PROCEDURE 12-1  Focused Physical Assessment by Body Systems

PURPOSES
- To obtain measurements to compare to baseline data.
- To obtain information to assess effect of medications.
- To determine health and comfort status of the client before or after a procedure or at the end of shift.

EQUIPMENT
- Stethoscope or DUS
- Penlight or flashlight
- Thermometer
- Sphygmomanometer and cuff

Part A: General Appearance and Mental Status

GENERAL APPEARANCE

INSPECTION
1. Observe body build, height, and weight in relation to the client's age, lifestyle, and health.
2. Observe the client's posture and gait, standing, sitting, and walking.
3. Observe the client's overall hygiene and grooming. Relate these to the person's activities prior to the assessment.
4. Note body and breath odor in relation to activity level.
5. Observe for signs of distress in posture (e.g., bending over because of abdominal pain) or facial expression (e.g., wincing or labored breathing).
6. Note obvious signs of health or illness (e.g., in skin color or breathing).

BEHAVIOR
1. Assess the client's attitude.
2. Note the client's affect/mood; assess the appropriateness of the client’s response and level of orientation to time, place, and persons.
3. Listen for quantity of speech (amount and pace), quality (loudness, clarity, inflection), and organization (coherence of thought, overgeneralization, vagueness).
4. Listen for relevance and organization of thoughts.

Normal Findings
- Clean, neat
- No body odor or minor body odor relative to work or exercise; no breath odor
- Healthy appearance
- Cooperative
- Appropriate to situation
- Understandable, moderate pace
- Exhibits thought association
- Logical sequence
- Makes sense; has sense of reality

Deviations from Normal
- Excessively thin or obese
- Tense, slouched, bent posture; uncoordinated movement; tremors
- Dirty, unkempt
- Foul body odor; ammonia odor; acetone breath odor; foul breath
- Pallor; weakness; obvious illness
- Negative, hostile, withdrawn
- Inappropriate to situation
- Rapid or slow pace
- Uses generalizations; lacks association
- Illogical sequence
- Flight of ideas; confusion

NEUROLOGIC STATUS

ASSESSING LEVEL OF CONSCIOUSNESS (LOC)
1. Ask client to give name, present location, and date or time of day

*This is an abbreviated assessment that can be conducted by the LPN/LVN at the beginning and/or end of the shift. A complete physical assessment is done by the RN on admission. Although vital signs could be done along with the appropriate body system, they are usually done at the beginning or the end of this procedure. (See full discussion of vital signs in Chapter 14.)*
Normal Findings
- Alert and oriented X3; able to give correct name, location and/or time of day or date

Deviations from Normal
- Inability to correctly name one or more items

ASSESSING VERBAL RESPONSE
1. Assess how the client communicates rather than what is communicated, through normal conversation.

Normal Findings
- Clear
- Rate consistent with overall psychomotor status
- Volume audible, normal conversational tone
- Modulation and flow—fluid and expressive
- Production—able to produce words

Deviations from Normal
- Incoherent, rambling, slurred, stuttering
- Monotone
- Dysphasia, aphasia

ASSESSING MOTOR RESPONSE
Grips
1. Ask the client to grasp your index and middle finger while you try to pull the fingers out.

Pushes/Pulls
1. Have the client hold arm up and resist while you try to push it down.
2. Have the client fully extend each arm and try to flex it while you attempt to hold arm in extension.
3. Have the client resist while you attempt to dorsiflex the foot and again while you attempt to flex the foot.

Walking Gait
1. Ask the client to walk across the room and back with eyesight focused ahead; assess the client’s gait.

Normal Findings
- Bilateral/equal 100% normal strength; normal full movement; against gravity and against full resistance
- Has upright posture and steady gait with opposing arm swing; walks unaided, maintaining balance

Deviations from Normal
- Unequal strength
- 10% of normal strength; no movement, contraction of muscle is palpable or visible
- Has poor posture and unsteady, irregular, staggering gait with wide stance; bends legs only from hips; has rigid or no arm movements

ASSESSING PUPIL REACTIONS
Direct and Consensual Reaction to Light
1. Partially darken the room.
2. Ask the client to look straight ahead.
3. Using a penlight or flashlight and approaching from the side, shine a light on the pupil.
4. Observe the response of the illuminated pupil. It should constrict (direct response).
5. Shine the light on the pupil again, and observe the response of the other pupil. It should also constrict (consensual response).

Reaction to Accommodation
1. Hold an object (a penlight or pencil) about 10 cm (4 in.) from the bridge of the client’s nose.
2. Ask the client to look first at the top of the object and then at a distant object (e.g., the far wall) behind the penlight. Alternate the gaze from the near to the far object.
3. Observe the pupil response. The pupils should constrict when looking at the near object and dilate when looking at the far object.
4. Next, move the penlight or pencil toward the client’s nose. The pupils should converge.
5. To record normal assessment of the pupils, use the abbreviation PERRLA (pupils equally round and react to light and accommodation).
6. Assess each pupil’s reaction to accommodation.

Normal Findings
- Pupils constrict when looking at near object; pupils dilate when looking at far object; pupils converge when near object is moved toward nose.

Deviations from Normal
- One or both pupils fail to constrict, dilate, or converge.

Part B: Integumentary Assessment

ASSESSING THE SKIN
1. Inspect skin color (best assessed under natural light and on areas not exposed to the sun).
2. Inspect uniformity of skin color.
3. Assess edema, if present (i.e., location, color, temperature, and the degree to which the skin remains indented or pitted when pressed by a finger). See Figure 12-16

4. Inspect and describe skin lesions.
5. Observe and palpate skin moisture.
6. Palpate skin temperature. Compare the two feet and the two hands, using the backs of your fingers. Backs of fingers pick up temperature differences more readily.
7. Note skin turgor (fullness or elasticity) by lifting and pulling the skin on an extremity into a tent position.
Normal Findings

- Varies from light to deep brown; from ruddy pink to light pink; from yellow overtones to olive
- Generally uniform except in areas exposed to the sun; areas of lighter pigmentation (palms, lips, nail beds) in dark-skinned people

Scale for Describing Edema

1 = Barely detectable
2 = Indentation of less than 5 mm
3 = Indentation of 5 to 10 mm
4 = Indentation of more than 10 mm

- Freckles, some birthmarks, some flat and raised nevi (moles); no abrasions or other lesions
- Moisture in skin folds and the axillae (varies with environmental temperature and humidity, body temperature, and activity)
- Uniform; within normal range
- When tented, skin springs back to previous state

Deviations from Normal

- Pallor, cyanosis, jaundice, erythema
- Areas of either hyperpigmentation or hypopigmentation (e.g., vitiligo, albinism, edema)
- Various interruptions in skin integrity
- Excessive moisture (e.g., in hyperthermia); excessive dryness (e.g., in dehydration)
- Generalized hyperthermia (e.g., in fever); generalized hypothermia (e.g., in shock); localized hyperthermia (e.g., in infection); localized hypothermia (e.g., in arteriosclerosis)
- Skin stays tented or moves back slowly (e.g., in dehydration)

ASSESSING MUCOUS MEMBRANES

1. Inspect and palpate the inner lips and buccal mucosa for color, moisture, texture, and the presence of lesions. Look for uniform pink color (darker, e.g., bluish hue, in dark-skinned clients).

Normal Findings

- Soft, moist, smooth texture
- Uniform pink color (freckled brown pigmentation with bluish undertones in dark-skinned clients)
- Moist, smooth, soft, glistening, and elastic texture

Deviations from Normal

- Pallor; cyanosis (seen especially in sclera of dark-skinned clients)
- Blisters; generalized or localized swelling; fissures, crusts, or scales (may result from excessive moisture, nutritional deficiency, or fluid deficit)
- Inability to purse lips (indicative of facial nerve damage)
- Pallor; white patches (leukoplakia)
- Excessive dryness

ASSESSING TEETH AND GUMS

1. Inspect the teeth and gums while examining the inner lips and buccal mucosa.

Normal Findings

- 32 adult teeth
- Smooth, white, shiny tooth enamel
- Pink gums (bluish or dark patches in dark-skinned clients)
- Moist, firm texture to gums
- No retraction of gums (pulling away from the crown of the tooth)

Deviations from Normal

- Missing teeth
- Ill-fitting dentures
- Brown or black discoloration of the enamel (may indicate staining or the presence of caries)
- Excessively red gums
- Spongy texture; bleeding; tenderness (may indicate periodontal disease)
- Receding, atrophied gums; swelling that partially covers the teeth
- Dry, furry tongue (associated with fluid deficit)
- Nodes, ulcerations, discolorations (white or red areas); areas of tenderness
- Restricted mobility
- Swelling, ulceration
- Swelling, nodules
- Inflammation (redness and swelling)
- Discoloration (e.g., jaundice or pallor)
- Palates the same color
Irritations
- Bony growths (exostoses) growing from the hard palate
- Deviation to one side from tumor or trauma; immobility (may indicate damage to trigeminal [fifth cranial] nerve or vagus [tenth cranial] nerve)
- Reddened or edematous; presence of lesions, plaques, or exudate
- Inflamed

Part C: Cardiovascular Assessment

ASSESSING HEART SOUNDS
1. Auscultate the heart in all four anatomic sites: aortic, pulmonary, tricuspid, and apical (mitral). Auscultation need not be limited to these areas. However, the nurse may need to move the stethoscope to find the most audible sounds for each client. (Heart sounds are generally assessed by the RN.)
2. Eliminate all sources of room noise. Heart sounds are of low intensity, and other noise hinders the nurse’s ability to hear them.
3. Keep the client in a supine position with head elevated 30 to 45 degrees.
4. Use both the flat-disc diaphragm and the bell-shaped diaphragm to listen to all areas.
5. In every area of auscultation, distinguish both $S_1$ and $S_2$ sounds.
6. When auscultating, concentrate on one particular sound at a time in each area: the first heart sound, followed by systole, then the second heart sound, then diastole. Systole and diastole are normally silent intervals.
7. Later, reexamine the heart while the client is in the upright sitting position. Certain sounds are more audible in this position.

Normal Findings
- $S_1$: usually heard at all sites; usually louder at the apical and tricuspid areas
- $S_2$: usually heard at all sites; usually louder at base of heart and aortic and pulmonic areas
- Systole: silent interval; slightly shorter duration than diastole at normal heart rate (60–90 beats/min)
- Diastole: silent interval; slightly longer duration than systole at normal heart rates
- $S_3$ in children and young adults
- $S_4$ in many older adults

Deviations from Normal
- Increased or decreased intensity
- Varying intensity with different beats
- Increased intensity at aortic area
- Increased intensity at pulmonic area
- Sharp-sounding ejection clicks

Presence of discharge
Swollen

ASSESSING THE NAILS
1. Note the color of the nail bed. Bluish nails suggest cyanosis.
2. Perform a capillary refill test if necessary. A capillary refill time of more than 3 seconds may indicate circulatory problems.

- $S_3$ in older adults
- $S_4$ may be a sign of hypertension

ASSESSING THE PERIPHERAL VASCULAR SYSTEM

Peripheral Pulses
1. Palpate the peripheral pulses (except the carotid pulse) on both sides of the client’s body simultaneously and systematically to determine the symmetry of pulse volume. This helps determine symmetry of pulse volume.
2. Assess radial pulses and compare. Check capillary refill. Ask client to wiggle fingers. Ask client not to look at his or her feet. Touch the client’s feet one at a time, asking the client if he or she is able to feel your touch. This will determine level of touch perception.
3. Assess pedal pulses and compare one side to the other. Note strength of pulse. If pedal pulses are not palpable, palpate posterior tibial pulse and compare one side to the other. Check capillary refill in toes. Ask client to wiggle toes. Ask client if he or she experiences numbness or tingling in extremities or sensation of cold. Tibial pulse should be more palpable because it is closer to the heart.
4. Palpate skin temperature. Compare the two feet and two hands, using the backs of your fingers. Coolness may indicate lack of tissue perfusion.
5. Note color of feet and toes and edema of the lower extremities.
6. Check for Homan’s sign. To perform this test, the nurse supports the leg while flexing the foot in dorsiflexion. Ask the client if pain is felt as the foot is flexed. Palpate muscles of calf for tender, hot areas. A positive Homan’s sign indicates venous thrombosis.

Normal Findings
- Symmetric pulse volumes
- Full pulsations
- In dependent position, distention and nodular bulges at calves are present
- When limbs are elevated, veins collapse (veins may appear tortuous or distended in older people)
- Limbs not tender
- Symmetric in size
Deviations from Normal

- Asymmetric volumes (indicate impaired circulation)
- Absence of pulsation (indicates arterial spasm or occlusion)
- Decreased, weak, thready pulsations (indicate impaired cardiac output)
- Increased pulse volume (may indicate hypertension, high cardiac output, or circulatory overload)
- Distended veins in the anteromedial part of thigh and/or lower leg or on posterolateral part of calf from knee to ankle
- Tenderness on palpation
- Pain in calf muscles with passive dorsiflexion of the foot (Homan’s sign)
- Warmth and redness over vein
- Swelling of one calf or leg

**Peripheral Perfusion**

1. Inspect the skin of the hands and feet for color, temperature, edema, and skin changes. These factors can identify poor blood perfusion.
2. Assess the adequacy of arterial flow if arterial insufficiency is suspected.

Normal Findings

- Natural skin color
- Skin temperature not excessively warm or cold
- No edema
- Skin texture resilient and moist
- Buerger’s test: Original color returns in 10 seconds; veins in feet or hands fill in about 15 seconds
- Capillary refill test: Immediate return of color

Deviations from Normal

- Cyanosis, pallor
- Skin cool
- Marked edema
- Skin thin and shiny or thick, waxy, shiny, and fragile, reduced hair, ulceration
- Delayed color return or mottled appearance; delayed venous filling; marked redness of arms or legs (indicates arterial insufficiency)
- Delayed return of color (arterial insufficiency)

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**Part D: Respiratory Assessment**

**ASSESSING THE THORAX AND LUNGS**

**Posterior Thorax**

1. Inspect the shape and symmetry of the thorax from posterior and lateral views.
2. Palpate the posterior thorax.
3. For clients who have no respiratory complaints, rapidly assess the temperature and integrity of all chest skin.
4. For clients who do have respiratory complaints, palpate all chest areas for bulges, tenderness, or abnormal movements. Do not perform deep palpation. Observe caution when palpating (lightly). If rib is fractured, deep palpation could lead to displacement of the bone fragment against the lungs.

Normal Finding

- Chest symmetric

Deviations from Normal

- Chest asymmetric
- Bulges, tenderness, or abnormal movements in chest area

**Anterior Thorax**

1. Auscultate the chest using the flat-disc diaphragm of the stethoscope. Flat-disc side is best for transmitting the high-pitched breath sounds. Use the systematic zigzag procedure used in percussion (Figure 12-17). This ensures that no areas are missed.
2. Ask the client to take slow, deep breaths through the mouth. Listen at each point to the breath sounds during a complete inspiration and expiration. Compare findings at each point with the corresponding point on the opposite side of the chest. Slow, deep breaths move more air and allow abnormalities to be heard.

Normal Findings

- Quiet, rhythmic, and effortless respirations
- Full symmetric respiratory effort

Deviations from Normal

- Adventitious breath sounds (e.g., crackles, rhonchi, wheeze, friction rub)
- Absence of breath sounds (associated with collapsed and surgically removed lung lobes)
- Asymmetric and/or decreased respiratory exchange
Part E: Abdominal Assessment

INSPECTION

1. Inspect the abdomen for skin integrity (refer to the discussion of skin assessment earlier in this chapter).
2. Inspect the abdomen for contour and symmetry.
3. Observe the abdominal contour (profile line from the rib margin to the pubic bone) while standing at the client’s side when the client is supine.
4. Ask the client to take a deep breath and to hold it (makes any abnormality such as an enlarged liver or spleen more obvious).
5. Assess the symmetry of contour while standing at the foot of the bed.
6. If distention is present, measure the abdominal girth by placing a tape around the abdomen at the level of the umbilicus. Distention may indicate hidden fluid imbalances.

Normal Findings
- Unblemished skin
- Uniform color
- Silver-white striae or surgical scars
- Flat, rounded (convex), or scaphoid (concave or boat shaped)
- No evidence of enlargement of liver or spleen
- Symmetric contour

Deviations from Normal
- Presence of rash or other lesions
- Tense, glistening skin (may indicate ascites, edema)
- Purple striae (associated with Cushing’s disease)
- Generalized distention (associated with gas retention, obesity, ascites, or tumors)
- Lower abdominal distention (may indicate bladder distention, pregnancy, or ovarian mass)
- Markedly scaphoid abdomen (associated with malnutrition)
- Evidence of enlargement of liver or spleen
- Asymmetric contour, such as localized protrusions around umbilicus, inguinal ligaments, or scars (possible hernia or tumor)

AUSCULTATION

1. Auscultate the abdomen for bowel sounds and vascular sounds.
2. Warm the hands and the stethoscope diaphragms. Cold hands and a cold stethoscope may cause the client to contract the abdominal muscles, and these contractions may be heard during auscultation.

For Bowel Sounds

1. Use the flat-disc diaphragm (Figure 12-18). Intestinal sounds are relatively high pitched and best accentuated by the flat-disc diaphragm. Light pressure with the stethoscope is adequate to detect sounds.

2. Ask when the client last ate. The frequency of sounds relates to the state of digestion or the presence of food in the gastrointestinal tract. Shortly after or long after eating, bowel sounds may normally increase. They are loudest when a meal is long overdue. Four to 7 hours after a meal, bowel sounds in the RLQ may be heard continuously over the ileocecal valve area while the digestive contents from the small intestine empty through the valve into the large intestine.
3. Place the flat-disc diaphragm of the stethoscope in each of the four quadrants of the abdomen (see Figure 12-4). Many nurses begin in the right lower quadrant in the area of the cecum.
4. Listen for active bowel sounds—irregular gurgling noises occurring about every 5 to 20 seconds. The duration of a single sound may range from less than a second to more than several seconds.
5. Normal bowel sounds are described as audible. Alterations in sounds are described as absent or hypoactive, that is, extremely soft and infrequent (e.g., one per minute), and hyperactive or increased, that is, high-pitched, loud, rushing sounds that occur frequently (e.g., every 3 seconds), also known as borborygmi. Absence of sounds indicates a cessation of intestinal motility. Hypoactive sounds indicate decreased motility and are usually associated with manipulation of the bowel during surgery, inflammation, paralytic ileus, or late bowel obstruction. Hyperactive sounds indicate increased intestinal motility and are usually associated with diarrhea, an early bowel obstruction, or the use of laxatives.

Absent, Hypoactive, or Hyperactive Bowel Sounds

1. If bowel sounds appear to be absent, listen for 3 to 5 minutes before concluding that they are absent. Because bowel sounds are so irregular, a longer time and more sites are used to confirm absence of sounds.

Normal Finding
- Audible bowel sounds
Deviations from Normal

- Limited movement due to pain or disease process
- Visible peristalsis in nonlean clients (with bowel obstruction)

PALPATION

1. Perform light palpation first to detect areas of tenderness and/or muscle guarding. Systematically explore all four quadrants. Palpation is used to detect tenderness, the presence of masses or distention, and the outline and position of abdominal organs (e.g., the liver, spleen, and kidneys). Two types of palpation are used: light and deep. In some practice settings, palpation is limited to light abdominal palpation to assess tenderness and bladder palpation to assess for distention.

2. Before palpation, ensure that the client’s position is appropriate for relaxation of the abdominal muscles, and (b) warm the hands. Cold hands can elicit muscle tension and thus impede palpatory evaluation.

3. For light palpation, hold the palm of your hand slightly above the client’s abdomen, with your fingers parallel to the abdomen.

4. Depress the abdominal wall lightly, about 1 cm or to the depth of the subcutaneous tissue, with the pads of your fingers (Figure 12-19).

5. Move the finger pads in a slight circular motion.

6. Note areas of slight tenderness or superficial pain, large masses, and muscle guarding. To determine areas of tenderness, ask the client to tell you about them, watch for changes in the client’s facial expressions, and note areas of muscle guarding.

Normal Findings

- No tenderness; relaxed soft abdomen with smooth, consistent tension; pain free
- As for light palpation

Deviations from Normal

- Tenderness and hypersensitivity
- Superficial masses
- Localized areas of increased tension
- Generalized or localized areas of tenderness

Figure 12-19 For light palpation of the abdomen, depress the abdominal wall lightly, about 1 cm or to the depth of the subcutaneous tissue, with the pads of your fingers.

Part F: Genitourinary Assessment

ASSESSING URINATION

1. Assess client for continence and independent urination.

Normal Finding

- Continent

Deviation from Normal

- Incontinent

Indwelling catheter

1. Assess amount, color, odor, clarity, sediment, and frequency

Normal Findings/Deviations from Normal

- Refer to Table 30-4 for normal characteristics of urine.

Part G: Musculoskeletal System

ASSESSING MUSCLES

1. Inspect the muscles for size. Compare the muscles on one side of the body (e.g., of the arm, thigh, and calf) to the same muscle on the other side. For any discrepancies, measure the muscles with a tape.

2. Inspect the muscles and tendons for contractures (shortening).

3. Inspect the muscles for fasciculations and tremors. Inspect any tremors of the hands and arms by having the client hold the arms in front of the body.
ASSESSING BONES
1. Inspect the skeleton for normal structure and deformities.
2. Examine for scoliosis in persons over age 12. Client stands facing away from the nurse and bends over to touch the toes.

ASSESSING JOINTS
1. Inspect the joints for swelling.
2. Palpate each joint for tenderness, smoothness of movement, swelling, crepitation, or presence of nodules.
3. Assess joint range of motion.

Normal Findings
- Equal size on both sides of the body
- No contractures
- No fasciculations or tremors
- Normally firm
- Smooth coordinated movements
- Equal strength on each side of body
- No deformities
- Straight spine
- No tenderness or swelling
- No swelling
- No tenderness, swelling, crepitation, or nodules
- Joints move smoothly
- Varies to some degree in accordance with person's genetic makeup and degree of physical activity

Deviations from Normal
- Atrophy (a decrease in size) or hypertrophy (an increase in size)
- Malposition of body part (e.g., a foot fixed in dorsiflexion)
- Presence of fasciculation or tremor
- Atonic (lacking tone)
- Flaccidity (weakness or laxness) or spasticity (sudden involuntary muscle contraction)
- 25% or less of normal strength
- Bones misaligned
- A hump in the thoracic spine indicating a lateral curve
- Presence of tenderness or swelling (may indicate fractures, neoplasms, or osteoporosis)
- One or more swollen joints
- Presence of tenderness, swelling, crepitation, or nodules
- Limited range of motion in one or more joints

SAMPLE DOCUMENTATION
[date] Client alert and oriented × 3, eyes PERRLA, I&O 700 mL in 6 h; BP 130/80; R 16; P 80; breath sounds clear; bowel sounds present and active in all quadrants. Abdominal incision open to air, without redness or swelling, staples intact.
Complained of incision pain with a stated pain level of 7. PRN Pain med given 1100. Pain level 1 at 1145.
Barbara Cook, LPN