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Purpose & Objectives
This course will provide the nurse with the knowledge needed to provide a complete health assessment for an adult patient.

After successful completion of this course, you will be able to:
1. Ask appropriate questions when conducting a comprehensive health history to elicit data that will be used to guide a physical examination.
2. List the components of the comprehensive physical examination and review of systems based on red flags identified in the patient history.
3. Determine when to perform four different types of health assessments:
   - Complete or comprehensive
   - Interval or abbreviated
   - Focused
   - Special populations

Introduction
Health assessment of patients falls under the purview of both physicians and nurses. While some nurses practice in extended roles (Advanced Nurse Practitioners), others maintain a more traditional role in the acute care setting. Assessment of patients varies based on both role and setting. A cardiac care nurse will be more familiar with and attuned to cardiac issues. A nurse on a neurologic unit will be more familiar with a more complex neurologic exam.

As you progress through this course, keep in mind that exposure to a detailed health assessment may lead you to a more comprehensive and thorough exam. For instance, if you note a patient has leukoplakia (coated tongue) as you perform your general assessment, you may wonder about hygiene issues, underlying diseases, or medications that may cause this. Documenting the information, talking with the patient about it, and confirming it with the physician adds to your value as a healthcare team member, and ultimately a better patient care provider.

As you progress through the course, note which parts of the exam are applicable in your practice, don’t fit into your practice, or that you might want to include in your practice.

General Health Assessment
The nursing health assessment is an incredibly valuable tool nurses have in their arsenal of skills. A thorough and skilled assessment allows you, the nurse, to obtain descriptions about your patient’s symptoms, how the symptoms developed, and a process to discover any associated physical findings that will aid in the development of differential diagnoses. Assessment uses both subjective and objective data. Subjective assessment factors are those that are reported by the patient. Objective assessment data includes that which is observable and measurable (Jarvis, 2008).

During the assessment period, you are given an opportunity to develop a rapport with your patient and their family. Remember the adage “first impressions are lasting impressions?” That adage is also very true in healthcare. You are often the first person your patient sees when admitted to your unit, returns from testing, or at the beginning of a new shift. Your interactions with your patient gives the patient and family lasting impressions about you, other nurses, the facility you are working in, and how care will be managed (Jarvis, 2008).

All assessments should consider the patient’s privacy and foster open, honest patient communications.
Types of General Health Assessments

In general, there are four fundamental types of assessments that nurses perform:

- A comprehensive or complete health assessment
- An interval or abbreviated assessment
- A problem-focused assessment
- An assessment for special populations

A comprehensive or complete health assessment usually begins with obtaining a thorough health history and physical exam. This type of assessment is usually performed in acute care settings upon admission, once your patient is stable, or when a new patient presents to an outpatient clinic.

If the patient has been under your care for some time, a complete health history is usually not indicated. Nurses perform an interval or abbreviated assessment at this time. These assessments are usually performed at subsequent visits in an outpatient setting, at change of shift, when returning from tests, or upon transfer to your unit from another in-house unit. This type of assessment is not as detailed as the complete assessment that occurs at admission. The advantage of an abbreviated assessment is that it allows you to thoroughly assess your patient in a shorter period of time (Jarvis, 2008).

The third type of assessment that you may perform is a problem-focused assessment. The problem-focused assessment is usually indicated after a comprehensive assessment has identified a potential health problem. The problem-focused assessment is also indicated when an interval or abbreviated assessment shows a change in status from the most current previous assessment or report you received, when a new symptom emerges, or the patient develops any distress. An advantage of the focused assessment is that it directs you to ask about symptoms and move quickly to conducting a focused physical exam (Jarvis, 2008; Scanlon, 2011).

The fourth type of assessment is the assessment for special populations, including:

- Pregnant patients
- Infants
- Children
- The elderly

If there is any indication to perform a problem-focused or special population assessment during the comprehensive assessment, the assessment should occur after obtaining a baseline comprehensive assessment. Based upon the results of the problem-focused or special population assessment, you can decide how often to perform interval assessments to monitor your patient’s identified problem (Jarvis, 2008; Scanlon, 2011).

The special assessment should not replace the comprehensive or interval assessments, but should augment both the complete and interval assessments. These will not be specifically addressed in this course. A systematic physical assessment remains one of the most vital components of patient care. A thorough physical assessment can be completed within a time frame that is practical and should never be dismissed due to time constraints (Zambas, 2010).

Assessment Techniques: Inspection

Whether you are performing a comprehensive assessment or a focused assessment, you will use at least one of the following four basic techniques during your physical exam: inspection, auscultation, percussion, and palpation. These techniques should be used in an organized manner from least disturbing or invasive to most invasive to the patient (Jarvis, 2008).
INSPECTION is the most frequently used assessment technique. When you are using inspection, you are looking for conditions you can observe with your eyes, ears, or nose. Examples of things you may inspect are skin color, location of lesions, bruises or rash, symmetry, size of body parts and abnormal findings, sounds, and odors. Inspection can be an important technique as it leads to further investigation of findings (Jarvis, 2008).

Assessment Techniques: Auscultation

AUSCULTATION is usually performed following inspection, especially with abdominal assessment. The abdomen should be auscultated before percussion or palpation to prevent production of false bowel sounds.

When auscultating, ensure the exam room is quiet and auscultate over bare skin, listening to one sound at a time. Auscultation should never be performed over patient clothing or a gown, as it can produce false sounds or diminish true sounds. The bell or diaphragm of your stethoscope should be placed on your patient’s skin firmly enough to leave a slight ring on the skin when removed.

Be aware that your patient’s hair may also interfere with true identification of certain sounds. Remember to clean your stethoscope between patients.

The diaphragm is used to listen to high pitched sounds and the bell is best used to identify low pitched sounds (Jarvis, 2008; Edmunds, Ward & Barnes, 2010).

Assessment Techniques: Palpation

PALPATION is another commonly used physical exam technique, requires you to touch your patient with different parts of your hand using different strength pressures. During light palpation, you press the skin about ½ inch to 3/4 inch with the pads of your fingers. When using deep palpation, use your finger pads and compress the skin approximately 1½ inches to 2 inches. Light palpation allows you to assess for texture, tenderness, temperature, moisture, pulsations, and masses. Deep palpation is performed to assess for masses and internal organs (Jarvis, 2008).

Assessment Techniques: Percussion

PERCUSSION is used to elicit tenderness or sounds that may provide clues to underlying problems. When percussing directly over suspected areas of tenderness, monitor the patient for signs of discomfort. Percussion requires skill and practice.

The method of percussion is described as follows: Press the distal part of the middle finger of your non-dominant hand firmly on the body part. Keep the rest of your hand off the body surface. Flex the wrist, but not the foreman, of your dominant hand. Using the middle finger of your dominant hand, tap quickly and directly over the point where your other middle finger contacts the patient’s skin, keeping the fingers perpendicular. Listen to the sounds produced (Jarvis, 2008).

These sounds may include:
- Tympany
- Resonance
- Hyperresonance
- Dullness
- Flatness
- Dullness

Tympany sounds like a drum and is heard over air pockets. Resonance is a hollow sound heard over areas where there is a solid structure and some air (like the lungs).
Hyperresonance is a booming sound heard over air such as in emphysema. Dullness is heard over solid organs or masses. Flatness is heard over dense tissues including muscle and bone (Jarvis, 2008).

Health History
The purpose of obtaining a health history is to provide you with a description of your patient’s symptoms and how they developed. A complete history will serve as a guide to help identify potential or underlying illnesses or disease states. In addition to obtaining data about the patient’s physical status, you will obtain information about many other factors that impact your patient’s physical status including spiritual needs, cultural idiosyncrasies, and functional living status. The basic components of the complete health history (other than biographical information) include:

- Chief complaint
- Present health status
- Past health history
- Current lifestyle
- Psychosocial status
- Family history
- Review of systems

Communication during the history and physical must be respectful and performed in a culturally-sensitive manner. Privacy is vital, and the healthcare professional needs to be aware of posture, body language, and tone of voice while interviewing the patient (Jarvis, 2008; Caple, 2011).

Chief Complaint
In your patient’s own words, document the chief complaint. The chief complaint may be elicited by asking one of the following questions:

- So, tell me why you have come here today?
- Tell me what your biggest complaint is right now?
- What is bothering you the most right now?
- If we could fix any of your health problems right now, what would it be?
- What is giving you the most problems right now?

If your patient has more than one complaint, discuss which one is the most troublesome for them and document the complaints in order of importance as determined by the patient (Jarvis, 2008; Baid, 2006).

Present Health Status
Obtaining information about a patient’s present health status allows the nurse to investigate current complaints. The mnemonic, PQRST, utilizes a structured format for information gathering, including evaluation of pain, and provides an efficient methodology to communicate with other healthcare providers. Use PQRST to assess each symptom and after any intervention to evaluate any changes or responses to treatment (Jarvis, 2008):

Provocative or Palliative: What makes the symptom(s) better or worse?

Quality: Describe the symptom(s).

Region or Radiation: Where in the body does the symptom occur? Is there radiation or extension of the symptom(s) to another area of the body?
Severity: On a scale of 1-10, (10 being the worst) how bad is the symptom(s)? Another visual scale may be appropriate for patients that are unable to identify with this scale.

Timing: Does it occur in association with something else (i.e. eating, exertion, movement)?

**Past Health History**
It is important to ask questions about your patient’s past health history. The past health history should elicit information about the patient’s childhood illnesses and immunizations, accidents or traumatic injuries, hospitalizations, surgeries, psychiatric or mental illnesses, allergies, and chronic illnesses. For women, include history of menstrual cycle, how many pregnancies and how many births (Jarvis, 2008).

**Childhood Illnesses:** Data related to childhood illnesses is more pertinent to children than adults and the elderly. For adults, you want to know if they have ever had rheumatic fever and if their tetanus and hepatitis B vaccinations are current. For the elderly, you may want to ask if they ever had polio, rheumatic fever, or chicken pox. Pertinent vaccinations for the elderly would include tetanus, pneumonia and influenza (Jarvis, 2008).

**Accidents or Traumatic Injuries:** When assessing this area of the past health history, pay particular attention to patterns of injury, especially in infants, children, women and the elderly (Jarvis, 2008).

**Hospitalizations:** Be sure to ask the reason for the hospitalization and the nature of the treatments received while in the hospital such as blood transfusions, surgeries and any follow-up treatments. Remember to include hospitalizations for childbirth (Jarvis, 2008).

**Surgeries:** Many surgical procedures are performed on an outpatient basis. Questions regarding surgeries should also be asked in addition to hospitalizations, as patients may not discuss a surgery if there was no associated hospital stay (Jarvis, 2008).

**Psychiatric or Mental Illnesses:** If your patient has a past history of psychiatric or mental illnesses, ask what triggered the illness, if anything, and the course and the progression of the illness. This includes depression and anxiety, as well as diagnosed mental illness (Jarvis, 2008).

**Allergies:** Identify what your patient is allergic to (both food and medication), as well as the reaction and response to treatment. It is important to ask about any environmental allergies or sensitivities (such as latex) also (Jarvis, 2008).

**Family History**
Family history is important in identifying your patient’s risk for certain disease states.

Applicable generations with whom to explore health status include grandparents, parents, and the children of your patient.

Chronic illnesses or known diseases with genetic components should also be screened for. Chronic illness or disease can include cancer, diabetes, autoimmune disorders, cholesterol, heart disease, hypertension, renal disease, and mental illness, among others (Jarvis, 2008).

**Current Health Status:**
Information collected should also include details about your patient’s personal habits such as smoking or drinking, nutrition, cholesterol, and if there is a history of heart disease or hypertension.
**Medications:**
Obtain a list of current medications, including dose and frequency, as well as reason for taking them. Remember to ask the patient about over the counter medications, vitamins, and herbal supplements (Jarvis, 2008; Baid, 2006).

**Review of Systems and Physical Exam**
The physical examination can be performed in a “head-to-toe” fashion, starting with the head and ending with the toes. Although some healthcare professionals have varied tactics to performing this skill, the key to assessment is to ensure a consistent, methodical approach to avoid missing any vital assessment areas.

A physical examination should include:
- Complete set of vital signs (blood pressure, heart rate, respiratory rate and temperature)
- Assess immediate pain level. Can use acronym “PQRST” for quick pain assessment:
  - **P**=provoking factors (what brought on the pain?)
  - **Q**=quality (describe the pain- i.e. stabbing, throbbing, burning)
  - **R**=radiation (does the pain radiate anywhere?)
  - **S**=severity/symptoms (how bad is the pain-rate it; are there other symptoms with the pain?)
  - **T**=timing (is it constant? What makes it better/worse?)

A review of systems can be incorporated during your physical exam. While examining each body system, it is appropriate to ask certain history questions that pertain to that system. The following sections list applicable questions and physical exam criteria to evaluate while exploring that system. The areas in parentheses are clues or details to note in each area.

**Skin Assessment:**
Skin assessment can be performed throughout the physical examination. As each body system is examined, assessment of the skin can be incorporated into findings (Jarvis, 2008).

**When assessing the skin, EXAMINE the following:**
- General pigmentation (evenness, appropriate for heritage)
- Systemic color changes (pallor, erythema, cyanosis, jaundice)
- Freckles and moles (symmetry, size, border, pigmentation)
- Temperature (hypothermia, hyperthermia)
- Moisture and texture (diaphoresis, dehydration, firm smooth texture)
- Edema (location and degree)
- Bruising (location, pattern, consistent with history – especially in at risk populations)
- Lesions (color, elevation, pattern or shape, size, location, exudates)
- Hair (normal color, texture, distribution)
- Nails (shape, contour, color) (Jarvis, 2008; Baid, 2006)
- Remember that skin breakdown is a common problem with ill and hospitalized patients. Skin assessment is vital to identify areas of vulnerability in the prevention of pressure ulcer
Neurological Assessment

It may not be necessary to perform the entire neurological exam on a patient with no suspicion of neurological disorders. You should perform a complete baseline neurological examination on any patient that has verbalized neurological concerns in their history, or if a noted neurological deficit is discovered. When examining the nervous system, ask the following:

- Any past history of head injury? (location, loss of consciousness)
- Do you have frequent or severe headaches? (when, where, how often)
- Any dizziness or vertigo? (frequency, precipitating factors, gradual or sudden)
- Ever had/or do you have seizures? (when did they start, frequency, course and duration, motor activity associated with, associated signs, postictal phase, precipitating factors, medications, coping strategies)
- Any difficulty swallowing? (solids or liquids, excessive saliva)
- Any difficulty speaking? (forming words or actually saying what you intended)
- Do you have any coordination problems? (describe)
- Do you have any numbness or tingling? (describe)
- Any significant past neurologic history? (cerebral vascular accident, spinal cord injuries, neurologic infections, congenital disorders)
- Environmental or occupational hazards? (insecticides, lead, organic solvents, illicit drugs, alcohol) (Jarvis, 2008)

Recheck the neurological exam at periodic intervals with any patient that has a neurological deficit (Jarvis, 2008; D’Amato, & Hartlage, 2008).

The Complete Neurological Exam

When performing the complete neurological exam, examine the following 12 Cranial Nerves:

- Cranial Nerve I: Olfactory
- Cranial Nerve II: Optic
- Cranial Nerves III, IV, & VI: Oculomotor, Trochlear, and Abducens
- Cranial Nerve V: Trigeminal
- Cranial Nerve VII: Facial Nerve
- Cranial Nerve VIII: Acoustic (Vestibulocochlear)
- Cranial Nerve IX & X: Glossopharyngeal and Vagus
- Cranial Nerve XI: Spinal Accessory
- Cranial Nerve XII: Hypoglossal

Inspect and palpate the motor system

(Tests muscle groups and for motor neuron disease)

- Muscles appropriate size for body (atrophy, hypertrophy)
- Muscle strength (asymmetric, weak for patient)
- Muscle tone (range of motion, pain, flaccidity, spasticity, rigidity)
- Involuntary movements (tic, tremor, fasciculation)

Check cerebellar function

(Tests balance and coordination and skilled movements)

- Gait (stiff posture, staggering, wide base of support, lack of arm swing, unequal steps, dragging or slapping of foot, ataxia)
- Romberg’s test (loss of balance increases when eyes are closed)
- Rapid alternating movements (lack of coordination, slow, clumsy)
- Finger to finger test (misses mark)
- Finger to nose test (misses mark)
- Heel to shin test (misses mark, lower extremity coordination impaired)
Assess the sensory system
(Tests intactness of peripheral nerves, sensory tracts, and higher cortical discrimination)
- Superficial pain
- Light touch
- Vibration

Assess the spinothalmic tract
(Tests for ability to sense pain, temperature, and light touch)
- Presence of pain (hypoalgesia, hyperalgesia, analgesia)
- Temperature (test only if pain test is normal)
- Light touch (hypoesthesia, anesthesia, hyperesthesia)

Assess posterior column tract
(May identify lesions of the sensory cortex or vertebral column)
- Vibration
- Position
- Tactile discrimination (stereognosis, graphesthesia)
- Two point discrimination

Check the reflexes
(May identify upper motor neuron disease, diseases of the pyramidal tract, or spinal cord injury)
- Stretch or deep tendon reflexes (clonus, hyporeflexia, hyperreflexia)
- Superficial reflexes (Abdominal, cremasteric, plantar) (Berman, Snyder, Kozier & Erb. 2008; Jarvis, 2008).

The Neurological Recheck or Abbreviated Neurological Exam
Perform the neurological recheck exam at periodic intervals with your patient that has a neurologic deficit. This exam is also useful for your inpatient with a head injury or systemic disease process that may be manifesting as a neurologic symptom (Jarvis, 2008).

When performing this abbreviated exam, examine the following:

Level of Consciousness
(Monitors for signs of increasing intracranial pressure)
- Is your patient oriented to person, place, and time? Are they oriented to the situation?
- Is your patient alert? If not, what does it take to get them alert - calling their name, light touch, vigorous touch, pain?

Motor Function
- Ask your patient to squeeze your fingers with their hands and let go (tests for strength and symmetry of strength in the upper extremities).
- Ask your patient to push and pull their arms toward and away from you when their elbows are bent. Provide some resistance (tests for strength and symmetry of strength in upper extremities).
- Ask your patient to dorsiflex and plantarflex their feet, while providing some resistance (tests for strength and symmetry of strength in lower extremities).
- Ask your patient to perform straight leg raises with and without resistance (tests for strength and symmetry of strength in lower extremities).
Pupillary Response
- Size, shape, and symmetry of both pupils should be the same.
- Each pupil should constrict briskly when a light is shined into the eyes.
- Each pupil should have consensual light reflex.

Glasgow Coma Scale
The Glasgow Coma Scale assesses how the brain functions as a whole and not as individual parts (Altman, 2010).

The scale assesses three major brain functions:
- Eye opening
- Motor response
- Verbal response

A completely normal person will score 15 on the scale overall. Scores of less than 7 reflect coma. Using the scale consistently in the healthcare setting allows healthcare providers to share a common language and monitor for trends across time (Jarvis, 2008). To refresh your skills in neurological assessment, visit RN.com's course "Focused Neurological Assessment."

<table>
<thead>
<tr>
<th>Glasgow Coma Scale (GCS)</th>
<th>1 = No response</th>
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</thead>
<tbody>
<tr>
<td>Best Eye Opening Response</td>
<td>2 = To pain</td>
</tr>
<tr>
<td></td>
<td>3 = To speech</td>
</tr>
<tr>
<td></td>
<td>4 = Spontaneously</td>
</tr>
<tr>
<td>Best Motor Response</td>
<td>1 = No response</td>
</tr>
<tr>
<td></td>
<td>2 = Extension – abnormal</td>
</tr>
<tr>
<td></td>
<td>3 = Flexion - abnormal</td>
</tr>
<tr>
<td></td>
<td>4 = Flexion – withdrawal</td>
</tr>
<tr>
<td></td>
<td>5 = Localizes pain</td>
</tr>
<tr>
<td></td>
<td>6 = Obeys verbal commands</td>
</tr>
<tr>
<td>Best Verbal Response</td>
<td>1 = No response</td>
</tr>
<tr>
<td></td>
<td>2 = Sounds -</td>
</tr>
<tr>
<td></td>
<td>3 = Speech - inappropriate</td>
</tr>
<tr>
<td></td>
<td>4 = Conversation - confused</td>
</tr>
<tr>
<td></td>
<td>5 = Oriented X 3</td>
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Head, Face & Throat Assessment
When assessing the head, face and throat, focus on assessment of suspected deficits as indicated by the history, patient complaints, or disease process the patient is exhibiting. Some of the following points fall outside of the general scope of nursing practice but may be observed by the nurse, or practiced in advanced nursing roles. A complete exam of the head, face and throat is not warranted in every patient.
When examining the head, ears, eyes, nose, mouth, and throat, ask the following questions:

- Do you get frequent or severe headaches?
- Any past history of head injury?
- Do you frequently get dizzy?
- Do you have any neck pain, swelling, or lumps?
- Do you have a history of head or neck surgery (Jarvis, 2008)?

**Look for:**

- General facial symmetry
- Hair distribution
- General facial expressions
- Lymph nodes or lesions (Jarvis, 2008)

### Assessment of the Eyes

**Eyes**

- Any vision changes or difficulty?
- Any eye pain?
- Do you have double vision?
- Any redness, swelling or discharge?
- Do you have a history of glaucoma?
- Do you wear glasses or contacts (Jarvis, 2008)?

**Look for:**

- Visual acuity
- Visual fields (confrontation test)
- Extraocular muscle function (nystagmus, abnormal corneal light reflex)
- Conjunctiva and sclera (redness, irritation)
- Pupil (shape, symmetry, light reflexes, accommodation)
- Ocular fundus (red reflex, optic disc, retinal vessels, macula) (Jarvis, 2008)

### Assessment of the Ears

**Ears**

- Have you had many ear infections?
- Do you have any discharge from your ears?
- Do you have any hearing difficulty?
- Do you have any environmental or occupational exposure to loud noises?
- Any ringing in your ears (tinnitus)?
- Any dizziness (vertigo) (Jarvis, 2008)?

**Look for:**

- Size, shape, skin condition, and tenderness
- External canal (redness, swelling, discharge)
- Tympanic membrane [color & characteristics (amber, redness), air/fluid levels]
- Hearing acuity (also examined as you collect the patient’s history)
Assessment of the Nose

Nose
- Any nasal discharge?
- Do you get frequent colds?
- Do you have sinus pain?
- Do you get nose bleeds?
- Do you have allergies?
- Have you had a change in sense of smell (Jarvis, 2008)?

Look for:
- Nasal cavity (discharge, rhinnorhea, swollen, boggy, mucosa)
- Sinuses (tenderness and transillumination) (Jarvis, 2008)

Assessment of the Mouth & Throat

Mouth and Throat
- Skin integrity (lesions or blisters)
- Teeth (discoloration, bleeding or swollen gums)
- Tongue (color, surface characteristics, moisture, lesions)
- Buccal mucosa (discoloration, Koplik’s spots, leukoplakia)
- Uvula (midline)
- Throat (tonsils, Cranial Nerve XII by sticking out tongue) (Jarvis, 2008)

Look For:
- Do you have any sores or lesions in your mouth or throat?
- Do you have a sore throat and hoarseness?
- Do you have a toothache or get bleeding gums?
- Any difficulty swallowing?
- Do things taste differently than usual?
- Do you smoke, drink or chew tobacco (Jarvis, 2008)?

Cardiovascular Assessment

Cardiovascular disease is the United States' leading killer for both men and women among all racial and ethnic groups. In 2009, heart disease is estimated to cost more than $304.6 billion, including health care services, medications, and lost productivity (Centers for Disease Control and Prevention, 2009). Therefore, a complete cardiovascular exam should be a part of every abbreviated and complete assessment.

When examining the cardiovascular system, **ASK** about the following:
- Any chest pain? (use PQRST pneumonic)
- Do you ever get short of breath? (associated with what)
- How many pillows do you sleep on at night? (orthopnea)
- Do you have a cough? (describe, frequency, timing, severity, sputum production)
- Are you frequently fatigued? (morning or night)
- Do you have any swelling or skin color changes? (edema, cyanosis, pallor)
- How often do you get up at night to urinate? (nocturia)
- Do you have a past history of cardiac or cardiovascular events or disorders?
- Do you have a family history of cardiovascular disease?
- Assess cardiac risk factors? (Jarvis, 2008; Edmunds, Ward & Barnes, 2010)
When assessing the cardiovascular system, examine the following:
- Palpate and auscultate the carotid artery (strength of pulsation, bruises, murmurs).
- Inspect and palpate the jugular veins (jugular vein distention).
- Inspect the precordium (heaves, lifts).
- Palpate the precordium (location of apical impulse, presence of thrill).
- Percuss cardiac borders.
- Auscultate heart sounds.
  - Auscultate in a Z-pattern listening over the aortic, pulmonic, mitral, and tricuspid valves and over Erb’s point. (See appendix for auscultation landmarks)
  - Identify S1 and S2.
  - Listen to S1 and S2 separately (split S1 or S2).
  - Listen for any extra heart sounds (S3, S4, clicks, rubs).
  - Listen for murmurs (note timing/loudness/pitch/pattern/quality/location/radiation/position)
- Palpate peripheral pulses: brachial, radial, femoral, popliteal, dorsalis pedis, posterior tibial (strength and symmetry).
- Inspect extremities (color, capillary refill, edema, ulcerations) (Jarvis, 2008; Edmunds, Ward, & Barnes, 2010).

**Pulmonary Assessment**

When examining the pulmonary system, ask the following for both abbreviated and complete examinations:
- Do you have a cough? (use PQRST pneumonic)
- Do you frequently get short of breath? (position, associated night sweats, related to any triggering event)
- Pain with breathing? (constant or periodic, describe the quality, treatment)
- Any past history of breathing trouble or lung disease? (frequency and severity of colds, allergies, asthma family history, smoking, environmental or occupational risk factors)

To refresh your skills in performing lung auscultation, visit RN.com's course "Focused Physical Examination for The Acute Care Setting."

When examining the pulmonary system, explore the following as indicated by your patient’s history, symptoms or disease processes they are exhibiting:
- Inspect the thoracic cage (symmetry of expansion, anterior-posterior diameter, any areas of retractions) (See appendix for retraction sites)
- Palpate the thoracic cage (tactile fremitus)
- Percuss the thoracic cage (hyperresonance, dullness, diaphragmatic excursion)
- Auscultate the anterior and posterior chest
  - Have patient breath slightly deeper than normal through their mouth
  - Auscultate from C-7 to approximately T-8, in a left to right comparative sequence. You should auscultate between every rib.
  - Listen for bronchial, bronchovesicular, and vesicular breath sounds
  - Identify any adventitious breath sounds, their location, and timing in relation to the cardiac cycle (crackles, or rales and wheezes or rhonchi) (see appendix for auscultation landmarks)
- Auscultate voice sounds including bronchophony, egophony and whispered pectoriloquy (Jarvis, 2008)
Assessing the Abdomen/Gastrointestinal System

When examining the abdomen/gastrointestinal system, **ASK** about the following:

- Any change in appetite?
- Any difficulty swallowing? (dysphagia)
- Any abdominal pain? (use PQRST pneumonic)
- Any nausea or vomiting? (color, odor, presence of blood, food intake in past 24 hours)
- Any change in bowel habits? (constipation, diarrhea, blood in stool, or dark, tarry stools)
- Do you have any hemorrhoids? (bleeding, treatment)
- Any past history of abdominal problems? (gall bladder, liver, pancreas, digestion, elimination)

When assessing the abdomen, examine the following:

- Inspect for bulges, masses, hernias, ascites, spider nevi, veins, pulsations or movements, inability to lie flat.
- Auscultate after inspection so you do not produce false bowel sound through percussion or palpation. Auscultate for bowel sounds (normal, hyper- or hypo-active) and bruits.
- Percuss for general tympany, liver span, splenic dullness (dullness over the spleen), costovertebral angle tenderness, presence of fluid wave and shifting dullness with ascites.
- Palpate lightly then deeply noting any muscle guarding, rigidity, masses or tenderness. Palpate tender areas last.
- Palpate the liver margins (often it is not palpable).
- Palpate the spleen (enlargement occurs with mononucleosis and trauma).
- Palpate the kidneys (enlargement may indicate a mass).
- Assess for rebound tenderness (pain on release of pressure to the abdomen usually indicates peritoneal irritation).
- When acute abdominal pain is present perform the iliopsoas muscle test and obturator test (Jarvis, 2008).

Musculoskeletal System

When examining the musculoskeletal system, ask the following:

- Any joint pain or problems? (Use PQRST pneumonic.)
- Any stiffness in your joints? Any swelling, heat or redness in your joints?
- Any limitation of movement in your joints?
- Which activities are difficult? (Assess functional ability.)
- Any muscle problems (pain, cramping, aches, weakness, atrophy)?
- Any bone problems (bone pain, deformity, history of broken bones)? (Jarvis, 2008)

When assessing the musculoskeletal system, examine the following:

- Inspect the size and shape of any problem joints (color, swelling, masses, deformities).
- Palpate each joint for temperature and range of motion (heat, tenderness, swelling, masses, limitation in range of motion, crepitation).
- Test muscle strength and strength against resistance of the major muscle groups of the body.
- Assess the temporomandibular joint (swelling, crepitus, pain).
- Assess the cervical spine (alignment of head and neck, symmetry of muscles, tenderness, spasms, range of motion).
- Inspect and assess upper extremity strength and range of motion for the shoulders, elbows, wrists, and hands.
- Inspect and assess lower extremity strength and range of motion for the hips, knees, ankles and feet (Jarvis, 2008).
Male Reproductive System

When examining the reproductive systems, ask about the following:

- Do you urinate more than usual? (frequency, urgency, nocturia)
- Any pain or burning upon urination?
- Any difficulty starting or maintaining the stream of urine?
- Any difficulty controlling you urine? Any blood in your urine?
- Any problems with you penis? (pain, lesions, discharge)
- Any problems with your scrotum? (lumps, tenderness, swelling)
- Are you in a sexually active relationship and if so any difficulties in this relationship related to the physical act of intercourse?
- Do you use contraceptives? (what type, questions or concerns)
- Any sexual contact with a partner whom may have had a sexually transmitted disease?
- Do you perform self-testicular examinations monthly? (Jarvis, 2008)

When assessing the male reproductive system, examine the following:

- Inspect and palpate the penis (inflammation, lesions, freely moveable foreskin in uncircumcised male, location of urinary meatus, pubic lice or nits, narrowed urethral opening).
- Inspect and palpate the scrotum (scrotal edema, lesions or inflammation, absent, atrophied or fixed testes, tenderness of testicle or spermatic cord).
- Inspect and palpate for hernia.
- Inspect and palpate inguinal lymph nodes.
- Discuss and encourage self-testicular exams monthly (Jarvis, 2008).

Female Reproductive System

When examining the reproductive systems, ask about the following:

- Do you urinate more than usual? (frequency, urgency, nocturia); Any pain or burning upon urination?
- Any difficulty starting or maintaining the stream of urine?
- Any blood in your urine? Any difficulty controlling you urine?
- Any unusual vaginal discharge?
- Are you sexually active? Any difficulties related to the physical act of intercourse?
- Do you use contraceptives? (what type, questions or concerns)
- Any sexual contact with a partner whom may have had a sexually transmitted disease?
- Tell me about your menstrual history (onset, length, amount of flow, cramps, bloating, PMS, age of first period, age of menopause).
- Have you ever been pregnant? (if so how many times, how many live births, any miscarriages or abortions, any complications)
- Have your periods slowed down or stopped? (associated symptoms of menopause, estrogen replacement therapy, psychological well-being)
- Any breast tenderness, lumps, discharge or concerns? Do you perform self-breast examinations monthly?
- Do you have regular PAP smears? (Jarvis, 2008).

The complete female reproductive system examination is usually only performed by specially trained nurses or a physician. Please consider the following when examining the female reproductive system:
In the lithotomy position examine the external genitalia:

- Skin color
- Hair distribution
- Labia and clitoris (swelling, lesions)
- Urethral opening (stricture, inflammation)
- Vaginal opening (foul-smelling discharge, inflammation, lesions)
- Palpate the vagina (tenderness, swelling, discharge, Bartholin’s glands)

The internal genitalia are only examined by specially trained healthcare providers, but you may be requested to assist with a vaginal examination. This would include assisting with the speculum to visualize the cervix (color, position, size, cervical os, surface of cervix, cervical secretions), and obtaining cervical smears and cultures. A bimanual (rectal - vaginal) exam may be performed to rule out rectal disease.

Cervix should be smooth, firm, round, and mobile. Uterus and adnexa should not be enlarged, tender, fixed, or nodular. Ovaries are often not palpable, but if they are, they should be small, round and smooth. Your patient may feel a slight pang or twinge upon palpation and should resolve quickly (Jarvis, 2008).

Examine the breasts and axilla:

- Inspect the breasts for size, symmetry, and nipple dimpling.
- Palpate the breasts and axilla in a circular pattern, covering all areas (note inconsistencies and tenderness).
- If you palpate a mass, note its size, shape, consistency, mobility, degree of tenderness, and location (Jarvis, 2008).

**Nutritional Assessment**

Assessing nutritional status of your patients is important for several reasons. A thorough nutritional assessment will identify individuals at risk for malnutrition and provide baseline information for nutritional assessments in the future. A nutritional screening is indicated for all patients. A complete nutritional assessment is indicated for only those individuals at risk for malnutrition. A screening assessment includes:

**Biographical data**

- Age
- Height
- Weight

**Lab Data**

- Albumin
- Hemoglobin
- Hematocrit
- Total lymphocytes
- Other abnormal labs?
Signs of Malnutrition

When performing your physical exam, **OBSERVE** for the following signs and symptoms of nutritional deficiency:

- Eyes dry
- Pale or red conjunctivae
- Blepharitis
- Cheilosis
- Cracks at the side of mouth
- Tongue pale
- Bleeding gums
- Dry, flaky skin
- Petichiae
- Bruising
- Dry, bumpy skin
- Petechiae
- Cracked skin

- Eczema
- Xanthomas
- Dull, dry, thin hair
- Hair color changes
- Brittle nails
- Joint pain
- Muscle wasting
- Pain in calves
- Splinter hemorrhages of nails
- Peripheral neuropathy
- Hyporeflexia
- Confusion or irritability

Lab Values Associated with Malnutrition

Abnormal laboratory values consistent with malnutrition include:

- Hemoglobin < 12 g/dl in adult females & < 14 g/dl in adult males
- Hematocrit < 36-46% in adult females and < 37-49% in adult males
- Total lymphocyte count of < 1800 cell/mm³
- Serum Albumin < 3.5 g/dl
- Serum Transferrin < 170 mg/dl (Jarvis, 2008)

A complete nutritional exam is warranted if you suspect your patient is malnourished or is at risk for malnourishment.

Usually, a dietary consult is warranted for hospitalized patients in this situation.

Putting It All Together

Once nurses are familiar with the health assessment of the adult, it is necessary to adapt the assessment for specific patients such as infants, children, and the elderly. Knowledge of Age-specific considerations will allow the nurse to evaluate the significance of the health history and exam results and apply specifics to an individualized plan of care.

Conclusion

Obtaining a concise and effective health history and physical exam takes practice. It is not enough to simply ask questions and perform a physical exam. As the patient’s nurse, you must critically analyze all of the data you have obtained, synthesize the data into relevant problem focuses, and identify a plan of care for your patient based upon this synthesis.

As the plan of care is being carried out, reassessments must occur on a periodic basis. The frequency of reassessments is unique to each patient based upon their diagnosis.

The ability of the nurse to efficiently and effectively obtain the health history and physical exam will ensure that appropriate plan of care will be enacted for all patients (Jarvis, 2008; Baid, 2006; Zambas, 2010).
References


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Glossary
Definitions from Tabers® dictionary (Venes, 2009) or Mosby’s Medical Dictionary (2009)

Abdominal reflex: Superficial neurologic reflex obtained by firmly stroking the skin of the abdomen around the umbilicus

Accommodation: The act or state of adjustment or adaptation

Adnexa: The conjoined anatomic parts, or tissues adjacent to or contained within a nearby space

Adventitious breath sounds: Added sounds, or those superimposed on a patient's underlying breath sounds that usually indicate disease

Analgesia: An inability to feel pain or no sensation with painful stimuli

Anesthesia: Inability to sense touch or pain

Apical impulse: A motion of the anterior wall of the thorax localized in the area over the heart

Ascites: The accumulation of serous fluid in the peritoneal cavity

Atrophy: A wasting; a decrease in size of an organ or tissue

Auscultation: Listening for sounds within the body

Blepharitis: Inflammation of the eyelids

Bronchial breath sound: Normal sound heard with a stethoscope over the main airways of the lungs, especially the trachea. Expiration and inspiration produce noise of equal loudness and duration, sounding like blowing through a hollow tube

Bronchophony: An increase in the intensity and clarity of vocal resonance

Bronchovesicular breath sound: Normal sound heard with a stethoscope in the anterior first and second intercostal spaces and posteriorly between the scapulae. Consist of a full inspiratory phase with a shortened and softer expiratory phase.

Bruit: An abnormal blowing or swishing sound or murmur heard while auscultating a carotid artery, the aorta, an organ, or a gland, such as the liver or thyroid, and resulting from blood flowing through a narrow or partially occluded artery

Buccal: Of or relating to the cheeks or the mouth cavity

Capillary refill: A test of blood circulation by blanching

Cerebral vascular accident: A sudden loss of neurological function, caused by vascular injury (loss of blood flow) to an area of the brain. Also called a stroke or CVA

Cheilosis: Noninflammatory disorder of the lips and mouth characterized by bilateral scales and fissures, resulting from a deficiency of riboflavin in the diet
Click: An extra heart sound that occurs during systole

Clonus: A series of involuntary muscular contractions due to sudden stretching of the muscle

Corneal light reflex: A screening test performed to assess light reflection off the cornea

Costovertebral angle: That formed on either side of the vertebral column between the last rib and the lumbar vertebrae

Crackle: A common, abnormal respiratory sound consisting of discontinuous bubbling noises heard on auscultation of the chest during inspiration

Cremasteric reflex: Superficial neurologic reflex obtained by stimulation of the skin on the front and inner thigh retracts the testis on the same side

Crepitus: A sound or feel that resembles the crackling noise heard when rubbing hair between the fingers or throwing salt on an open fire

Cyanosis: Bluish discoloration of the skin and mucous membranes caused by an excess of deoxygenated hemoglobin in the blood or a structural defect in the hemoglobin molecule

Dehydration: Excessive loss of water from body tissues

Diaphoresis: The secretion of sweat, especially the profuse secretion associated with an elevated body temperature, physical exertion, exposure to heat, and mental or emotional stress

Dorsiflex: To bend toward the head

Dullness: Diminished resonance on percussion

Dysphagia: Difficulty in swallowing or inability to swallow

Eczema: A general superficial dermatitis of unknown cause

Edema: Swelling; the abnormal accumulation of fluid in interstitial spaces of tissues

Egophony: An extreme form of bronchophony, in which spoken words assume a nasal or bleating (or goat-like) quality

Erythema: Redness or inflammation of the skin or mucous membranes that is the result of dilation and congestion of superficial capillaries

Excursion: A range of movement regularly repeated in performance of a function

Extraocular: Outside the eye

Exudate: A fluid that has exuded out of a tissue or its capillaries due to injury or inflammation

Fasciculation: Involuntary contraction or twitching of muscle fibers, visible under the skin

Flaccid: Relaxed; flabby; having defective or absent muscular tone
Flatness: A peculiar sound lacking resonance, heard on percussing an abnormally solid part

Fremitus: A vibration felt on palpation

Glaucoma: A disease where fluid pressure inside the eye increases causing irreversible damage to the optic nerve and loss of vision

Graphesthesia: The ability to recognize writing on the skin purely by the sensation of touch

Hernia: Protrusion or projection of an organ through an abnormal opening in the muscle wall of the cavity that surrounds it

Hyperactive: Increased or heightened activity

Hyperalgesia: An increased or heightened sensation or reaction to painful stimuli

Hyperesthesia: Increased or heightened sense of touch or sensation

Hyperreflexia: Exaggerated reflexes

Hyperresonance: Greater than normal resonance, often of a lower pitch, on percussion of the body

Hyperthermia: Abnormally high body temperature

Hypertrophy: An increase in the size of an organ or structure, or of the body owing to growth rather than tumor formation

Hypoactive: Underactive

Hypoalgesia: A decreased sensation or reaction to painful stimuli

Hypoesthesia: Reduced sense of touch or sensation

Hyporeflexia: The condition of below normal or absent reflexes

Hypothermia: Abnormally low body temperature

Iliopsoas: One of the pair of muscle complexes that flex, adduct, and laterally rotate the thigh and the lumbar vertebral column

Inspection: Visual examination

Jaundice: A yellow discoloration of the skin, mucous membranes, and sclerae of the eyes caused by greater than normal amounts of bilirubin in the blood

Jugular vein distention: Blood pressure in the jugular vein, which reflects the volume and pressure of venous blood

Koplik’s spots: Small red spots with white centers found on the mucous membranes of the mouth and tongue

Lesion: Any visible local abnormality of the tissues of the skin, such as a wound, sore, rash, or boil

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**Leukoplakia:** An abnormal condition characterized by white spots or patches on mucous membranes

**Mononucleosis:** Excess of mononuclear leukocytes (monocytes) in the blood

**Murmur:** A gentle blowing, fluttering, or humming sound, such as a heart murmur, susceptible to auscultation

**Neuropathy:** Inflammation or degeneration of the peripheral nerves

**Nocturia:** Excessive urination at night

**Nystagmus:** Rhythmic, oscillating motions of the eyes

**Obturator sign:** Pain on outward pressure on the obturator foramen as a sign of inflammation in the sheath of the obturator nerve, probably caused by appendicitis

**Orthopnea:** An abnormal condition in which a person must sit or stand to breathe deeply or comfortably

**Pallor:** An unnatural paleness or absence of color in the skin

**Palpation:** To examine by feeling and pressing with the palms of the hands and the fingers

**Percussion:** A technique in physical examination of tapping the body with the fingertips or fist to evaluate the size, borders, and consistency of some of the internal organs and to discover the presence of and evaluate the amount of fluid in a body cavity

**Peritoneum:** The serous membrane lining the walls of the abdominal and pelvic cavities

**Petechiae:** Numerous tiny purple or red spots appearing on the skin as a result of tiny hemorrhages within the dermal or submucosal layers.

**Pigmentation:** Any coloring matter of the body

**Plantar reflex:** Superficial neurologic reflex obtained by irritation of the sole contracts the toes

**Plantarflex:** To bend toward the sole of the foot

**Postictal:** The stage following a seizure

**Precordial heave:** A palpable lifting sensation under the sternum and anterior chest wall to the left of the sternum

**Precordial lift:** A palpable lifting sensation at the apex

**Precordium:** The part of the front of the chest wall that overlays the heart and the epigastrium

**Rale:** An abnormal lung sound. Rales may be discontinuous sounds or vibrations heard by auscultation in various lung disease

**Red reflex:** A luminous red appearance seen upon the retina in retinoscopy
Resistance: Force applied to a body part by weights, machinery, or another person to load muscles as an exercise to increase muscle strength

Resonance: The prolongation and intensification of sound produced by transmission of its vibrations to a cavity, especially such a sound elicited by percussion

Rhinorrhea: Persistent watery mucus discharge from the nose

Rhonchi: An abnormal sound heard on auscultation of an airway obstructed; rattling sound

Rigidity: Inflexibility or stiffness

Rigidity: Tenseness; immovability; stiffness; inability to bend or be bent

Romberg test: The patient is stood up and asked to close his eyes. A loss of balance is interpreted as a positive Romberg sign

Rub: The movement of one surface moving over another, thereby producing friction

Seizure: A convulsion or other clinically detectable event caused by a sudden discharge of electrical activity in the brain

Spasticity: A motor disorder characterized by velocity-dependent increased muscle tone, exaggerated tendon jerks, and clonus

Spider nevi: A superficial spider-like cluster of capillaries; also called spider angioma

Stereognosis: The ability to perceive the form of an object by using the sense of touch

Systemic: Pertaining to the whole body rather than to a localized area or regional part of the body

Tactile: Perceptible to the touch

Temporomandibular joint: Formed by the head of the mandible and the mandibular fossa, and the articular tubercle of the temporal bone

Thrill: A vibration felt by the examiner on palpation

Tic: A spasmodic muscular contraction, most commonly involving the face, mouth, eyes, head, neck, or shoulder muscles

Tinnitus: A subjective noise sensation, often described as ringing, heard in one or both ears

Transillumination: The passing of a light through the walls of a body part or organ to facilitate medical inspection

Tremor: An involuntary movement of a part or parts of the body resulting from alternate contractions of opposing muscles

Tympany: A loud, high-pitched musical sound percussed over an area filled with air

Urinary frequency: Frequent urination without an increase in the total daily volume of urine
**Urinary urgency:** The sudden, almost uncontrollable, need to urinate

**Vertigo:** The sensation of moving around in space (subjective vertigo) or of having objects move about the person (objective vertigo). Vertigo is sometimes inaccurately used as a synonym for dizziness, lightheadedness, or giddiness

**Vesicular breath sound:** Normal sound heard with a stethoscope over peripheral lung fields, these breath sounds are soft and low-pitched, without the harsh, tubular quality of bronchial and tracheal breath sounds

**Wheeze:** A form of rhonchus, characterized by a high-pitched or low-pitched musical quality. It is caused by a high-velocity flow of air through a narrowed airway and is heard during both inspiration and expiration

**Whispered pectoriloquy:** A phenomenon in which voice sounds, including whispers, are transmitted clearly through the pulmonary structures and are clearly audible through a stethoscope

**Xanthoma:** A benign fatty fibrous yellowish plaque, nodule, or tumor that develops in the subcutaneous layer of skin, often around tendons