

**FAP Health Assessment for Advanced Practice  
Cognitive and Clinical Objectives by Organ System**  
**Think of cognitive as the “why” objective(s) behind the  
clinical objective(s), “the actual skill(s)”**

**General Survey and Vital Signs**

***Cognitive Objectives***

Upon completion of the lesson, the student will be able to:

1. Describe the important aspects of a general survey of the patient.
2. Identify the components of measurement and vital signs and discuss the considerations for each.
3. Describe steps taken if the clinician is suspecting orthostatic hypotension.
4. Describe abnormalities a clinician may find when taking pulse rates and respiratory rates.
5. Discuss and give examples of the term "differential diagnosis".
6. Discuss the significance of the Body Mass Index (BMI) waist-to-hip-ratio and waist measurement and how it is utilized in clinical practice.
7. Discuss general recommendations for conducting the physical exam.
8. Verbalize the importance of hand washing as a primary means of infection control.

***Clinical Objectives***

The student will demonstrate a complete and systematic performance of the general survey and vital signs by:

1. Demonstrating appropriate hand washing prior to examination of a patient.
2. Correctly demonstrating the techniques for obtaining measurements and vital signs (temperature, pulse, respirations, and blood pressure, including orthostatic VS).
3. Identifying normal expected findings for height, weight, and BMI measurements and vital signs.
4. Performing a general survey as part of the physical exam.

**Skin, Hair, Nails**

***Cognitive Objectives***

Upon completion of this lesson the student should be able to:

1. List and describe the 3 layers of the skin.
2. Describe the 5 functions of the skin.
3. Describe the differences between the sebaceous, eccrine and apocrine glands.
4. Discuss the cause of central cyanosis and peripheral cyanosis.
5. Identify the changes in the skin that occur with aging.
6. Identify risk factors and preventive measures related to skin.
7. List 6 elements noted in the examination of the skin.
8. List 4 features to note regarding skin lesions.
9. Describe and give an example of the following primary skin lesions: macule, papule, pustule, vesicle, wheal, nodule, plaque and tumor, cherry angioma, telangiectasias.
10. Describe and give an example of the following secondary skin lesions: scar, scale, fissure, crust, erosion, ulcer excoriation, keloid, atrophic scar, lichenification.
11. Describe and give examples of vascular skin lesions.
12. Describe appearance and possible causes of the following abnormalities of the nails: clubbing, Terry's nails, transverse white lines (Mee's lines), and transverse depressions (Beau's lines).
13. Compare and contrast primary and secondary skin lesions.
14. State features that the examiner should note about hair and nails.

### ***Clinical Objectives***

1. Obtain a relevant history for complaints relating to the skin, hair, and nails. It should include the history of present illness (HPI), relevant past medical history (PMH), social history (SH) and family history (FH) and review of system(s) (ROS) as outlined in Bickley and H&P Plus Booklet.
2. The student will demonstrate and document a thorough examination of the skin, hair and nails.

### **Head and Neck**

#### ***Cognitive Objectives***

Upon completion of this lesson, the student should be able to:

1. Identify the bones of the head.
2. Identify the anatomical structures of the eye.
3. Describe the function of each part of the eye.
4. Explain the causes of visual field defects.
5. Explain the causes of an abnormal extra ocular movement exam (EOM's)

6. Discuss the difference between papillary reaction to light by direct and consensual reaction.
7. Discuss the importance of the cover / uncover test.
8. Define ptosis.
9. Describe and identify corneal arcus.
10. Describe normal findings on insufflation of the tympanic membrane with a pneumatic otoscope.
11. Identify the anatomical parts of the outer, middle, and inner ear.
12. Identify the anatomical structures of the nose and sinuses.
13. Identify anatomical structures of the mouth and pharynx.
14. Identify lymph nodes in the head and neck.
15. Discuss function of lymph nodes and sites of drainage.
16. Identify anatomical landmarks of the neck.

#### ***Clinical Objectives***

1. Obtain a relevant history for complaints relating to the head, eyes, ears, nose, mouth, throat, and neck, to include the history of present illness (HPI), relevant past medical history (PMH), social history (SH) and family history (FH) and review of system(s) (ROS) as outlined in Bickley and H&P Plus Booklet.
2. The student will demonstrate a complete and systematic examination of the head and neck by completion of the following objectives:
  - a. Describe and document appropriate examination of the head, including scalp and hair.
  - b. Obtain relevant history for complaints related to the eye, ear, nose, mouth, and neck.
  - c. Demonstrate and document appropriate examination of the eye, including the cover/uncover test and screening of visual fields by confrontation.
  - d. Describe the steps to use an ophthalmoscope.
  - e. Demonstrate skill in the use of the ophthalmoscope.
  - f. Discuss and demonstrate the functional assessment of hearing.
  - g. Describe and demonstrate the Weber and Rinne tests.
  - h. Describe a normal tympanic membrane and common abnormalities of the tympanic membrane (TM).
  - i. Demonstrate a complete ear examination using the otoscope.
  - j. Demonstrate ability to document a complete ear examination (objective).

- k. Demonstrate an appropriate examination of the nose, frontal, and maxillary sinuses.
- l. Demonstrate a complete oral examination and document findings.
- m. Identify cranial nerves that innervate the eye, ear, face, tongue, soft palate, and neck (also covered in Neurology).
- n. Demonstrate proper lymph node examination techniques.
- o. Demonstrate and document an appropriate examination of the neck to include lymph nodes and thyroid gland.
- p. Accurately record history and physical exam findings related to the HEENT systems using appropriate terminology

### **Thorax and Lungs**

#### ***Cognitive Objectives***

Upon completion of this lesson, the student should be able to:

- 1. Identify bony anatomical landmarks found on the thorax.
- 2. Identify the following anatomical lines found on the thorax:
  - a. Midsternal
  - b. Midclavicular
  - c. Anterior midaxillary
  - d. Posterior midaxillary
  - e. Vertebral
  - f. Scapular
- 3. If given a drawing be able to identify the location of the three lobes of the right lung and two lobes of the left lung.
- 4. Define tactile fremitus, provide a rationale for both increased and decreased tactile fremitus, and provide an example of a patient who would have increased and decreased fremitus.
- 5. Describe the following abnormalities of the chest wall:
  - a. Barrel chest
  - b. Pectus excavatum
  - c. Pectus carinatum
- 6. Define percussion and compare and contrast the characteristics of the following five percussion notes:

- a. Dullness
  - b. Tympany
  - c. Resonance
  - d. Hyperresonance
  - e. Flat
7. Compare and contrast the characteristics, normal location on exam, and the physiological rationale for the following breath sounds:
- a. Vesicular
  - b. Bronchovesicular
  - c. Bronchial
8. Describe the characteristics of the following adventitious breath sounds, provide a physiological rationale for each, and identify a type of patient in which they may be commonly found.
- a. Crackles
  - b. Wheezes
  - c. Rhonchi
9. Define the following transmitted voice sounds and describe their significance when found on exam.
- a. Bronchophony
  - b. Egophony
  - c. Whispered pectoriloquy
10. Compare and contrast the following physical findings noted on the exam of a patient with pneumonia (consolidation) versus pneumothorax:
- a. percussive note
  - b. breath sounds
  - c. adventitious sounds
  - d. transmitted voice sounds ( tactile and vocal fremitus)
11. Describe the importance of the following symptoms of respiratory disease
- a. Dyspnea
  - b. Chest pain
  - c. Wheezing
  - d. Cough
  - e. Hemoptysis

### ***Clinical Objectives***

1. Obtain a relevant history for complaints relating to the respiratory system, to include the history of present illness (HPI), relevant past medical history (PMH), social history (SH) and family history (FH) and review of system(s) (ROS) as outlined in Bickley and H&P Plus Booklet.
2. The student will demonstrate a complete and systematic examination of the lungs and thorax by completion of the following objectives:
  - a. Demonstrate inspection of the chest noting respiratory rate and rhythm, deformities of chest wall, and presence of retractions.
  - b. Demonstrate palpation of the chest wall noting tenderness or the presence of masses.
  - c. Demonstrate chest expansion looking for symmetry of expansion.
  - d. Demonstrate tactile fremitus noting symmetry.
  - e. Demonstrate percussion of the anterior, posterior, lateral chest wall noting symmetry and percussive note.
  - f. Demonstrate percussion of the diaphragmatic level.
  - g. Demonstrate auscultation of the anterior, posterior, and lateral chest wall in 5 cm segments describing type of breath sounds and presence of adventitious sounds.
  - h. Demonstrate vocal fremitus by bronchophony, egophony, and whispered pectoriloquy.
  - i. Record a complete respiratory exam using correct terminology.

### **Cardiovascular and Peripheral Vascular**

#### ***Cognitive Objectives***

Upon completion of this lesson, the student should be able to:

1. Define systole and diastole.
2. If given a drawing of the anterior chest identify the position of important cardiac structures that lie underneath the chest wall.
3. Describe the structure and the function of the atrioventricular and semilunar valves.
4. Describe the characteristics of the normal pulse.
5. Describe the effect of inspiration on heart rate.
6. Identify the role of the atrioventricular valves in the formation of S1.
7. Identify the role of the semilunar valves in the formation of S2.

8. Describe the flow of blood through the heart making sure to differentiate diastolic and systolic flow.
9. Define “apical pulse” (PMI) and identify its normal location on the chest wall.
10. Describe the location of the Aortic, Pulmonic, Tricuspid, and Mitral areas on the chest wall.
11. Define “jugular venous pressure (JVP)” and identify why “JVP” is measured during the cardiovascular exam.
12. Define “bruit” and explain its causes.
13. Define “thrill” and identify its causes.
14. Define “lift” and “heave” and identify their causes.
15. Describe the mechanisms responsible for the development of a physiologic splitting of S2.
16. Describe the physiologic mechanisms responsible for the development of an S3 and S4.
17. Identify in what type of patients you would commonly hear an S3 or S4.
18. Describe the following characteristics of a “functional” (physiologic or innocent) murmur: timing, shape, location of maximal impulse, radiation, intensity, pitch, and quality.
19. Define “clubbing” and describe why it can occur in cardiovascular disease.
20. Describe signs and symptoms of arterial insufficiency.
21. Describe signs and symptoms of venous insufficiency.
22. Define the following symptoms of cardiac disease and identify why they are important in cardiac evaluation.
  - a. Chest pain
  - b. Shortness of breath
  - c. Palpitations
  - d. Orthopnea
  - e. Dyspnea on exertion (DOE)
  - f. Paroxysmal Nocturnal Dyspnea (PND)
  - g. Peripheral edema

### ***Clinical Objectives***

1. Obtain a relevant history for complaints relating to the cardiovascular system, to include the history of present illness (HPI), relevant past medical history (PMH), social history (SH) and family history (FH) and review of system(s) (ROS) as outlined in Bickley and H&P Plus Booklet.

2. The student will demonstrate a complete and systematic examination of the cardiovascular system by completion of the following objectives:
  - a. Identify the function of the bell and diaphragm of the stethoscope and give an example of a situation in which the use of each is appropriate.
  - b. Identify signs of cardiac disease that can be noted on inspection of the patient.
  - c. Inspect the anterior chest and identify the position of the apical pulse.
  - d. Palpate the anterior chest and note the position and characteristics of the apical pulse.
  - e. Identify on the chest wall the position of the Aortic, Pulmonic, Tricuspid, and Mitral area.
  - f. Palpate each of the above areas and note the presence and characteristics of pulsations or the presence of thrills.
  - g. Listen to the following areas with the diaphragm and bell of your stethoscope and identify the heart sounds heard and the characteristics of each:
    1. Aortic
    2. Pulmonic
    3. Tricuspid
    4. Mitral
  - h. Listen with the bell to the tricuspid and mitral areas for the presence of a S3 or S4
  - i. Palpate the carotid pulse and note symmetry.
  - j. Auscultate the carotid pulse and note the presence of a bruit.
  - k. Inspect for jugular venous distension with the patient in a semi-fowler's position.
  - l. Demonstrate the proper location and technique for palpating the following pulses:
    1. Radial
    2. Brachial
    3. Femoral
    4. Popliteal
    5. Dorsalis pedis
    6. Posterior tibial
    7. Carotid



- m. Record rate, rhythm, character, and grading of pulses.
- n. Inspect for evidence of arterial or venous insufficiency.
- o. Demonstrate the proper method for checking for a Homan's sign.
- p. Demonstrate the proper method for testing for ulnar artery patency (Allen's test).
- q. Record a complete cardiovascular exam using appropriate terminology.

## **Breast**

### ***Cognitive Objectives***

Upon completion of this lesson, the student should be able to:

1. Identify components of the normal breast.
2. Describe normal changes in the female breast throughout the life cycle.
3. Describe the characteristics of each of the five Tanner stages of breast development.
4. Identify the effect of cyclical secretion of estrogen and progesterone on the breast and the best time in the menstrual cycle to perform an examination of the breast.
5. State the rationale for the inclusion in the breast examination of assessment of the axillary, infraclavicular, and supraclavicular lymph nodes.
6. Describe the location of the pectoral, subscapular, lateral, infraclavicular and supraclavicular lymph nodes.
7. Identify variations of normal related to the breast and axilla and provide appropriate patient education.
8. Differentiate between breast masses based on characteristics and common age of occurrence.
9. Discuss signs visible on inspection suggesting underlying breast cancer and the mechanism which causes them.
10. List the characteristics that are used to describe a dominant breast mass.
11. Discuss recommendations for breast cancer screening in patients at average or normal risk.
12. Identify risk factors for breast cancer.
13. Describe the techniques and procedure of clinical breast examination for both men and women.

### ***Clinical Objectives***

1. Obtain a relevant history for complaints relating to the breast, to include the history of present illness (HPI), relevant past medical history (PMH) , social history (SH) and family history (FH) and review of system(s) (ROS) as outlined in Bickley and H&P Plus Booklet.
2. The student will demonstrate a complete and systematic examination of the breast by completion of the following objectives:
  - a. Incorporate history questions related to risk factors for breast cancer into the patient visit.
  - b. Incorporate knowledge of the anatomy and physiology of the breast into the physical examination.
  - c. Properly position the patient for inspection and palpation of the breasts.
  - d. List characteristics to be observed in the inspection of the breast.
  - e. Demonstrate a complete and systematic examination of the breast and related lymph nodes using proper technique and draping.
  - f. Incorporate instruction in breast self-examination into the process of the clinical breast examination.
  - g. Differentiate between the examination procedures and findings for the female with normal breasts, the female post-mastectomy, and the male breast.
  - h. Describe breast masses according to size, shape, consistency, mobility, tenderness, location, and delimitation and accurately record findings.
  - i. Appropriately determine sexual maturity rating of females using Tanner staging of the breast.
  - j. Accurately document history and physical examination findings related to the breast.

## **Abdomen**

### ***Cognitive Objectives***

Upon completion of this lesson, the student should be able to:

1. Identify organs found within the following regions of the abdominal cavity:
  - a. Right upper quadrant
  - b. Right lower quadrant
  - c. Left upper quadrant
  - d. Left lower quadrant
  - e. epigastrium
  - f. umbilical

- g. suprapubic
2. Define and locate on a drawing of the abdomen the epigastric, umbilical, and hypogastric or suprapubic areas of the abdomen.
  3. Define the following symptoms of gastrointestinal disease and identify why they are important in the evaluation of the gastrointestinal system:
    - a. Heartburn
    - b. Anorexia
    - c. Nausea and vomiting
    - d. Hematemesis
    - e. Abdominal pain
    - f. Dysphagia
    - g. Jaundice
    - h. Constipation or diarrhea
  4. Describe the concept of referred pain and identify on a drawing locations of pain referred from the spleen, appendix, or gallbladder.
  5. Describe the characteristics of normal bowel sounds, hyperactive bowel sounds, hypoactive bowel sounds, and borborygmi.
  6. Describe the function and location of the parietal and visceral pleura.
  7. Describe the function and location of the gallbladder and liver.
  8. Describe the function and location of the spleen.
  9. Describe the function and location of the kidneys.
  10. Locate the costovertebral angle on a drawing of the posterior thorax and identify.
  11. Describe the general principles that should be considered prior to doing an abdominal exam.
  12. Identify the appropriate order of the abdominal exam and provide the rationale.
  13. Define rebound tenderness and provide the rationale for the presence in peritonitis.
  14. Define the following abnormal findings on an abdominal exam and describe the rationale for the presence of each:
    - a. Psoas sign
    - b. Obturator
    - c. Rovsing's
    - d. Murphy's
    - e. Cutaneous hyperesthesia

f. Voluntary vs. involuntary guarding

15. Define ascites and provide a rationale for the presence on a abdominal exam.
16. Describe the concept of “shifting dullness”.
17. Define “tympany” and identify why it is the predominant percussive note found on the abdominal exam.
18. Describe where “dullness” as a percussive note may be found on the abdominal exam.
19. Identify the normal size of the liver at the MCL
20. Compare light and deep palpation as to purpose and technique.

***Clinical Objectives***

Obtain a relevant history for complaints relating to the abdomen and gastrointestinal system, to include the history of present illness (HPI), relevant past medical history (PMH) , social history (SH) and family history (FH) and review of system(s) (ROS) as outlined in Bickley and H&P Plus Booklet.

1. The student will demonstrate a complete and systematic examination of the abdomen by completion of the following objectives:
  - a. Properly position and drape the patient for an abdominal examination.
  - b. Inspect the abdomen noting contour, pulsations, skin color, lesions, peristaltic waves, pulsatile mass.
  - c. Auscultate the four quadrants of the abdomen using the diaphragm of the stethoscope.
  - d. Auscultate the abdomen using the bell for renal, aortic, iliac, and femoral bruits.
  - e. Systematically percuss the entire abdomen.
  - f. Percuss the size of the liver in the right upper quadrant.
  - g. Percuss the left upper quadrant for evidence of splenic enlargement.
  - h. Percuss the suprapubic area to detect the presence of bladder distension.
  - i. Lightly palpate all four quadrants of the abdomen noting tenderness, superficial masses, or the presence of guarding.
  - j. Deeply palpate all four quadrants of the abdomen noting the presence of pain or masses.
  - k. Correctly palpates the right upper quadrant for characteristics of the liver.
  - l. Correctly palpates the left upper quadrant for characteristics of the spleen.
  - m. Correctly palpates for the kidneys bilaterally.
  - n. Correctly demonstrates the procedure for testing for rebound tenderness.

- o. Correctly demonstrates the procedure for testing for CVA tenderness.
- p. Correctly demonstrates the following tests:
  - 1. Psoas
  - 2. Obturator
  - 3. Murphy's
  - 4. Navel tug
  - 5. Rovsing's
  - 6. Cutaneous hyperesthesia
- q. Correctly demonstrates testing for the presence of ascites, fluid wave, and shifting dullness.
- r. Palpates the femoral pulse.
- s. Palpates for inguinal nodes.
- t. Accurately record history and physical exam findings related to the gastrointestinal system using appropriate terminology.

### **Female Genitalia**

#### ***Cognitive Objectives***

Upon completion of this lesson, the student should be able to:

- 1. Incorporate knowledge of anatomy and physiology of the female genitoreproductive system into the physical examination.
- 2. Describe the location of the structures of the internal and external female genitalia.
- 3. Define common term and abbreviations related to the female genital tract.
- 4. Describe the effects of estrogen on the female genitoreproductive tract throughout the life cycle.
- 5. Define the Tanner Stages of sexual development of the female genitalia.
- 6. Identify common presenting complaints related to the female genitoreproductive tract and appropriate history to be obtained related to each.
- 7. Describe the technique and procedures employed in the examination of the female genitalia.
- 8. Identify indications for rectal or rectovaginal examination.
- 9. Describe the significance of the finding of cervical motion tenderness on bimanual examination.

### ***Clinical Objectives***

1. Obtain a relevant history for complaints relating to the female genitalia, anus & rectum to include the history of present illness (HPI), relevant past medical history (PMH), social history (SH) and family history (FH) and review of system(s) (ROS) as outlined in Bickley and H&P Plus Booklet.
2. The student will demonstrate a complete and systematic examination of the female genitalia, anus & rectum by completion of the following objectives:
  - a. Incorporate history questions related to risk factors for breast cancer into the patient visit.
  - b. Incorporate techniques for physical and psychological preparation of the patient for a pelvic examination.
  - c. Incorporate history questions related to the female genitalia into the patient visit.
  - d. Incorporate knowledge of the anatomy and physiology of the female genitalia into the physical examination.
  - e. Properly position the patient for examination of the genitalia.
  - f. Employ infection control precautions during examination of the female genitalia.
  - g. Demonstrate correct techniques for both the speculum and bimanual examination of the female genitalia.
  - h. Inspect and describe findings related to the external genitalia.
  - i. Employ appropriate examination techniques for the assessment of pelvic relaxation.
  - j. Correctly obtain and prepare specimens for the pap smear, cervical culture, and wet mount.
  - k. Correctly perform a rectal and rectovaginal examination.
  - l. Employ proper techniques in the palpation of the Skene's and Bartholin's glands.
  - m. Accurately document history and physical examination findings related to the female reproductive system using appropriate terminology.

### **Male Genitalia**

#### ***Cognitive Objectives***

Upon completion of this lesson, the student should be able to:

1. Incorporate knowledge of the anatomy and physiology of the male genitalia, anus, rectum, and prostate into the physical examination.

2. Describe the effects of testosterone on the male genitroreproductive tract throughout the life cycle.
3. Define the Tanner Stages of sexual development of the male genitalia.
4. List indications for transillumination of the scrotum.
5. Describe the function of the cremaster muscle.
6. Define terms and abbreviations commonly associated with the male reproductive system.
7. Describe the characteristics of the normal prostate gland that are assessed by palpation.
8. Compare and contrast the underlying pathophysiology and characteristics of direct and indirect hernias.
9. Describe the risk factors for prostate cancer and prostate cancer screening guidelines for patients with normal or average risk.
10. Describe the risk factors for colorectal cancer and the screening guidelines for patients with normal or average risk.
11. Describe the procedure for fecal occult blood testing.
12. Describe the technique for rectal examination in the male.

***Clinical Objectives:***

1. Obtain a relevant history for complaints relating to the female genitalia, anus & rectum to include the history of present illness (HPI), relevant past medical history (PMH), social history (SH) and family history (FH) and review of system(s) (ROS) as outlined in Bickley and H&P Plus Booklet.
2. The student will demonstrate a complete and systematic examination of the female genitalia, anus & rectum by completion of the following objectives:
  - a. Incorporate history questions related to risk factors for breast cancer into the patient visit.
  - b. Demonstrate a complete and systematic examination of the external male genitalia and internal structures of the scrotum.
  - c. Demonstrate examination for femoral and inguinal hernias.
  - d. Demonstrate appropriate specimen collection from the male urethra.
  - e. Demonstrate examination of the anuses, prostate and rectum.
  - f. Provide complete and correct patient education related to testicular self examination (TSE).
  - g. Accurately record history and physical exam findings related to the male reproductive system using appropriate terminology.

## **Musculoskeletal**

### ***Cognitive Objectives***

Upon completion of this lesson, the student should be able to:

1. Incorporate knowledge of the anatomy and physiology of the musculoskeletal system into the history and physical exam.
2. Identify the joint the following joint types and compare their characteristics: fibrous, cartilaginous & synovial joints.
3. Compare and contrast the 3 main categories & 2 subtypes of each category of synovial joints: hinge, pivot, saddle, condyle, ball & socket, and gliding.
4. Describe the structure and function of the bursae, tendons, and ligaments.
5. Define active and passive range of motion and describe the indications for performing each type of exam.
6. Describe the structure and function of the TM joint.
7. Describe the structure and function of the SITS muscles of the shoulder joint.
8. If given a drawing identify the bony components of the following joints:
  - a. Shoulder joint
  - b. Elbow joint
  - c. Wrist and Hand (carpal, metacarpal, and phalangeal)
  - d. Hip
  - e. Knee
  - f. Ankle and Foot (tarsal, metatarsal and phalangeal)
9. Describe the function of the anterior and posterior cruciate ligaments.
10. Describe the function of the medial and lateral collateral ligaments of the knee.
11. Describe the function of the following ligaments of the ankle:
  - a. Deltoid
  - b. Anterior and posterior talo-fibular
  - c. Calcaneofibular ligament
12. Describe the important components of the history for a patient with a musculoskeletal complaint.
13. Describe the following special test used in the musculoskeletal examination, identify normal and abnormal findings, and indications for use:
  - a. Phalen's
  - b. Tinel's
  - c. McMurray



- d. Drawer sign
  - e. Bulge sign
  - f. Ballottement
  - g. Straight leg raising
  - h. Hyperextension test
14. Describe clinical manifestations noted in a patient with joint inflammation.
  15. Describe the clinical signs of kyphosis, scoliosis, and lordosis.
  16. Describe the importance of crepitus noted on examination of a joint.
  17. Define carpal tunnel syndrome and identify what are common clinical manifestations of the disease.

***Clinical Objectives***

1. Obtain a relevant history for complaints relating to the musculoskeletal system, to include the history of present illness (HPI), relevant past medical history (PMH) , social history (SH) and family history (FH) and review of system(s) (ROS) as outlined in Bickley and H&P Plus Booklet.
2. The student will demonstrate a complete and systematic examination of the musculoskeletal system by completion of the following objectives:
  - a. Identify normal and abnormal findings noted on inspection and palpation of the following joints:
    1. Spine
    2. TM
    3. Shoulder
    4. Elbow
    5. Wrist
    6. Hand
    7. Hip
    8. Knee
    9. Ankle
    10. Foot
  - b. Correctly locate and perform range of motion on the above joints.
  - c. Correctly perform the following special tests:
    1. Phalen's
    2. Tinel's
    3. Bulge

4. Ballottement
  5. McMurray
  6. Anterior and Posterior Drawer
  7. Straight leg raising
  8. Hyperextension
- d. Correctly demonstrate how to measure leg length.
  - e. Correctly demonstrate range of motion of the spine.
  - f. Correctly examine the spine for evidence of kyphosis, scoliosis, and lordosis.
  - g. Accurately record history and physical exam findings related to the musculoskeletal system using appropriate terminology.

### **Neurological and Mental Status**

#### ***Cognitive Objectives***

Upon completion of this lesson, the student should be able to:

1. Describe the function of the following structures within the central nervous system:
  - a. Frontal lobe
  - b. Parietal lobe
  - c. Occipital lobe
  - d. Temporal lobe
  - e. Cerebellum
  - f. Thalamus
  - g. Basal Ganglia
  - h. Corticospinal tract
  - i. Extrapyramidal tracts
  - j. Posterior column
  - k. Spinothalamic tracts
2. Describe the function of Wernicke and Broca's area.
3. List the two main divisions of the central nervous system.
4. Describe the components of a deep tendon reflex and identify the function of each component.
5. Identify the twelve cranial nerves, their function, and how they are tested.

6. Describe the following components of the mental status exam and identify possible abnormalities in each.
  - a. Level of consciousness
  - b. Appearance and Behavior
  - c. Speech and Language
  - d. Mood and affect
  - e. Thought Processes, insight, and judgment
  - f. Cognitive function: orientation, attention, memory, higher cognitive function.
7. Define efferent and afferent transmission within the central nervous system.
8. Define the following discriminative sensations: stereognosis and graphesthesia and describe their function during the neurological exam.
9. Describe the scale used to test muscle strength.
10. Describe three tests used to test coordination during the neurological exam.
11. Compare and contrast the methods used to test (pain, temperature, light touch) and (vibration and position sense). Make sure and document differences in the actual testing procedures.
12. Describe the scale used to grade deep tendon reflexes and define each level.
13. Compare and contrast upper and lower motor neurons with respect to location, function, and clinical manifestations of disease.
14. Describe the use of standardized monofilament testing in the evaluation of peripheral neuropathy.
15. Describe the following tests used to identify the presence of meningeal inflammation and identify an abnormal response:
  - a. Brudzinski's sign
  - b. Kernig's sign
16. Differentiate between decorticate and decerebrate posturing.
17. Describe the characteristics of the following gaits:
  - a. Parkinsonian gait
  - b. Scissors gait
  - c. Steppage gait
  - d. Ataxic gait
18. Compare and contrast the clinical findings of flaccidity, spasticity, and rigidity.

19. Identify the following dermatomes: Cervical 4, 5, 6, 7, 8; Thoracic 4, 10; Lumbar 4, 5; Sacral 1, 5.
20. Identify the following peripheral nerve regions: radial, median, ulnar, sciatic, common peroneal.

### ***Clinical Objectives***

1. Obtain a relevant history for complaints relating to the neurological system, to include the history of present illness (HPI), relevant past medical history (PMH), social history (SH) and family history (FH) and review of system(s) (ROS) as outlined in Bickley and H&P Plus Booklet.
2. The student will demonstrate a complete and systematic examination of the neurological system by completion of the following objectives:
  - a. Demonstrate a complete mental status exam
  - b. Demonstrate the examination of cranial nerves I-XII.
  - c. Demonstrate testing for pain, temperature, and light touch evaluating all major dermatomes of the upper and lower extremities and describe abnormalities of function.
  - d. Demonstrate testing for position and vibratory sense and describe abnormalities of function.
  - e. Demonstrate stereognosis, graphesthesia, point localization and two point discrimination and describe abnormalities of function.
  - f. Demonstrate assessment of muscle mass and describe abnormalities noted.
  - g. Demonstrate range of motion of all major joints of the neck, extremities, and back.
  - h. Demonstrate muscle strength testing in all major muscle groups of the neck and extremities.
  - i. Demonstrate assessment of gait including as assessment of tandem gait.
  - j. Demonstrate the Romberg exam (with eyes open and eyes closed) and describe abnormalities of function.
  - k. Demonstrate the following deep tendon reflexes (DTRs):
    1. Biceps
    2. Triceps
    3. Brachioradialis
    4. Patellar
    5. Achilles

6. Plantar

- l. Demonstrate correct use of a 10 g monofilament for peripheral sensory testing.
- m. Accurately record history and physical exam findings related to the neurologic system using appropriate terminology.