressure measurement



Steps of blood pressure measurement





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