

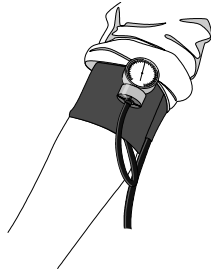
Blood Pressure

The fourth vital sign

Some definitions

The measure of the force of blood against the arterial walls

- Expressed in a improper fraction
- Numerator equals systolic or first sound you will hear.
- Denominator is the diastolic or change or last sound you hear.
- Systolic is when the ventricles contract or the greatest pressure.
- Diastolic is when the ventricles relax or lowest pressure.



Blood pressure depends on the



- Volume of blood.
- Force of the heartbeat
- Arteries that have lost their elasticity, give more resistance.
 - Would the blood pressure be lower or higher in these arteries?
- Distance from the heart.
- Would blood pressure in the legs be lower or higher?

Blood Pressure is elevated by:



- Sex and age of patient
- Exercise, eating, emotions
- Stimulants
- Obesity, age
- Arteriosclerosis
- Elevated cholesterol
- Diabetes
- Heredity factors
- Pain
- Some drugs

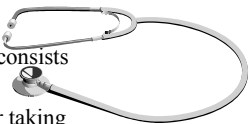
Blood Pressure is Lowered by

- Fasting
- Rest
- Depressants
- Weight loss
- Emotions (grief)
- Loss of blood or shock
- Diuretics

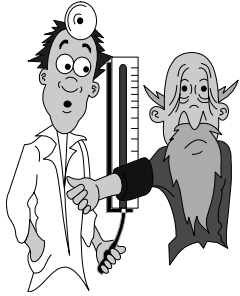


Equipment

- Sphygmomanometer- the blood pressure measuring apparatus.
- Use the proper width cuff
- Width should be approx. 80% of arm
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- Stethoscope- magnifies sounds, consists of bell and diaphragm.
- Use the bell (smaller portion) for taking a blood pressure.

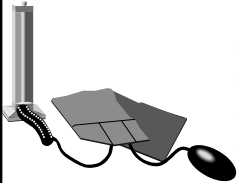


Measuring the blood pressure
upper arm over brachial artery



- Readings taken anywhere else requires Dr's order.
- Cuff applied smoothly over brachial artery (1 inch above the antecubital area)
- Place bell over brachial artery.
- Where is the brachial artery?
- Inflate the rubber bladder in the cuff to stop the flow of blood.
- Release pressure slowly and listen for sounds of heart valves closing.

Some more info.



- Pulse pressure- the difference between systolic and diastolic pressure. Approx. 40 millimeters of mercury.
- Systolic normal range 90-140mm
- Diastolic normal range 60-90mm
- Hypertension- elevated BP
- Hypotension- low BP
- Do not take BP on arm that has an IV, paralyzed, injured, A-V shunt, or edema (swelling).
