Chapter 1: Examination Process

MULTIPLE CHOICE

1. When determining a treatment and rehabilitation program, which evaluation should be used as a baseline?
   a. Initial evaluation
   b. Reevaluation
   c. Discharge evaluation
   d. Final evaluation

   ANS: A
   Rationale: Baseline measures allow you to monitor progress across subsequent evaluations and make changes as needed; thus, the initial evaluation is the evaluation used to gather the baseline measures.

   PTS: 1

2. The uninjured body part should *not* be used for which of the following purposes?
   a. Allowing the patient to demonstrate the mechanism of the injury
   b. Allowing the clinician to understand the normal "feel" of the patient during assessments
   c. Allowing for unilateral comparison of the injured body part
   d. Allowing the clinician to determine that an injury exists to the opposite limb

   ANS: C
   Rationale: Examination of the uninjured side allows for bilateral comparison with the injured side, not unilateral comparison.

   PTS: 1

3. Which of the following components of the exam is the most informative?
   a. History
   b. Inspection/observation
   c. Palpation
   d. Special tests

   ANS: A
   Rationale: The history portion of the examination is the most informative because it will obtain important information that will be refined by later portions of the examination.

   PTS: 1

4. The medical record does *not* allow for which of the following?
   a. Communicating information about the patient
   b. Documenting facts regarding the patient
   c. Giving a disposition about the patient
   d. Giving the treatment protocol for the patient

   ANS: D

Rationale: Aside from legal reasons, the main purpose of the medical record is to communicate a patient's current medical disposition, not the treatment plan.

PTS: 1

5. What type of consent is needed before evaluating an injury?
   a. Implied consent
   b. Informed consent
   c. Nonconsent
   d. Assumed consent

   ANS: B
   Rationale: A clinician must obtain informed consent unless there is a medical emergency that does not allow the patient to give consent for treatment.

   PTS: 1

6. Which of the following is *not* an open-ended question?
   a. "When does your arm hurt?"
   b. "When is your pain the worst?"
   c. "Does your ankle hurt when you walk?"
   d. "When does your injury limit you?"

   ANS: C
   Rationale: This is not open-ended because it can be answered with a "yes" or "no."

   PTS: 1

7. Which of the following should *not* be done in an effort to minimize the risk of misdiagnosis?
   a. Involve patients in their own health care.
   b. Understand cultural groups' attitudes, beliefs, and values as related to issues of health and illness.
   c. Use only the clinician's experiences or cultural beliefs when thinking about a diagnosis.
   d. Use cultural resources and knowledge to address healthcare problems.

   ANS: C
   Rationale: Many things beyond the clinician's own experiences or cultural beliefs should be taken into account when determining a diagnosis.

   PTS: 1

8. A complete history should be taken in which of the following injury situations?
   a. Sideline evaluation of a sprained ankle
   b. On-field evaluation of an injured knee
   c. Clinical evaluation of an injured shoulder
   d. Follow-up orthopedic exam

   ANS: C
   Rationale: The clinical setting is ideal to take a full history, whereas the on-field examination will typically only focus on immediate events.

PTS: 1

9. Which of the following would have an insidious onset?
   a. Achilles tendinopathy
   b. Medial collateral ligament sprain of the knee
   c. Acromioclavicular sprain
   d. Quadriceps contusion

   ANS: A
   Rationale: Insidious refers to a condition that has a gradual onset with no apparent macrotrauma. Of the options given, Achilles tendinopathy is the only pathology that typically has an insidious onset.

   PTS: 1

10. A patient comes to the athletic training room with an acute ankle sprain. Which of the following pain descriptions is typically used to indicate acute pain symptoms?
    a. "It hurts from my toes to my knee."
    b. "My whole ankle is throbbing."
    c. "It hurts right here" (pointing to the anterior talofibular ligament).
    d. There is no difference between the feeling of acute and chronic pain.

    ANS: C
    Rationale: Acute injury often results in pain that is localized; thus, being able to point to exactly where it hurts is a good sign of acute injury.

    PTS: 1

11. Before beginning the physical inspection portion of the exam, the clinician should be most concerned about his or her own safety. Which of the following is the greatest threat to the clinician if an injured knee is about to be evaluated?
    a. Bruising on the knee
    b. Bleeding from an abrasion on the knee
    c. Swelling on the lateral portion of the knee
    d. Swelling on the medial portion of the knee

    ANS: B
    Rationale: Any injury that involves exposed bodily fluid should be treated as contaminated because all bodily fluids can potentially transmit blood-borne pathogens.

    PTS: 1

12. When should the evaluation of an injury begin?
    a. While observing the mechanism of injury
    b. When the patient comes into the athletic training room
    c. During the history portion of the evaluation
    d. During the inspection/observation portion of the evaluation

    ANS: A
    Rationale: The evaluation should begin as soon as possible, with the earliest point being your observation of the mechanism of injury.

PTS: 1

13. Which of the following should *not* occur during the inspection portion of an evaluation?
    a. Observe skin.
    b. Measure range of motion (ROM).
    c. Observe swelling.
    d. Look for deformity.

    ANS: B
    Rationale: ROM should be assessed during the joint and muscle function assessment portion of the examination.

    PTS: 1

14. What is the best method for palpating an injury?
    a. Immediately palpate the most painful site.
    b. If there is a bilateral structure, palpate it first.
    c. Palpate away from the injury working toward the injury.
    d. Palpation doesn't offer any information and shouldn't be performed.

    ANS: B
    Rationale: Palpating the uninjured side first allows for a baseline to which the injured side can be compared.

    PTS: 1

15. Active range of motion (AROM) should be completed unless which of the following is present?
    a. Fracture
    b. Contusion
    c. Sprain
    d. Strain

    ANS: A
    Rationale: Due to the potential for further damage, AROM should be omitted when there is an immature fracture.

    PTS: 1

16. Athletes may not want to compete or practice. They may exaggerate or fake their signs and/or symptoms. This is known as
    a. exaggerating.
    b. faking.
    c. malingering.
    d. outsmarting the coaches.

    ANS: C
    Rationale: Malingering is defined as faking or exaggerating the symptoms of an injury or illness.

    PTS: 1

17. In order to perform manual muscle testing (MMT), which of the following has to occur?
    a. Active range of motion (AROM)
    b. Passive range of motion (PROM)
    c. Resistive range of motion (RROM)
    d. Maximal voluntary isometric contraction (MVIC)

    ANS: A
    Rationale: Inability to perform AROM means the patient cannot move against gravity, and so there is no need to add additional resistance via MMT.

    PTS: 1

18. In normal healthy tissue, which of the following is true?
    a. Active range of motion is the same as passive range of motion.
    b. Active range of motion is greater than passive range of motion.
    c. Active range of motion is less than passive range of motion.
    d. Passive range of motion should not be compared to active range of motion.

    ANS: C
    Rationale: Typically, when PROM is not greater than AROM, there is some pathology or condition present.

    PTS: 1

19. Deep tendon reflexes should be assessed in all of the following injuries *except*
    a. possible brain lesion.
    b. anterior cruciate ligament sprain.
    c. lumbar disc herniation.
    d. concussion.

    ANS: B
    Rationale: Deep tendon reflex testing is a component of the neurological examination, which is indicated when the patient complains of numbness, paresthesia, muscular weakness, or pain of unexplained origin, or when the patient has sustained a cervical or lumbar spine injury.

    PTS: 1

20. Capillary refill can give us information in all of the following cases *except*
    a. a tape job that is applied too tightly.
    b. a ligament injury.
    c. when splinting a fracture.
    d. when assessing injury with deformity.

    ANS: B
    Rationale: If blood supply to the extremities is diminished, the nailbeds can become cyanotic; thus, capillary refill is performed when there is the potential for decreased blood supply.

    PTS: 1

21. Which of the following is *not* a good practice when performing an evaluation?
    a. A systematic approach to the evaluation following the history, inspection/observation, palpation, and special testing process

b. Utilizing a repeatable process that the clinician uses each time when performing an evaluation
c. Randomly assessing areas or structures
d. Developing high reliability in the order with which processes are performed to maximize the information gained during the evaluation

ANS: C
Rationale: A systematic and methodical model leads to efficiency, consistency, and accuracy in the evaluation process.

PTS: 1

22. A patient is able to extend the leg (knee extension) against gravity but cannot overcome any other resistance. The grade for this manual muscle test is:
a. Normal (5/5).
b. Good (4/5).
c. Fair (3/5).
d. Poor (2/5).

ANS: C
Rationale: The ability to move the leg against gravity is an AROM, which is graded 3/5 if no other resistance is applied.

PTS: 1

23. Which of the following is *not* information that would be acquired while taking a patient history?
a. Mechanism of injury
b. Onset of symptoms
c. Posture
d. Treatment to date

ANS: C
Rationale: Posture will be assessed during the inspection portion of the examination.

PTS: 1

24. What is the term for the sensation of numbness or tingling, often described as “pins and needles”?
a. Upper motor neuron lesion
b. Malingering
c. Painful arc
d. Paresthesia

ANS: D
Rationale: Paresthesia is defined as the sensation of numbness or tingling.

PTS: 1

25. Which of the following bodily fluids is *least* likely to transmit blood-borne pathogens?
a. Blood
b. Sweat

c. Saliva
d. Synovial fluid

ANS: B
Rationale: Blood, saliva, and synovial fluid can potentially transmit blood-borne pathogens.

PTS: 1

26. Which of the following is *not* examined during the inspection, when checking the injured body part and comparing the results with the opposite structure?
a. Infection
b. Edema
c. Ecchymosis
d. Movement pattern

ANS: D
Rationale: Movements of the patient should be assessed during the joint and muscle function assessment.

PTS: 1

27. Which part of the examination process allows the examiner to detect tissue damage or tissue change by comparing the findings of one body part with those of the opposite one?
a. History
b. Physical examination
c. Inspection
d. Palpation

ANS: D
Rationale: Palpation allows the clinician to touch and feel changes in tissue density as well as potential damage to tissues.

PTS: 1

28. What is the term for a hypersensitive area located in a muscle belly that, when irritated, refers pain to another body area?
a. Point tenderness
b. Crepitus
c. Muscle spasm
d. Trigger point

ANS: D
Rationale: Trigger points are typically noted during the palpation and they feel like small nodules within the tissue.

PTS: 1

29. Which factors influence ROM?
a. Height and age
b. Gender and age
c. Height and gender
d. Height, age, and gender

ANS: B
Rationale: Both a patient's age and gender will have an influence on ROM, with less age-related decreases in ROM noted in females.

PTS: 1

30. Which of the following is used to assess strength and provocation of pain by isolating muscles or groups of muscles?
    a. Manual muscle test
    b. Resisted range of motion
    c. Break test
    d. Active range of motion

ANS: A
Rationale: MMT is used to isolate a muscle or muscle group, whereas RROM assesses strength in a cardinal plane. The break test is a specific form of manual muscle test that better differentiates between muscle pathology and injury of noncontractile tissues such as ligaments. Active range of motion is not designed to assess strength beyond moving against gravity.

PTS: 1

31. In deep tendon reflex grading, hyperreflexia is graded as which of the following?
    a. 0
    b. 1+
    c. 2+
    d. 3+

ANS: D
Rationale: A normal response would be graded a 2+, whereas no response would be given a grade of 0.

PTS: 1

32. Joint motion that is stopped by involuntary or voluntary muscle contraction describes what pathological end-feel?
    a. Spasm
    b. Hard
    c. Soft
    d. Firm

ANS: A
Rationale: An end-feel that results from spasm is often identified when there is inflammation, strain, or joint instability.

PTS: 1

33. A patient who can move his or her body part through a full ROM in a gravity-eliminated position would be given what MMT grade?
    a. 1/5, Trace
    b. 2/5, Poor

c. 3/5, Fair
d. 4/5, Good

ANS: B
Rationale: Trace is identified when there is a muscle contraction palpable but no movement, whereas Fair is assigned when the patient can move through a full ROM against gravity. Good refers to a patient who can resist against moderate pressure.

PTS: 1

34. Blood accumulation can result in what type of tissue density change?
a. Dense/viscous
b. Dense thickening
c. Hard, warm
d. Spongy

ANS: C
Rationale: The increase in blood results in a warmer skin temperature.

PTS: 1

35. Which of the following is *not* a finding that indicates an alert to refer for possible cancer?
a. Blood in urine
b. Blood in stool
c. Slow-to-heal skin lesions
d. Unexplained weight loss

ANS: A
Rationale: Blood in the urine is a more common finding with kidney stones or bladder infections.

PTS: 1

36. What reflex is associated with the L5 nerve root?
a. Tibialis posterior
b. Patellar tendon
c. Semitendinosus
d. Achilles tendon

ANS: A
Rationale: The L5 nerve root is associated with the tibial nerve, which innervates the tibialis posterior.

PTS: 1

37. What motor testing is associated with the C4 nerve root level?
a. Shoulder shrug
b. Elbow flexion
c. Elbow extension
d. Shoulder abduction

ANS: A

Rationale: Motor testing for the C4 nerve root is associated with the dorsal scapular nerve, which innervates muscles associated with scapular elevation.

PTS: 1

38. According to common documentation of goniometric data, which of the following would indicate a patient lacking 7° of knee extension?
    a. 7°–0°–120°
    b. 120°–0°–7°
    c. 0°–7°–120°
    d. 7°–120°–0°

    ANS: C
    Rationale: Placing the 0 before the 7 (0°–7°–120°) typically indicates that the patient is lacking 7° of extension.

    PTS: 1

39. Which pain rating scale provides descriptors that the patient uses to identify the intensity and nature of the pain?
    a. Visual analog scale
    b. Numeric rating scale
    c. Part A of the McGill Pain Questionnaire
    d. Part B of the McGill Pain Questionnaire

    ANS: D
    Rationale: Part A of the McGill Pain Questionnaire helps determine the location of pain and whether it is deep or superficial, whereas part B is used to determine the nature and intensity of the pain. The visual analog scale and numeric rating scales do not provide descriptors and are typically only used to assess intensity of pain.

    PTS: 1

40. What is the correct positioning when performing abdominal percussion?
    a. Hook-lying
    b. Side-lying
    c. Prone
    d. Seated

    ANS: A
    Rationale: The hook-lying position relaxes the abdominal muscles while the procedure is performed.

    PTS: 1

41. When auscultating the lungs, what sound indicates possible fluid in the lung?
    a. Hyperresonance
    b. Crackles
    c. Wheezing
    d. Rhonchi

    ANS: A

Rationale: A narrowed airway results in wheezing, whereas rhonchi are the result of secretions in a larger airway. A crackling sound is the result of small airways "popping open."

PTS: 1

42. What area is assessed when heart auscultation is performed in the left midclavicular line between ribs 5 and 6?
    a. Aortic area
    b. Pulmonary area
    c. Tricuspid area
    d. Mitral area

    ANS: D
    Rationale: Because the mitral valve is located between the left atria and left ventricle, auscultation must be performed farther from the midline.

    PTS: 1

43. A blood pressure with a systolic reading of 80 mm Hg would be considered
    a. hypotension.
    b. hypertension.
    c. normal.
    d. prehypertension.

    ANS: A
    Rationale: Hypotension is associated with systolic readings below 90 mm Hg paired with diastolic pressure less than 60 mm Hg.

    PTS: 1

44. Which of the following is considered a sign of shock?
    a. Slow, strong pulse
    b. Deep breathing
    c. High blood pressure
    d. Excessive thirst

    ANS: D
    Rationale: Among other signs, shock could present with decreased blood pressure, rapid and shallow breathing, excessive thirst, and a rapid and weak pulse.

    PTS: 1

45. Which movement would result in a physiological end-feel of "soft" during PROM?
    a. Knee flexion
    b. Hip flexion with the knee extended
    c. Extension of the metacarpophalangeal joint
    d. Elbow extension

    ANS: A
    Rationale: The end-feel for knee flexion is soft because motion is limited by contact between the soft tissue of the posterior leg and posterior thigh.

PTS: 1

46. Which of the following represents the heart rate range in beats/minute (bpm) of the general population?
    a. 60 to 100 bpm
    b. 80 to 120 bpm
    c. 70 to 110 bpm
    d. 90 to 120 bpm

    ANS: A
    Rationale: A highly trained individual may present with a resting heart rate between 40 and 60 bpm, whereas tachycardia is greater than 100 bpm, and bradycardia is identified when the heart rate is below 60 bpm.

    PTS: 1

47. If an athlete came into the athletic training room stating that she thinks her appendix ruptured, where would the pain be located?
    a. Upper left quadrant
    b. Lower left quadrant
    c. Upper right quadrant
    d. Lower right quadrant

    ANS: D
    Rationale: Rebound tenderness of the appendix can be assessed in the lower right quadrant.

    PTS: 1

48. Which of the following statements is *false* concerning hematuria?
    a. It may not be visible to the naked eye.
    b. It may be present normally after long-distance events.
    c. It can only be detected through a urinalysis.
    d. It may be present normally due to menstruation.

    ANS: C
    Rationale: Urinalysis isn't the only method to assess urine, as changes in urine color are visible to the naked eye.

    PTS: 1