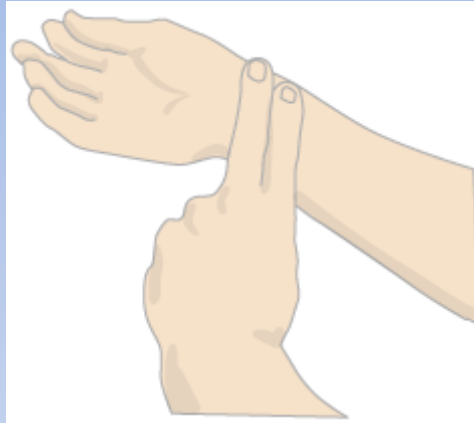


Measurement of Blood Pressure



By Bhavin Doshi
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Pulse measurement by palpation



- Measure for 1 minute
- Less time is not accurate due to:
 - 1. One cannot count fractions of pulses but only whole units
 - 2. First and last pulse cannot be caught with certainty
 - 3. Heart rate fluctuates periodically

Qualities of Peripheral Pulse

- Pulsus celer (fast)
- Pulsus tardus (slow)
- Pulsus mollis (soft or weak)
- Pulsus durus (hard or strong)
- Pulsus magnus (big amplitude)
- Pulsus parvus (small amplitude)

Description of pulse

- Mean HR
- Regular vs. irregular
- Respiratory arrhythmia - ↑ in inspiration
- ↓ in expiration
- Postural changes - ↑ in standing than sitting
- ↓ in sitting than supine
- ORTHOSTATIC REACTION
- CLINOSTATIC REACTION

NOW EVERYBODY
TRY IT ON EACH
OTHER



MEASURING Blood Pressure



Indirect measurement of blood pressure

- BY PALPATION
- Is possible to due to compliance of arterial walls
- When cuff reaches a pressure just above systolic pressure the artery is occluded
- At this point the pulse is no longer felt distal to the compression
- Measures systolic blood pressure only

In direct measurement of blood pressure

- BY AUSCULTATION
- If outer pressure is lower than systolic pressure (SP), but higher than diastolic pressure (DP), the blood flow is interrupted and renewed alternately
- These sudden changes cause vibrations in the acoustic frequency range – Heard by STETHOSCOPE distal to compressed area

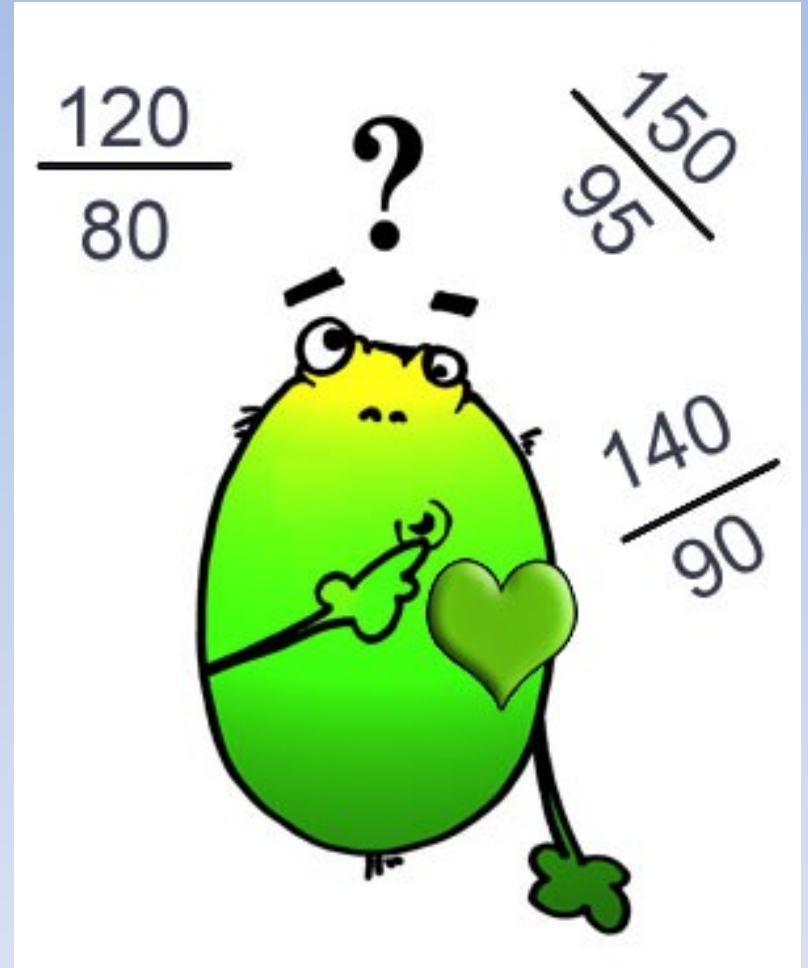
Rules for measuring blood pressure

1. Patient is sitting for a few minutes
2. Only validated apparatus must be used
3. Perform at least two measurements in the course of 1-2 minutes
4. Use cuff of correct size
5. Cuff must always be at the level of the heart
6. Pressure in cuff should be decreased slowly (2mmHG/s)

**ALWAYS REMEMBER ABOUT
WHITE COAT HYPERTENSION**



INTERPRETATION OF BLOOD PRESSURE VALUES



Category	Systolic pressure (mmHG)	Diastolic pressure (mmHg)
Optimal	<120	<80
Normal	120-129	80-84
High normal	130-139	85-89
Hypertension		
Stage 1	140-159	90-99
Stage 2	160-179	100-109
Stage 3	≥180	≥110
Isolated systolic hypertension	≥140	<90

Classification of blood pressures in adults according to Guideline of European society for hypertension and European cardiology society for diagnostics and treatment of arterial hypertension at general practitioner's (2003)

AND WHAT NEXT?

- Encourage a healthy diet
- Obesity management
- Control causative diseases
- Control stress levels
- Initiate pharmaco-therapeutic regime
- Constant monitoring and vigilance of causative factors
- Regular check-ups at the G.P.'s