Warm-Up: 10/16/14

• Calculate and interpret the following pulse pressure:
  • 120/80
  • 143/94
  • 110/56

• Interpret the following B/P readings as WNL, prehyper-, hyper-, or hypo-.
  • 136/92
  • 98/48
  • 158/110
  • 106/64
3. Pulse

- **Def:** P of the bld felt against the wall of the artery as the contracts & relaxes.
Pulse Sites

- Can be taken in 7 areas:
  - Radial*
  - Temporal
  - Dorsalis pedis
  - Carotid*
  - Brachial
  - Popiteal
  - Femoral
Pulse Characteristics

- **Volume:**
  - Bounding (strong)
  - Thready (weak)

- **Rate:**
  - 60-90 bpm
  - Children > 7 y/o = 70-90 bpm
  - Children < 7 y/o = 80-110 bpm
  - 1 y/o >= 100-160 bpm
  - Bradycardia = < 60 bpm
  - Tachycardia = > 100 bpm

- **Rhythm**
  - Regular or irregular
  - Arrhythmia: irregular/abnormal caused by electrical conduction problem
Number of beats per minute

Rate

Tachycardia (over 100 per minute)

Bradycardia (under 60 per minute)

Rhythm

Regular

Irregular

Volume

Strong, Bounding

Weak, Thready
Factors Affecting Pulse

Increase Pulse:
- Exrs
- Drugs
- Excitement
- Stress
- Fever
- Shock

Decrease Pulse:
- Sleep
- Drugs
- Heart Disease
- Coma
- Physical Training
Apical Pulse, AP

Def: heartbeat heard at the apex of the heart.

Reasons for taking apical pulse:

1. ordered by the doc
2. cardiac pts: irregular heart beats, hardening of the arteries or weak pulse
3. prior to certain meds
4. all infants = pulse is rapid & difficult to count
Heart sounds – caused by the closing of the heart valves as blood flows through the chambers of the heart.

1 beat = 1 lubb-dubb (2 distinct sounds)

Locating the AP:

1. Place bell of stethoscope 2-3 inches to the L of the sternum below the L nipple
2. Listen for one full minute
Pulse Deficit

Occurs if…

1. Heart is weak & does not pump enough blood to produce a pulse in some cases.

2. Tachycardia → not enough time to fill up the atria for every beat.

Measurement of pulse deficit:

1. Measure apical & radial pulse at the same time (2 people)

2. Subtract radial rate from apical rate = pulse deficit
Measuring Pulse

- Count for 10s multiply by 6
- Count for 15s (4)
- Count for 30s (2)
Recording VS Results

- Accuracy is essential
  1. report abnormal findings STAT
  2. have questionable readings checked by another individual
- Physician will decide if info can be told to a pt.
- Use Graphing TPR if available
Graphing TPR

A. Graphs present a visual diagram of variations in a pt’s VS & are easier to follow than a list of #s

B. Graphic sheets are legal records
   1. must be neat, legible & accurate
   2. must be completed in ink

C. Sheets may vary from area to area & hospital to hospital

D. Military Time
VS Lab #2

- Correctly record the following VS measurements on a TPR graph for two classmates:
  - P (record using an open dot)
  - BP (must be within 5 mmHg of my measurement)
  - Your adm date is 10/22/14