Chapter 21
Assisting With Assessment
Vital Signs

- Vital signs reflect three body processes:
  - Regulation of body temperature
  - Breathing
  - Heart function

- A person’s vital signs:
  - Vary within certain limits
  - Are affected by many factors
  - Show even minor changes in the person’s condition
  - Tell about responses to treatment
  - Often signal life-threatening events
Accuracy

● Accuracy is essential when you measure, record, and report vital signs.
  ➢ If unsure of your measurements, promptly ask the nurse to take them again.

● Unless otherwise ordered, take vital signs with the person at rest lying or sitting.

● Report the following at once:
  ➢ Any vital sign that is changed from a prior measurement
  ➢ Vital signs above or below the normal range
Body Temperature

Body temperature is the amount of heat in the body.

- It is a balance between the amount of heat produced and the amount lost by the body.
- Thermometers are used to measure temperature.
  - Fahrenheit (F) and centigrade or Celsius (C) scales are used.
- Temperature sites are the:
  - Mouth
  - Rectum
  - Axilla (underarm)
  - Tympanic membrane (ear)
  - Temporal artery (forehead)
- Each temperature site has a normal range.
Thermometers

● These types of thermometers are used:
  ➢ Glass thermometers
    • Used for oral, rectal, and axillary temperatures
  ➢ Electronic thermometers
    • Some have oral and rectal probes with disposable covers.
    • Tympanic membrane thermometers measure temperature at the tympanic membrane in the ear.
    • Temporal artery thermometers measure temperature at the temporal artery in the forehead.
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.
- Pulse sites
  - The temporal, carotid, brachial, radial, femoral, popliteal, posterior tibial, and dorsalis pedis (pedal) pulses are on each side of the body.
    - The radial pulse is used most often.
    - The apical pulse is felt over the heart.
- The apical pulse is taken with a stethoscope.
  - A stethoscope is an instrument used to listen to the sounds produced by the heart, lungs, and other body organs.
Using a Stethoscope

To use a stethoscope:

- Wipe the earpieces and diaphragm with antiseptic wipes before and after use.
- Place the earpiece tips in your ears.
  - The bend of the tips points forward.
  - Earpieces should fit snugly.
- Tap the diaphragm gently.
  - If you do not hear the tapping, turn the chest piece at the tubing. Gently tap the diaphragm again.
  - Check with the nurse if you still do not hear the tapping.
- Place the diaphragm over the artery. Hold it in place.
- Prevent noise. Do not let anything touch the tubing.
Pulse Rate

● The pulse rate is the number of heartbeats or pulses felt in 1 minute.
  - The adult pulse rate is between 60 and 100 beats per minute.
  - Report a rate of less than 60 or more than 100 to the nurse at once.

● The rhythm of the pulse should be regular.
  - Pulses are felt in a pattern.
  - The same time interval occurs between beats.

● Force relates to pulse strength.
  - A forceful pulse is described as strong, full, or bounding.
  - Hard-to-feel pulses are described as weak, thready, or feeble.
Pulse Sites

- The radial pulse is used for routine vital signs.
  - Place the first 2 or 3 fingertips of one hand against the radial artery.
  - Count the pulse for 30 seconds and multiply the number by 2.
  - If the pulse is irregular, count it for 1 minute.

- The apical pulse is on the left side of the chest slightly below the nipple.
  - It is taken with a stethoscope.
  - Count the apical pulse for 1 minute.
  - Count each *lub-dub* as one beat.
Respirations

- Respiration means breathing air into (inhaled) and out of (exhaled) the lungs.
  - Each respiration involves 1 inhalation and 1 exhalation.
  - Respirations are normally quiet, effortless, and regular. Both sides of the chest rise and fall equally.
  - The healthy adult has 12 to 20 respirations per minute.
  - The person should not know that you are counting respirations.
    - Count respirations right after taking a pulse.
    - Count them for 30 seconds and multiply the number by 2.
    - If an abnormal pattern is noted, count respirations for 1 minute.
Blood Pressure

- Blood pressure is the amount of force exerted against the walls of an artery by the blood.
  - Systole is the period of heart muscle contraction.
  - Diastole is the period of heart muscle relaxation.
  - The systolic pressure is the pressure in the arteries when the heart contracts.
  - The diastolic pressure is the pressure in the arteries when the heart is at rest.
  - Blood pressure is measured in millimeters (mm) of mercury (Hg).
  - The systolic pressure is recorded over the diastolic pressure.
BP Normal Ranges

- Blood pressure has normal ranges:
  - Systolic pressure—less than 120 mm Hg
  - Diastolic pressure—less than 80 mm Hg

- Treatment is indicated for:
  - Hypertension (blood pressure measurements that remain above the normal range)
  - Hypotension (when the systolic pressure and the diastolic pressure are below the normal range)

- A stethoscope and a sphygmomanometer are used to measure blood pressure.

- Blood pressure is normally measured in the brachial artery.
Pain

- Pain means to ache, hurt, or be sore.
- Pain is a warning from the body.
- Pain is personal.
  - If a person complains of pain or discomfort, the person has pain or discomfort.
- There are different types of pain.
  - Acute pain is felt suddenly from injury, disease, trauma, or surgery.
  - Chronic pain lasts for a long time.
  - Radiating pain is felt at the site of tissue damage and in nearby areas.
  - Phantom pain is felt in a body part that is no longer there.
Signs and Symptoms

- Promptly report any information you collect about pain.
- The nurse needs this information:
  - Location
  - Onset and duration
  - Intensity
  - Description
  - Factors causing pain (precipitating factors)
  - Factors affecting pain
  - Vital signs
  - Other signs and symptoms
Intake and Output

Intake and output (I&O) records are kept:
- To evaluate fluid balance and kidney function
- When the person has special fluid orders

These input fluids are measured and recorded:
- All fluids taken by mouth
- Foods that melt at room temperature
- IV fluids and tube feedings

Output includes urine, vomitus, diarrhea, and wound drainage.
Intake and Output, cont'd.

- Intake and output are measured in milliliters (mL).
  - A measuring container for fluid called a graduate is used to measure leftover fluids, urine, vomitus, and drainage from suction.
  - Plastic urinals and kidney basins have amounts marked.
  - The measuring device is held at eye level to read the amount.
  - An I&O record is kept at the bedside.
  - The urinal, commode, bedpan, or specimen pan is used for voiding.
    - Toilet tissue is not put into the receptacle.
Weight and Height

- Weight and height are measured:
  - On admission to the agency
  - Daily, weekly, or monthly

- Standing, chair, bed, and lift scales are used.
Weight and Height Guidelines

● When measuring weight and height, follow these guidelines:
  ➢ The person only wears a gown or pajamas.
    • No footwear is worn.
  ➢ The person voids before being weighed.
  ➢ Weigh the person at the same time of day.
    • Before breakfast is the best time.
  ➢ Use the same scale for daily, weekly, and monthly weights.
  ➢ Balance the scale at zero (0) before weighing the person.