

Vital signs and general assessment

Equipment needed:

- 1. Balance scale.**
- 2. Tape measure.**
- 3. Thermometer.**
- 4. Sphygmomanometer.**
- 5. Stethoscope.**

Subjective Data:

Reason for seeking health care and major concern about current health, current age, height, and weight, recent weight changes, fever, history of hypertension, hypertension, difficulty breathing, changes impulse or heart rate.

Vital signs (assessment) include:

- 1. Assessment of temperature, pulse, respiration and blood pressure are known as life signs.**
- 2. Vital signs are indicators of the body's physiologic status and response to physical, environmental and physiologic stressors.**
- 3. Vital signs reveal the client's current ability to maintain body temperature regulation, to maintain local and systemic blood flow, and to provide oxygenation of body tissues.**

A. Temperature

*** Body temperature is difference between heat produced and heat lost. The hypothalamus acts as the body's thermostat to maintain between the body's heat-producing function (metabolism, shivering, muscle contraction, exercise and thyroid activity) and heat losing methods (radiation, convection)**

B. Pulse

The pulse reflects the force of the heart contracting. Also reflects stroke volume, the amount of blood ejected with each contraction.

A pulse deficit (a difference between the apical and radial pulse rate)

Factors influencing of pulse

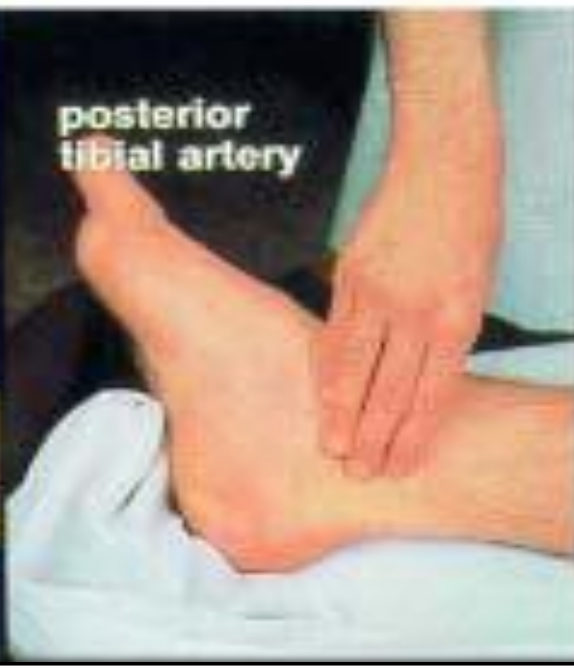
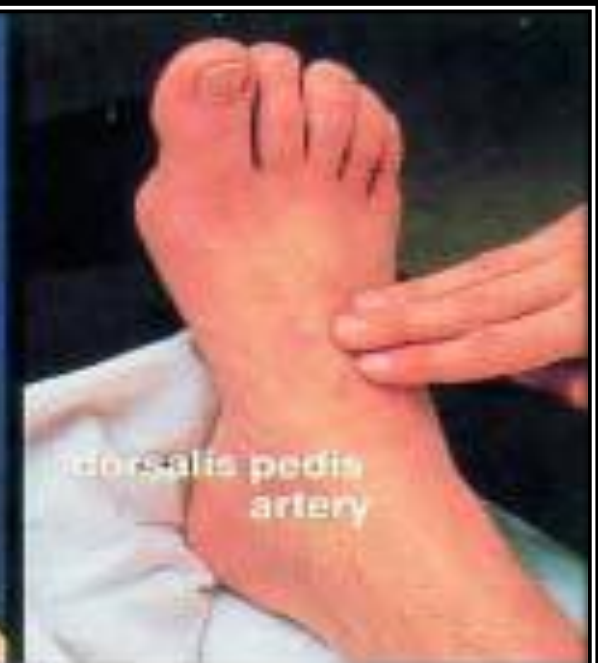
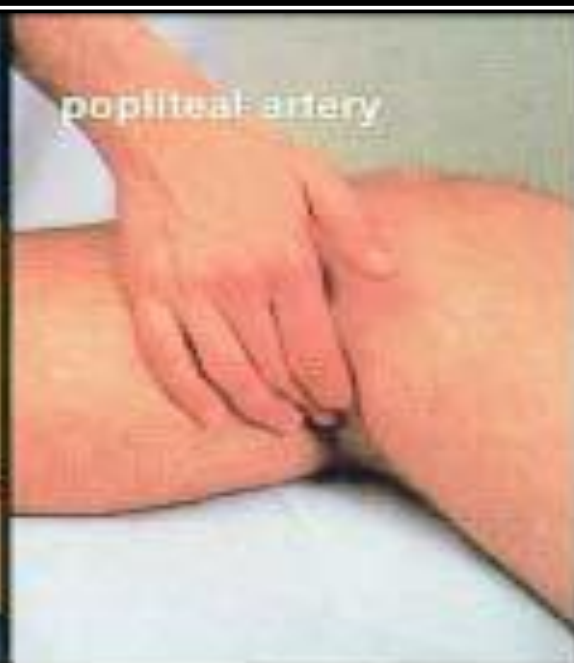
1. Pain
2. Emotion
3. Exercise
4. Prolong heat application
5. Decrease BP, and increase temperature.
6. Poor oxygen in the blood.

Remember

Palpate the radial pulse and count for at least "30" second.

If the pulse is irregular, count for full minute and note the number of irregular beats per minute.

Note is the pulse against your finger strong or weak (Amplitude of rhythm)



C. Respiration:

1. Count the number of respiration (rate), in full minute Respiration: normally "16-20 breath/minute" (for healthy adult person).
2. Note rhythm (regular or irregular) and depth of breathing (reflects the tidal volume, described as shallow or deep breathing).

Factors influencing of reparation

1- Age

Newborn 35 breath / minute ,

1 year 30 breath / minute ,

6 year 21 breath / minute,

10 year 19 breath / minute ,

18 year 16-18 breath / minute

2. Any disease

3. Exercise

4. Emotion

D. Blood pressure:

- 1. Measure Blood Pressure in both arms.**
- 2. Pulse pressure: the difference between the systolic and the diastolic pressures (normally is 30 to 40 mm Hg)**
- 3. Palpate the systolic pressure before using the stethoscope in order to detect an auscultatory gap.**
- 4. Apply cuff firmly, if too tight (small) it will give falsely high reading.**
- 5. Use cuff in appropriate size.**
- 6. Note position of client when measuring blood pressure.**
- 7. Monitor blood pressure after client is seated or supine quietly for "10" minute.**
- 8. Repeat after two minutes. Then repeat with client standing.**

Factors influencing the BP

1. Age

Newborn 40 mmHg/systolic / 20 diastole

1 month 84/54 mmHg

1 year 95 /65 mmHg

6 year 105 / 65 mmHg

10 – 13 year 120 / 80 mmHg

14- 17 year 120/80 mmHg

18 year 120/80 mmHg

- Normal range 100 – 140mmHg (systolic) and from 60-90 mmHg/(diastolic)

2. Sex

3. Emotion

4. Position: Laying down

4. After meal

5. Exercise

Instrumentation used in assessment

Instruments, or “equipments” used during physical assessment should be readily accessible, clean, in proper working order.

- **Ophthalmoscope:** "lighted instrument for visualization of the eye".
- **Otoscope:** for examination of the ear.
- **Snellen eye chart:** used as a screening test for vision.
- **Nasal speculum:** used for assessment of the nose.
- **Vaginal speculum:** examination of the vaginal canal and cervix.
- **Tuning fork:** for testing auditory function and vibratory perception.
- **Percussion hammer:** “reflex hammer” used to test reflexes and determine tissue density.

TABLE 28-3 Equipment and Supplies Used for a Health Examination

Guidelines

Example

Flashlight or penlight



To assist viewing of the pharynx and cervix or to determine the reactions of the pupils of the eye

Laryngeal or dental mirror



To observe the pharynx and oral cavity

Nasal speculum



To permit visualization of the lower and middle turbinates; usually, a penlight is used for illumination

Ophthalmoscope



A lighted instrument to visualize the interior of the eye

Otoscope



A lighted instrument to visualize the eardrum and external auditory canal (a nasal speculum may be attached to the otoscope to inspect the nasal cavities)

Percussion (reflex) hammer



An instrument with a rubber head to test reflexes

Tuning fork



A two-pronged metal instrument used to test hearing acuity and vibratory sense

Vaginal speculum (various sizes)



To assess the cervix and the vagina

Cotton applicators



To obtain specimens

Disposable pads



To absorb liquid

Gloves (sterile and unsterile)



To protect the nurse

Lubricant



To ease insertion of instruments (e.g., vaginal speculum)

Tongue blades (depressors)



To depress the tongue during assessment of the mouth and pharynx

Note: From Fundamentals of Nursing: Concepts, Process, and Practice, 6th ed., by B. Kozier, G. Erb, A. Berman, & K. Burke, 2000, Upper Saddle River, NJ: Prentice Hall Health.

Positions

Each position has its specialty for parts of examination. Draping during assessment is used to prevent unnecessary exposure. Drapes may be paper, cloth, or bed linens

I. Sitting position

- ***Areas Assessed:***

Head and neck, back, posterior thorax and lungs, anterior thorax and lungs, breasts, axially, heart, vital signs, and upper extremities

- ***Rationale:***

Sitting upright provides full expansion of lungs and provides better visualization of symmetry of upper body parts.

- ***Limitations:***

Physically weakened client may be unable to sit. Examiner should use supine position with head of bed elevated instead.

II. Supine position

- **Areas Assessed:** Head and neck anterior thorax and lungs, breasts, axillae, heart, abdomen, extremities, and pulses
- **Rationale:** This is most normally relaxed position. It prevents contracture of abdominal muscles and provides easy access to pulse sites.
- **Limitations:** If client becomes short of breath easily, examiner may need to raise head of bed.

III. Dorsal position:

- **Areas Assessed:** Head and neck, anterior thorax and lungs, Breasts, axillae and heart.
- **Rationale:** Clients with painful disorders are more comfortable with knees flexed.
- **Limitations:** Position is not used for abdominal assessment because it promotes contracture of abdominal muscles

IV. Lithotomy position:

- **Areas Assessed:** Female genitalia and genital tract
- **Rational:** This position provides maximal exposure of genitalia and facilitates insertion of vaginal speculum.
- **Limitations:**

Lithotomy position is embarrassing and uncomfortable, so examiner minimizes time that client spends in it. Client is kept well draped.

Client with severe arthritis or other joint deformity may be unable to assume this position.

V. Sims' position:

- **Areas Assessed:** Rectum and vagina
- **Rationale:** Flexion of hip and knee improves exposure of rectal area.
- **Limitations:**

Joint deformities may hinder client's ability to bend hip and knee.

VI. Prone position:

- **Areas Assessed:** Musculoskeletal system

- **Rationale:**

This position is used only to assess extension of hip joint.

- **Limitations:**

This position is intolerable for client with respiratory difficulties.

VII. Knee-chest position:

- **Areas Assessed:** Rectum.







- **Rationale:** This position provides maximal exposure of rectal area.

- **Limitations:**

- This position is embarrassing and uncomfortable.

- Clients with arthritis or other joint deformities may be unable to assume this position.

TABLE 28-2 Client Positions and Body Areas Assessed

| Position | Description | Areas Assessed | Cautions |
|--|---|--|--|
| <p>Dorsal recumbent</p>  | <p>Back-lying position with knees flexed and hips externally rotated; small pillow under the head; soles of feet on the surface</p> | <p>Head and neck, axillae, anterior thorax, lungs, breasts, heart, extremities, peripheral pulses, vital signs, and vagina</p> | <p>May be contraindicated for clients who have cardio-pulmonary problems. Not used for abdominal assessment because of the increased tension of abdominal muscles.</p> |
| <p>Supine (Horizontal recumbent)</p>  | <p>Back-lying position with legs extended; with or without pillow under the head</p> | <p>Head, neck, axillae, anterior thorax, lungs, breasts, heart, abdomen, extremities, peripheral pulses</p> | <p>Tolerated poorly by clients with cardiovascular and respiratory problems.</p> |
| <p>Sitting</p>  | <p>A seated position, back unsupported and legs hanging freely</p> | <p>Head, neck, posterior and anterior thorax, lungs, breasts, axillae, heart, vital signs, upper and lower extremities, reflexes</p> | <p>Elderly and weak clients may require support.</p> |
| <p>Lithotomy</p>  | <p>Back-lying position with feet supported in stirrups; the hips should be in line with the edge of the table.</p> | <p>Female genitals, rectum, and female reproductive tract</p> | <p>May be uncomfortable and tiring for elderly people and often embarrassing.</p> |
| <p>Sims'</p>  | <p>Side-lying position with lowermost arm behind the body, uppermost leg flexed at hip and knee, upper arm flexed at shoulder and elbow</p> | <p>Rectum, vagina</p> | <p>Difficult for the elderly and people with limited joint movement.</p> |
| <p>Prone</p>  | <p>Lies on abdomen with head turned to the side, with or without a small pillow</p> | <p>Posterior thorax, hip joint movement</p> | <p>Often not tolerated by the elderly and people with cardiovascular and respiratory problems.</p> |