Vital signs

should be measured in various situations,

such as:

1. **When a person is admitted to a healthcare facility**:
   As part of the initial assessment, vital signs are taken to establish a baseline.
2. **Several times a day for hospitalized patients:**
   Frequent monitoring helps track changes in a patient's condition.
3. **Before and after surgery:** Vital signs are checked to ensure the patient is stable and to monitor their recovery afterward.
4. **After some nursing procedures:** Following certain medical interventions, like changing dressings or administering specific treatments.
5. **Before medications are given that affect the respiratory or circulatory system:** To ensure the patient's condition is suitable for the medication.
6. **Whenever the person complains of pain, shortness of breath, rapid heart rate, or not feeling well:** These symptoms can indicate changes in the patient's health.
7. **With the person at rest in a lying or sitting position:** Taking vital signs in a consistent position helps provide reliable data for comparisons.

Vital signs can be influenced by various factors,

Changes in one vital sign can impact the others. Some of the factors affecting vital signs include:

1. **Illness:** Infections, chronic conditions, and acute illnesses can all affect vital signs. For example, a fever can lead to an elevated temperature.
2. **Emotions** - Anger, Fear, Anxiety, Pain: Emotional states and pain can lead to an increase in heart rate and blood pressure due to the body's stress response.
3. **Exercise and Activity:** Physical activity can raise heart rate and respiration rate, as the body requires more oxygen and energy.
4. **Age:** Vital signs may vary with age, with children and the elderly often having different baseline values.
5. **Sex:** There can be some variations in vital signs between males and females, particularly related to heart rate and blood pressure.
6. **Environment - Weather:** Extreme temperatures can affect temperature and blood pressure. High humidity can affect respiration.
7. **Food and Fluid Intake:** Eating and drinking can temporarily affect vital signs, such as blood pressure.
8. **Medications:** Certain medications can influence vital signs. For example, some drugs can lower blood pressure or slow the heart rate.

9. **Time of Day -** Lower in the Morning, Higher in the Afternoon/Evening: Vital signs can exhibit diurnal variations, with some being lower in the morning and higher in the afternoon and evening.

10 .**Noise:** Loud or stressful environments can lead to increased heart rate and blood pressure.

Temperature can be measured in four areas: mouth (oral), rectum (rectal), underarm (axillary), and ear (tympanic). Typically, oral measurements are most common and rectal readings are considered the most accurate, while axillary readings are the least precise. Additionally, a newer method involves measuring temperature on the forehead (temporal).

Temperature Site	Normal Range (°C)
Oral	36.4°C - 37.6°C
Rectal	37.0°C - 38.1°C
Axillary	36.4°C - 37.0°C
Tympanic	37.0°C
Temporal	37.0°C

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.

The pulse should be consistent across all pulse sites on the body.It is an indication of how the cardiovascular system is meeting the body's needs.

Key details that can be obtained through pulse checking:

1. Heart Rate 2. Rhythm 3. Pulse Strength 4. Pulse Deficit

THE PULSE IS AFFECTED BY MANY FACTORS,

including age, fever, exercise, fear, anger, anxiety, excitement, heat, position, and pain.

Can be influenced by medications, which can either increase or decrease a person's pulse rate.

THESE ARE DEFINITIONS OF DIFFERENT RESPIRATORY CONDITIONS:

TACHYPNEA: Respiratory rate over 20 breaths per minute.

BRADYPNEA: Respiratory rate below 12 breaths per minute.

DYSPNEA: Shortness of breath or difficulty in breathing.

APNEA: Complete absence of breathing.

HYPERVENTILATION: Fast and deep respirations.

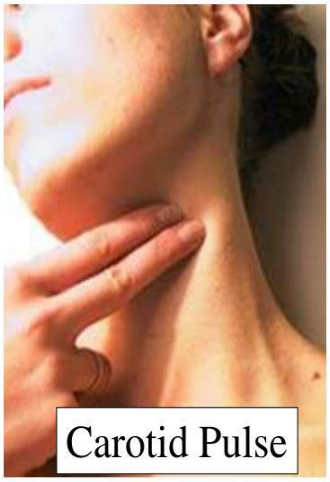
HYPOVENTILATION: Slow and shallow respirations.

BLOOD PRESSURE is the measurement of the force exerted by the blood against the walls of the arteries. It is recorded as a fraction, with the systolic pressure (pressure when the heart muscle is contracting) on top and the diastolic pressure (pressure when the heart muscle is relaxing between beats) on the bottom. For example, a typical blood pressure reading is 120/80. Blood pressure is measured in millimeters of mercury (mm Hg).

VARIOUS FACTORS CAN INFLUENCE BLOOD PRESSURE:

- **Age:** Blood pressure tends to increase as a person gets older.
- **Gender:** Women often have lower blood pressure than men.
- **Blood Volume:** Severe bleeding can lead to a decrease in blood pressure.
- **Stress:** Stress triggers an increase in heart rate and blood pressure as part of the body's response.
- **Pain:** Pain can raise blood pressure.
- **Exercise:** Physical activity can elevate heart rate and blood pressure.
- **Weight:** Blood pressure is typically higher in overweight individuals.
- **Race:** Black individuals often have higher blood pressure than white individuals.
- **Diet:** A high-sodium diet increases fluid volume in the body, raising blood pressure.
- **Medications:** Certain medications can be used to raise or lower blood pressure.
- **Position:** Blood pressure is generally lower when a person is lying down.

Pulse



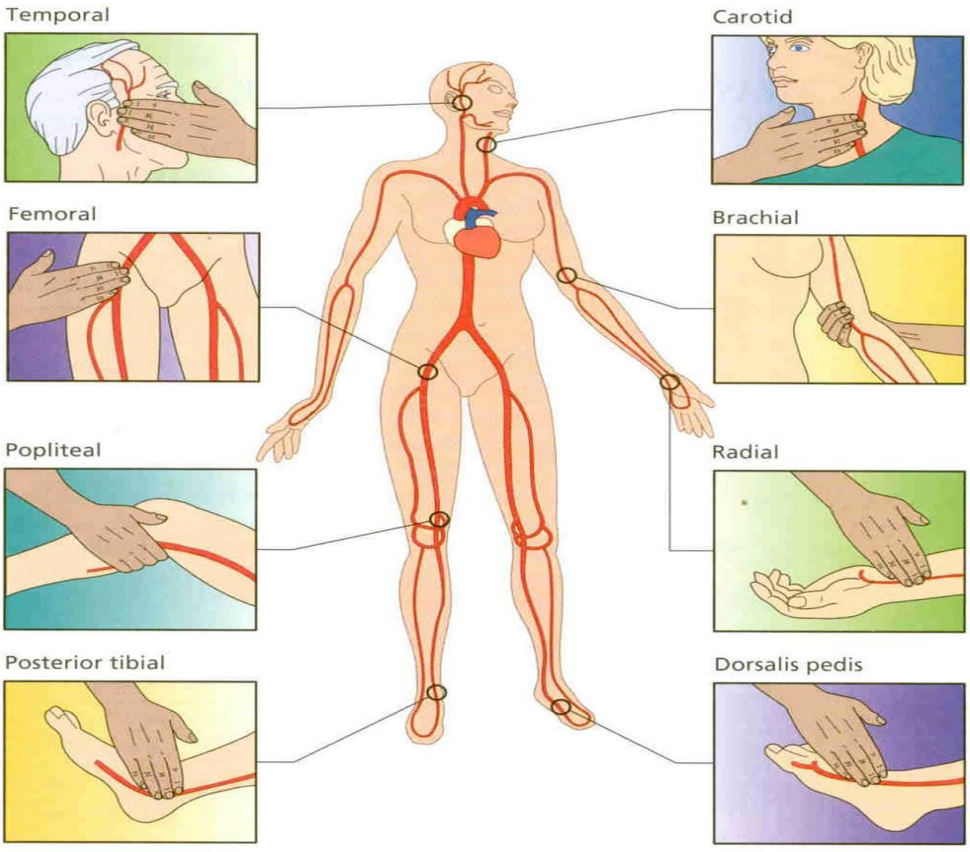
Carotid Pulse

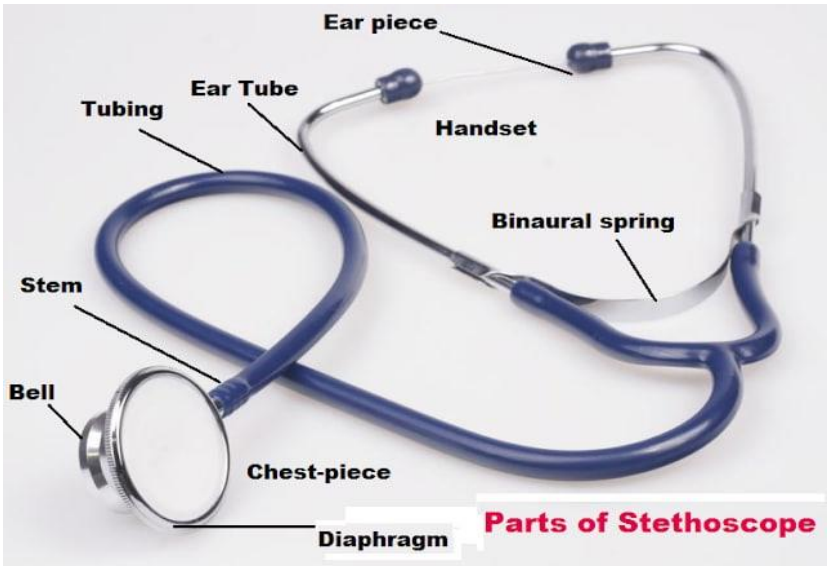


Radial Pulse



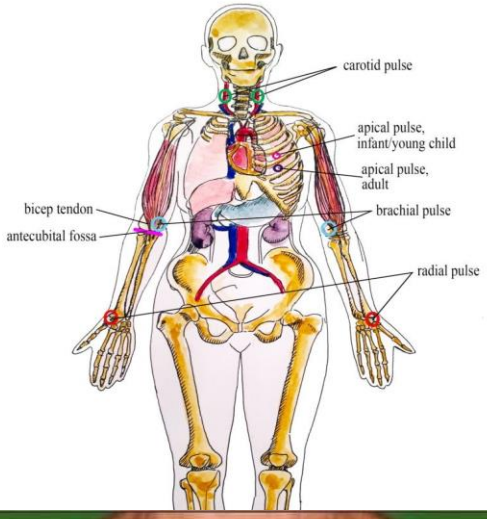
Brachial Pulse

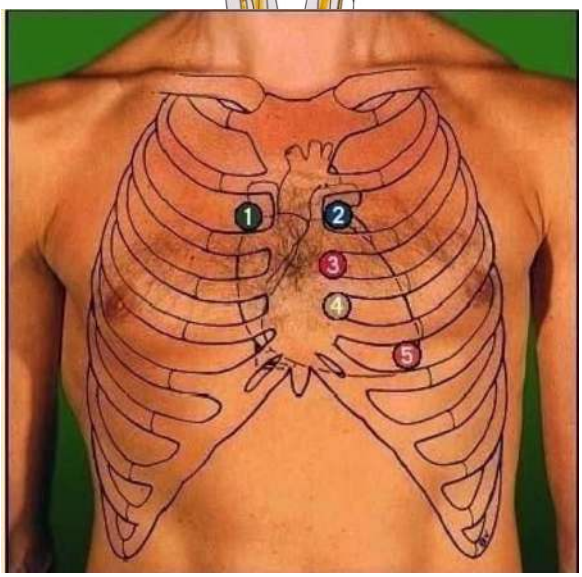


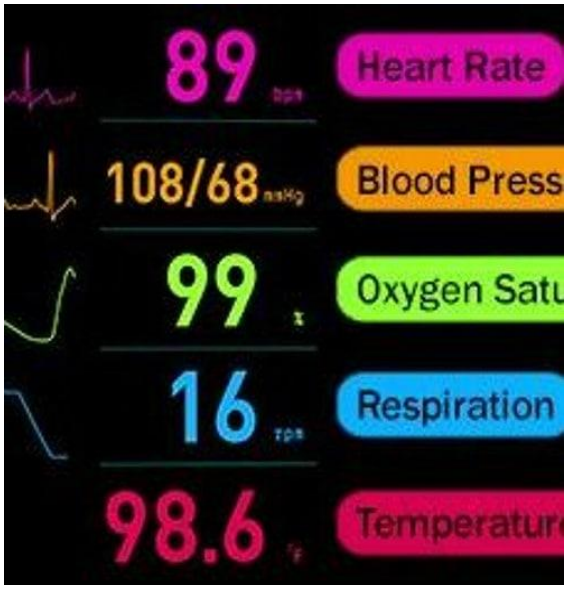

Ear piece
Ear Tube
Tubing
Handset
Binaural spring
Stem
Bell
Chest-piece
Diaphragm
Parts of Stethoscope






carotid pulse
apical pulse, infant/young child
apical pulse, adult
brachial pulse
bicep tendon
antecubital fossa
radial pulse


1
2
3
4
5


89
Heart Rate
108/68
Blood Press
99
Oxygen Satu
16
Respiration
98.6
Temperatur