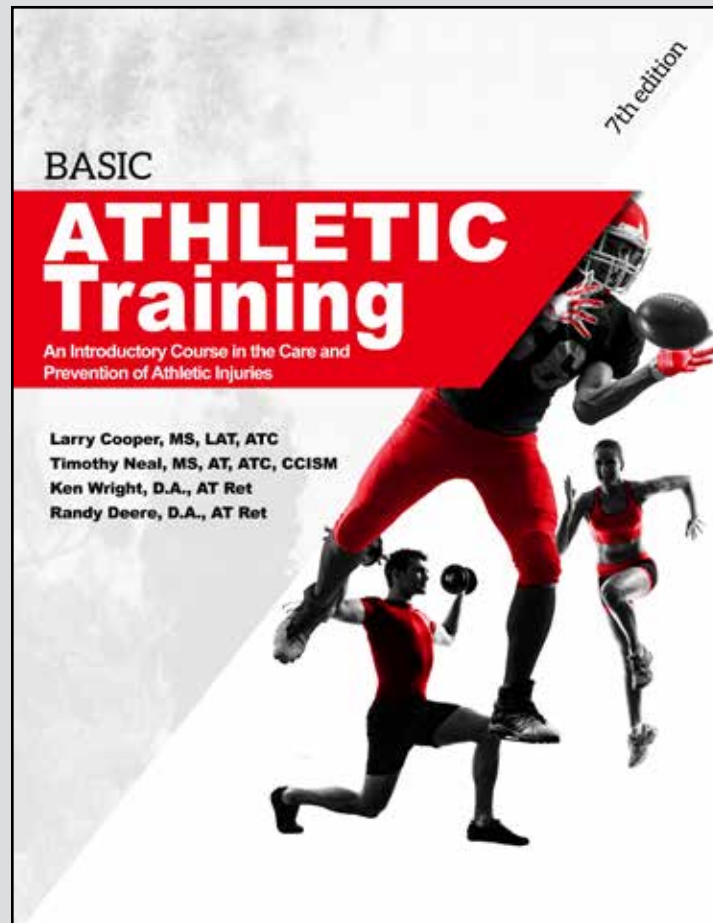


INSTRUCTOR'S GUIDE



SAGAMORE  VENTURE

Chapter 1: Organization and Administration

Completion

1. The athletic training student duties are limited: however, important duties could include _____, _____, and _____.
Answer pp. 5-6: immediate care of injuries, preventive techniques, and basic treatment protocols.
2. Just as a coach, the athletic training student should maintain _____ certification.
Answer pp. 5-6: First Aid & CPR
3. Athletic training students can benefit by _____ and _____.
Answer p. 6: Attending educational workshops and reading sports medicine texts and articles.
4. A _____ form should be kept recording all treatments given or preventive/supportive techniques applied by the athletic training staff.
Answer p. 10: daily treatment
5. A(n) _____ is someone who has successfully passed the national certification examination.
Answer p. 4: Athletic Trainer (AT)

Short Answer

1. Coaches play a very important part in the sports medicine program. List two things a coach should know related to the care of an athlete.
Answer p. 5
2. Name the seven areas of an athletic training facility.
Answer pp. 6-7: Administrative office, hydrotherapy area, preventive (taping) area, rehabilitation area, treatment (therapeutic modality) area, physician's examination, and storage area
3. List five employment situations where a certified athletic trainer can be employed.
Answer pp. 11-13: Schools, professional sports, sports medicine clinics and hospitals, corporate/industrial, community recreation centers, military/tactical/public safety and performing arts
4. List at least five medical personnel who could be members of the sports medicine team.
Answer p. 4-5: Multiple answers (e.g., cardiologist, dentist, neurosurgeon, Ophthalmologist/optometrist, orthopedic surgeon, etc
5. List existing requirements for becoming a certified athletic trainer.
Answer p. 11: Thorough knowledge in anatomy and physiology, physiology of exercise, psychology, first aid, CPR, nutrition, pharmacology, therapeutic modalities, rehabilitation protocols and graduate from an accredited athletic training education program
6. What is the mission of the NATA?
Answer p. 2: Enhance the quality of health care provided by certified athletic trainers and to advance the athletic training profession.
7. What role do parents play as a member of the sports medicine team?
Answer p. 6: Parents need to be kept abreast of their son or daughter's health status regarding injury or illness.
8. What role do athletes play in health care?
Answer p. 5: Maintain good physical condition, practice the techniques taught by coaches, play by the rules and follow instructions from coaches and certified athletic trainers.

Chapter 2: Recognition, Evaluation, and Management of Athletic Injuries

Completion

1. When palpating and performing assessment tests, always compare ____ by examining the uninvolved extremity first.
Answer pp. 20-21: bilaterally
2. Physical inspection begins at the ____ step.
Answer p. 19-21: evaluation
3. List the recommended treatment time for an ice bag: _____.
Answer p. 22: ten (10) minutes or less
4. Compression should be accomplished by using an ____ wrap.
Answer p. 22: elastic

Short Answer

1. What is the first step in the injury process?
Answer p. 18: Recognition of Injury
2. Why are special tests performed?
Answer p. 20: Special tests are performed to evaluate joint stability, disability, and pain.
3. In injury evaluation, what do these terms mean? H O P S and S O A P
Answer pp. 20-21
HOPS = History, Observation, Palpation, Special Test
SOAP = Subjective, Objective, Assessment, Plan
4. What are the two major considerations in emergency evaluation?
Answer p. 18: Control of life-threatening conditions and activation of emergency medical services; Management of non-life-threatening injuries
5. What does the acronym PRICES represent?
Answer p. 22: Protection, Rest, Ice, Compression, Elevation, and Support
6. What are the three types of splints?
Answer p. 21: Fixation splints, Vacuum splints, and Traction splints

Chapter 3: Injuries and the Healing Process

Completion

1. The body's reactions to trauma are ____, ____, ____, ____, and ____.

Answer p. 26: Pain, swelling, redness, heat, and loss of function.

2. Redness and a feeling of warmth around an injury are signs of an increase of ____ ____ to that body part.

Answer p. 26: Blood flow

3. Normal pulse readings for adults is ____.

Answer p. 26: 60-80

4. Normal pulse readings for children are ____.

Answer p. 26: 80-100

5. Normal blood pressure of a healthy adult is ____/____.

Answer p. 27: 120/80

6. Ice is used initially on an injury to reduce ____, ____, and ____.

Answer p. 28: pain, tissue's metabolic needs, blood flow

7. Range of motion of a joint can be measured by using a ____.

Answer p. 31: goniometer

8. All the fluids and dead cells that have resulted in swelling must be removed from the injury site by the ____ and ____ systems.

Answer p. 26: Circulatory, lymphatic

9. A rehabilitation program should not only focus on the injured body part, but also preventing ____ of the rest of the body.

Answer p. 30-31: de-conditioning

Short Answer

1. What five phases of physical rehabilitation need to be included in a comprehensive rehabilitation program?

Answer p. 31: Post-surgical/acute injury, early exercise, intermediate exercise, advanced exercise, initial sports re-entry

2. List three physiological changes associated with ice.

Answer p. 28: Reduced pain at the injury site, reduced tissue's metabolic need for oxygen, reduced blood flow to the injury site

3. List three physiological factors associated with heat.

Answer p. 29: Increased blood flow to the injured area, reduced muscle stiffness, muscular relaxation

4. Explain the difference between arthritis and bursitis.

Answer p. 32: Arthritis is an inflammation to a joint while a bursitis is an inflammation to a bursa.

Chapter 4: Biohazardous Protocols and Skin Conditions

Completion

1. Wounds affect the _____, also known as the integument system.
Answer p. 38: skin
2. In all follow-up wound care, the athletic trainer should look for signs of _____.
Answer p. 38: Infection
3. All soiled material should be placed in a _____.
Answer p. 37: biohazard container
4. OSHA guidelines cover bloodborne pathogens such as _____ and _____.
Answer p. 36: Hepatitis and HIV
5. The CDC estimates about _____ infections occur each year of Hepatitis B.
Answer p. 35: 38,000
6. An _____ is when the outer layer of skin is scraped or scratched.
Answer pp. 38: Abrasion
7. A sharp object causes a _____ or _____ wound.
Answer p. 38-39: laceration or puncture wound
8. Most fungus infections grow in an environment that is _____, _____, and _____.
Answer p. 40-41: moist, dark, and warm

Short Answer

1. List the five types of wounds mentioned in this chapter.
Answer p. 38
Avulsion
Abrasion
Laceration
Incision
Puncture
2. What is the difference between a laceration vs. avulsion?
Answer pp. 38-39: A laceration is the jagged or irregular tearing of soft tissue while an avulsion is the forceful tearing of tissue.
3. What are the bloodborne pathogens that are of most concern in today's health care?
Answer p. 36: HIV and Hepatitis B
4. What solution is used to clean a contaminated athletic training room area?
Answer p. 37: 1 ounce of bleach to 10 ounces of water
5. How long does the bleach/water solution keep its effectiveness?
Answer p. 37: One day

6. List the initial care for an avulsion.

Answer p. 38: Put on disposable latex gloves and follow OSHA guidelines. Apply direct pressure with sterile gauze, elevate affected anatomical structure, watch for severe bleeding, and transport the athlete to a physician. Medical referral is required. Wrap the avulsed body part in a sterile gauze pad and place body part in container of sterile water.

7. Why is it important to have a plan of action to deal with blood borne pathogens?

Answer p. 35-36: Following OSHA protocol protects everyone (athletes and health care workers) and should be implemented in the workplace.

8. Why is Herpes Simplex a serious skin disease within an athletic team?

Answer p. 40: Herpes simplex is a highly contagious disease that can spread very easily and rapidly.

9. How would you care for athlete's foot?

Answer p. 40: To care for athletes' foot, you would powder the feet daily, dry feet thoroughly after each shower, keep shoes dry by dusting them with powder, wear clean sports socks, use shower shoes, and clean and disinfect shower rooms daily.

Chapter 5: Basic Fundamentals: Taping Techniques, Wrapping Techniques for Compression and Support, and Protective Devices

Completion

1. Elastic tape has the ability to _____ and _____.
Answer p. 44: expand and contract
2. _____ is used in the initial treatment of acute injuries.
Answer p. 30: Protection, Rest, Ice, Compression, Elevation, Support (PRICES)
3. Proper skin temperature reduces the chances of _____.
Answer p. 44: irritation
4. Taping and wrapping procedures are not a substitute for proper _____.
Answer p. 44: injury rehabilitation

Short Answer

1. What is the primary purpose of tape or elastic wraps?
Answer p. 44 & 47: To provide additional support, stability, and compression for the affected body part
2. How is a compression wrap applied?
Answer p. 67: A compression wrap is applied by using a spiral pattern, starting distal from the injury, and wrapping toward the heart.
3. In preparation of some body parts for applying tape, what would be applied for protection of the skin?
Answer p. 46 & 47: Adhesive dressing, under-wrap, and skin lubricants along with a heel of lace pad may be used for skin protection
4. What is the importance of skin lubricants?
Answer p. 46: Skin lubricants reduce the possibility of skin irritation
5. List three specialty supplies utilized in special pad techniques.
Answer p. 51: Foam, thermoplastic, and felt
6. What should the skin temperature be for applying any taping technique?
Answer p. 44: Normal skin temperature
7. Why should caution be used in the application of any taping and wrapping procedure?
Answer p. 44 & 51: Caution should be used at all times because improper taping or wrapping could further injure the athlete.
8. What is the advantage of removing hair prior to applying a taping technique?
Answer p. 46: Removal of hair will ensure a good solid foundation for the tape, will allow for easy tape removal, and will reduce skin irritation.

Chapter 6: Foot, Ankle, and Lower Leg

Completion

1. The _____ is mounted almost directly on top of the talus and extends over its medial side.
Answer p. 56: Tibia
2. The talocrural joint is formed by the _____, _____, and _____.
Answer p. 56: Tibia, fibula, and talus
3. The injured ankle should be compared to the _____.
Answer p. 59: Uninjured side
4. _____ usually refers to a great toe sprain.
Answer p. 62: Turf toe
5. The four arches of the foot are the _____.
Answer p. 58: Metatarsal, transverse, medial longitudinal, lateral longitudinal
6. Factors that contribute to muscle cramps are: (list 4) _____.
Answer p. 64: Fatigue, dehydration, lack of nutrients in diet, poor flexibility, previous injury where rehabilitation program was not completed, improperly fitted equipment that causes excessive strain on the anatomical structure.
7. Two indicators of stress fractures are _____ and _____.
Answer p. 63: Specific point tenderness and increased pain during exercise sessions.
8. The large, bony protrusions on each side of the ankle are known as the _____.
Answer p. 56: Malleoli
9. With inversion ankle sprains, the ligament most often injured is the _____ ligament, on the _____ side of the ankle.
10. A common mechanism of injury for an anterior tibiofibular ligament sprain is _____.
Answer p. 60: A combination of eversion and abduction of the foot

Short Answer

1. Define the acronym: H_____ O_____ P_____ S_____
Answer p. 59-60
History – asking questions of the athlete
Observation – looking at the injury and comparing it to the un-involved side
Palpation – physically touching the injury
Special Tests – functional tests to assess disability
2. Explain the differences between a first, second, and third-degree ankle sprain.
Answer p. 61
First degree – one or more ligaments are stretched
Second degree – one or more ligaments are partially torn
Third degree – one or more ligaments have been completely torn
3. What is a March fracture?
Answer p. 63: A stress fracture to the 2nd or 3rd metatarsal.
4. Identify some of the exercises used to rehabilitate the ankle.

Answer p. 64-65: Heel raises, toe raises, ankle alphabet, incline board, mini squats, proprioceptive exercises

5. Define strain to the Achilles tendon.

Answer p. 63: A partial- to full-tear of the Achilles tendon, which is formed by the gastrocnemius and soleus muscle.

6. Define a sprain to the great toe.

Answer p. 62: A partial- to full-tear of the ligaments involved with supporting the big toe.

7. What are the symptoms of anterior compartment syndrome?

Answer p. 63: Signs of anterior compartment syndrome include pain even after cold treatment, a firmness of the muscle, numbness of the foot, and warmth

8. How are stress fractures evaluated?

Answer pp. 63: X-ray during initial evaluation and then possibly 3-4 weeks later.

9. What is a common complaint with plantar fasciitis?

Answer p. 62: A common complaint of the athlete with plantar fasciitis is increased pain when first walking in the morning after getting out of bed.

10. Which muscles are typically strengthened for a patient with medial tibial stress syndrome?

Answer p. 62: The muscles of the deep posterior compartment. Tibialis posterior, flexor digitorum longus, flexor hallucis longus.

Chapter 7: Knee and Thigh

Completion

1. While the knee is the largest joint in the body; structurally it is very _____.
Answer p. 75: Weak
2. The main weight bearing bone of the lower leg is the _____.
Answer p. 75: Tibia
3. The slightly concave surfaces of the distal tibia are called the _____.
Answer p. 75: Condyles
4. The _____ ligaments assist in reducing valgus and varus (abduction and adduction of tibia on femur) movement in the knee, while the _____ ligaments control anterior and posterior movement of the femur on the tibia.
Answer p. 75: Collateral, cruciate
5. The four muscles that comprise the quadriceps group are the _____, _____, _____, and _____.
Answer p. 76: Rectus femoris, vastus lateralis, vastus medialis, vastus intermedius
6. _____ condition is related to the growth center at the tibial tubercle.
Answer p. 82: Osgood-Schlatter

Short Answer

1. How does a torsion injury occur to the knee joint?
Answer p. 80: Torsion injuries occur when the feet are fixed and the body/injured joint is twisted.
2. What structures are injured in an “unhappy triad”?
Answer p. 80: ACL, MCL, medial meniscus
3. What are the functions of the menisci?
Answer p. 80-81: Menisci primarily reduce the load placed on the knee and function as “shock absorbers” for the knee.
4. Describe the Osgood-Schlatter condition. Why is it common to adolescents?
Answer p. 82: It can be either an inflammation or a bone separation at the tibial tubercle. It is common in adolescents because the tibial tubercle is at the growth plate of the tibia.
5. What are some common causes of hamstring and quadriceps muscle strains?
Answer pp. 82: Common causes of muscle strains are lack of strength, repetitive overuse, improper technique and inadequate warm-up.
6. Give three biomechanical reasons why patellar problems might occur.
Answer p. 81-82: Increased Q-angle, flat feet, and weak hip abductors
7. What criteria would be used to determine when the athlete is ready to return to sports participation?
Answer pp. 82-83: Full range of motion; strength, power, and endurance are proportional to the athlete’s size and sport; no pain during running, jumping, or cutting
8. Name the four most important ligaments of the knee.
Answer p. 78: ACL, PCL, MCL, LCL

9. What condition is characterized by an irritation and softening of the cartilage on the posterior aspect of the patella?

Answer p. 81: Chondromalacia patellae

10. Why might females be more likely to tear their ACL than males? How would you prevent this injury?

Answer, p. 81: Women tend to land from a jump in a more straight-legged position than men and tend to rely on the ligaments to give stability to the knee, whereas men tend to land with more of a bent knee and rely on the musculature of the leg to give stability to the knee. To prevent the injury exercises should include: strengthening the hamstring muscle group, plyometrics and agility drills, all while focusing on proper biomechanical techniques such as landing on the toes with the knee bending over the foot instead of in a valgus position.

Chapter 8: Hip and Pelvis

Completion

1 The hip joint is formed by the spherical head of the _____ fitting into the deep ____ of the hip.

Answer p. 91: Femur, socket

2. The _____ joint is the strongest in the body.

Answer p. 91: Hip

3. While not common, a _____ dislocation is a dangerous condition that should only be handled by emergency medical personnel.

Answer p. 96: Hip

4. Conditions that indicate an athlete should be referred for physician evaluation include these 11 items

Answer p. 95: Gross deformity, significant pain, increased swelling, circulation or neurological impairment, joint instability, suspected fracture or dislocation, persistent pain in hip and pelvis area, noticeable and palpable deficit in the muscle or tendon, abnormal sensations such as clicking, popping, grating, or weakness, weight-bearing activities, any doubt regarding the severity or nature of the injury

Short Answer

1. What type of joint is the hip?

Answer p. 91: Ball and socket joint

2. What injury occurs to the growth plate of the head of the femur and is most likely to occur in boys aged 10 to 14?

Answer p. 96: Slipped Capital Femoral Epiphysis (SCFE)

3. What injury is an avascular necrosis of the femoral head and most often seen in boys prior to the age of 10?

Answer p. 96-97: Legg-Calve-Perthes Disease

4. What is thought as the primary cause of Osteitis Pubis?

Answer p. 96: It is thought that stiffness and restricted motion of the hip joint may cause an increase in movement (over 2mm) at the pubic symphysis.

5. What are methods to decrease the spasm caused by trauma to the genitalia?

Answer p. 96: One method to relieve this spasm is to have the athlete lie on the ground and to flex his/her thighs to the chest. Additionally, have the athlete loosen the clothing area.

6. What movements will increase pain during a severe iliac crest contusion?

Answer p. 96: Any movement requiring involvement of the trunk and extremities will result in more pain and discomfort.

7. What is the definition of "avascular necrosis"?

Answer, p. 96: Death of tissue due to lack of blood

8. What rehabilitation exercises may be done to return an athlete who has suffered a thigh or hip injury back to full sports participation?

Answer pp. 97-98: Abdominal sit-up/curl-ups, abdominal crunches, pelvic tilts, squats, range-of-motion exercise, resistance exercises, cardiovascular/fitness activities (walking, stair climbing, running, swimming, cycling, etc), Sport-specific activities (jumping, figure of eights, cutting, jumping rope, etc.)

Chapter 9: Thorax and Abdomen

Short Answer

1. Why is it important to have preseason baseline data (thorax and abdominal areas) while conducting a secondary survey?

Answer p. 106: Physical findings may vary tremendously from athlete to athlete, yet still be within their own “normal range.”

2. What are the characteristics of bronchitis?

Answer p. 110: This is inflammation of the larger bronchial tubes and is characterized by a progressive cough.

3. Describe the reason a pneumothorax occurs?

Answer p. 109: The result of air leaking from the lung or from the outside via a penetrating chest wound into the pleural space or between the chest wall. It can also be spontaneous without known cause.

4. If blood enters the pleural space in the lungs as a result of a rib lacerating an intercostal artery, or lung itself, what is the proper name for this condition?

Answer p. 110: Hemothorax

5. Name the four quadrants of the abdominal cavity and a specific organ of concern in each?

Answer p. 104-105: 1) Right Upper; liver, gallbladder, pylorus of stomach, head of pancreas, hepatic flexure of colon, portion of small intestine, right kidney, adrenal gland, and distal vena cava. 2) Left Upper; Stomach, spleen, body and tail of pancreas, splenic flexure of colon, portion of small intestine, left kidney, adrenal gland. and distal esophagus. 3) Right Lower; appendix, cecum of colon, portion of small bowel, right side of urinary and reproductive systems. 4) Left Lower; sigmoid colon, rectum, portion of small bowel, left side of urinary and reproductive systems

6. List the four vital signs

Answer p. 106: Heart rate, respiratory rate, blood pressure, and body temperature

7. What are the four elements of auscultation assessment?

Answer p. 107:

- 1) Presence of normal versus abnormal sounds of the abdomen and chest
- 2) Symmetry of equality of breath sounds
- 3) Respiratory rate and breath sound
- 4) Depth of breaths

8. Name the three symptoms of acute abdominal injury.

Answer p. 108:

- 1) Rebound tenderness
- 2) Voluntary guarding
- 3) Rigidity

9. What is the primary survey for a thoracic injury (pneumonic)?

Answer p. 106: Compression/Circulation, airway and breathing

10. What does the secondary survey consist of?

Answer p. 106: Consists of two elements—a thorough history and a complete physical examination.

11. What are the signs and symptoms of a myocardial infarction?

Answer p. 109: Persistent chest pain, difficulty breathing, irregular pulse (may be faster or slower than normal) Cyanosis, profuse sweating, radiating pain left neck, shoulder and arm, Levine’s sign (clinched fist over the chest), hypotension or shock

12. Name the two most commonly injured organs in the abdomen.

Answer p. 110: Splenic laceration and liver laceration

13. Name five reasons for immediate referral of an injured athlete.

Answer p. 111: Loss of airway, shortness of breath, abnormal chest movements, decreased breath sounds, tracheal deviation, jugular venous distention, signs of shock, hemoptysis, hematemesis, blood in urine or stool, fever. There are several others listed on page 112.

Chapter 10: Head, Neck, and Spine

Completion

- 1 The first seven vertebrae are known as the _____ vertebrae
Answer p. 116-117: Cervical
2. The brain is protected from direct trauma by the bones of the _____.
Answer p. 116: Cranium
3. A _____ is defined as an injury to the brain due to acceleration the deceleration or “shaking” of the brain.
Answer pp. 119-120: Concussion
4. A “stinger” or “burner” down the arm is the result of stretching the _____.
Answer p. 124: Brachial Plexus

Short Answer

1. Name the four types of intracranial hemorrhage.
Answer pp. 122-123: 1) Epidural hematoma, 2) Subdural hematoma, 3) Intracerebral hematoma
4) Subarachnoid hemorrhage
2. List all components of a comprehensive rehabilitation program.
Answer pp. 125-126
Range of motion exercises to head and neck, spine/back and torso
Strengthening exercises to head and neck, spine/back. Best way to determining if healing is complete is absence of pain, full range of motion and strength, power and endurance to the affected muscle group.
3. What is the difference between a dermatome and myotome?
Answer p. 123: Dermatomes are areas of skin that are supplied by a single nerve while myotomes reflect the level or segment of the spinal cord and corresponding spinal nerve.
4. According to the CDC signs and symptoms of concussions fall into four categories. Please name them.
Answer p. 119-120: 1) Thinking/remembering, 2) Physical, 3) Emotional/Mood, and 4) Sleep
5. What was the purpose of the 4th International Conference on Concussion in Sport held in November 2012 in Zurich?
Answer p. 121: To develop a consensus statement, recommendations, and a standardized tool for evaluating injured athletes for concussions. The tool was updated and titled “Sport Concussion Assessment Tool 3rd ed. (SCAT 3). There is a SCAT 3 for adults (ages 13-up) and a Modified SCAT 3 for children (ages 5-12)
6. Describe the SCAT 5 for adults and SCAT 5 for Children.
Answer pp.128-145: They are basically the same except the SCAT 3 for Children has a parent assessment and specific test that identify mental and physical differences children and adults.

Chapter 11: Shoulder and Upper Arm

Completion

1. The _____ is the point where the clavicle articulates with the scapula.
Answer p. 147: Acromioclavicular joint
2. The clavicle does not articulate with the _____.
Answer p. 147: humerus
3. The _____ glenohumeral dislocation occurs when the arm is _____ and _____ rotated.
Answer p. 153: anterior, abducted and externally
4. The four bones that make up the shoulder/upper arm complex are the _____, _____, _____, and _____.
Answer p. 148: sternum, clavicle, humerus, and scapula
5. The _____ end of the clavicle articulates with the sternum. The _____ end articulates with the acromion process.
Answer p. 147: proximal, distal
6. _____ attach the scapula to the clavicle.
Answer p. 147: Ligaments (coracoclavicular ligaments and acromioclavicular ligament)
7. Resistance to shoulder movement can often reveal an injury to a specific _____.
Answer p. 152: anatomical structure
8. With a shoulder dislocation, you should always suspect a _____.
Answer p. 153: fracture
9. Contusions to the distal end of the clavicle are called _____.
Answer p. 154: shoulder pointers
10. The four deep muscles that stabilize the head of the humerus into the glenoid fossa are referred to as the rotator cuff. The four muscles are:
Answer p. 148-149: Supraspinatus, Infraspinatus, Teres Minor, and Subscapularis

Short Answer

1. Name three components of a rehabilitation protocol.
Answer pp. 155-156: Absence of pain; Full range of motion; Strength
2. Name four shoulder rehabilitative exercises.
Answer pp. 155-156:
Non-gravity pendulum movements
Shoulder fly (abduction to 90 degrees) with dumbbells
Push-ups
Rowing
Thrower's Ten exercise program,
Elastic band exercises for rotator cuff and scapular stabilizers
Towel movement routine

3. Name an internal derangement test.

Answer p. 152: Glenoid labrum clunk test

4. Describe the basic first aid treatment for a fractured clavicle.

Answer p. 153: When a fracture of the clavicle is suspected, the basic treatment includes: stabilizing the injured joint (applying a sling), treat the athlete for shock, and immediate medical referral for physician evaluation.

5. What is a common mechanism of an acromioclavicular (AC) sprain?

Answer p. 153-154: The mechanism of injury is often a blow to the top of the shoulder or a fall on an outstretched arm.

6. What is the difference between a separation and a dislocation to a joint?

Answer pp. 153-154: Dislocation is an injury to a moveable joint. Separation is an injury to a non-moveable joint

Chapter 12: Elbow, Forearm, Wrist, and Hand

Completion

1. The _____ and _____ tests assess the elbow collateral ligaments.
Answer p. 166: valgus and varus
2. The anatomical snuffbox test can help identify a possible _____ of the scaphoid bone.
Answer p. 167: fracture
3. _____ is the accumulation of blood under the fingernail.
Answer p. 169: Subungual Hematoma
4. Pronation and supination are suggested exercises for _____ rehabilitation.
Answer pp. 170: elbow
5. The bones that form the elbow are the _____, _____, and _____.
Answer pp. 161: radius, ulna and humerus
6. The _____ is similar to the femur of the leg, as both have two _____ at their or lower ends.
Answer pp. 161: humerus; condyles distal
7. Of the two bones of the forearm, the _____ acts as a stationary axle.
Answer pp. 161-162: ulna
8. The elbow joint has very strong _____ and _____ support.
Answer pp. 161: ligamentous and muscular
9. Helping to stabilize the elbow joint, by attaching to the ulna and encircling the head of the radius, is the _____ ligament.
Answer p. 162: annular
10. The three muscles that control the movement of the elbow are the _____, _____, and the _____.
Answer p. 162: biceps, triceps, and the brachialis
11. The wrist joint is formed by the distal ends of the _____ and _____, and by the _____ bones.
Answer pp. 162: ulna and radius, and by the eight carpal

Short Answer

1. Name the three ligaments of the elbow joint.
Answer p. 164: Medial collateral (Ulna) ligament; Lateral collateral (Radial) ligament; Annular ligament
2. List two suggested exercises for rehabilitation of the wrist and hand.
Answer pp. 170-171: Hand squeeze; Finger abduction
3. Name the eight bones that make up the wrist.
Answer p. 162: Navicular, lunate, triquetrum, pisiform, trapezium, trapezoid, capitate, hamate
4. Name the three groups of bones of the hand.
Answer p. 162: Carpals; Metacarpals; Phalanges

Chapter 13: Mental Health and Wellness Issues

Completion

1. Pre-activity foods should exclude the following items:

Answer p. 182

- Fatty, fried foods, because they are digested slowly and can interfere with efficiency in exercise
- Gas-forming foods, such as bulky raw vegetables, can cause discomfort and detract from physical abilities
- Salt tablets (average diet usually contains enough salt)
- Special “magic” foods (e.g., energy drinks)
- Nutritional supplements can be costly and potentially dangerous, possibly containing stimulants

2. The gender-specific condition called the female athlete triad involves three components

Answer p. 181: disordered eating, the absence of menstruation (amenorrhea), and the loss of bone density (osteoporosis)

3. _____ is a component of the cannabis plant that creates a euphoric effect on an individual.

Answer p. 183: THC (tetrahydrocannabinol)

4. The ____ of energy drinks cannot be ensured, as there are no regulatory controls over these products.

Answer p. 182-183: safety

Short Answer

1. List four of the harmful side effects of steroid use.

Answer p. 184:

The side effects in males include liver damage (including liver cancer); impaired kidney function; enlargement of the prostate gland; decreased levels of natural testosterone; testicular atrophy resulting in sterility; growth of breast tissue; premature closure of epiphyseal plates in younger age groups; and weight gain caused by fluid retention, which often leads to elevated blood pressure.

2. What are some of the signs you should look for in substance use and abuse?

Answer p. 185-186

- Motivation variations
- Change in personality or behavioral patterns
- Withdrawal from companionship
- Decline in performance, both physically and academically
- Frequent missing of classes, especially physical activity classes
- Inability to coordinate (standing or walking)
- Poor personal hygiene and grooming
- Muddled speech
- Impaired judgment
- Restless, jittery
- Muscular twitches, tremor of hands
- Heavy sweating, bad breath, nervousness (amphetamine abuse)
- Red eyes, listlessness, increased appetite with special craving for sweets or salty foods (marijuana abuse)

3. Define the differences between anorexia nervosa and bulimia.

Answer p. 181

Anorexia nervosa is characterized by a person refusing to eat or a person not eating enough to maintain normal body functions, such as 15% below ideal body weight and loss of menses.

Bulimia is characterized by overeating (binge) and then vomiting (purge) at least two times per week for 3 months. The athlete will consume large quantities of food and immediately purge it through vomiting, laxatives, diet pills, or over-exercise.

4. Explain the difference between CBD and THC.

Answer p. 183-184

- THC - Marijuana
- CBD - Cannabidiol

5. In relation to vaping, what does ENDS stand for?

Answer p. 184-185: Electronic Nicotine Delivery Systems

6. What is restless leg syndrome?

Answer p. 180: An unpleasant sensation in the legs that causes the person to move the legs. It most commonly occurs when the person is lying down or sitting still. The athlete should be tested for low iron levels, as this can be a symptom of restless leg syndrome.

Chapter 14: Important Issues to Consider in Athletic Health Care

Completion

1. The gradual process of adjusting to hot weather and cold weather workouts is known as _____. This process take _____ weeks.
Answer p. 190: Acclimatization; 1 to 2 weeks
2. Frequent _____ before, during, and after practice will help ensure that athletes function efficiently and safely.
Answer p.190: fluid intake
3. A fluid loss of as little as _____% of total body weight can adversely affect endurance and coordination.
Answer p. 190: 2%
4. _____ is a medical emergency
Answer p. 192-193: Heat Stroke (Hyperthermia)
5. Besides fluid replacement, two special concerns during cold weather workouts include _____ and _____.
Answer p. 194: air temperature and wind
6. The common cold virus is transmitted primarily by
Answer p. 196: touch

Short Answer

1. Why are high temperature and elevated humidity dangerous?
Answer p. 189: High temperatures and elevated humidity can negatively affect athletic performance and adversely affect health, which in turn can cause the student-athlete to succumb to heat illness and can even threaten life.
2. What factors cause heat stroke?
Answer p. 192-193: Heat stroke is the most serious form of hyperthermia; it is a life-threatening medical emergency! Athletes who reach this stage of heat illness usually have a high body temperature (104 °F or higher), are dehydrated, and usually have some form of electrolyte imbalance.
3. What are the symptoms of heat exhaustion?
Answer p. 192:
 - Cool, moist, or pale skin color
 - Headache, light-headedness, dizziness, lack of coordination
 - Profuse sweating, decreased urine output, diarrhea
 - Fast and shallow breathing
 - Weak but rapid pulse (less than 120 bpm)
 - Dilated pupils
 - Nausea and/or vomiting
 - Muscle cramps
 - General sense of weakness or tiredness
 - Conscious, but fainting may occur
 - Watch for signs of shock
 - Elevated core temp < 102 °F

4. What are the symptoms of heat stroke?

Answer p. 193:

- Skin is hot, dry, red but can also be sweaty
- Athlete is mentally confused and may be very aggressive
- Elevated temperature
- Headache, dizziness, weak and fatigued feeling
- Possible absence of sweating
- Strong, rapid pulse (>160 bpm)
- Falling blood pressure
- Elevated core temp (≥ 104 °F)
- Convulsions
- Conscious but unresponsive aphasic
- Diarrhea and/or vomiting
- Athlete may faint or become unconscious
- Central nervous system dysfunction

5. What are the first-aid procedures for heat stroke?

Answer p. 193

Cool first. Transport second.

Activate emergency management system—call 911 immediately!

Remove excessive clothing and equipment; move out of direct sunlight and into air-conditioning immediately if possible.

Check rectal temperature with rectal thermistor if available.

Cool the athlete as quickly as possible within 30 minutes via whole-body ice water immersion (place them in a tub/stock tank with ice and water approximately 35–58 °F); stir water and add ice throughout cooling process.

After cooling has been initiated, activate emergency medical system by calling 911.

If immersion is not possible (no tub or no water supply), take athlete to a shaded, cool area and use rotating cold, wet towels to cover as much of the body surface as possible.

Maintain airway, breathing, and circulation.

Monitor vital signs such as rectal temperature, heart rate, respiratory rate, and blood pressure, and monitor central nervous system status. If rectal temperature is not available, DO NOT USE AN ALTERNATE METHOD (oral, tympanic, axillary, forehead sticker, etc.). These devices are not accurate and should never be used to assess an athlete exercising in the heat.

Cease cooling when rectal temperature reaches 101–102 °F (38.3–38.9 °C).

If the athlete is conscious and responsive, give cold fluids. Athletes MUST be cleared by a physician before returning to sports activities and gradually progress from limited participation to full participation over several days under close observation for a return of symptoms.

Exertional heat stroke has had a 100% survival rate when immediate cooling (via cold water immersion or aggressive whole-body cold-water dousing) was initiated within 10 minutes of collapse.

6. What are the progressive signs of hypothermia?

Answer p. 194

Constant shivering—an attempt by the body to generate heat

Apathy, slurring of speech, listlessness, involuntary muscle movement, croaky voice, sleepiness, and generalized rigidity of muscles

Sluggishness or clumsiness, poor judgment

Unconsciousness, pupils that are abnormally dilated and that react sluggishly to light, and very slow pulse and respiratory rates

Freezing of hands and/or feet

Athletes with asthma (store asthma inhalers in a place where they will remain at normal temperature, to avoid adverse reactions)

7. What can happen if an athlete returns to activity before fully recovering from a cold?

Answer p. 196: Prior to return to activity, the athlete should be given adequate time to recover from the common cold or respiratory tract infection. Returning too soon can cause the virus to linger and possibly turn into a more serious illness.