
CHAPTER 12

Health and Physical Assessment of the Adult Client

<http://evolve.elsevier.com/Silvestri/comprehensiveRN/>

Priority Concepts

Clinical Judgment; Health Promotion

I. Environment/Setting

- A. Establish a relationship and explain the procedure to the client.
- B. Ensure privacy and make the client feel comfortable (comfortable room temperature, sufficient lighting, remove distractions such as noise or objects, and avoid interruptions).
- C. Sit down for the interview (avoid barriers such as a desk), maintain an appropriate social distance, and maintain eye level.
- D. Use therapeutic communication techniques and open-ended questions to obtain information about the client's symptoms and concerns; allow time for the client to ask questions.
- E.  Consider religious and cultural characteristics such as language (the need for an interpreter), values and beliefs, health practices, eye contact, and touch.
- F. Keep note-taking to a minimum so the client is the focus of attention.
- G. Types of health and physical assessments ([Box 12-1](#))
- H. SOAP (subjective, objective, assessment, plan) notes are a frequently used format for documenting client data including health history, physical examination, assessment or diagnosis, and plan of care. The nurse should be familiar with SOAP notes, how to interpret the initial history and physical (H&P) SOAP notes, and how to follow subsequent progress SOAP notes so as to maintain abreast of changes in the client's plan of care. See [Table 12-1](#) for a detailed list of information contained in SOAP notes.

II. Health History (refer to section titled "Subjective" in [Table 12-1](#))

- A. General state of health: Body features and physical characteristics, body movements, body posture, level of consciousness, nutritional status, speech

- B.  Chief complaint and history of present illness (document

- direct client quotes) that leads the client to seek care
- C. Family history: The health status of direct blood relatives as well as the client's spouse
 - D. Social history
 1. Data about the client's lifestyle, with a focus on factors that may affect health
 2. Information about alcohol, drug, and tobacco use; sexual practices; tattoos; body piercing; travel history; and work setting to identify occupational hazards
 - E.  Domestic violence screening
 1. Done to determine whether the client is experiencing any form of domestic violence
 2. Conducted during a one-to-one interview with the client while obtaining the health history

III. Mental Status Exam

- A. The mental status can be assessed while obtaining subjective data from the client during the health history interview.
- B. Appearance
 1. Note appearance, including posture, body movements, dress, and hygiene and grooming.
 2.  An inappropriate appearance and poor hygiene may be indicative of depression, manic disorder, dementia, organic brain disease, or another disorder.
- C. Behavior
 1. Level of consciousness: Assess alertness and awareness and the client's ability to interact appropriately with the environment.
 2. Facial expression and body language: Check for appropriate eye contact and determine whether facial expression and body language are appropriate to the situation; this assessment also provides information regarding the client's mood and affect.
 3. Speech: Assess speech pattern for articulation and appropriateness of conversation.
- D. Cognitive level of functioning ([Box 12-2](#))

IV. Physical Exam (refer to section titled "Objective" in [Table 12-1](#))

- A. Overview
 1. Gather equipment needed for the examination.
 2. Use the senses of sight, smell, touch, and hearing to collect data.
 3.  Assessment includes **inspection, palpation, percussion, and auscultation**; these skills are performed one at a time, in this order (except the

abdominal assessment).

B.  Assessment techniques

1. Inspection

- a. The first assessment technique, which uses vision and smell senses while observing the client
- b. Requires good lighting, adequate body exposure with draping, and possibly the use of certain instruments such as an otoscope or ophthalmoscope

2. Palpation

- a. Uses the sense of touch; warm the hands before touching the client.
- b. Identify tender areas and palpate them last.
- c. Start with light palpation to detect surface characteristics, and then perform deeper palpation.
- d. Light palpation is done with 1 hand by pressing the skin gently with the tips of 2 or 3 fingers held close together; deep palpation is done by placing 1 hand on top of the other and pressing down with the fingertips of both hands.
- e. Assess texture, temperature, and moisture of the skin, as well as organ location and size and symmetry if appropriate.
- f. Assess for swelling, vibration or pulsation, rigidity or spasticity, and crepitation.
- g. Assess for the presence of lumps or masses, as well as the presence of tenderness or pain.

3. Percussion

- a. Involves tapping the client's skin to assess underlying structures and to determine the presence of vibrations and sounds and, if present, their intensity, duration, pitch, quality, and location
- b. Provides information related to the presence of air, fluid, or solid masses as well as organ size, shape, and position
- c. Descriptions of findings include

resonance, hyperresonance, tympany, dullness, or flatness.

4. Auscultation: Involves listening with a stethoscope to sounds produced by the body for presence and quality, such as heart, lung, or bowel sounds

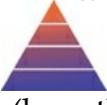
C. Vital signs

1. Includes temperature, radial pulse (apical pulse may be measured during the cardiovascular assessment), respirations, blood pressure, pulse oximetry, and presence of pain (refer to [Chapter 10](#) for information on vital signs, pulse oximetry, and pain)
2. Height, weight, and nutritional status are also assessed.

V. Body Systems Assessment

- A. Integumentary system: Involves inspection and palpation of skin, hair, and nails.

1.  **Subjective data:** Self-care behaviors, history of skin disease, medications being taken, environmental or occupational hazards and exposure to toxic substances, changes in skin color or pigmentation, change in a mole or a sore that does not heal

2.  **Objective data:** Color, temperature (hypothermia or hyperthermia); excessive dryness or moisture; skin turgor; texture (smoothness, firmness); excessive bruising, itching, rash; hair loss (alopecia) or nail abnormalities such as pitting; lesions (may be inspected with a magnifier and light or with the use of a Wood's light [ultraviolet light used in a darkened room]); scars or birthmarks; edema; capillary filling time ([Boxes 12-3](#) and [12-4](#); [Table 12-2](#))

3. Dark-skinned client
 - a. Cyanosis: Check lips and tongue for a gray color; nailbeds, palms, and soles for a blue color; and conjunctivae for pallor.
 - b. Jaundice: Check oral mucous membranes for a yellow color; check the sclera nearest to the iris for a yellow color.
 - c. Bleeding: Look for skin swelling and darkening and compare the affected side with the unaffected side.
 - d. Inflammation: Check for warmth or a shiny or taut and pitting skin area, and compare with the unaffected side.

4. Refer to [Chapter 42](#) for diagnostic tests related to the integumentary system



To test skin turgor, pinch a large fold of skin and assess the ability of the skin to return to its place when released. Poor turgor occurs in severe dehydration or extreme weight loss.

5.  Client teaching

- a. Provide information about factors that can be harmful to the skin, such as sun exposure.
 - b. Encourage performing self-examination of the skin for lesions monthly using the ABCDE (asymmetry, border irregularity, color variance, diameter greater than 6 mm, evolving size, shape, and color) mnemonic.
- B. Head, neck, and lymph nodes: Involves inspection, palpation, and auscultation of the head, neck, and lymph nodes
1. Ask the client about headaches; episodes of dizziness (lightheadedness) or vertigo (spinning sensation); history of head injury; loss of consciousness; seizures; episodes of neck pain; limitations of range of motion; numbness or tingling in the shoulders, arms, or hands; lumps or swelling in the neck; difficulty swallowing; medications being taken; and history of surgery in the head and neck region.
 2. Head
 - a. Inspect and palpate: Size, shape, masses or tenderness, and symmetry of the skull
 - b. Palpate temporal arteries, located above the cheekbone between the eye and the top of the ear.
 - c. Palpate frontal and maxillary sinuses for tenderness.
 - d. Temporomandibular joint: Ask the client to open his or her mouth and move it from side to side; note any crepitation, tenderness, or limited range of motion. This tests cranial nerve V, the trigeminal nerve.
 - e. Face: Inspect facial structures for shape, symmetry, involuntary movements, or swelling, such as periorbital edema (swelling around the eyes).

3. Neck

- a. Inspect for symmetry of accessory neck muscles.
- b. Assess range of motion.
- c.  Test cranial nerve XI (spinal accessory nerve) to assess muscle strength: Ask the client to push against resistance applied to the side of the chin (tests sternocleidomastoid muscle); also ask the client to shrug the shoulders against resistance (tests trapezius muscle).
- d. Palpate the trachea: It should be midline, without any deviations.
- e. Thyroid gland: Inspect the neck as the client takes a sip of water and swallows (thyroid tissue moves up with a swallow); palpate using an anterior-posterior approach (usually the normal adult thyroid cannot be palpated); if it is enlarged, auscultate for a bruit.

4. Lymph nodes

- a. Palpate using a gentle pressure and a circular motion of the finger pads.
- b. Begin with the preauricular lymph nodes (in front of the ear); move to the posterior auricular lymph nodes and then downward toward the supraclavicular lymph nodes. Lymph nodes in the head and neck area to be palpated include preauricular, postauricular, tonsillar, submandibular, submental, anterior cervical chain (superficial and deep), posterior cervical chain, supraclavicular, and infraclavicular.
- c. Palpate with both hands, comparing the 2 sides for symmetry.
- d. If nodes are palpated, note their size, shape, location, mobility, consistency, and tenderness.

5.  Client teaching: Instruct the client to notify the primary health care provider (PHCP) if persistent headache, dizziness, or neck pain occurs; if swelling

or lumps are noted in the head and neck region; or if a neck or head injury occurs.



Neck movements are never performed if the client has sustained a neck injury or if a neck injury is suspected.

C. Eyes: Includes inspection, palpation, vision-testing procedures, and the use of an ophthalmoscope

1.  Subjective data: Difficulty with vision (e.g., decreased acuity, double vision, blurring, blind spots); pain, redness, swelling, watery or other discharge from the eye; use of glasses or contact lenses; medications being taken; history of eye problems
2.  Objective data
 - a. Inspect the external eye structures, including eyebrows, for symmetry; eyelashes for even distribution; eyelids for ptosis (drooping); eyeballs for exophthalmos (protrusion) or enophthalmos (recession into the orbit; sunken eye).
 - b. Inspect the conjunctiva (should be clear), sclera (should be white), and lacrimal apparatus (check for excessive tearing, redness, tenderness, or swelling); cornea and lens (should be smooth and clear); iris (should be flat, with a round regular shape and even coloration); eyelids; and pupils.
3.  Snellen eye chart
 - a. The Snellen eye chart is a simple tool used to measure distance vision.
 - b. Position the client in a well-lit spot 20 feet (6 meters) from the chart, with the chart at eye level, and ask the client to read the smallest line that he or she can discern.
 - c. Instruct the client to leave on glasses or leave in contact lenses; if the glasses are for reading only, they are removed because they blur distance vision.
 - d. Test 1 eye at a time, cover the eye not

- being tested.
 - e. Record the result using the fraction at the end of the last line successfully read on the chart.
 - f. Normal visual acuity is 20/20 (distance in feet at which the client is standing from the chart/distance in feet at which a normal eye could have read that particular line).
 - g. This assessment tests cranial nerve II, the optic nerve.
4. Near vision
- a. Use a handheld vision screener (held about 14 inches [35.5 cm] from the eye) that contains various sizes of print or ask the client to read from a magazine.
 - b. Test each eye separately with the client's glasses on or contact lenses in. Cover the eye not being tested.
 - c. Normal result is 14/14 (distance in inches at which the subject holds the card from the eye/distance in inches at which a normal eye could have read that particular line).
 - d. This assessment tests cranial nerve II, the optic nerve.
5. Confrontation test
- a. A crude but rapid test used to measure peripheral vision and compare the client's peripheral vision with the nurse's (assuming that the nurse's peripheral vision is normal)
 - b. The client covers 1 eye and looks straight ahead; the nurse, positioned 2 feet away (60 cm), covers his or her eye opposite the client's covered eye.
 - c. The nurse advances a finger or other small object from the periphery from several directions; the client should see the object at the same time the nurse does.
 - d. Documented as the client's peripheral vision is equal to that of the examiner's.
 - e. This assessment tests cranial nerve II, the optic nerve.
6. Corneal light reflex
- a. Used to assess for parallel alignment of

- the axes of the eyes
 - b. Client is asked to gaze straight ahead as the nurse holds a light about 12 inches (30 cm) from the client.
 - c. The nurse looks for reflection of the light on the corneas in exactly the same spot in each eye.
7. Cover/uncover test
- a. Used to check for slight degrees of deviated alignment
 - b. Each eye is tested separately.
 - c. The nurse asks the client to gaze straight ahead and cover 1 eye.
 - d. The nurse examines the uncovered eye, expecting to note a steady, fixed gaze.
8. Diagnostic positions test (6 cardinal positions of gaze) (Fig. 12-1)
- a. The 6 muscles that attach the eyeball to its orbit and serve to direct the eye to points of interest are tested.
 - b. Client holds head still and is asked to move his or her eyes and follow a small object.
 - c. The examiner notes any parallel movements of the eye or nystagmus, an involuntary, rhythmic, rapid twitching of the eyeballs.
 - d. This assessment tests cranial nerves III, IV, and VI, oculomotor, trochlear, and abducens, respectively.
9. Color vision
- a. Tests for color vision involve the client picking numbers or letters out of a complex and colorful picture using what is known as the *Ishihara chart*.
 - b. The test is sensitive for the diagnosis of red-green blindness but cannot detect discrimination of blue.



The first slide on the Ishihara chart is one that everyone can discriminate; failure to identify numbers on this slide suggests a problem with performing the test, not a problem with color vision.

10.  Pupils (Box 12-5)

- a. The pupils are round and of equal size.
- b. Increasing light causes pupillary

constriction.

- c. Decreasing light causes pupillary dilation.
- d. Constriction of both pupils is a normal response to direct light. Constriction of the pupil in which the light is being shone is considered reaction to direct light, and constriction of the pupil in which the light is not being shone is considered reaction to consensual light.

11. Sclera and cornea

- a. Normal sclera color is white.
- b. A yellow color to the sclera may indicate jaundice or systemic problems.
- c. In a dark-skinned person, the sclera may normally appear yellow; pigmented dots may be present.
- d. The cornea is transparent, smooth, shiny, and bright.
- e. Cloudy areas or specks on the cornea may be the result of an accident or eye injury.

12. Ophthalmoscopy or funduscopy

- a. The ophthalmoscope, or funduscope, is an instrument used to examine the external structures and the interior of the eye.
- b. The room is darkened so that the pupil will dilate.
- c. The instrument is held with the right hand when examining the right eye and with the left hand when examining the left eye.
- d. The client is asked to look straight ahead at an object on the wall.
- e. The examiner should approach the client's eye from about 12 to 15 inches (30.5 to 38 cm) away and 15 degrees lateral to the client's line of vision.
- f. As the instrument is directed at the pupil, a red glare (red reflex) is seen in the pupil.
- g. The red reflex is the reflection of light on the vascular retina.
- h. Absence of the red reflex may indicate opacity of the lens.

- i. The optic disc, retinal vessels, general background, and macula can be examined.
- j. The optic disc should be creamy yellow-orange to pink, round or oval shape with distinct margins. Retinal vessels should be visible without nicking and engorgement. General background varies from light red to dark brown red, corresponding with the person's color.

13. Refer to [Chapter 56](#) for diagnostic tests related to the eye.

14.  Client teaching

- a. Instruct the client to notify the PHCP if alterations in vision occur or any redness, swelling, or drainage from the eye is noted.
- b. Inform the client of the importance of regular eye examinations.

D. Ears: Includes inspection, palpation, hearing tests, vestibular assessment, and the use of an otoscope

1.  Subjective data: Difficulty hearing, earaches, drainage from the ears, dizziness, ringing in the ears, exposure to environmental noise, use of a hearing aid, medications being taken, history of ear problems or infections

2.  Objective data

- a. Inspect and palpate the external ear, noting size, shape, symmetry, skin color, and the presence of pain.
- b. Inspect the external auditory meatus for size, swelling, redness, discharge, and foreign bodies; some cerumen (earwax) may be present.

3. Auditory assessment

- a. Sound is transmitted by air conduction and bone conduction.
- b. Air conduction takes 2 or 3 times longer than bone conduction.
- c. Hearing loss is categorized as conductive, sensorineural, or mixed conductive and sensorineural.
- d. Conductive hearing loss is caused by

any physical obstruction to the transmission of sound waves.

e. Sensorineural hearing loss is caused by a defect in the cochlea, eighth cranial nerve, or the brain itself.

f. A mixed hearing loss is a combination of a conductive and sensorineural hearing loss; it results from problems in both the inner ear and the outer ear or middle ear.

4. Voice (Whisper) test

a. Used to determine whether hearing loss has occurred

b. One ear is tested at a time (the ear not being tested is occluded by the client).

c. The nurse stands 1 to 2 feet (30 to 60 cm) from the client, covers his or her mouth so that the client cannot read the lips, exhales fully, and softly whispers 2-syllable words in the direction of the unoccluded ear; the client points a finger up during the test when the nurse's voice is heard (a ticking watch may also be used to test hearing acuity).

d. Failure to hear the sounds could indicate possible fluid collection and/or consolidation, requiring further assessment.

5. Watch test

a. A ticking watch is used to test for high-frequency sounds.

b. The examiner holds a ticking watch about 5 inches (12.5 cm) from each ear and asks the client if the ticking is heard.

6. Tuning fork tests

a. Used to measure hearing on the basis of air conduction or bone conduction; includes the Weber's and Rinne's tests. These tests are not commonly used because of their limited sensitivity to detect hearing loss.

7. Vestibular assessment ([Box 12-6](#))

8. Otoscope exam



Before performing an otoscopic exam and inserting the

speculum, check the auditory canal for foreign bodies. Instruct the client not to move the head during the examination to avoid damage to the canal and tympanic membrane.

- a. The client's head is tilted slightly away and the otoscope is held upside down as if it were a large pen; this permits the examiner's hand to lay against the client's head for support.
- b. In an adult, pull the pinna up and back to straighten the external canal.
- c. Visualize the external canal while slowly inserting the speculum.
- d. The normal external canal is pink and intact, without lesions and with varying amounts of cerumen and fine little hairs.
- e. Assess the tympanic membrane for intactness; the normal tympanic membrane is intact, without perforations, and should be free from lesions.
- f. The tympanic membrane is transparent, opaque, pearly gray, and slightly concave. The cone of light reflex is noted at 5 o'clock on the right and 7 o'clock on the left, and there is positive mobility when the client swallows.
- g. A fluid line or the presence of air bubbles is not normally visible.
- h. If the tympanic membrane is bulging or retracting, the edges of the light reflex will be fuzzy (diffuse) and may spread over the tympanic membrane.



The otoscope is never introduced blindly

into the external canal because of the risk of perforating the tympanic membrane.

9. Refer to [Chapter 56](#) for diagnostic tests related to the ear.
10. Client teaching
 - a. Instruct the client to notify the PHCP if an alteration in hearing or ear pain or ringing in the ears occurs, or if redness, swelling, or drainage from the ear is noted.

- b. Instruct the client in the proper method of cleaning the ear canal.
- c. The client should cleanse the ear canal with the corner of a moistened washcloth and should never insert sharp objects or cotton-tipped applicators into the ear canal.

E. Nose, mouth, and throat: Includes inspection and palpation

1.  Subjective data

- a. Nose: Ask about discharge or nosebleed (epistaxis), facial or sinus pain, history of frequent colds, altered sense of smell, allergies, medications being taken, history of nose trauma, or surgery.
- b. Mouth and throat: Ask about the presence of sores or lesions; bleeding from the gums or elsewhere; altered sense of taste; toothaches; use of dentures or other appliances; tooth and mouth care hygiene habits; at-risk behaviors (e.g., smoking, alcohol consumption); and history of infection, trauma, or surgery.

2.  Objective data

- a. External nose should be midline and in proportion to other facial features.
- b. Patency of the nostrils can be tested by pushing each nasal cavity closed and asking the client to sniff inward through the other nostril.
- c. A nasal speculum and penlight or a short, wide-tipped speculum attached to an otoscope head is used to inspect for redness, swelling, discharge, bleeding, or foreign bodies; the nasal septum is assessed for deviation.
- d. The nurse presses the frontal sinuses (located below the eyebrows) and over the maxillary sinuses (located below the cheekbones); the client should feel firm pressure but no pain.
- e. The external and inner surfaces of the lips are assessed for color, moisture, cracking, or lesions.

- f. The teeth are inspected for condition and number (should be white, spaced evenly, straight, and clean, free of debris and decay).
- g. The alignment of the upper and lower jaws is assessed by having the client bite down.
- h. The gums are inspected for swelling, bleeding, discoloration, and retraction of gingival margins (gums normally appear pink).
- i. The tongue is inspected for color, surface characteristics, moisture, white patches, nodules, and ulcerations (dorsal surface is normally rough; ventral surface is smooth and glistening, with visible veins).
- j. The nurse retracts the cheek with a tongue depressor to check the buccal mucosa for color and the presence of nodules or lesions; normal mucosa is glistening, pink, soft, moist, and smooth.
- k. Using a penlight and tongue depressor, the nurse inspects the hard and soft palates for color, shape, texture, and defects; the hard palate (roof of the mouth), which is located anteriorly, should be white and dome-shaped, and the soft palate, which extends posteriorly, should be light pink and smooth.
- l. The uvula is inspected for midline location; the nurse asks the client to say "ahhh" and watches for the soft palate and uvula to rise in the midline (this tests 1 function of cranial nerve X, the vagus nerve).
- m. Using a penlight and tongue depressor, the nurse inspects the throat for color, presence of tonsils, and the presence of exudate or lesions; tonsils should be graded (0 is surgically removed; 1 + is tonsils hidden within pillars; 2 + is tonsils extending to the pillars, 3 + is tonsils extending beyond the pillars, 4 + is tonsils extending to the midline). One technique to test

cranial nerve XII (the hypoglossal nerve) is asking the client to stick out the tongue (should protrude in the midline).

- n. To test the gag reflex, touch the posterior pharynx with the end of a tongue blade; the client should gag momentarily (this tests the function of cranial nerve IX, the glossopharyngeal nerve).

3.  Client teaching

- a. Emphasize the importance of hygiene and tooth care, as well as regular dental examinations and the use of fluoridated water or fluoride supplements.
- b. Encourage the client to avoid at-risk behaviors (e.g., smoking, alcohol consumption).
- c. Stress the importance of reporting pain or abnormal occurrence (e.g., nodules, lesions, signs of infection).

F. Lungs

1.  Subjective data: Cough; expectoration of sputum; shortness of breath or dyspnea; chest pain on breathing; smoking history; environmental exposure to pollution or chemicals; medications being taken; history of respiratory disease or infection; last tuberculosis test, chest radiograph, pneumonia, and any influenza immunizations. Record the smoking history in pack-years (the number of packs per day times the number of years smoked). For example, a client who has smoked one-half pack a day for 20 years has a 10-pack/year smoking history.
2. Objective data: Includes inspection, palpation, percussion, and auscultation
3. Inspection of the anterior and posterior chest: Note skin color and condition and the rate and quality of respirations, look for lumps or lesions, note the shape and configuration of the chest wall, and note the position the client takes to breathe.
4. Palpation: Palpate the entire chest wall, noting skin temperature and moisture and looking for areas of tenderness and lumps, lesions, or masses; assess chest excursion and tactile or vocal fremitus (Box 12-7).

5. Percussion

- a. Starting at the apices, percuss across the top of the shoulders, moving to the interspaces, making a side-to-side comparison all the way down the lung area (Fig. 12-2).
- b. Determine the predominant note; resonance is noted in healthy lung tissue.
- c. Hyperresonance is noted when excessive air is present and a dull note indicates lung density.

6. Auscultation

- a. Using the flat diaphragm endpiece of the stethoscope, hold it firmly against the chest wall and listen to at least 1 full respiration in each location (anterior, posterior, and lateral).
 - b. Posterior: Start at the apices and move side to side for comparison (see Fig. 12-2).
 - c. Anterior: Auscultate the lung fields from the apices in the supraclavicular area down to the 6th rib; avoid percussion and auscultation over female breast tissue (displace this tissue), because a dull sound will be produced (see Fig. 12-2).
 - d. Compare findings on each side.
7. Normal breath sounds: Three types of breath sounds are considered normal in certain parts of the thorax, including vesicular, bronchovesicular, and bronchial; breath sounds should be clear to auscultation (Fig. 12-3).
8. Abnormal breath sounds: Also known as *adventitious sounds* (Table 12-3)
9. Voice sounds (Box 12-8)
- a. Performed when a pathological lung condition is suspected
 - b. Auscultate over the chest wall; the client is asked to vocalize words or a phrase while the nurse listens to the chest.
 - c. Normal voice transmission is soft and muffled; the nurse can hear the sound but is unable to distinguish exactly what is being said.



When auscultating breath sounds, instruct

the client to breathe through the mouth and monitor the client for dizziness.

10. Refer to [Chapter 50](#) for diagnostic tests related to the respiratory system.

11.  Client teaching

- a. Encourage the client to avoid exposure to environmental hazards, including smoking (discuss smoking cessation programs as appropriate).
- b. Client should undergo periodic examinations as prescribed (e.g., chest x-ray study, tuberculosis skin testing; refer to [Chapter 50](#)).
- c. Encourage the client to obtain pneumonia and influenza immunizations.
- d. PHCP should be notified if client experiences persistent cough, shortness of breath, or other respiratory symptoms.

G. Heart

1.  Subjective data: Chest pain, dyspnea, cough, fatigue, edema, nocturia, leg pain or cramps (claudication), changes in skin color, obesity, medications being taken, cardiovascular risk factors, family history of cardiac or vascular problems, personal history of cardiac or vascular problems
2. Objective data: May include inspection, palpation, percussion, and auscultation
3. Inspection: Inspect the anterior chest for pulsations (apical impulse) created as the left ventricle rotates against the chest wall during systole; not always visible.
4. Palpation
 - a. Palpate the apical impulse at the fourth or fifth interspace, or medial to the midclavicular line (not palpable in obese clients or clients with thick chest walls).
 - b. Palpate the apex, left sternal border, and base for pulsations; normally none are present.
5. Percussion: May be performed to outline the heart's

borders and to check for cardiac enlargement (denoted by resonance over the lung and dull notes over the heart).

6.  Auscultation

- a. Areas of the heart ([Fig. 12-4](#))
- b. Auscultate heart rate and rhythm; check for a pulse deficit (auscultate the apical heartbeat while palpating an artery) if an irregularity is noted.
- c. Assess S1 (“lub”) and S2 (“dub”) sounds, and listen for extra heart sounds, as well as the presence of murmurs (blowing or swooshing noise that can be faint or loud with a high, medium, or low pitch).
- d. Grading a murmur: See [Box 12-9](#).

7. Peripheral vascular system

- a. Assess adequacy of blood flow to the extremities by palpating arterial pulses for equality and symmetry and checking the condition of the skin and nails.
- b. Check for pretibial edema and measure calf circumference (see [Table 12-2](#)).
- c. Measure blood pressure.
- d. Palpate superficial inguinal nodes (using firm but gentle pressure), beginning in the inguinal area and moving down toward the inner thigh.
- e. An ultrasonic stethoscope may be needed to amplify the sounds of a pulse wave if the pulse cannot be palpated.
- f. Carotid artery: Located in the groove between the trachea and sternocleidomastoid muscle, medial to and alongside the muscle
- g. Palpate 1 carotid artery at a time to avoid compromising blood flow to the brain.
- h. Auscultate each carotid artery for the presence of a bruit (a blowing, swishing, or buzzing, humming sound), which indicates blood flow turbulence; normally a bruit is not present.
- i. Palpate the arteries in the extremities

(Box 12-10).

8. Refer to [Chapter 52](#) for diagnostic tests related to the cardiovascular system.

9.  Client teaching

- a. Advise client to modify lifestyle for risk factors associated with heart and vascular disease.
- b. Encourage the client to seek regular physical examinations.
- c. Client should seek medical assistance for signs of heart or vascular disease.

H. Breasts

1.  Subjective data: Pain or tenderness, lumps or thickening, swollen axillary lymph nodes, nipple discharge, rash or swelling, medications being taken, personal or family history of breast disease, trauma or injury to the breasts, previous surgery on the breasts, breast self-examination (BSE) compliance, mammograms as prescribed

2.  Objective data: Inspection and palpation

3. Inspection

- a. Performed with the client's arms raised above the head, the hands pressed against the hips, and the arms extended straight ahead while the client sits and leans forward
- b. Assess size and symmetry (1 breast is often larger than the other); masses, flattening, retraction, or dimpling; color and venous pattern; size, color, shape, and discharge in the nipple and areola; and the direction in which nipples point.

4. Palpation

- a. Client lies supine, with the arm on the side being examined behind the head and a small pillow under the shoulder.
- b. The nurse uses the pads of the first 3 fingers to compress the breast tissue gently against the chest wall, noting tissue consistency.
- c. Palpation is performed systematically, ensuring that the entire breast and tail are palpated.

- d. The nurse notes the consistency of the breast tissue, which normally feels dense, firm, and elastic.
- e. The nurse gently palpates the nipple and areola and compresses the nipple, noting any discharge.
- f. It is important to document lump or mass characteristics, which includes size, shape, consistency, movability, distinctness, nipple characteristics, skin findings over the lump, tenderness, and lymphadenopathy.

5. Axillary lymph nodes

- a. The nurse faces the client and stands on the side being examined, supporting the client's arm in a slightly flexed position, and abducts the arm away from the chest wall.
- b. The nurse places the free hand against the client's chest wall and high in the axillary hollow, then, with the fingertips, gently presses down, rolling soft tissue over the surface of the ribs and muscles.
- c. Lymph nodes are normally not palpable.

6.  Client teaching

- a. Encourage and teach the client to perform BSE (refer to [Chapter 44](#) for information on performing BSE).
- b. Client should report lumps or masses to the PHCP immediately.
- c. Regular physical examinations and mammograms should be obtained as prescribed.

I. Abdomen

1.  Subjective data: Changes in appetite or weight, difficulty swallowing, dietary intake, intolerance to certain foods, nausea or vomiting, pain, bowel habits, medications currently being taken, history of abdominal problems or abdominal surgery

2.  Objective data

- a. Ask the client to empty the bladder.
- b. Be sure to warm the hands and the

- endpiece of the stethoscope.
c. Examine painful areas last.



When performing an abdominal

assessment, the specific order for assessment techniques is inspection, auscultation, percussion, and palpation.

3. Inspection

- a. Contour: Look down at the abdomen and then across the abdomen from the rib margin to the pubic bone; describe as flat, rounded, concave, or protuberant.
- b. Symmetry: Note any bulging or masses.
- c. Umbilicus: Should be midline and inverted
- d. Skin surface: Should be smooth and even
- e. Pulsations from the aorta may be noted in the epigastric area, and peristaltic waves may be noted across the abdomen.

4. Auscultation

- a. Performed before percussion and palpation, which can increase peristalsis.
- b. Hold the stethoscope lightly against the skin and listen for bowel sounds in all 4 quadrants; begin in the right lower quadrant (bowel sounds are normally heard here).
- c. Note the character and frequency of normal bowel sounds: high-pitched gurgling sounds occurring irregularly from 5 to 30 times a minute.
- d. Identify as normal, hypoactive, or hyperactive (borborygmus).
- e. Absent sounds: Auscultate for 5 minutes before determining that sounds are absent.
- f. Auscultate over the aorta, renal arteries, iliac arteries, and femoral arteries for vascular sounds or bruits with the bell of the stethoscope.

5. Percussion

- a. All 4 quadrants are percussed lightly.
- b. Borders of the liver and spleen are

- percussed and measured.
- c. Tympany should predominate over the abdomen, with dullness over the liver and spleen.
- d. Percussion over the kidney at the 12th rib (costovertebral angle) should produce no pain. This is also known as *costovertebral tenderness*.

6. Palpation

- a. Begin with light palpation of all 4 quadrants, using the fingers to depress the skin about 1 cm; next perform deep palpation, depressing 5 to 8 cm.
 - b. Palpate the liver and spleen (spleen may not be palpable).
 - c. Palpate the aortic pulsation in the upper abdomen slightly to the left of midline; normally it pulsates in a forward direction (pulsation expands laterally if an aneurysm is present).
7. Refer to [Chapter 48](#) for diagnostic tests related to the gastrointestinal system.
8. Client teaching
- a. Encourage the client to consume a balanced diet; obesity needs to be prevented.
 - b. Substances that can cause gastric irritation should be avoided.
 - c. The regular use of laxatives is discouraged.
 - d. Lifestyle behaviors that can cause gastric irritation (e.g., spicy foods) should be modified.
 - e. Regular physical examinations are important.
 - f. The client should report gastrointestinal problems to the PHCP.

J. Musculoskeletal system

1.  Subjective data: Joint pain or stiffness; redness, swelling, or warm joints; limited motion of joints; muscle pain, cramps, or weakness; bone pain; limitations in activities of daily living; exercise patterns; exposure to occupational hazards (e.g., heavy lifting, prolonged standing or sitting); medications being taken; history of joint, muscle, or bone injuries; history of surgery of the joints, muscles, or bones

2. Objective data: Inspection and palpation
3. Inspection: Inspect gait and posture, and for cervical, thoracic, and lumbar curves ([Box 12-11](#)).
4. Palpation: Palpate all bones, joints, and surrounding muscles.
5. Range of motion
 - a. Perform active and passive range-of-motion exercises of each major joint.
 - b. Check for pain, limited mobility, spastic movement, joint instability, stiffness, and contractures.
 - c. Normally joints are nontender, without swelling, and move freely.
6. Muscle tone and strength
 - a. Assess during measurement of range of motion.
 - b. Ask client to flex the muscle to be examined and then to resist while applying opposing force against the flexion.
 - c. Assess for increased tone (hypertonicity) or little tone (hypotonicity).
7. Grading muscle strength ([Table 12-4](#))
8. Refer to [Chapter 60](#) for diagnostic tests related to the musculoskeletal system.

9.  Client teaching

- a. The client should consume a balanced diet, including foods containing calcium and vitamin D.
- b. Activities that cause muscle strain or stress to the joints should be avoided.
- c. Encourage the client to maintain a normal weight.
- d. Participation in a regular exercise program is beneficial.
- e. The client should contact the PHCP if joint or muscle pain or problems occur or if limitations in range of motion or muscle strength develop.

K. Neurological system

1.  Subjective data: Headaches, dizziness or vertigo, tremors, weakness, incoordination, numbness or tingling in any area of the body, difficulty speaking or swallowing, medications being taken, history of

seizures, history of head injury or surgery, exposure to environmental or occupational hazards (e.g., chemicals, alcohol, drugs)

2.  Objective data: Assessment of cranial nerves, level of consciousness, pupils, motor function, cerebellar function, coordination, sensory function, and reflexes
3. Note mental and emotional status, behavior and appearance, language ability, and intellectual functioning, including memory, knowledge, abstract thinking, association, and judgment.
4. Vital signs: Check temperature, pulse, respirations, and blood pressure; monitor for blood pressure or pulse changes, which may indicate increased intracranial pressure (see [Chapter 50](#) for abnormal respiratory patterns).
5.  Cranial nerves ([Table 12-5](#))
6. Level of consciousness
 - a. Assess the client's behavior to determine level of consciousness (e.g., alertness, confusion, delirium, unconsciousness, stupor, coma); assessment becomes increasingly invasive as the client is less responsive. Use the Glasgow Coma Scale as appropriate (eye opening, motor response, verbal response, graded on a scale). See [Chapter 58](#) for a description of this scale.
 - b. Speak to client.
 - c. Assess appropriateness of behavior and conversation.
 - d. Lightly touch the client (as culturally appropriate).
7. Pupils
 - a. Assess size, equality, and reaction to light (brisk, slow, or fixed) and note any unusual eye movements (check direct light and consensual light reflex); refer to [Chapter 58](#) for abnormal pupillary findings.
 - b. This component of the neurological examination may be performed during assessment of the eye.
8. Motor function

- a. Assess muscle tone, including strength and equality.
- b. Assess for voluntary and involuntary movements and purposeful and nonpurposeful movements.
- c. This component of the neurological examination may be performed during assessment of the musculoskeletal system.

9. Cerebellar function

- a. Monitor gait as the client walks in a straight line, heel to toe (tandem walking).
- b. Romberg's test: Client is asked to stand with the feet together and the arms at the sides and to close the eyes and hold the position; normally the client can maintain posture and balance.
- c. If appropriate, ask the client to perform a shallow knee bend or to hop in place on 1 leg and then the other.

10. Coordination

- a. Assess by asking the client to perform rapid alternating movements of the hands (e.g., turning the hands over and patting the knees continuously).
- b. The nurse asks the client to touch the nurse's finger, then his or her own nose; the client keeps the eyes open and the nurse moves the finger to different spots to ensure that the client's movements are smooth and accurate.
- c. Heel-to-shin test: Assist the client into a supine position, then ask the client to place the heel on the opposite knee and run it down the shin; normally the client moves the heel down the shin in a straight line.

11. Sensory function

- a. Pain: Assess by applying an object with a sharp point and one with a dull point to the client's body in random order; ask the client to identify the sharp and dull feelings.
- b. Light touch: Brush a piece of cotton over the client's skin at various locations in a random order and ask

- the client to say when the touch is felt.
- c. Position sense (kinesthesia): Move the client's finger or toe up or down and ask the client which way it has been moved; this tests the client's ability to perceive passive movement.
 - d. Stereognosis: Tests the client's ability to recognize objects placed in his or her hand
 - e. Graphesthesia: Tests the client's ability to identify a number traced on the client's hand
 - f. Two-point discrimination: Tests the client's ability to discriminate 2 simultaneous pinpricks on the skin

12. Deep tendon reflexes

- a. Includes testing the following reflexes: biceps, triceps, brachioradialis, patella, Achilles
- b. Limb should be relaxed.
- c. The tendon is tapped quickly with a reflex hammer, which should cause contraction of muscle.
- d. Scoring deep tendon reflex activity ([Box 12-12](#))

13. Plantar reflex

- a. A cutaneous (superficial) reflex is tested with a pointed but not sharp object.
- b. The sole of the client's foot is stroked from the heel, up the lateral side, and then across the ball of the foot to the medial side.
- c. The normal response is plantar flexion of all toes.



Dorsiflexion of the great toe and fanning of the other toes (Babinski's sign) after firmly stroking the sole of the foot, is abnormal in anyone older than 2 years and indicates the presence of central nervous system disease.

14. Testing for meningeal irritation

- a. A positive Brudzinski's sign or Kernig's sign indicates meningeal irritation.
- b. Brudzinski's sign is tested with the client in the supine position. The nurse flexes the client's head (gently moves the head to the chest) and there should

be no reports of pain or resistance to the neck flexion; a positive Brudzinski's sign is observed if the client passively flexes the hip and knee in response to neck flexion and reports pain in the vertebral column.

c. Kernig's sign is positive when the client flexes the legs at the hip and knee and complains of pain along the vertebral column when the leg is extended.

15. Refer to [Chapter 58](#) for additional neurological assessments and diagnostic tests.

16.  Client teaching

a. Client should avoid exposure to environmental hazards (e.g., insecticides, lead).

b. High-risk behaviors that can result in head and spinal cord injuries should be avoided.

c. Protective devices (e.g., a helmet, body pads) should be worn when participating in high-risk behaviors.

d. Seat belts should always be worn.

L. Female genitalia and reproductive tract

1.  Subjective data: Urinary difficulties or symptoms such as frequency, urgency, or burning; vaginal discharge; pain; menstrual and obstetrical histories; onset of menopause; medications being taken; sexual activity and the use of barrier and other contraceptives; history of sexually transmitted infections

2.  Objective data

a. Use a calm and relaxing approach; the examination is embarrassing for many clients and may be a difficult experience for an adolescent.

b.  Consider the client's cultural background and their beliefs regarding examination of the genitalia.

c. Consider sexual orientation in these types of exams, such as a transgendered individual and the sensitivity required in caring for this

- special population.
- d. A complete examination will include the external genitalia and a pelvic (speculum and bi-manual) examination.
- e. The nurse's role is to prepare the client for the examination and to assist the PHCP or other practitioner.
- f. The client is asked to empty her bladder before the examination.
- g. The client is placed in the lithotomy position, and a drape is placed across the client.

3. External genitalia

- a. Quantity and distribution of hair
- b. Characteristics of labia majora and minora (make note of any inflammation, edema, lesions, or lacerations)
- c. Urethral orifice is observed for color and position.
- d. Vaginal orifice (introitus) is inspected for inflammation, edema, discoloration, discharge, and lesions.
- e. The examiner may check Skene's and Bartholin's glands for tenderness or discharge (if discharge is present, color, odor, and consistency are noted and a culture of the discharge is obtained).
- f. The client is assessed for the presence of a cystocele (in which a portion of the vaginal wall and bladder prolapse, or fall, into the orifice anteriorly) or a rectocele (bulging of the posterior wall of the vagina caused by prolapse of the rectum).

4. Speculum examination of the internal genitalia

- a. Performed by the PHCP or other practitioner
- b. Permits visualization of the cervix and vagina
- c. Papanicolaou (Pap) smear (test): A painless screening test for cervical cancer is done; the specimen is obtained during the speculum examination, and the nurse helps prepare the specimen for laboratory

analysis. This test may or may not include screening for human papilloma virus (HPV).

5. Bimanual examination

- a. Performed by PHCP or other practitioner
- b. Internal examination of the structures of the female reproductive tract
- c. May reveal masses, nodules, growths, or tenderness
- d. The uterus is palpated for position, size, shape, contour, and mobility.
- e. The adnexa and ovaries are palpated for masses or tenderness.
- f. A rectovaginal examination may be done for further examination of the pelvic structures.

6.  Client teaching

- a. Stress the importance of personal hygiene.
- b. Explain the purpose and recommended frequency of Pap tests.
- c. Explain the signs of sexually transmitted infections.
- d. Educate the client on measures to prevent a sexually transmitted infection.
- e. Inform the client with a sexually transmitted infection that she must inform her sexual partner(s) of the need for an examination.

M. Male genitalia

1.  Subjective data: Urinary difficulty (e.g., frequency, urgency, hesitancy or straining, dysuria, nocturia); pain, lesions, or discharge on or from the penis; pain or lesions in the scrotum; medications being taken; sexual activity and the use of contraceptives; history of sexually transmitted infections

2.  Objective data
- a. Includes assessment (inspection and palpation) of the external genitalia and inguinal ring and canal
 - b. Client may stand or lie down for this

examination.

- c. Genitalia are manipulated gently to avoid causing erection or discomfort.
- d. Sexual maturity is assessed by noting the size and shape of the penis and testes, the color and texture of the scrotal skin, and the character and distribution of pubic hair.
- e. The penis is checked for the presence of lesions or discharge; a culture is obtained if a discharge is present.
- f. The scrotum is inspected for size, shape, and symmetry (normally the left testicle hangs lower than the right) and is palpated for the presence of lumps.
- g. Inguinal ring and canal: inspection (asking the client to cough or bear down) and palpation are performed to assess for the presence of a hernia.

3.  Client teaching

- a. Stress the importance of personal hygiene.
- b. Teach the client how to perform testicular self-examination (TSE); a day of the month is selected and the exam is performed on the same day each month after a shower or bath when the hands are warm and soapy and the scrotum is warm. (Refer to [Chapter 44](#) for information on performing TSE.)
- c. Explain the signs of sexually transmitted infections.
- d. Educate the client on measures to prevent sexually transmitted infections.
- e. Inform the client with a sexually transmitted infection that he must inform his sexual partner(s) of the need for an examination.

N. Rectum and anus

1.  Subjective data: Usual bowel pattern; any change in bowel habits; rectal pain, bleeding from the rectum, or black or tarry stools; dietary habits; problems with urination; previous screening for colorectal cancer; previous screening for prostate

cancer; medications being taken; history of rectal or colon problems; family history of rectal or colon problems

2.  Objective data

- a. Examination can detect colorectal cancer in its early stages; in men, the rectal examination can also detect prostate tumors.
- b. Women may be examined in the lithotomy position after examination of the genitalia.
- c. A man is best examined by having the client bend forward with his hips flexed and upper body resting over the examination table.
- d. A nonambulatory client may be examined in the left lateral (Sims') position.
- e. The external anus is inspected for lumps or lesions, rashes, inflammation or excoriation, scars, or hemorrhoids.
- f. Digital examination will most likely be performed by the PHCP or other practitioner.
- g. Digital examination is performed to assess sphincter tone; to check for tenderness, irregularities, polyps, masses, or nodules in the rectal wall; and to assess the prostate gland.
- h. The prostate gland is normally firm, without boggy, tenderness, or nodules (hardness or nodules may indicate the presence of a cancerous lesion; boggy or tenderness may indicate infection).

3.  Client teaching

- a. Diet should include high-fiber and low-fat foods and plenty of liquids.
- b. The client should obtain regular digital examinations.
- c. The client should be able to identify the symptoms of colorectal cancer or prostatic cancer (men).
- d. The client should follow the American Cancer Society's guidelines for

screening for colorectal cancer and prostate cancer.



VI. Documenting Health and Physical Assessment Findings

- A. Documentation of findings may be either written or recorded electronically (depending on agency protocol).
- B. Whether written or electronic, the documentation is a legal document and a permanent record of the client's health status.
- C. Principles of documentation need to be followed and data need to be recorded accurately, concisely, completely, legibly, and objectively without bias or opinions; always follow agency protocol for documentation.
- D. Documentation findings serve as a source of client information for other health care providers; procedures for maintaining confidentiality are always followed.
- E. Record findings about the client's health history and physical examination as soon as possible after completion of the health assessment.
- F. Refer to [Chapter 6](#) for additional information about documentation guidelines.

Box 12-1

Types of Health and Physical Assessments

- Complete Assessment:* Includes a complete health history and physical examination and forms a baseline database.
- Focused Assessment:* Focuses on a limited or short-term problem, such as the client's complaint.
- Episodic/Follow-up Assessment:* Focuses on evaluating a client's progress.
- Emergency Assessment:* Involves the rapid collection of data, often during the provision of lifesaving measures.

Table 12-1

SOAP Notes

Subjective	
Identifying client information	Name, date of birth, medical record number
Problems, allergies, medications, immunizations (PAMI) list	Ongoing list of medical problems, allergies with reactions, medications with dosages and directions, and past immunizations
General client information	Address, phone numbers, employer, work address and phone number, email address, gender, marital status, health insurance status and information
Chief complaint or reason for seeking care	Brief description of main problem; stated verbatim in quotation marks; duration is always included
History of present illness	Detailed description of all symptoms that may be related to the chief complaint Guided by "OLDCARTS" symptom analysis: (onset, location, duration, character, aggravating/associated factors, relieving factors, timing, severity)
Past medical history	Hospitalizations, surgeries, childhood illnesses, adult illnesses, injuries/accidents, immunizations, past and current medications, allergies, mental health, recent laboratory tests
Family history	Pedigree may be included Includes but not limited to major health or genetic disorders, such as hypertension, cancer, cardiac, respiratory, and thyroid disorders, allergies, hepatitis Age and health of spouse and children included
Personal and social history	Varies based on health influences Cultural background and practices, home environment, general life satisfaction, safety/abuse, stressors, religious preferences, occupation, exposure to heat/cold or toxins, exposure to contagious diseases, health habits such as diet, exercise, smoking, salt intake, obesity, alcohol intake, recreational drug use, caffeine use, sexual activity, concerns about cost of care
Review of systems (may include some objective data)	General or constitutional symptoms: fever, chills, malaise, night sweats, fatigue, unintentional weight loss or gain, overall behavior Skin, hair, nails: rash, itching, pigmentation change, sweating, abnormal hair or nail growth Head and neck: headache, dizziness, syncope, concussions, loss of consciousness Eyes: visual acuity, double vision, blurring, light sensitivity, glaucoma, use of glasses or contacts, use of eyedrops Ears: hearing loss, ear pain, tinnitus, vertigo Nose: smell, colds, nosebleeds, postnasal discharge, sinus pain Throat and mouth: hoarseness, change in voice, sore throat, gum bleeding or swelling, taste changes Lymphatics: enlargement, tenderness Chest and lungs: respiratory pain, dyspnea, wheezing, cyanosis, cough, sputum, hemoptysis, last chest x-ray Breasts: development, pain, tenderness, lumps, discharge, last mammogram Heart and circulation: chest pain, edema, history of hypertension, myocardial infarction, exercise tolerance, previous cardiac tests, claudication, bruising, thrombophlebitis Hematologic: anemia, blood cell disorder, bleeding Gastrointestinal: appetite, food intolerance, dysphagia, heartburn, nausea, vomiting, diarrhea, constipation, change in stool, dark urine, previous studies such as colonoscopy, diet recall Endocrine: thyroid enlargement, heat or cold intolerance, polyphagia, polydipsia, polyuria, changes in facial or body hair, striae Genitourinary: for males, puberty onset, testicular pain, libido, infertility; for females, menses onset, regularity, duration, dysmenorrhea, last period, itching, date of last Papanicolaou (Pap) smear/human papilloma virus (HPV) test, age at menopause, libido, sexual difficulties, pregnancy (GTPAL; refer to Chapter 21); for both, dysuria, flank pain, urgency, frequency, nocturia, dribbling, hematuria, incontinence Musculoskeletal: joint pain, stiffness, redness, swelling, restricted motion, deformities Neurological: syncope, seizures, weakness, paralysis, incoordination, tremors, cognition Mental health: mood changes, depression, anxiety, difficulty concentrating, suicidal thoughts, irritability, sleep disturbances
Objective	
General statement	Age, race, gender, general appearance, weight, height, body mass index, vital signs (including orthostatic if applicable)
Mental status	Physical appearance, behavior, facial expression and body language, appropriate eye contact, level of consciousness (alertness and awareness and ability to interact appropriately with the environment), response to questions, reasoning, emotion, speech and language
Skin	Color, texture, temperature, turgor, uniformity, hygiene, scars, tattoos, moisture, edema, odor, lesions, trauma, hair texture and distribution, nail configuration
Head	Size, contour, scalp, facial features, facies, edema, temporal arteries
Eyes	Acuity, visual fields, edema, conjunctiva and sclera, eyebrows, extraocular movements, corneal light reflex, cover-uncover test, nystagmus, pupils equal, round, react to light, accommodation (PERRLA) both direct and consensual, fundoscopic findings
Ears	Configuration, position, alignment, tenderness, nodules, hearing, otoscopic findings
Nose	Appearance, patency, discharge, polyps, turbinates, septum, sinus tenderness, odors
Throat and mouth	Teeth, lips, tongue, buccal and oral mucosa, floor of mouth, appearance of palate, tonsils, tonsil grade, gag reflex, phonation of "Ah," voice, taste

Neck	Fullness, mobility, strength, trachea, thyroid size, shape, nodules, tenderness, bruits, masses, lymphadenopathy
Chest	Size, shape, anterior and posterior (AP) and transverse diameter, respiration, tenderness on bones, retractions/accessory muscle use
Lungs	Respiration rate, depth, work of breathing, regularity, tactile fremitus, percussion notes, breath sounds, friction rub
Breasts	Size, symmetry, contour, lesions, masses, tenderness, retractions, dimpling, nipple discharge, nipple retraction
Heart	Apical impulse, pulsation, heart rate, rhythm, thrills, heaves, lifts, heart tones, murmurs, rubs, gallops
Vasculature	Pulses, jugular venous distention or pulsations, carotid, abdominal aortic, temporal, renal, iliac, femoral artery bruit, temperature, color, skin texture, hair distribution, edema, nailbeds, tenderness
Abdomen	Shape, contour, pulsations, bowel sounds, masses, organomegaly, tenderness, distention, costovertebral angle tenderness
Genitalia	Male: Symmetry, circumcision, color, urethral opening, discharge, lesions, hair distribution, palpation of penis, testes, epididymides, vasa deferentia, tenderness, masses, hernia, scrotal swelling, transillumination Female: Tenderness, discharge, inflammation, lesions, polyps, vaginal mucosa, cervix, discharge, odor, size and contour of uterus, mobility of cervix, adnexa, ovaries
Anus and rectum	Hemorrhoids, fissures, skin tags, inflammation, excoriation, sphincter tone and control, prostate size, contour, consistency, mobility, color and consistency of stool
Lymphatics	Presence of palpable lymph nodes, size, shape, warmth, tenderness, mobility, consistency
Musculoskeletal	Posture, alignment, symmetry, spasms, active and passive range of motion, deformities, tenderness, swelling, crepitus, muscle strength
Neurologic	Cranial nerves, gait, balance, coordination with rapid alternating movements, sensory function with pain, touch, vibration, superficial and deep tendon reflexes
Assessment	
<ul style="list-style-type: none"> ■ Diagnosis with rationale ■ Rationale derived from subjective and objective data ■ Symptoms can be listed as diagnoses ■ There may be a list of differential diagnoses, which are suspected diagnoses that are yet to be confirmed ■ May include anticipated problems such as progression of disease or complications 	
Plan	
<ul style="list-style-type: none"> ■ Typically denoted in the following order: ■ Diagnostic tests, treatment plan with rationale ■ Client education and counseling ■ Referrals ■ Follow-up or dates for re-evaluating results of plan 	

From Ball JW, Dains JE, Flynn JA, Solomon BS, Stewart RW: *Seidel's guide to physical examination*, ed 8, St. Louis, 2015, Elsevier.

Box 12-2

The Mental Status Examination: Cognitive Level of Functioning

Orientation: Assess client's orientation to person, place, and time.

Attention Span: Assess client's ability to concentrate.

Recent Memory: Assessed by asking the client to recall a recent occurrence (e.g., the means of transportation used to get to the health care agency for the physical assessment).

Remote Memory: Assessed by asking the client about a verifiable past event (e.g., a vacation).

New Learning: Used to assess the client's ability to recall unrelated words identified by the nurse; the nurse selects four words and asks the client to recall the words 5, 10, and 30 minutes later.

Judgment: Determine whether the client's actions or decisions regarding

discussions during the interview are realistic.

Thought Processes and Perceptions: The way the client thinks and what the client says should be logical, coherent, and relevant; the client should be consistently aware of reality.

Box 12-3

Characteristics of Skin Color

Cyanosis: Mottled bluish coloration

Erythema: Redness

Pallor: Pale, whitish coloration

Jaundice: Yellow coloration

Box 12-4

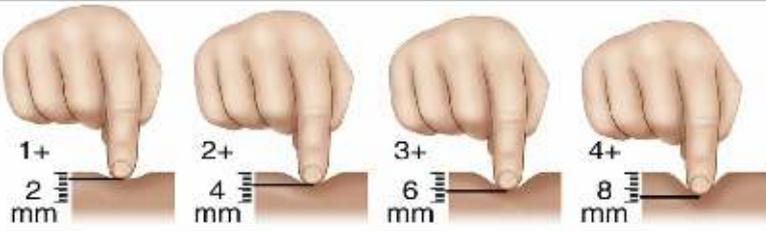
Assessing Capillary Filling Time

1. Depress the nailbed to produce blanching.
2. Release and observe for the return of color.
3. Color will return within 3 seconds if arterial capillary perfusion is normal.

Table 12-2

Pitting Edema Scale

Scale	Description	"Measurement" ^{ns}
1+	A barely perceptible pit	2 mm (3/32 in)
2+	A deeper pit, rebounds in a few seconds	4 mm (6/32 in)
3+	A deep pit, rebounds in 10-20 sec	6 mm (1/4 in)
4+	A deeper pit, rebounds in > 30 sec	8 mm (5/16 in)



The illustration shows four hands demonstrating the pitting edema scale. Each hand has a finger pressing down on the lower leg. Below each hand is a vertical scale with a horizontal line indicating the depth of the pit. The scales are labeled 1+, 2+, 3+, and 4+ from left to right. Below each scale, the measurement is given in millimeters (mm) and inches (in). The measurements are 2 mm (3/32 in) for 1+, 4 mm (6/32 in) for 2+, 6 mm (1/4 in) for 3+, and 8 mm (5/16 in) for 4+.

* "Measurement" is in quotation marks because depth of edema is rarely actually measured but is included as a frame of reference.

Data from Wilson AF, Giddens JF: *Health assessment for nursing practice*, ed 5, St. Louis, 2013, Mosby. Description column data from Kirton C: Assessing edema, *Nursing* 96 26(7):54, 1996.

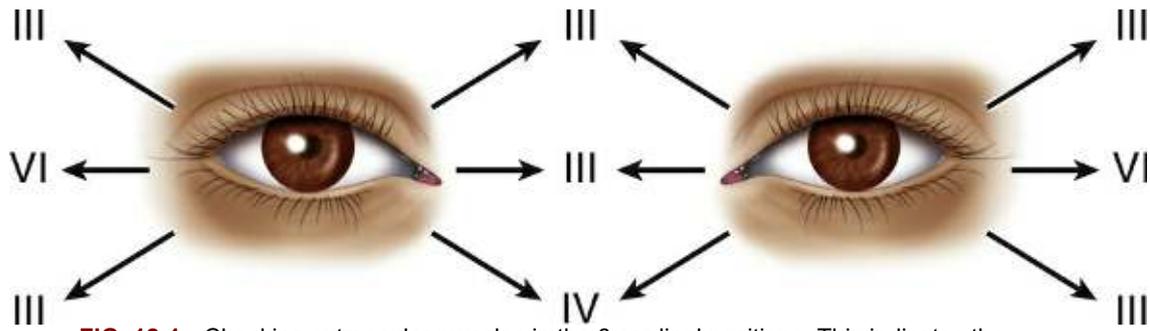


FIG. 12-1 Checking extraocular muscles in the 6 cardinal positions. This indicates the functioning of cranial nerves III, IV, and VI.

Box 12-5

Assessing and Documenting Pupillary Responses

Pupillary Light Reflex

1. Darken the room (to dilate the client's pupils) and ask the client to look forward.
2. Test each eye.
3. Advance a light in from the side to note constriction of the same-side pupil (direct light reflex) and simultaneous constriction of the other pupil (consensual light reflex).

Accommodation

1. Ask the client to focus on a distant object (dilates the pupil).
2. Ask the client to shift gaze to a near object held about 3 inches (7.5 cm) from the nose.
3. Normal response includes pupillary constriction and convergence of the axes of the eyes.

Documenting Normal Findings: PERRLA

P = pupils
 E = equal
 R = round
 RL = reactive to light (direct and consensual)
 A = reactive to accommodation

Box 12-6

Vestibular Assessment

Test for Falling

1. The examiner asks the client to stand with the feet together, arms hanging loosely at the sides, and eyes closed.
2. The client normally remains erect, with only slight swaying.
3. A significant sway is a positive Romberg's sign.

Test for Past Pointing

1. The client sits in front of the examiner.
2. The client closes the eyes and extends the arms in front, pointing both index fingers at the examiner.
3. The examiner holds and touches his or her own extended index fingers under the client's extended index fingers to give the client a point of reference.
4. The client is instructed to raise both arms and then lower them, attempting to return to the examiner's extended index fingers.
5. The normal test response is that the client can easily return to the point of reference.
6. The client with a vestibular function problem lacks a normal sense of position and cannot return the extended fingers to the point of reference; instead, the fingers deviate to the right or left of the reference point.

Gaze Nystagmus Evaluation

1. The client's eyes are examined as the client looks straight ahead, 30 degrees to each side, upward and downward.
2. Any spontaneous nystagmus—an involuntary, rhythmic, rapid twitching of the eyeballs—represents a problem with the vestibular system.

Dix-Hallpike Maneuver

1. The client starts in a sitting position; the examiner lowers the client to the exam table and rather quickly turns the client's head to the 45-degree position.
2. If after about 30 seconds there is no nystagmus, the client is returned to a sitting position and the test is repeated on the other side.

Box 12-7

Palpation of the Chest

Chest Excursion

Posterior: The nurse places the thumbs along the spinal processes at the 10th rib, with the palms in light contact with the posterolateral surfaces. The nurse's thumbs should be about 2 inches (5 cm) apart, pointing toward the

spine, with the fingers pointing laterally.

Anterior: The nurse places the hands on the anterolateral wall with the thumbs along the costal margins, pointing toward the xiphoid process.

The nurse instructs the client to take a deep breath after exhaling.

The nurse should note movement of the thumbs, and chest excursion should be symmetrical, separating the thumbs approximately 2 inches (5 cm).

Tactile or Vocal Fremitus

The nurse places the ball or lower palm of the hand over the chest, starting at the lung apices and palpating from side to side.

The nurse asks the client to repeat the words "ninety-nine."

Symmetrical palpable vibration should be felt by the nurse.

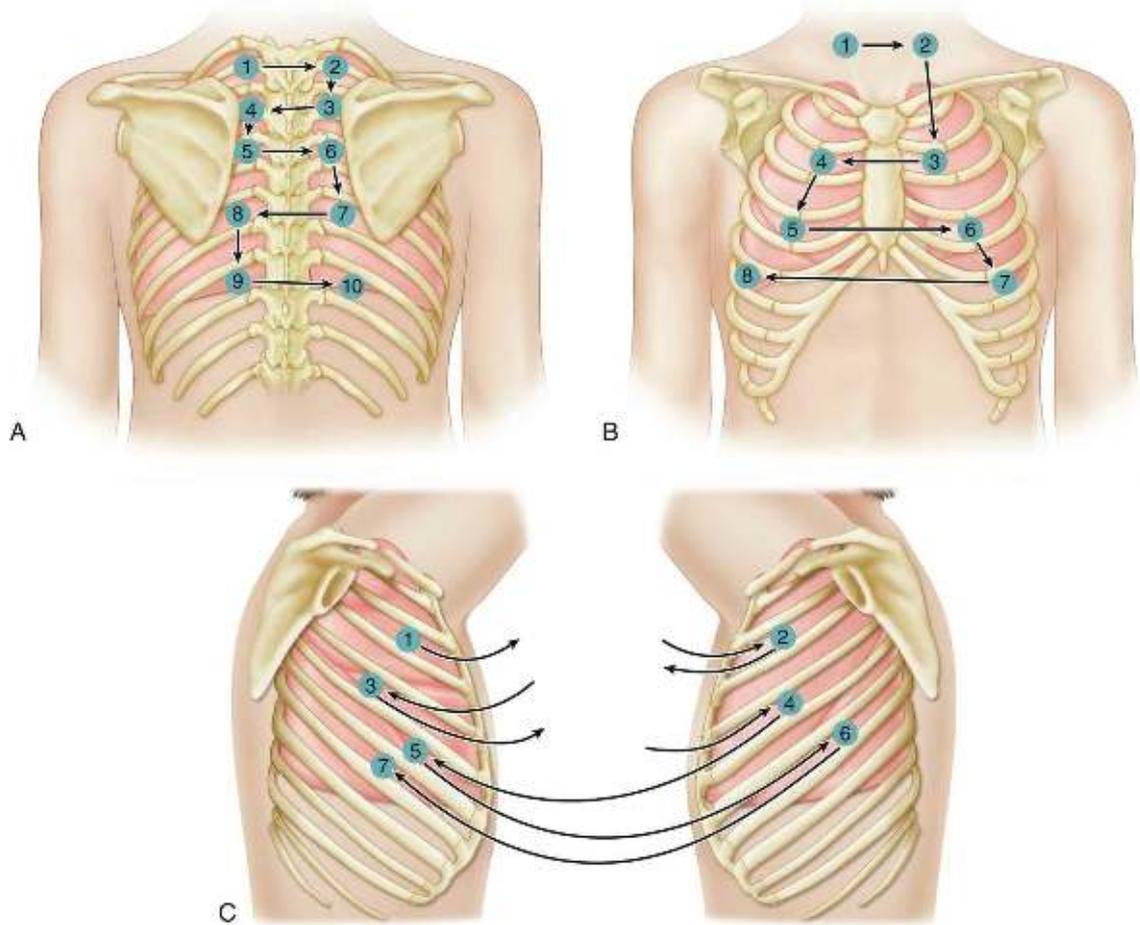


FIG. 12-2 Landmarks for chest auscultation and percussion. **A**, Posterior view. **B**, Anterior view. **C**, Lateral views.

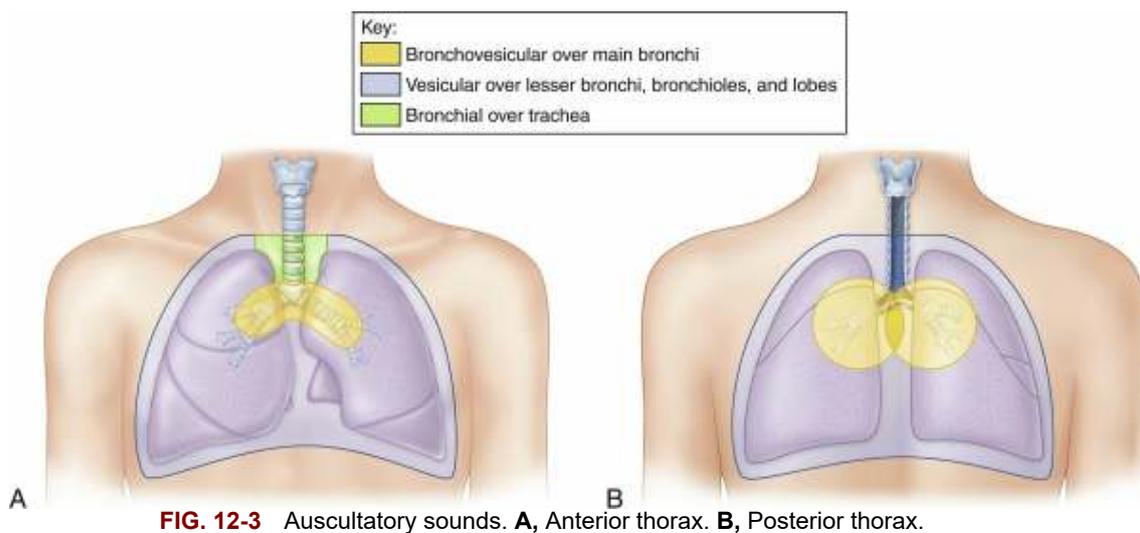


FIG. 12-3 Auscultatory sounds. **A**, Anterior thorax. **B**, Posterior thorax.

Table 12-3

Characteristics of Adventitious Sounds

Adventitious Sound	Characteristics	Clinical Examples
Fine crackles	High-pitched crackling and popping noises (discontinuous sounds) heard during the end of inspiration. Not cleared by cough.	May be heard in pneumonia, heart failure, asthma, and restrictive pulmonary diseases
Medium crackles	Medium-pitched, moist sound heard about halfway through inspiration. Not cleared by cough.	Same as above, but condition is worse
Coarse crackles	Low-pitched, bubbling or gurgling sounds that start early in inspiration and extend into the first part of expiration. Not cleared by cough.	Same as above, but condition is worse or may be heard in terminally ill clients with diminished gag reflex. Also heard in pulmonary edema and pulmonary fibrosis.
Wheeze (also called <i>sibilant</i> wheeze)	High-pitched, musical sound similar to a squeak. Heard more commonly during expiration, but may also be heard during inspiration. Occurs in small airways.	Heard in narrowed airway diseases such as asthma
Rhonchi (also called <i>sonorous</i> wheeze)	Low-pitched, coarse, loud, low snoring or moaning tone. Actually sounds like snoring. Heard primarily during expiration, but may also be heard during inspiration. Coughing may clear.	Heard in disorders causing obstruction of the trachea or bronchus, such as chronic bronchitis
Pleural friction rub	A superficial, low-pitched, coarse rubbing or grating sound. Sounds like 2 surfaces rubbing together. Heard throughout inspiration and expiration. Loudest over the lower anterolateral surface. Not cleared by cough.	Heard in individuals with pleurisy (inflammation of the pleural surfaces)

Data from Wilson AF, Giddens JF: *Health assessment for nursing practice*, ed 5, St. Louis, 2013, Mosby.

Box 12-8

Voice Sounds

Bronchophony

1. Ask the client to repeat the words “ninety-nine.”
2. Normal voice transmission is soft, muffled, and indistinct.

Egophony

1. Ask the client to repeat a long “ee-ee-ee” sound.
2. Normally the nurse would hear the “ee-ee-ee” sound.

Whispered Pectoriloquy

1. Ask the client to whisper the words “one, two, three.”
2. Normal voice transmission is faint, muffled, and almost inaudible.

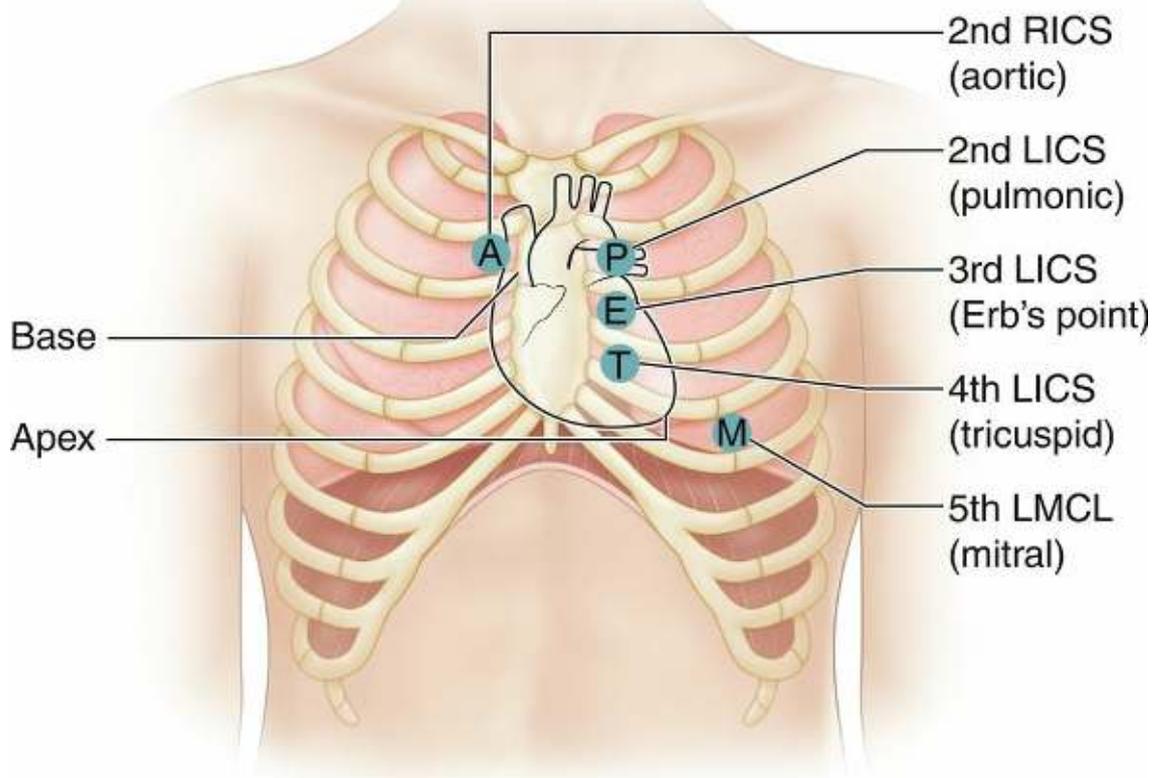


FIG. 12-4 Auscultation areas of the heart. *LICS*, Left intercostal space; *LMCL*, left midclavicular line; *RICS*, right intercostal space.

Box 12-9

Grading a Murmur

- Grade I: Barely audible
- Grade II: Quiet but clearly audible
- Grade III: Moderately loud
- Grade IV: Loud, associated with a thrill
- Grade V: Very loud, easily palpable thrill
- Grade VI: Very loud, audible without using a stethoscope, thrill easily palpable and visible

Box 12-10

Arterial Pulse Points and Grading the Force of Pulses

Arteries in the Arms and Hands

Radial Pulse: Located at the radial side of the forearm at the wrist

Ulnar Pulse: Located on the opposite side of the location of the radial pulse at the wrist

Brachial Pulse: Located above the elbow at the antecubital fossa, between the biceps and triceps muscles

Arteries in the Legs

Femoral Pulse: Located below the inguinal ligament, midway between the symphysis pubis and the anterosuperior iliac spine

Popliteal Pulse: Located behind the knee

Dorsalis Pedis Pulse: Located at the top of the foot, in line with the groove between the extensor tendons of the great and first toes

Posterior Tibial Pulse: Located on the inside of the ankle, behind and below the medial malleolus (ankle bone)

Grading the Force

4 + = Strong and bounding

3 + = Full pulse, increased

2 + = Normal, easily palpable

1 + = Weak, barely palpable

Box 12-11

Common Postural Abnormalities

Lordosis (Swayback): Increased lumbar curvature

Kyphosis (Hunchback): Exaggeration of the posterior curvature of the thoracic spine

Scoliosis: Lateral spinal curvature

Table 12-4

Criteria for Grading and Recording Muscle Strength

Functional Level	Lovett Scale	Grade	Percentage of Normal
No evidence of contractility	Zero (0)	0	0
Evidence of slight contractility	Trace (T)	1	10
Complete range of motion with gravity eliminated	Poor (P)	2	25
Complete range of motion with gravity	Fair (F)	3	50
Complete range of motion against gravity with some resistance	Good (G)	4	75
Complete range of motion against gravity with full resistance	Normal (N)	5	100

Data from Wilson AF, Giddens JF: *Health assessment for nursing practice*, ed 5, St. Louis, 2013, Mosby.

Table 12-5

Assessment of the Cranial Nerves

Cranial Nerve	Test
Cranial Nerve I: Olfactory	
<ul style="list-style-type: none"> ■ Sensory ■ Controls the sense of smell 	<ul style="list-style-type: none"> ■ Have the client close the eyes and occlude 1 nostril with a finger ■ Ask the client to identify nonirritating and familiar odors (e.g., coffee, tea, cloves, soap, chewing gum, peppermint) ■ Repeat the test on the other nostril
Cranial Nerve II: Optic	
<ul style="list-style-type: none"> ■ Sensory ■ Controls vision 	<ul style="list-style-type: none"> ■ Assess visual acuity with a Snellen chart and perform an ophthalmoscopic exam ■ Check peripheral vision by confrontation ■ Check color vision
Cranial Nerves III, IV, and VI	
Cranial Nerve III: Oculomotor	
<ul style="list-style-type: none"> ■ Motor ■ Controls pupillary constriction, upper-eyelid elevation, and most eye movement 	<ul style="list-style-type: none"> ■ The motor functions of cranial nerves III, IV, and VI overlap; therefore, they should be tested together ■ Inspect the eyelids for ptosis (drooping); then assess ocular movements and note any eye deviation ■ Test accommodation and direct and consensual light reflexes
Cranial Nerve IV: Trochlear	
<ul style="list-style-type: none"> ■ Motor ■ Controls downward and inward eye movement 	
Cranial Nerve VI: Abducens	
<ul style="list-style-type: none"> ■ Motor ■ Controls lateral eye movement 	
Cranial Nerve V: Trigeminal	
<ul style="list-style-type: none"> ■ Sensory and motor ■ Controls sensation in the cornea, nasal and oral mucosa, and facial skin, as well as mastication 	<ul style="list-style-type: none"> ■ To test motor function, ask the client to clench the teeth and assess the muscles of mastication; then try to open the client's jaws after asking the client to keep them tightly closed ■ The corneal reflex may be tested by the primary health care provider; this is done by lightly touching the client's cornea with a cotton wisp (this test may be omitted if the client is alert and blinking normally) ■ Check sensory function by asking the client to close the eyes; lightly touch forehead, cheeks, and chin, noting whether the touch is felt equally on the 2 sides
Cranial Nerve VII: Facial	
<ul style="list-style-type: none"> ■ Sensory and motor ■ Controls movement of the face and taste sensation 	<ul style="list-style-type: none"> ■ Test taste perception on the anterior two-thirds of the tongue; the client should be able to taste salty and sweet tastes ■ Have the client smile, frown, and show the teeth ■ Ask the client to puff out the cheeks ■ Attempt to close the client's eyes against resistance
Cranial Nerve VIII: Acoustic or Vestibulocochlear	
<ul style="list-style-type: none"> ■ Sensory ■ Controls hearing and vestibular function 	<ul style="list-style-type: none"> ■ Assessing the client's ability to hear tests the cochlear portion ■ Assessing the client's sense of equilibrium tests the vestibular portion ■ Check the client's hearing, using acuity tests ■ Observe the client's balance and watch for swaying when he or she is walking or standing ■ Assessment of sensorineural hearing loss may be done with the Weber's or Rinne's tests
Cranial Nerves IX and X	
Cranial Nerve IX: Glossopharyngeal	
<ul style="list-style-type: none"> ■ Sensory and motor ■ Controls swallowing ability, sensation in the pharyngeal soft palate and tonsillar mucosa, taste perception on the posterior third of the tongue, and salivation 	<ul style="list-style-type: none"> ■ Usually cranial nerves IX and X are tested together ■ Test taste perception on the posterior one third of the tongue or pharynx; the client should be able to taste bitter and sour tastes ■ Inspect the soft palate and watch for symmetrical elevation when the client says "aaah" ■ Touch the posterior pharyngeal wall with a tongue depressor to elicit the gag reflex
Cranial Nerve X: Vagus	
<ul style="list-style-type: none"> ■ Sensory and motor ■ Controls swallowing and phonation, sensation in the exterior ear's posterior wall, and sensation behind the ear ■ Controls sensation in the thoracic and abdominal viscera 	
Cranial Nerve XI: Spinal Accessory	

Cranial Nerve	Test
<ul style="list-style-type: none"> ■ Motor ■ Controls strength of neck and shoulder muscles 	<ul style="list-style-type: none"> ■ The nurse palpates and inspects the sternocleidomastoid muscle as the client pushes the chin against the nurse's hand ■ The nurse palpates and inspects the trapezius muscle as the client shrugs the shoulders against the nurse's resistance
Cranial Nerve XII: Hypoglossal	
<ul style="list-style-type: none"> ■ Motor ■ Controls tongue movements involved in swallowing and speech 	<ul style="list-style-type: none"> ■ Observe the tongue for asymmetry, atrophy, deviation to 1 side, and fasciculations (uncontrollable twitching); ask the client to stick out the tongue (tongue should be midline) ■ Ask the client to push the tongue against a tongue depressor, and then have the client move the tongue rapidly in and out and from side to side

Box 12-12

Scoring Deep Tendon Reflex Activity

- 0 = No response
- 1 + = Sluggish or diminished
- 2 + = Active or expected response
- 3 + = Slightly hyperactive, more brisk than normal; not necessarily pathological
- 4 + = Brisk, hyperactive with intermittent clonus associated with disease

Data from Wilson AF, Giddens JF: *Health assessment for nursing practice*, ed 5, St. Louis, 2013, Mosby.

Practice Questions

90. A Spanish-speaking client arrives at the triage desk in the emergency department and states to the nurse that an interpreter is needed. Which is the **best** action for the nurse to take?
 1. Have one of the client's family members interpret.
 2. Have the Spanish-speaking triage receptionist interpret.
 3. Page an interpreter from the hospital's interpreter services.
 4. Obtain a Spanish-English dictionary and attempt to triage the client.
91. The nurse is performing a neurological assessment on a client and notes a positive Romberg's test. The nurse makes this determination based on which observation?
 1. An involuntary rhythmic, rapid, twitching of the eyeballs
 2. A dorsiflexion of the great toe with fanning of the other toes
 3. A significant sway when the client stands erect with feet together, arms at the side, and the eyes closed
 4. A lack of normal sense of position when the client is unable to return extended fingers to a point of reference
92. The nurse notes documentation that a client is exhibiting Cheyne-Stokes respirations. On assessment of the client, the nurse should expect to note which finding?

1. Rhythmic respirations with periods of apnea
 2. Regular rapid and deep, sustained respirations
 3. Totally irregular respiration in rhythm and depth
 4. Irregular respirations with pauses at the end of inspiration and expiration
93. A client diagnosed with conductive hearing loss asks the nurse to explain the cause of the hearing problem. The nurse plans to explain to the client that this condition is caused by which problem?
1. A defect in the cochlea
 2. A defect in cranial nerve VIII
 3. A physical obstruction to the transmission of sound waves
 4. A defect in the sensory fibers that lead to the cerebral cortex
94. While performing a cardiac assessment on a client with an incompetent heart valve, the nurse auscultates a murmur. The nurse documents the finding and describes the sound as which?
1. Lub-dub sounds
 2. Scratchy, leathery heart noise
 3. A blowing or swooshing noise
 4. Abrupt, high-pitched snapping noise
95. The nurse is testing the extraocular movements in a client to assess for muscle weakness in the eyes. The nurse should implement which assessment technique to assess for muscle weakness in the eye?
1. Test the corneal reflexes.
 2. Test the 6 cardinal positions of gaze.
 3. Test visual acuity, using a Snellen eye chart.
 4. Test sensory function by asking the client to close the eyes and then lightly touching the forehead, cheeks, and chin.
96. The nurse is instructing a client how to perform a testicular self-examination (TSE). The nurse should explain that which is the **best** time to perform this exam?
1. After a shower or bath
 2. While standing to void
 3. After having a bowel movement
 4. While lying in bed before arising
97. The nurse is assessing a client suspected of having meningitis for meningeal irritation and elicits a positive Brudzinski's sign. Which finding did the nurse observe?
1. The client rigidly extends the arms with pronated forearms and plantar flexion of the feet.
 2. The client flexes a leg at the hip and knee and reports pain in the vertebral column when the leg is extended.
 3. The client passively flexes the hip and knee in response to neck flexion and reports pain in the vertebral column.
 4. The client's upper arms are flexed and held tightly to the sides of the body and the legs are extended and internally rotated.
98. A client with a diagnosis of asthma is admitted to the hospital with respiratory distress. Which type of adventitious lung sounds should the nurse expect to hear when performing a respiratory assessment on this

client?

1. Stridor
2. Crackles
3. Wheezes
4. Diminished

99. The clinic nurse prepares to perform a focused assessment on a client who is complaining of symptoms of a cold, a cough, and lung congestion. Which should the nurse include for this type of assessment? **Select all that apply.**

1. Auscultating lung sounds
2. Obtaining the client's temperature
3. Assessing the strength of peripheral pulses
4. Obtaining information about the client's respirations
5. Performing a musculoskeletal and neurological examination
6. Asking the client about a family history of any illness or disease

Answers

90. *Answer:* 3

Rationale: The best action is to have a professional hospital-based interpreter translate for the client. English-speaking family members may not appropriately understand what is asked of them and may paraphrase what the client is actually saying. Also, client confidentiality as well as accurate information may be compromised when a family member or a non-health care provider acts as interpreter.

Test-Taking Strategy: Note the **strategic word**, *best*. Initially focus on what the client needs. In this case the client needs and asks for an interpreter. Next keep in mind the issue of confidentiality and making sure that information is obtained in the most efficient and accurate way. This will assist in eliminating options 1, 2, and 4.

Level of Cognitive Ability: Applying

Client Needs: Psychosocial Integrity

Integrated Process: Communication and Documentation

Content Area: Foundations of Care: Communication

Health Problem: N/A

Priority Concepts: Communication; Culture

Reference: Lewis et al. (2017), p. 31.

91. *Answer:* 3

Rationale: In Romberg's test, the client is asked to stand with the feet together and the arms at the sides, and to close the eyes and hold the position; normally the client can maintain posture and balance. A positive Romberg's sign is a vestibular

neurological sign that is found when a client exhibits a loss of balance when closing the eyes. This may occur with cerebellar ataxia, loss of proprioception, and loss of vestibular function. A lack of normal sense of position coupled with an inability to return extended fingers to a point of reference is a finding that indicates a problem with coordination. A positive gaze nystagmus evaluation results in an involuntary rhythmic, rapid twitching of the eyeballs. A positive Babinski's test results in dorsiflexion of the great toe with fanning of the other toes; if this occurs in anyone older than 2 years it indicates the presence of central nervous system disease.

Test-Taking Strategy: Note the **subject**, Romberg's sign. You can easily answer this question if you can recall that the client's balance is tested in this test.

Level of Cognitive Ability: Analyzing

Client Needs: Physiological Integrity

Integrated Process: Nursing Process—Assessment

Content Area: Health Assessment/Physical Exam: Neurological

Health Problem: N/A

Priority Concepts: Clinical Judgment; Mobility

Reference: Ignatavicius, Workman, Rebar (2018), p. 850.

92. *Answer:* 1

Rationale: Cheyne-Stokes respirations are rhythmic respirations with periods of apnea and can indicate a metabolic dysfunction in the cerebral hemisphere or basal ganglia. Neurogenic hyperventilation is a regular, rapid and deep, sustained respiration that can indicate a dysfunction in the low midbrain and middle pons. Ataxic respirations are totally irregular in rhythm and depth and indicate a dysfunction in the medulla. Apneustic respirations are irregular respirations with pauses at the end of inspiration and expiration and can indicate a dysfunction in the middle or caudal pons.

Test-Taking Strategy: Focus on the **subject**, the characteristics of Cheyne-Stokes respirations. Recalling that periods of apnea occur with this type of respiration will help direct you to the correct answer.

Level of Cognitive Ability: Applying

Client Needs: Physiological Integrity

Integrated Process: Nursing Process—Assessment

Content Area: Health Assessment/Physical Exam: Thorax and Lungs

Health Problem: N/A

Priority Concepts: Clinical Judgment; Gas Exchange

Reference: Lewis et al. (2017), p. 1324.

93. *Answer:* 3

Rationale: A conductive hearing loss occurs as a result of a physical obstruction to the transmission of sound waves. A sensorineural hearing loss occurs as a result of a pathological process in the inner ear, a defect in cranial nerve VIII, or a defect of the sensory fibers that lead to the cerebral cortex.

Test-Taking Strategy: Focus on the **subject**, a conductive hearing loss. Noting the relationship of the word *conductive* in the question and *transmission* in the correct

option will direct you to this option.

Level of Cognitive Ability: Applying

Client Needs: Physiological Integrity

Integrated Process: Teaching and Learning

Content Area: Health Assessment/Physical Exam: Ear, Nose, and Throat

Health Problem: Adult Health: Ear: Hearing Loss

Priority Concepts: Client Education; Sensory Perception

Reference: Ignatavicius, Workman, Rebar (2018), pp. 996-997.

94. **Answer:** 3

Rationale: A heart murmur is an abnormal heart sound and is described as a faint or loud blowing, swooshing sound with a high, medium, or low pitch. Lub-dub sounds are normal and represent the S1 (first) heart sound and S2 (second) heart sound, respectively. A pericardial friction rub is described as a scratchy, leathery heart sound. A click is described as an abrupt, high-pitched snapping sound.

Test-Taking Strategy: Focus on the **subject**, characteristics of a murmur. Eliminate option 1 because it describes normal heart sounds. Next recall that a murmur occurs as a result of the manner in which the blood is flowing through the cardiac chambers and valves. This will direct you to the correct option.

Level of Cognitive Ability: Applying

Client Needs: Physiological Integrity

Integrated Process: Communication and Documentation

Content Area: Health Assessment/Physical Exam: Heart and Peripheral Vascular

Health Problem: Adult Health: Cardiovascular: Inflammatory and Structural Heart Disorders

Priority Concepts: Clinical Judgment; Perfusion

Reference: Ignatavicius, Workman, Rebar (2018), p. 655.

95. **Answer:** 2

Rationale: Testing the 6 cardinal positions of gaze (diagnostic positions test) is done to assess for muscle weakness in the eyes. The client is asked to hold the head steady, and then to follow movement of an object through the positions of gaze. The client should follow the object in a parallel manner with the 2 eyes. A Snellen eye chart assesses visual acuity and cranial nerve II (optic). Testing sensory function by having the client close his or her eyes and then lightly touching areas of the face and testing the corneal reflexes assess cranial nerve V (trigeminal).

Test-Taking Strategy: Focus on the **subject**, assessing for muscle weakness in the eyes. Note the relationship between the words *extraocular movements* in the question and *positions of gaze* in the correct option.

Level of Cognitive Ability: Applying

Client Needs: Physiological Integrity

Integrated Process: Nursing Process—Assessment

Content Area: Health Assessment/Physical Exam: Ear, Nose, and Throat

Health Problem: N/A

Priority Concepts: Clinical Judgment; Sensory Perception

Reference: Ignatavicius, Workman, Rebar (2018), p. 964.

96. *Answer:* 1

Rationale: The nurse needs to teach the client how to perform a TSE. The nurse should instruct the client to perform the exam on the same day each month. The nurse should also instruct the client that the best time to perform a TSE is after a shower or bath when the hands are warm and soapy and the scrotum is warm. Palpation is easier and the client will be better able to identify any abnormalities. The client would stand to perform the exam, but it would be difficult to perform the exam while voiding. Having a bowel movement is unrelated to performing a TSE.

Test-Taking Strategy: Note the **strategic word**, *best*. Think about the purpose of this test and visualize this assessment technique to answer correctly.

Level of Cognitive Ability: Applying

Client Needs: Health Promotion and Maintenance

Integrated Process: Teaching and Learning

Content Area: Health Assessment/Physical Exam: Testicles

Health Problem: N/A

Priority Concepts: Client Education; Sexuality

Reference: Ignatavicius, Workman, Rebar (2018), p. 1486.

97. *Answer:* 3

Rationale: Brudzinski's sign is tested with the client in the supine position. The nurse flexes the client's head (gently moves the head to the chest), and there should be no reports of pain or resistance to the neck flexion. A positive Brudzinski's sign is observed if the client passively flexes the hip and knee in response to neck flexion and reports pain in the vertebral column. Kernig's sign also tests for meningeal irritation and is positive when the client flexes the legs at the hip and knee and complains of pain along the vertebral column when the leg is extended. Decorticate posturing is abnormal flexion and is noted when the client's upper arms are flexed and held tightly to the sides of the body and the legs are extended and internally rotated. Decerebrate posturing is abnormal extension and occurs when the arms are fully extended, forearms pronated, wrists and fingers flexed, jaws clenched, neck extended, and feet plantar-flexed.

Test-Taking Strategy: Focus on the **subject**, a positive Brudzinski's sign. Recalling that a positive sign is elicited if the client reports pain will assist in eliminating options 1 and 4. Next it is necessary to know that a positive Brudzinski's sign is observed if the client passively flexes the hip and knee in response to neck flexion and reports pain in the vertebral column.

Level of Cognitive Ability: Applying

Client Needs: Physiological Integrity

Integrated Process: Nursing Process—Assessment

Content Area: Health Assessment/Physical Exam: Neurological

Health Problem: Adult Health: Neurological: Inflammation/Infections

Priority Concepts: Clinical Judgment; Intracranial Regulation

Reference: Jarvis (2016), p. 688.

98. *Answer:* 3

Rationale: Asthma is a respiratory disorder characterized by recurring episodes of dyspnea, constriction of the bronchi, and wheezing. Wheezes are described as high-pitched musical sounds heard when air passes through an obstructed or narrowed lumen of a respiratory passageway. Stridor is a harsh sound noted with an upper airway obstruction and often signals a life-threatening emergency. Crackles are produced by air passing over retained airway secretions or fluid, or the sudden opening of collapsed airways. Diminished lung sounds are heard over lung tissue where poor oxygen exchange is occurring.

Test-Taking Strategy: Note the **subject**, assessment of abnormal lung sounds. Note the client's diagnosis and think about the pathophysiology that occurs in this disorder. Recalling that bronchial constriction occurs will assist in directing you to the correct option. Also, thinking about the definition of each adventitious lung sound identified in the options will direct you to the correct option.

Level of Cognitive Ability: Analyzing

Client Needs: Physiological Integrity

Integrated Process: Nursing Process—Assessment

Content Area: Health Assessment/Physical Exam: Thorax and Lungs

Health Problem: Adult Health: Respiratory: Asthma

Priority Concepts: Clinical Judgment; Gas Exchange

Reference: Ignatavicius, Workman, Rebar (2018), pp. 519, 521.

99. *Answer:* 1, 2, 4

Rationale: A focused assessment focuses on a limited or short-term problem, such as the client's complaint. Because the client is complaining of symptoms of a cold, a cough, and lung congestion, the nurse would focus on the respiratory system and the presence of an infection. A complete assessment includes a complete health history and physical examination and forms a baseline database. Assessing the strength of peripheral pulses relates to a vascular assessment, which is not related to this client's complaints. A musculoskeletal and neurological examination also is not related to this client's complaints. However, strength of peripheral pulses and a musculoskeletal and neurological examination would be included in a complete assessment. Likewise, asking the client about a family history of any illness or disease would be included in a complete assessment.

Test-Taking Strategy: Focus on the **subject** and note the words *focused assessment*. Noting that the client's symptoms relate to the respiratory system and the presence of an infection will direct you to the correct options.

Level of Cognitive Ability: Analyzing

Client Needs: Health Promotion and Maintenance

Integrated Process: Nursing Process—Assessment

Content Area: Health Assessment/Physical Exam: Health History

Health Problem: N/A

Priority Concepts: Clinical Judgment; Gas Exchange

Reference: Lewis et al. (2017), pp. 40, 44.