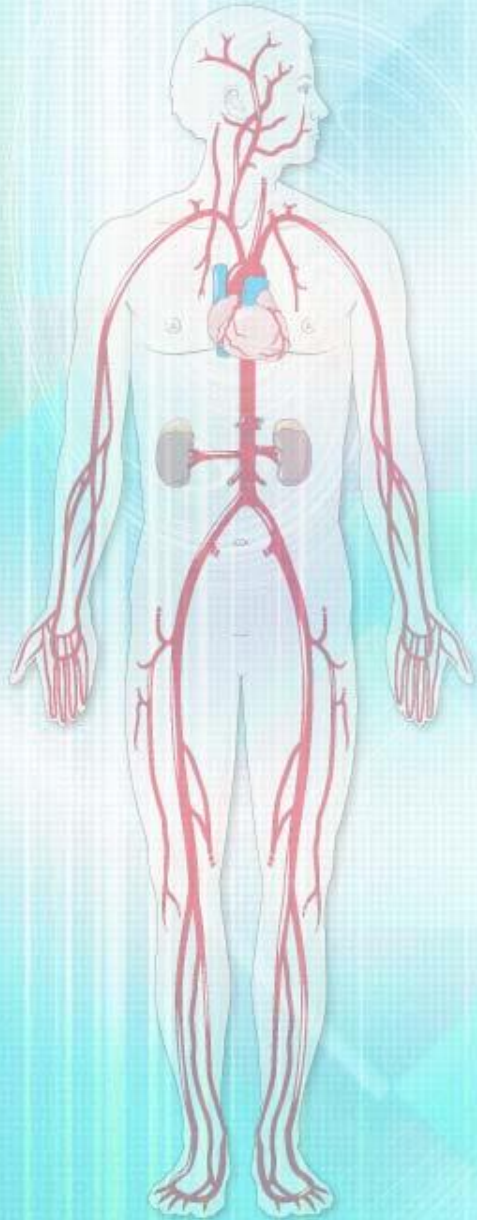


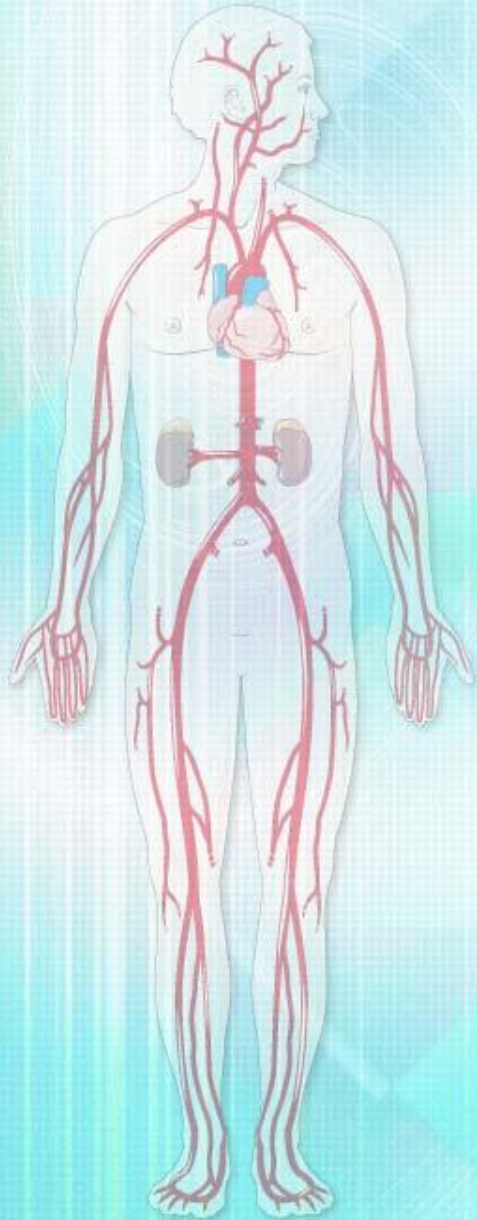
Today's Agenda: 10/08/14



1. Students will grade Infection Control Test.
2. Students will highlight State Standard 10 Technical skills:
 1. Apply procedures for measuring and recording vital signs including recognition of normal ranges.
3. **TO: Students will understand what is blood pressure and what its reading tells us.**
4. Students will practice listening for systolic and diastolic sounds as a class.

U2 EQ: How are vital signs measured and what do their results mean?

Vital Signs, VS

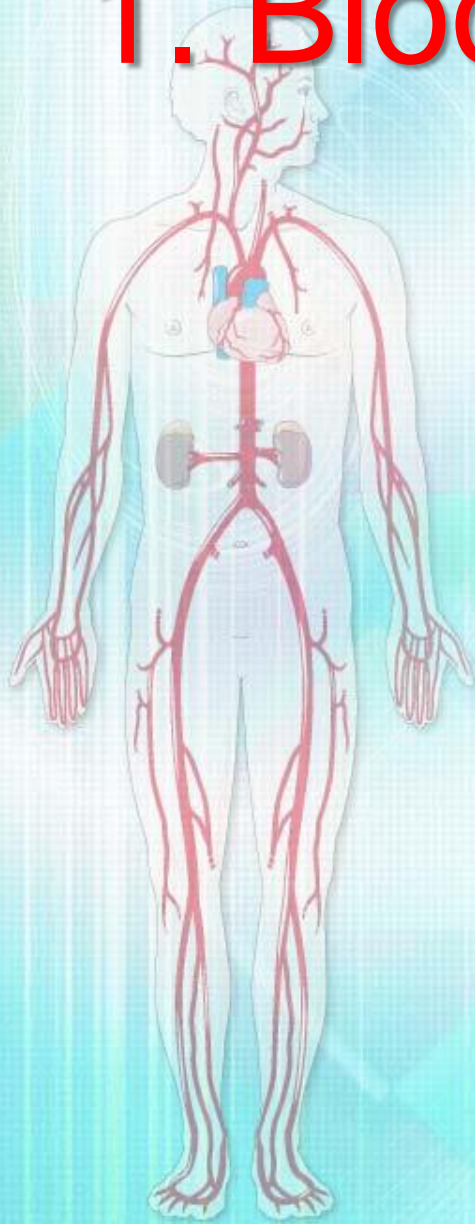


Def: Information about the basic body conditions of pts

There are five:

1. Blood Pressure
2. Pulse
3. Respiration
4. Temperature
5. Degree of Pain

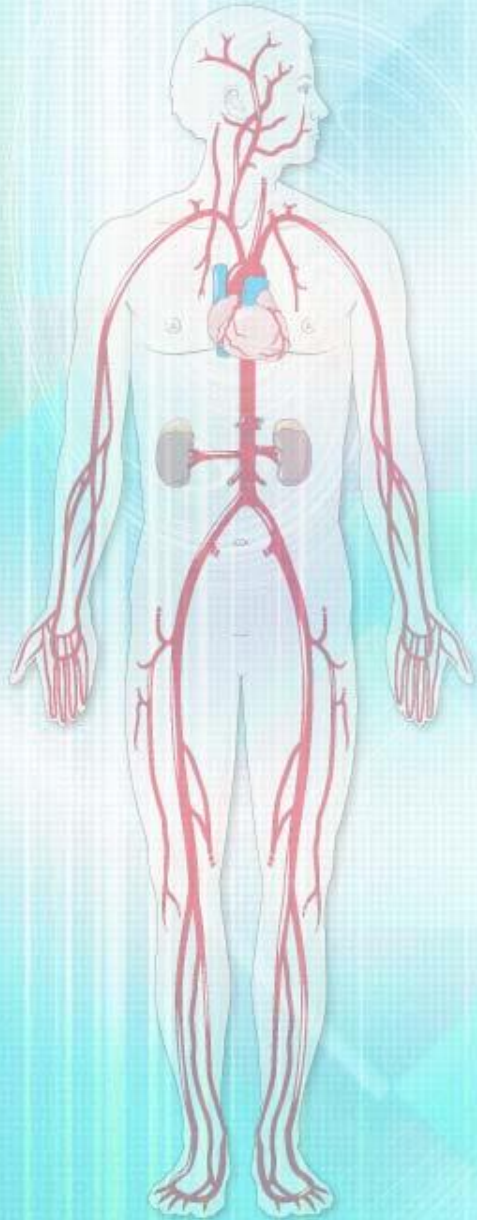
1. Blood Pressure, BP



Def: F exerted by the bld against the arterial walls when the heart contracts & relaxes.

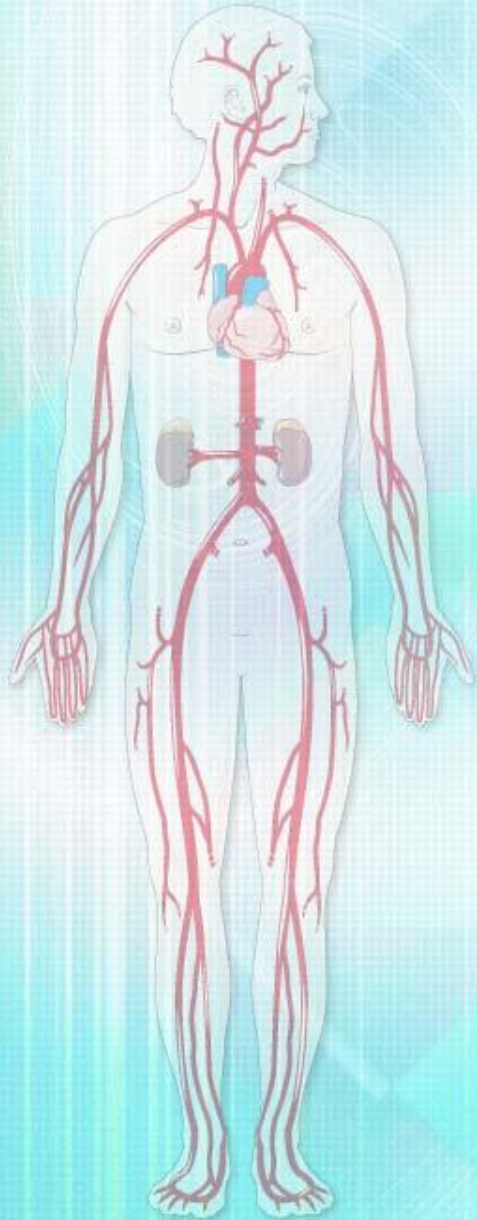
- **Sphygmomanometer** = BP Cuff that measures B/P

Systolic Pressure

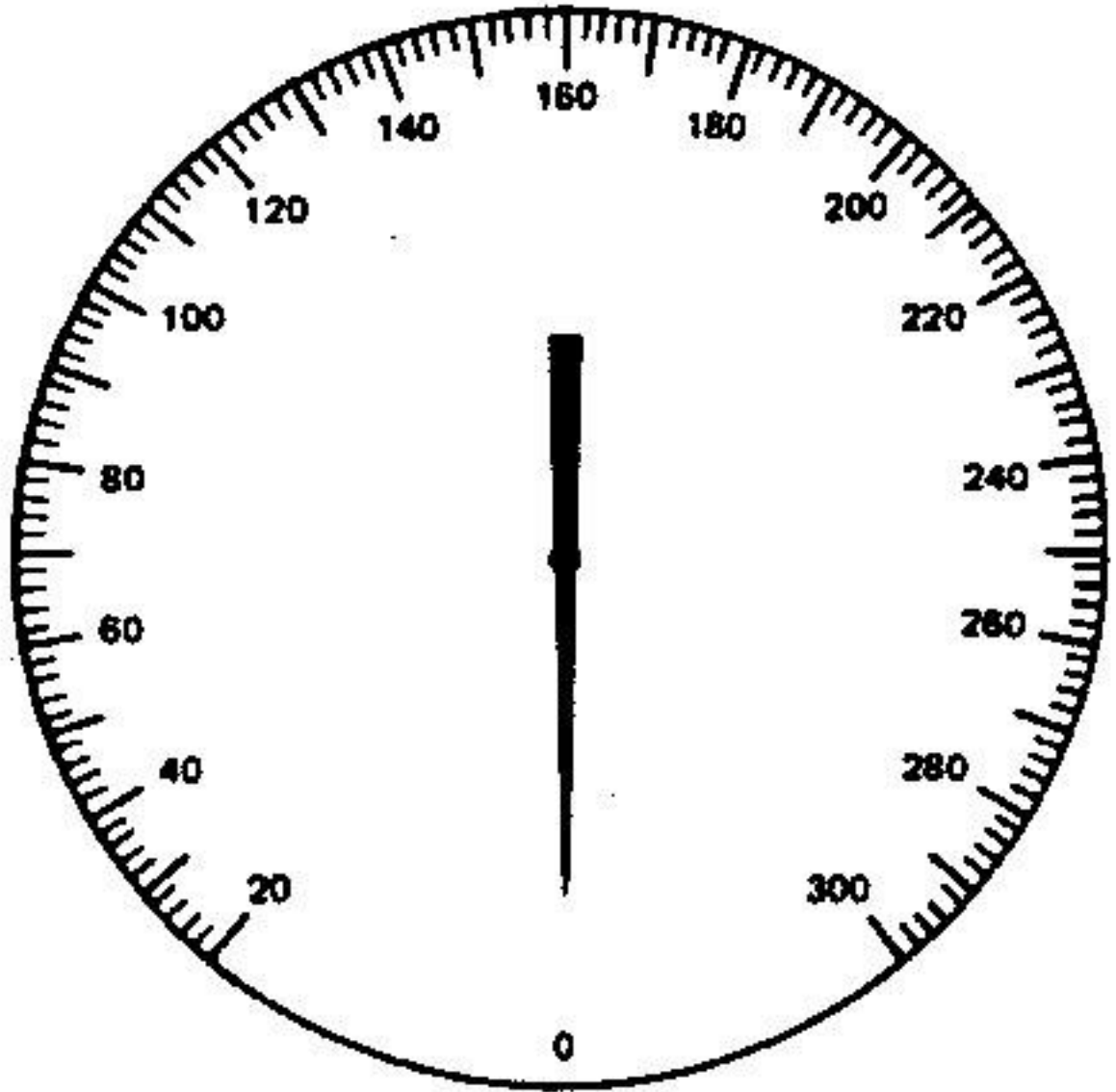
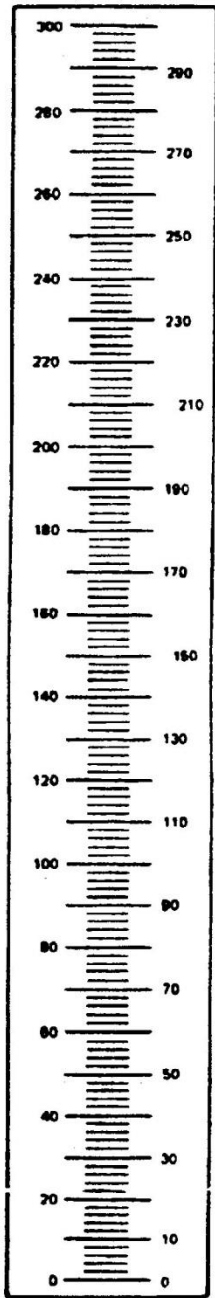


- **P that occurs** in the walls of arteries when the heart is **CONTRACTING & pushing bld** into the arteries.
- **Noted** on the sphygmomanometer when the **first sound** is heard.
- **120 mmHg** is what we want
- **Normal = 100 to 140**

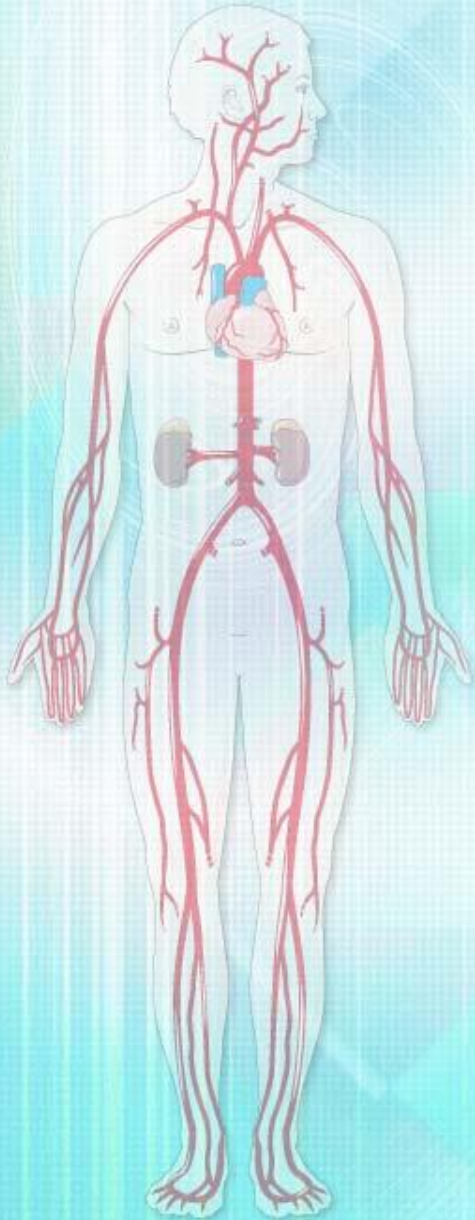
Diastolic Pressure



- **P** that is in the walls of the arteries when the heart is **at REST** or **b/w contractions**.
- Noted on the sphygmomanometer when the **sounds stops or becomes faint**.
- **80 mmHg** is what we want
- **Normal = 60 to 90 mmHg**



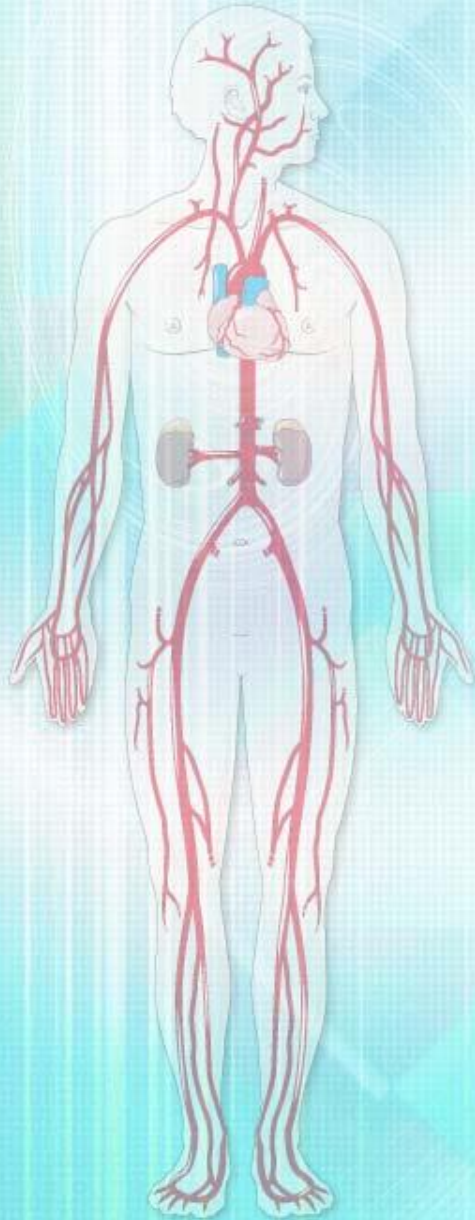
On-line practice for recording:



http://familymedicine.osu.edu/products/physical_exam/exam/flash/bloodpressure/index.html

http://familymedicine.osu.edu/products/physical_exam/exam/

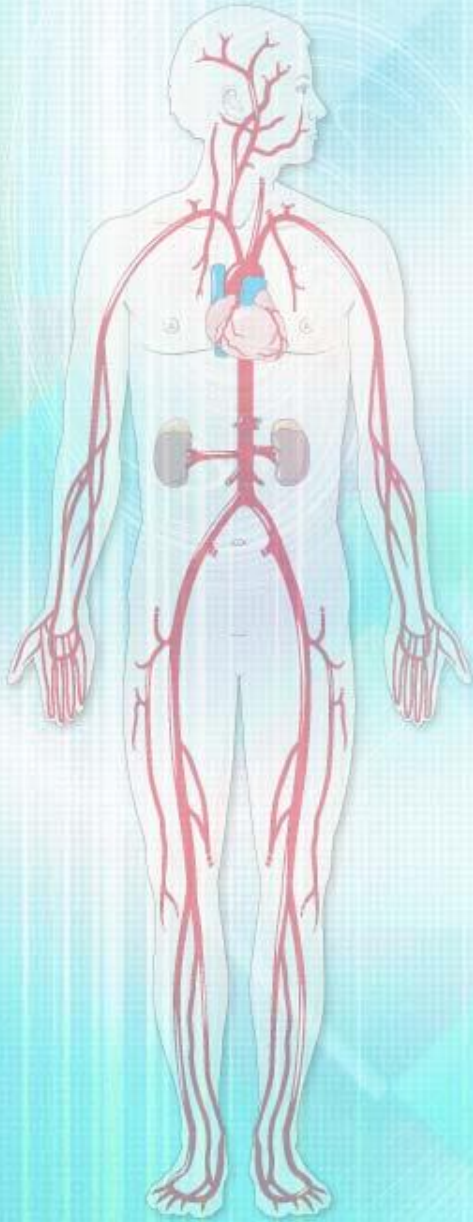
Pulse Pressure



- Difference b/w systolic & diastolic numbers
 - Indicates health and tone of arterial walls
- Normal range 30 – 50 mmHg

Hypertension:

HBP = $>140/90$



- Etiology (pick 3):
 - Stress,
 - Obesity,
 - High-salt intake,
 - Aging,
 - Kidney disease,
 - Vascular problems

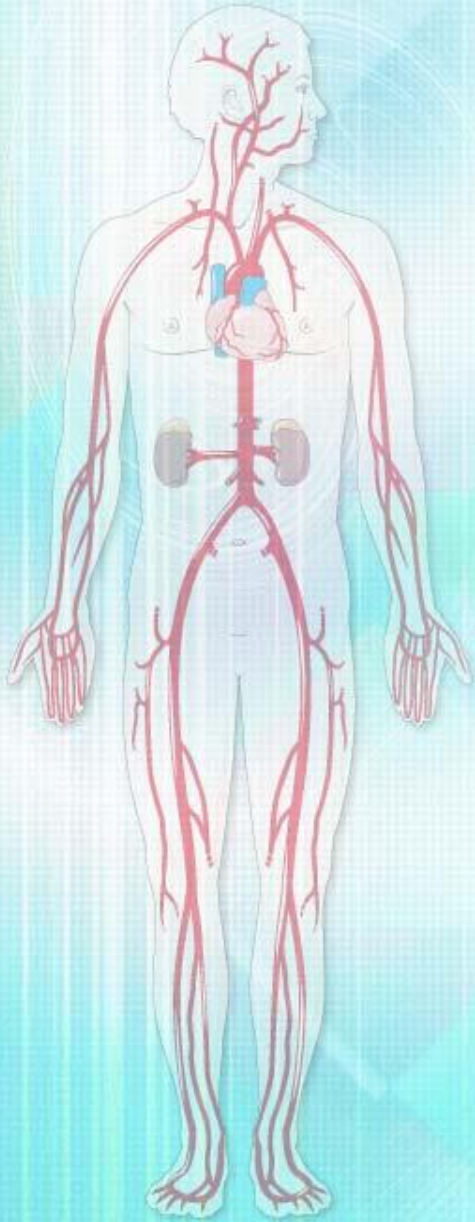
TABLE 15-2 Classifications of Blood Pressure in Adults

Blood Pressure Level Millimeters of Mercury (mmHg)			
Category	Systolic		Diastolic
Normal blood pressure	<120	and	<80
Normal range	100–120	and	60–80
Prehypertension	120–139	or	80–89
Hypertension			
Stage 1 Hypertension	140–159	or	90–99
Stage 2 Hypertension	≥160	or	≥100

Legend: < less than ≥ greater than or equal

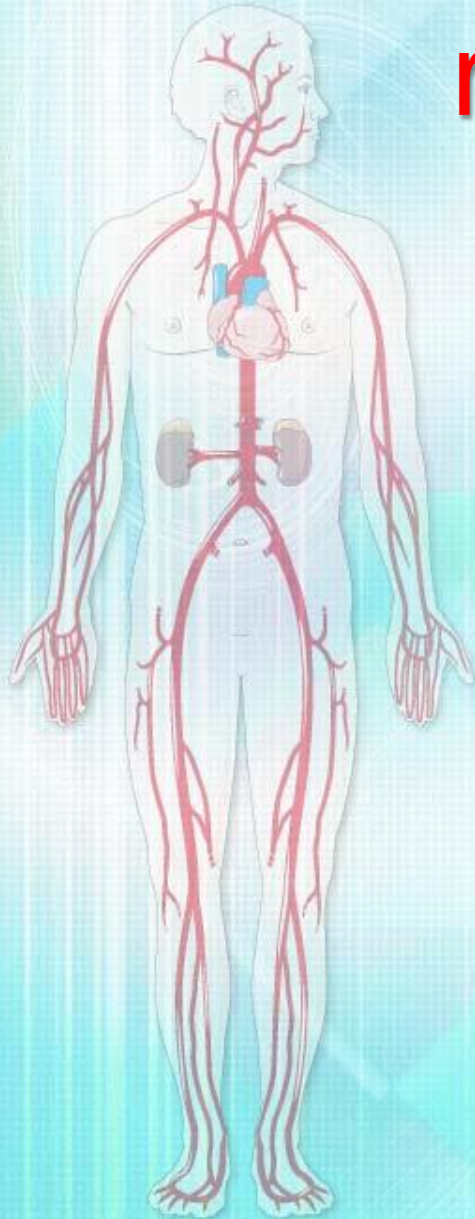
Hypotension:

LBP= 100/60



- **Et (pick 3):**
 - Heart failure,
 - Dehydration,
 - Depression,
 - Severe burns,
 - Hemorrhage, Shock
- **Orthostatic or Postural Hypotension:** dec in BP from lying down to sitting to standing

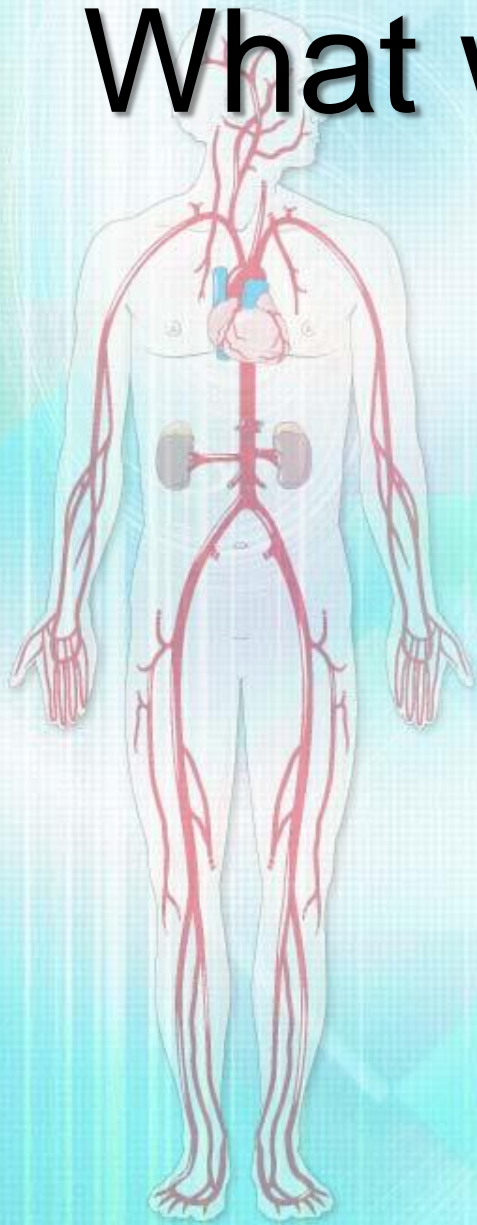
Factors influencing B/P readings:



- **Force** of the Heartbeat
- **Elasticity** of the arteries
- **Resistance** of the arterial system
- **Volume** of bld in the arteries

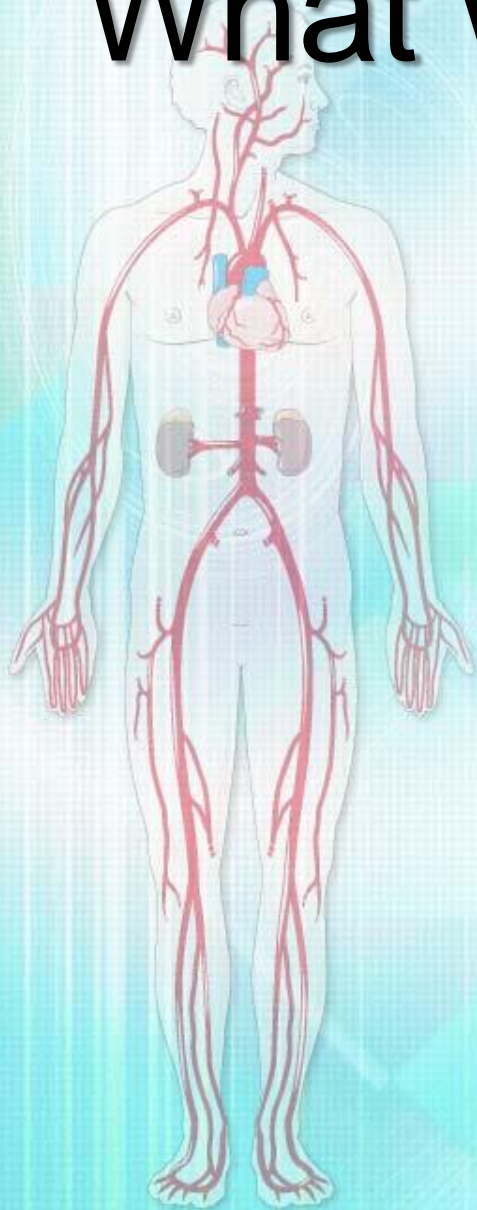
(Remember FERV)

What will Increase B/P?



- Excitement, *Pick 3*
- Anxiety,
- Nervous tension
- Stimulant drugs
- Exercise
- Eating

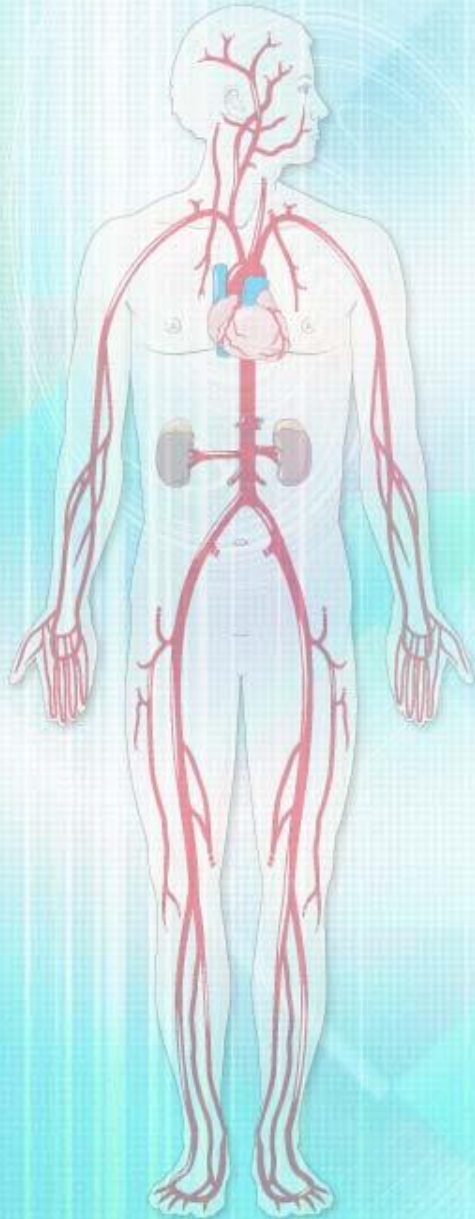
What will Decrease B/P?



- Rest
- Sleep
- Depressant drugs
- Excessive loss of blood

Pick 3

Recording B/P



Types of sphygmomanometers = each line represents 2 mm/Hg

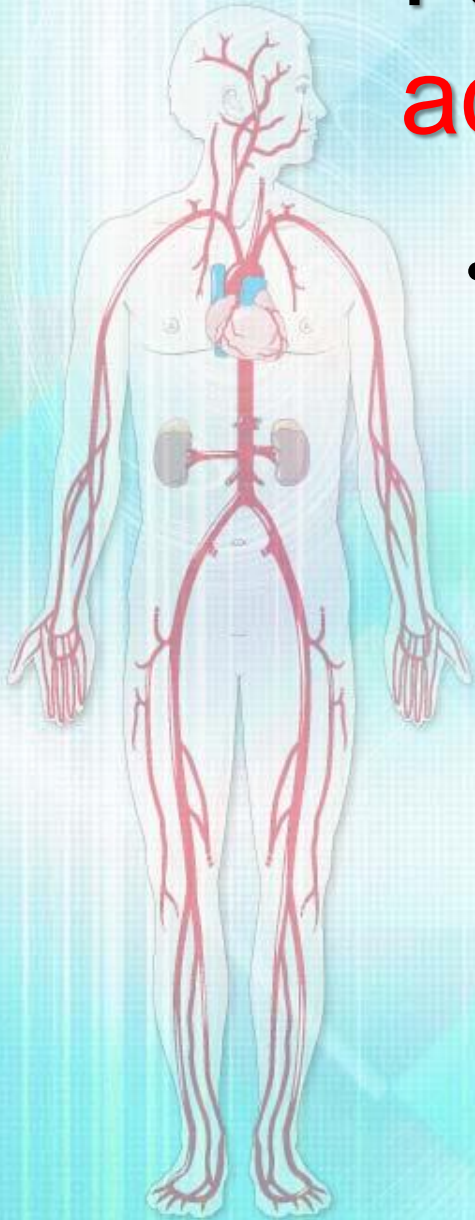
1. **mercury** sphygmomanometer
2. **aneroid** sphygmomanometer
3. **electronic** sphygmomanometer

- **Systolic** reading is **top #**
- **Diastolic** is **bottom #**
- Measured in mmHg
- **Example**

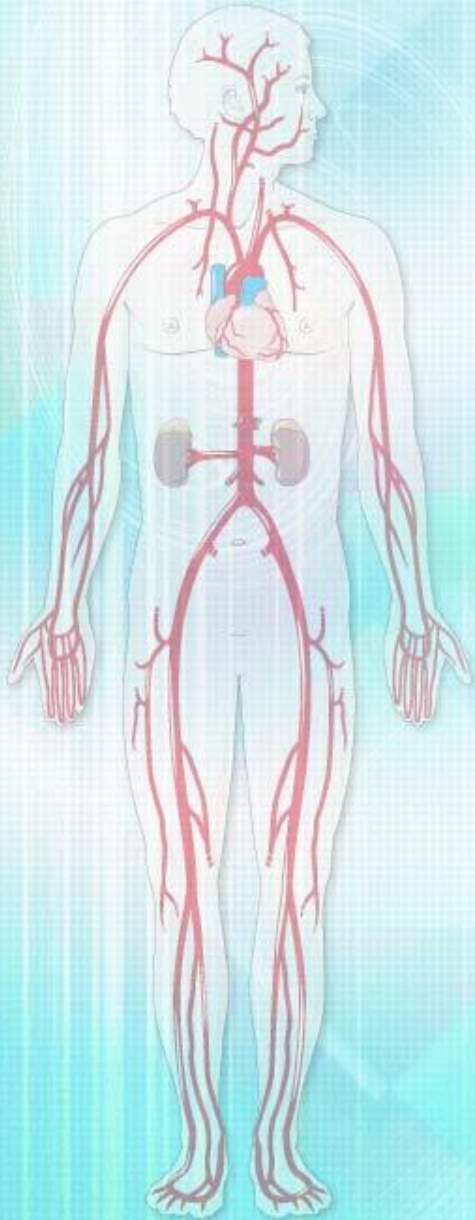
120/80 mmHg

Factors to follow for accurate readings:

- American Heart Association recommendations
 - Pt should sit quietly for at least 5 mins before the B/P is taken
 - 2 separate readings should be taken & averaged
 - Minimum wait of 30 s between readings



Proper Size



- B/P cuff should be **at least the same diameter as the pts arm, but preferably 20% larger** than the pts upper arm.
- **Small cuffs** may result in **falsely high readings.**
- **Large cuffs** may result in **falsely low readings.**