VITAL SIGNS

TAKING A PULSE

THE PULSE IS:

- The beat of the heart felt at an artery as a wave of blood passes through the artery
- A pulse is felt every time the heart beats
- More easily felt in arteries that come close to the skin and can be gently pressed against a bone
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– The pulse is an indication of how the cardiovascular system is meeting the body's needs

-The pulse rate is affected by many factors – age, fever, exercise, fear. Anger, anxiety,, heat, position, and pain.

-Medications can be taken that either increase or decrease a person's pulse rate

Purpose of taking pulse

- To identify whether the pulse rate is within normal range .

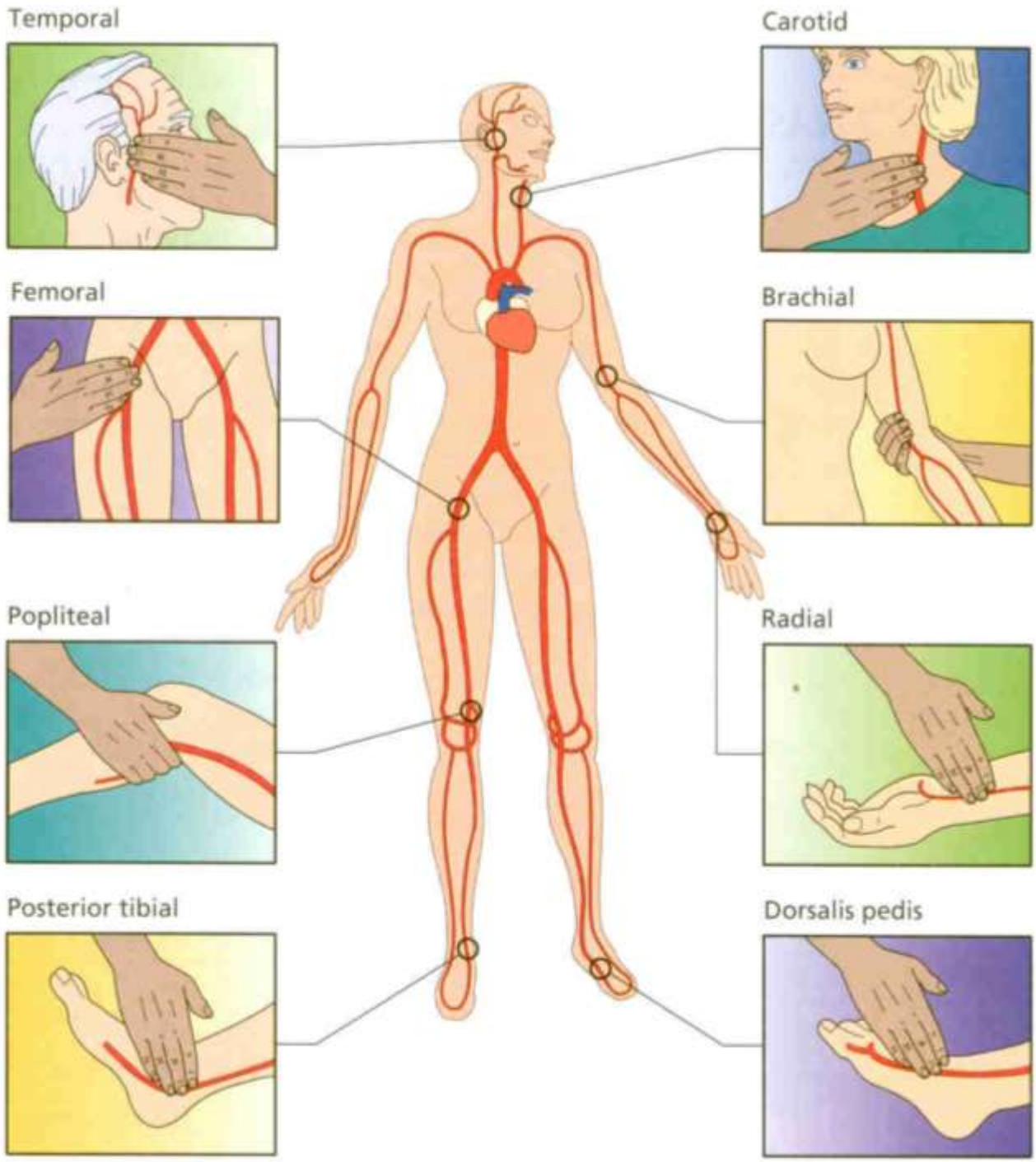
- To determine whether the pulse rhythm is regular and the pulse volume is appropriate.

- To determine the equality of corresponding peripheral pulse on each side of the body .

Types of pulse

- Peripheral pulse (radial)
- Apical pulse

PULSE SITES

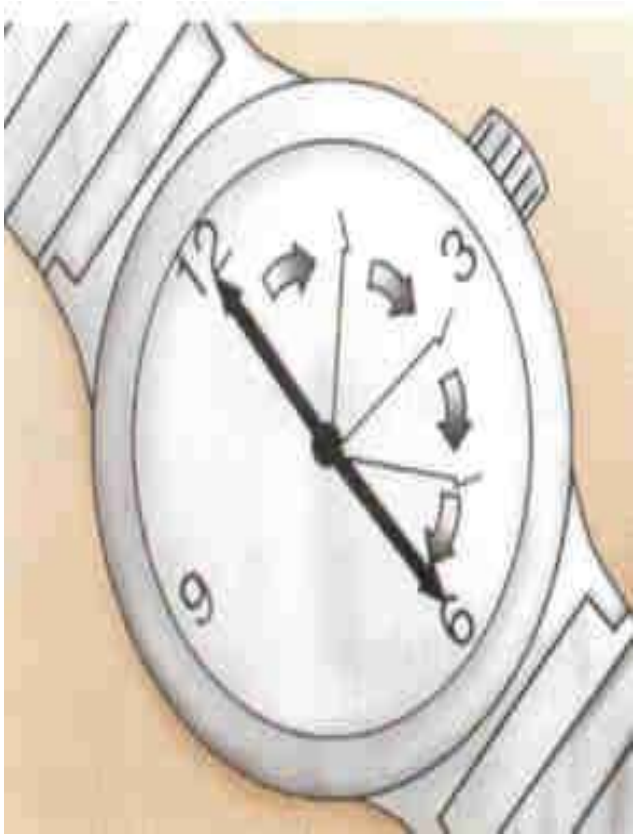

Temporal
Carotid
Femoral
Brachial
Popliteal
Radial
Posterior tibial
Dorsalis pedis

Characteristics of PULSE

- **(Rate)** (60-100 b/m

- We note the (**rhythm)** of the heart beat (regular or irregular)

-We also observe the force (**depth**) of the heartbeat.(strong or weak)



RADIAL PULSE procedure

- Most common site used for taking a pulse
- Can be taken without disturbing or exposing the person after explaining procedure
- Place the first two or three fingers of one hand against the radial artery

- The radial artery is on the thumb side of the wrist

- Do not use your thumb to take a person's pulse

- Use gentle pressure

- Count the pulse for one minute

- Record pulse rate and any abnormal finding

Apical pulse

The sound of heart can be heard with stethoscope

Equipment

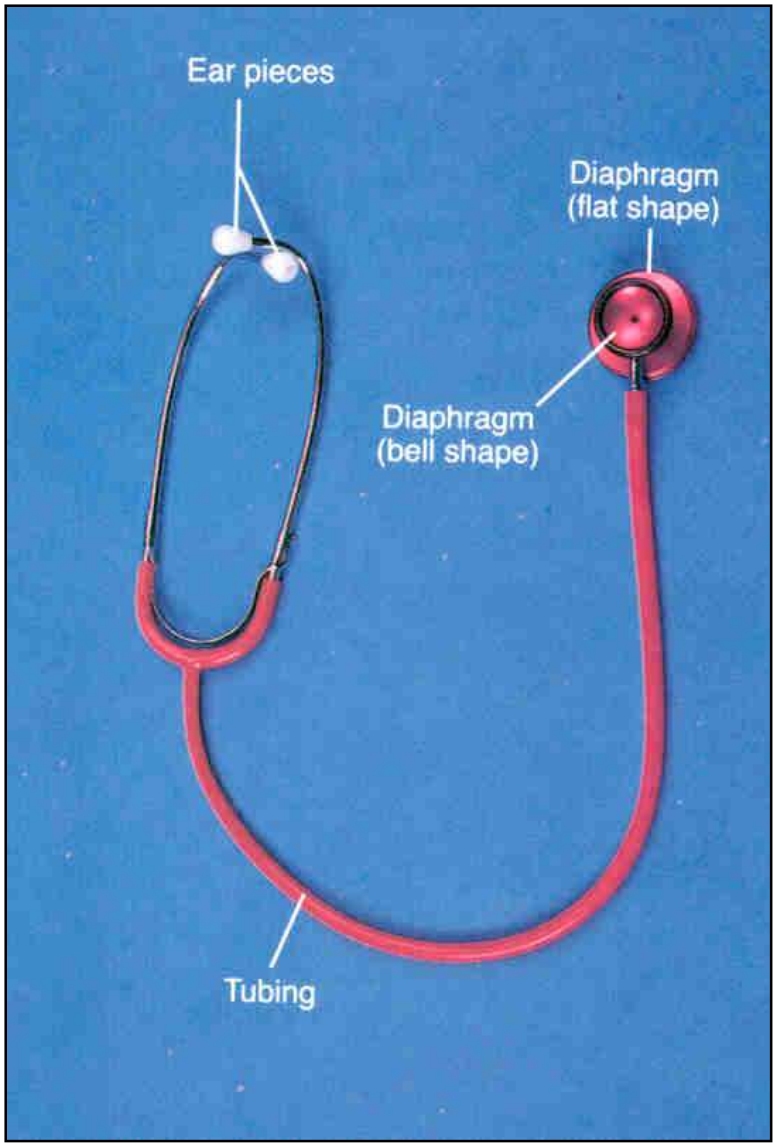
When taking apical pulse we need:

- Stethoscope
- Watch
- Alcohol swap

USING A STETHOSCOPE and procedure

-Always clean the earpieces of the stethoscope with alcohol before and after use

-Warm the diaphragm in your hand before placing it on the person



- Hold the diaphragm in place over the artery
- Do not let the tubing strike against anything while the stethoscope is being used

procedure

– Prepare equipment's

- Wash hands

- Explain procedure to patient and put him in comfortable position

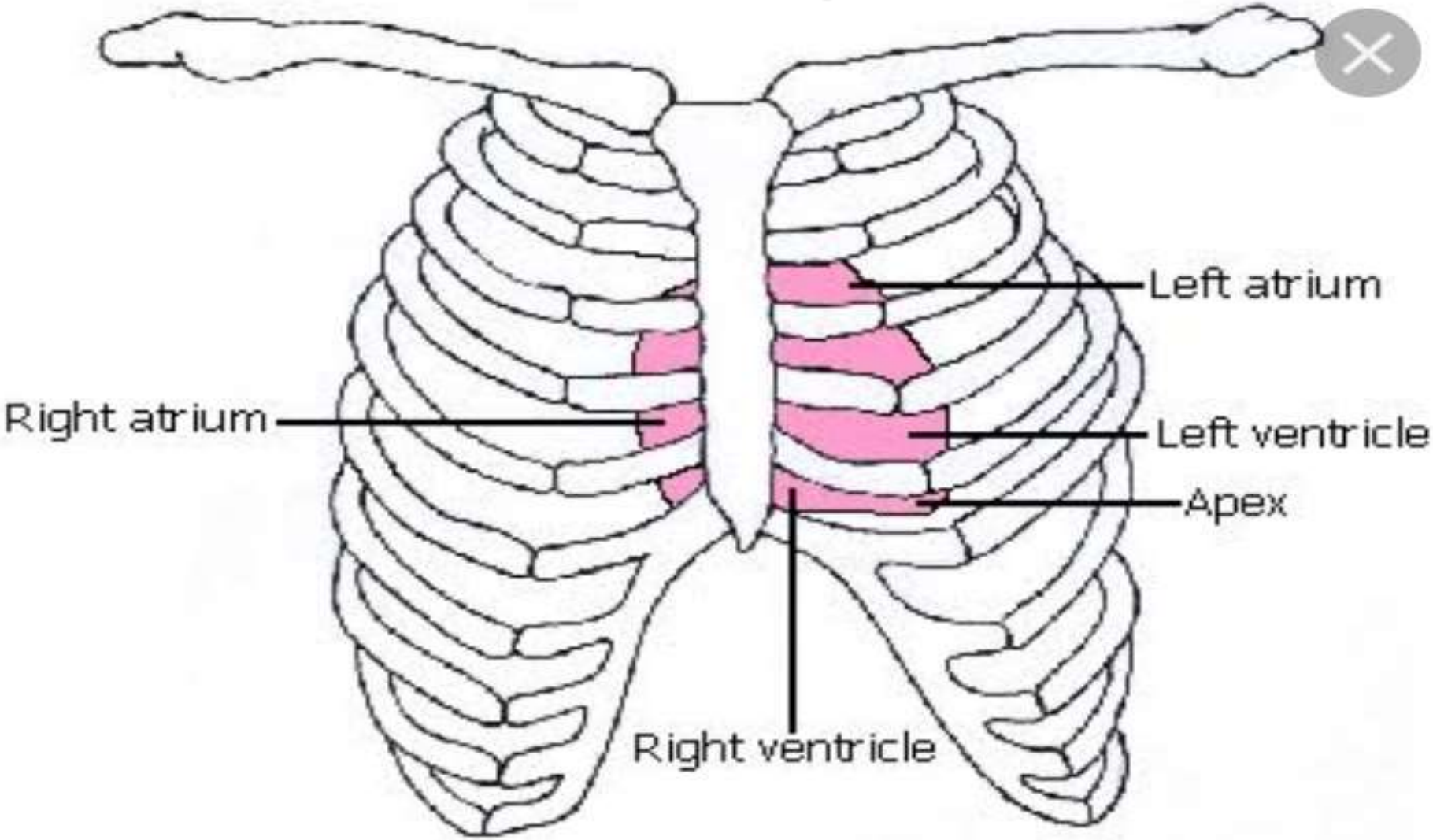
- Put on the stethoscope

– Place diaphragm on the patient chest over heart at fifth intercostal space in mid_clavicular line

- Listen to heart sound and count for one minute

-Record heart rate ,rhythm or any abnormalities

Fifth intercostal space where apex of the heart that create loudest heart sound that can be heard clearly



APICAL - RADIAL PULSE

The apical and radial pulse rates should be equal

One person counts the apical while the other person counts the radial

The difference in pulses is called the **pulse deficit**

Normal adult pulse rate is – 60 to 100 beats per min.

Tachycardia **– heart rate over 100**

Bradycardia **– heart rate below 60**

COUNTING RESPIRATIONS

One respiration consists of one inspiration and one expiration

- The chest rises during inspiration (breathing in) and falls during expiration (breathing out)

- Count each time the chest rises and fall this one cycle

- Involves three processes:
  - Ventilation
  - Diffusion
  - Perfusion

Purpose of counting respiration

- to determine number of respiration occurring per minute
- to monitor progress of patient condition
- to monitor abnormal respiration and respiratory pattern and determine any changes
- to monitor clients at risk for respiratory alteration

Characteristics of respiration

Rate: 12 – 20 cycle per minute

Rhythm: regular or irregular

Depth : shallow or deep

ABNORMAL RESPIRATIONS

Tachypnea – respiratory rate over 20

Bradypnea – respiratory rate below 12

Dyspnea – difficulty in breathing

- ***Apnea*** – no breathing
- ***Hyperventilation*** – fast and deep respirations
- ***Hypoventilation*** – slow and shallow respirations

Procedure of counting respiration

– Maintain quit environment

- Wash your hands

- Put your finger tips on site of patient radial pulse

- Observe the patient chest raise and fall and count respiration for one minute

- Observe rate rhythm and depth of respiration

- Record any abnormalities

- Perform hand hygiene

Thank you