

Sports Injuries **Guidebook**

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LEARNING OBJECTIVES

After reading *Sports Injuries Guidebook*, the participant will be able to:

1. Understand an in-depth overview of a variety of sports injuries.
2. Describe the common causes of a variety of sports injuries.
3. Name the anatomical structures involved in a variety of sports injuries.
4. Recognize sports injury identification cues and symptoms.
5. Indicate the common treatment options for a variety of sports related injuries.
6. Understand the concepts describing functional training.
7. List the common causes, symptoms, treatments and return to action guidelines for head injuries.
8. Identify the evaluation scales associated with concussions.
9. List the common causes, symptoms, treatments and return to action guidelines for neck and cervical spine injuries.
10. Identify the common causes, symptoms, treatments and return to action guidelines for shoulder injuries.
11. Identify the common causes, symptoms, treatments and return to action guidelines for arm and elbow injuries.
12. Identify the common causes, symptoms, treatments and return to action guidelines for wrist and hand injuries.
13. Identify the common causes, symptoms, treatments and return to action guidelines for chest and abdominal injuries.
14. Identify the common causes, symptoms, treatments and return to action guidelines for low back injuries.
15. Identify the common causes, symptoms, treatments and return to action guidelines for hip injuries.
16. Identify the common causes, symptoms, treatments and return to action guidelines for leg injuries.
17. Identify the common causes, symptoms, treatments and return to action guidelines for knee injuries.

18. Identify the common causes, symptoms, treatments and return to action guidelines for foot and ankle injuries.
19. Understand the positive contributions that integrative and complimentary medicine can make in sports injury management.



CEC/CEU Test for Sports Injuries Guidebook

Remember to choose the BEST answer for each question.

- 1. Functional conditioning is a training technique that focuses on _____.**
 - a. the core
 - b. isolated muscle groups
 - c. movements
 - d. balance

- 2. Functional conditioning exercises occur in which of the following planes?**
 - a. Sagittal and Frontal Planes
 - b. Transverse and Frontal Planes
 - c. Transverse Plane only
 - d. Sagittal, Frontal and Transverse Planes

- 3. Most injuries occur in the _____ plane during deceleration.**
 - a. Transverse
 - b. Sagittal
 - c. Frontal
 - d. Multiplanar

- 4. Which of the following proprioceptors will inhibit a muscle contraction when tension exceeds a certain threshold?**
 - a. Motor Neurons
 - b. Golgi Tendon Organs
 - c. Muscle Spindles
 - d. Motor Programs

- 5. The stretch-shortening reflex happens in _____ of motion.**
 - a. The frontal plane
 - b. The sagittal plane
 - c. The transverse plane
 - d. All planes

- 6. Movement preparation programs should take from _____ minutes.**
- a. 5-10
 - b. 10-20
 - c. 15-30
 - d. 30-45
- 7. What type of flexibility training best prepares the proprioceptive system for activity?**
- a. Dynamic
 - b. Static
 - c. Active
 - d. PNF
- 8. According to the Sports Injuries Guidebook, the best predictors of injury are_____.**
- a. Age and previous injury history
 - b. Number of consecutive training days and age
 - c. Number of consecutively training days and previous injury history
 - d. Previous injury history and sport participation choices
- 9. Breaking a training season down into smaller time chunks with specific, planned goals for each is an example of _____.**
- a. Periodization
 - b. Progressive Overload
 - c. Macrocycle
 - d. Mesocycle
- 10. When you match an increase in training with an increase in rest, you are following one of the strategies of _____.**
- a. Periodization
 - b. Progressive Overload
 - c. FITT
 - d. Cross training

11. _____ contractions are easy to perform but may not be appropriate for those with medical conditions as they can raise blood pressure.
- a. Isotonic
 - b. Isometric
 - c. Isokentic
 - d. Dynamic
12. _____ during the off season can help reduce injury risk and maintain strength and endurance.
- a. Cross training
 - b. Interval training
 - c. Periodization training
 - d. Fartlek training
13. Fitness assessments for athletes should be completed every ____.
- a. 2-3 weeks
 - b. 1 Month
 - c. 2-3 months
 - d. 4-6 months
14. Functional abnormalities can be caused by ____.
- a. Poor technique
 - b. Equipment
 - c. Injuries
 - d. All of the above
15. Most healthy diets contain _____ percent carbohydrates.
- a. 30-40
 - b. 40-45
 - c. 50-55
 - d. 65-70
16. Endurance athletes should generally consume _____ grams protein per kg body weight daily.
- a. .5
 - b. 1.0
 - c. 1.5
 - d. 2.0

- 17. Polyphenols are a type of _____.**
- a. Antioxidants**
 - b. Essential fat**
 - c. Vitamin**
 - d. Mineral**
- 18. When re-hydrating after exercise the recommendation is to drink _____ liters of fluid per kilogram of body weight lost.**
- a. .5 - 1.**
 - b. 1. -1.5**
 - c. 2.- 2.5**
 - d. 3. – 3.5**
- 19. The “P” in the acronym PRICE stands for _____.**
- a. Pain**
 - b. Progression**
 - c. Prevention**
 - d. Protection**
- 20. HARM stands for:**
- a. Heat, Alcohol, Running, Massage**
 - b. Heat, Antioxidants, Resistance, Massage**
 - c. Heat, Anti-inflammatory, Running, Massage**
 - d. Hydration, Assessment, Running, Massage**
- 21. NSAIDs are most appropriate _____.**
- a. For long term pain management**
 - b. For the initial stages of inflammation**
 - c. For athletes with kidney problems**
 - d. Combined with acetaminophen**
- 22. Buddy taping the fingers is an example of**
- a. Anatomical splinting**
 - b. Functional bracing**
 - c. Prophylactic bracing**
 - d. Transitional splinting**

- 23. Which of the following is LEAST likely to occur in young athletes**
- a. Overuse injuries
 - b. Malnutrition
 - c. Dehydration
 - d. Premature closure of the growth plates
- 24. When a bone is broken but still maintains its correct position, it is referred to as a _____.**
- a. Displaced fracture
 - b. Comminuted fracture
 - c. Simple fracture
 - d. Compound fracture
- 25. When a tendon tears away a piece of bone it is referred to as a(n) _____.**
- a. Avulsion fracture
 - b. Stress fractures
 - c. Comminuted fracture
 - d. Displaced fracture
- 26. If an athlete experiences a complete tear of a muscle tendon unit, this would be referred to as a _____.**
- a. Grade I Strain
 - b. Grade I Sprain
 - c. Grade III Strain
 - d. Grade III Sprain
- 27. A serious and difficult to treat skin infection that can be picked up from training room equipment is _____.**
- a. Athletes Foot
 - b. Methicillin Resistant Staph Aureus
 - c. Corns
 - d. Melanoma
- 28. _____ can identify soft tissue injuries.**
- a. CAT Scan
 - b. MRI
 - c. X-ray
 - d. Nuclear Bone Scan

- 29. _____ are commonly caused by a sudden impact to the head with acceleration and deceleration forces.**
- a. Concussions
 - b. Subdural hematomas
 - c. Epidural hematomas
 - d. Burners
- 30. The _____ measures levels of consciousness.**
- a. Cantu Grading Scale
 - b. American Academy of Neurology Scale
 - c. Vienna Concussion Conference Scale
 - d. Glasgow Coma Scale
- 31. An athlete with retrograde amnesia will not be able to remember events _____ an injury.**
- a. 30 minutes prior to
 - b. immediately preceding
 - c. immediately after
 - d. 30 minutes after
- 32. The most common symptom of Post-concussion Syndrome is _____.**
- a. Dizziness
 - b. Fatigue
 - c. Headaches
 - d. Blurred vision
- 33. Which of the following guidelines allow for a quicker return to play for concussed athletes?**
- a. AAN
 - b. Cantu
 - c. Glasgow
 - d. Spurling
- 34. Subdural and epidural hematomas are usually experienced in _____.**
- a. aquatic sports
 - b. racquet sports
 - c. team sports
 - d. contact sports

35. Athletes suspected of having a subdural hematoma should

_____.

- a. Not be allowed to return to play that day
- b. Be immediately taken to the hospital
- c. Have neurological exams on the side lines every five minutes
- d. Be evaluated using the Glasgow Coma Scale

36. Which of the following skull fracture is a “crack in the cranium”?

- a. Comminuted Fracture
- b. Depressed Fracture
- c. Basal Fracture
- d. Linear Fracture

37. The first step of treatment for a nasal fracture is to

_____.

- a. Maintain an open airway
- b. Pinch the nostrils to control bleeding
- c. Immobilize the lower jaw
- d. Apply a cold pack

38. A hematoma in the outer ear is most commonly seen in which of the following sports?

- a. Water polo
- b. Football
- c. Wrestling
- d. Volleyball

39. An athlete with a subconjunctival hemorrhage can return to play

_____.

- a. Generally without delay
- b. In two days
- c. In two weeks
- d. Two weeks after complete healing

40. Which additional piece of first aid equipment is recommended specifically for helmet sports?

- a. Backboard
- b. Phillips screwdriver
- c. Ice
- d. Resuscitation equipment

- 41. Whiplash is a trauma injury to the _____.**
- a. Spinous processes
 - b. Spinal cord
 - c. Soft tissues of the cervical spine
 - d. Skull
- 42. Burners are a(n) _____ to a nerve root.**
- a. Fracture
 - b. Tear
 - c. Avulsion
 - d. Contusion
- 43. Which of the following is LEAST likely to occur in American football?**
- a. Cauliflower ear
 - b. Stinger
 - c. Whiplash
 - d. Concussion
- 44. Which of the following is a common treatment for a burner?**
- a. Muscle relaxants
 - b. Massage
 - c. Electrical stimulation
 - d. No treatment is required
- 45. After a burner an athlete can return to play when all of the following conditions are met EXCEPT _____.**
- a. Pain free range of motion
 - b. A positive Spurling maneuver
 - c. Full strength in the upper extremities
 - d. Full strength in the shoulder
- 46. _____ is a positive response to the Spurling maneuver.**
- a. Local neck pain
 - b. Reduced range of motion in the neck
 - c. Bilateral shoulder weakness
 - d. Pain in the arm on the affected side

- 47. Cervical osteoarthritis is commonly seen in those over _____.**
- a. 60
 - b. 50
 - c. 35
 - d. 25
- 48. Treatment of cervical osteoarthritis focuses on all of the following EXCEPT _____.**
- a. Curing the degenerating cervical vertebrae
 - b. Pain management
 - c. Cervical muscle strengthening
 - d. Prevention of additional deterioration
- 49. Which of the following is the LEAST likely cause of cervical disc injuries?**
- a. Bone spur formation
 - b. Foraminal narrowing
 - c. Acute disc rupture
 - d. Intervertebral disc space deterioration
- 50. Common signs of a cervical disc injury include _____.**
- a. Chronic neck pain
 - b. Numbness and tingling in the arms
 - c. Weakness in the legs
 - d. Both A and B
- 51. Transient quadriplegia is a sign of _____.**
- a. Cervical stenosis
 - b. Whiplash
 - c. Burners
 - d. Cervical osteoarthritis
- 52. Athletes with uncorrected cervical stenosis _____.**
- a. are at a decreased risk of neurological injury
 - b. should avoid contact sports
 - c. should avoid all sports
 - d. always experience burning hands syndrome

- 53. Fractures to the spinous process and chip fractures in the cervical vertebrae tend to be _____.**
- a. Unstable
 - b. Catastrophic
 - c. Stable
 - d. Compressive
- 54. The glenohumeral joint is an example of a _____ joint.**
- a. Saddle
 - b. Ball and socket
 - c. Hinge
 - d. Pivot
- 55. _____ muscles are dynamic shoulder stabilizers.**
- a. Rotator cuff
 - b. Biceps brachii
 - c. Triceps brachii
 - d. Deltoid
- 56. One of the most common bones fractured in contact sports is the _____.**
- a. Humorous
 - b. Femur
 - c. Clavicle
 - d. Ulna
- 57. Athletes can normally return to contact sports _____ weeks after a collar bone fracture.**
- a. 12
 - b. 6
 - c. 4
 - d. 2
- 58. Shoulder dislocations are commonly caused by an impact to the _____ of the shoulder with the arm _____.**
- a. Back, outstretched
 - b. Front, overhead
 - c. Front, flexed
 - d. Back, overhead

- 59. Should dislocations can best be described as the _____.**
- a. Humeral head slipping out of the glenoid fossa
 - b. Humerous detaching from the clavicle
 - c. Humeral head slipping out of the AC joint
 - d. Scapula slipping out of the glenoid fossa
- 60. After an athletes first shoulder dislocation, the arm and shoulder should be _____ in a brace or sling.**
- a. Reduced
 - b. Ice packed
 - c. Immobilized
 - d. Rotated
- 61. Shoulder reduction can be described as _____ .**
- a. Putting the head of the humerus back into the socket
 - b. Packing the glenoid fossa
 - c. Removing the adhesive capsulitis
 - d. Strengthening the laxity of the rotator cuff
- 62. On average, athletes can return to play within _____ weeks of an initial shoulder dislocation.**
- a. 3-4
 - b. 1-2
 - c. 4-8
 - d. 8-12
- 63. As stated in the text, recurrent shoulder dislocations can be caused by a variety of contributing factors EXCEPT _____.**
- a. Age
 - b. Activity levels
 - c. Gender
 - d. Structural abnormalities
- 64. Bankart lesions are a detachment of the _____.**
- a. Glenoid fossa
 - b. Glenoid labrum
 - c. Rotator cuff
 - d. Shoulder capsule

- 65. SLAP is an injury to the _____.**
- a. Face
 - b. Labrum
 - c. Triceps Tendon
 - d. AC Joint
- 66. The step-off deformity can be seen with _____.**
- a. AC joint separations
 - b. Glenoid labral separations
 - c. Rotator cuff tears
 - d. Shoulder subluxations
- 67. AC joint sprains are commonly treated with _____.**
- a. Immobilization, surgery and anti-inflammatory drugs
 - b. Ice, anti-inflammatory drugs and surgery
 - c. ROM exercises, electric stimulation and anti-inflammatory drugs
 - d. Immobilization, ice and anti-inflammatory drugs
- 68. The _____ is the most commonly torn rotator cuff tendon.**
- a. Infraspinatus
 - b. Teres minor
 - c. Subscapularis
 - d. Supraspinatus
- 69. Rotator cuff tears are most common in athletes over _____.**
- a. 40
 - b. 50
 - c. 30
 - d. 20
- 70. Which of the following conditions have similar symptoms and treatment recommendations?**
- a. Shoulder impingement and bursitis
 - b. Rotator cuff tendinitis and tears
 - c. Shoulder subluxation and biceps tendon rupture
 - d. Both a and b

71. Swimmers are at risk for developing_____.

- a. AC joint separation
- b. Cervical stenosis
- c. Shoulder dislocation
- d. Shoulder impingement

72. Shoulder impingement can be described as the _____.

- a. Biceps tendon getting impinged under the acromion
- b. Inflammation of the biceps tendon due to rubbing in the bicipital groove
- c. Subacromial bursa and rotator cuff getting pinched under the acromion
- d. Rotator cuff getting impinged under the coracoid process

73. Athletes who experience a _____ usually require surgery in order to return to play.

- a. Distal biceps tendon rupture
- b. Proximal biceps tendon rupture
- c. Shoulder impingement
- d. Shoulder subluxation

74. An appropriate initial treatment of _____ is avoiding painful motions and rest.

- a. Biceps Tendon Rupture
- b. Bicipital Tendonitis
- c. Shoulder Dislocation
- d. Transient Neuropraxia

75. Athletes who have experienced DVT should not return to contact sports until _____ is completed.

- a. Physical therapy
- b. Anti-coagulation therapy
- c. Hydrotherapy
- d. Cryotherapy

- 76. _____ is caused by repeated twisting and torque on the forearm and elbow.**
- a. Bicipital Tendinitis
 - b. Carpal Tunnel Syndrome
 - c. Lateral epicondylitis
 - d. Pronator Syndrome
- 77. Tennis elbow occurs _____.**
- a. In men three times more than women
 - b. In women twice as many times as men
 - c. Three times more in young athletes as those over 50
 - d. Twice as many times in athletes over 50
- 78. Medial Epicondylitis commonly strikes _____.**
- a. Men between 20-49
 - b. Women between 20-49
 - c. Men between 50-65
 - d. Women between 50-65
- 79. Common symptoms of _____ include pain on the inside of the elbow that gets worse with wrist flexion and pronation.**
- a. Radial tunnel syndrome
 - b. Golfers elbow
 - c. Tennis elbow
 - d. Bicipital tendinitis
- 80. _____ can be identified by pain and numbness on the back of the hand and forearm, and weakness in the fingers with wrist extension that does not resolve with rest.**
- a. Tennis Elbow
 - b. Golfers Elbow
 - c. Little League Elbow
 - d. Radial Tunnel Syndrome
- 81. Athletes most susceptible to pronator syndrome are _____.**
- a. Baseball Catchers
 - b. Golfers
 - c. Weight Lifters
 - d. Swimmers

- 82. Tommy John surgery has been the most successful treatment option for _____.**
- a. Posterior interosseous nerve syndrome
 - b. Ulnar collateral ligament tear
 - c. Little League elbow
 - d. Cubital tunnel syndrome
- 83. Little League elbow injuries can include all of the following EXCEPT _____.**
- a. Avulsion of the posterior olecranon epiphysis
 - b. Separation of the medial apophysis off the humerus
 - c. Posterior interosseous nerve impingement
 - d. Impingement of the tip of the olecranon
- 84. To reduce the risk of Little League Elbow _____.**
- a. Limit the quantity and types of pitches
 - b. Limit the innings pitched
 - c. Increase the distance between the pitching mound and home plate
 - d. Increase the height of the pitching mound
- 85. Conservative treatment of Little League Elbow focuses on _____.**
- a. RICE
 - b. PRICE
 - c. Electrical Stimulation
 - d. Icing
- 86. Which of the following elbow injury is not common to throwing activities?**
- a. Olecranon Bursitis
 - b. Cubital Tunnel Syndrome
 - c. Osteochondritis Dissecans
 - d. Humeral Stress Fracture
- 87. Wrist fractures and sprains are usually caused by _____.**
- a. Falling on to the hand
 - b. Repetitive overuse
 - c. Repetitive micro-trauma
 - d. Improper pitching techniques

- 88. Scaphoid fractures can be serious because they _____.**
- a. Can be confused with sprains
 - b. Do not heal well
 - c. Are very painful
 - d. Always require surgery
- 89. Wrist sprains are normally treated with _____.**
- a. 5-7 minute ice treatments
 - b. 20 minute ice treatments
 - c. Heat therapy treatments
 - d. Night splints
- 90. Night numbness and a radiating tingling sensation when tapping the inside of the wrist are signs of _____.**
- a. DeQuervains Syndrome
 - b. Intersection Syndrome
 - c. Carpel Tunnel Syndrome
 - d. Drummer Boys' Palsy
- 91. The most common hand injury in sports is a _____.**
- a. Finger dislocation
 - b. Finger sprain
 - c. Mallet finger
 - d. Thumb sprain
- 92. A trainer may suspect _____ if an athlete has chest pain, shortness of breath, is hyperventilating along with decreased breath sound on the painful side.**
- a. Pneumothorax
 - b. Hemothorax
 - c. Commotio Cordis
 - d. Both A & B
- 93. An AED can be used in the treatment of _____.**
- a. Hemothorax
 - b. Costochondritis
 - c. Commotio Cordis
 - d. Pneumothorax

94. A young baseball pitcher is hit in the chest with a ball and falls to the ground. He's not breathing, no pulse, no heartbeat and is starting to turn blue. You suspect he has experienced

_____.

- a. Commotio Cordis
- b. Hemothorax
- c. Grand Mal Seizure
- d. Precordial Thump

95. Treatment of non-serious rib fractures should focus on

_____.

- a. Increasing lung capacity
- b. Alleviating pain
- c. Cardiorespiratory fitness
- d. Pulmonary efficiency

96. Sternal fractures are commonly caused by _____.

- a. Repetitive stresses
- b. Overhead throwing mechanics
- c. Blunt trauma
- d. Rotational forces

97. An athlete with an inflammation of the cartilage that connects the ribs to the sternum has _____.

- a. Costochondritis
- b. Tietze's Syndrome
- c. Interchondral subluxation
- d. All of the above

98. It has been projected that up to _____ % of the US population will experience at least one episode of low back pain.

- a. 80
- b. 60
- c. 40
- d. 20

- 99. Back pain will heal itself about _____ % of the time.**
- a. 90
 - b. 70
 - c. 50
 - d. 30
- 100. The most common causes of low/mid back pain are_____.**
- a. Annular tears
 - b. Contusions
 - c. Herniated discs
 - d. Sprains and strains
- 101. Lumbar contusions are different from sprains or strains in that they exhibit with _____.**
- a. Low back spasms
 - b. Low back stiffness
 - c. Non-radiating dull pain
 - d. Radiating pain into the buttocks
- 102. The following treatment can be used for low back sprains, strains and contusions:**
- a. Ice and anti-inflammatory drugs
 - b. Ice and Electrical Stimulation
 - c. Anti-inflammatory drugs and splints
 - d. Heat and anti-inflammatory drugs
- 103. A direct trauma to the posterior spine during contact sports can cause _____.**
- a. Annular tears
 - b. Burst fractures
 - c. Herniated discs
 - d. Transverse process fractures
- 104. According to the text, bracing and analgesics are a common treatment for _____.**
- a. Facet joint pain
 - b. Vertebral compression fractures
 - c. Annual tears
 - d. Lumbar strains

- 105. A _____ of the vertebrae is an emergency and can potentially cause paralysis.**
- a. Burst fracture
 - b. Compression fracture
 - c. Spondylolysis
 - d. Spondylolisthesis
- 106. Gymnasts are prone to a variety of low back and hip injuries due to _____.**
- a. Extreme forward bending movements
 - b. Hyperextension of the lumbar spine
 - c. Impact from falls
 - d. All of the above
- 107. When the _____ bulges through the annulus fibrosis toward the nerve roots, this is a herniated disc.**
- a. Nucleus pulposus
 - b. Annulus
 - c. Transverse Process
 - d. Facet
- 108. Sacroiliac joint dysfunction can be caused by _____.**
- a. Sacrum fracture
 - b. Pregnancy
 - c. Imbalance of muscles attaching to the pelvis
 - d. All of the above
- 109. Approximately _____ percent of running athletes experience hip and pelvis injuries.**
- a. 5
 - b. 10
 - c. 25
 - d. 30
- 110. Adductor tendinosis is caused by _____.**
- a. Hip pointer
 - b. Leg length discrepancy
 - c. Osteoarthritis
 - d. Repetitive strain

- 111. Trochanteric bursitis most commonly occurs in which group of athletes?**
- a. Golfers
 - b. Long distance runners
 - c. Gymnasts
 - d. Hockey players
- 112. Iliopsoas tendinitis is exacerbated by repetitive _____.**
- a. External rotation
 - b. Hip flexion
 - c. Hip extension
 - d. Internal rotation
- 113. Athletes with a tear in the hip labrum should avoid activities such as _____.**
- a. Pivoting and twisting of the hip
 - b. Deep flexion and extension of the hip
 - c. Running
 - d. All of the above
- 114. Treating adductor canal syndrome usually involves _____.**
- a. Anti inflammatory drugs
 - b. Icing
 - c. Surgery
 - d. Electric stimulation
- 115. Snapping hip syndrome treatment includes strengthening and stretching the _____.**
- a. Hip flexors, abductors, adductors and iliotibial band
 - b. Hip extensors, gluteus maximus, and tensor fasciae latae
 - c. Hip flexors, abductors, adductors and gluteus maximus
 - d. Hip extensors, abductors, adductors and the iliotibial band
- 116. Repetitive stress and shearing at the symphysis pubis most likely causes _____.**
- a. Adductor canal syndrome
 - b. Athletic pubalgia
 - c. Osteitis pubis
 - d. Pelvis avulsion fractures

- 117. Which assessment tool would be used to diagnose a sports hernia?**
- a. CT Scan
 - b. MRI
 - c. Ultrasound
 - d. X-ray
- 118. Which of the following groups is most susceptible to sacroiliac joint injuries?**
- a. Pregnant runners
 - b. Young swimmers
 - c. Adolescent pitchers
 - d. Male golfers
- 119. How many joints do the hamstrings cross?**
- a. 1
 - b. 2
 - c. 3
 - d. 4
- 120. Lumbar lordosis can be caused by _____.**
- a. Tight gluteus maximus
 - b. Tight hip extensors
 - c. Tight hip flexors
 - d. Tight iliotibial band
- 121. Passive range of motion, isometric exercises and myofascial release are recommended for which phase of hamstring strain treatment?**
- a. First phase
 - b. Second phase
 - c. Third phase
 - d. Final phase
- 122. A moderate quadriceps contusion will allow for _____ degrees of knee flexion during assessment.**
- a. > 120
 - b. 90-120
 - c. 45-90
 - d. < 45

- 123. Generally, surgery is the treatment for a femoral stress fracture when the fracture is _____.**
- a. Displaced, on the outer lateral femoral neck
 - b. Medial side on the femoral neck
 - c. Non-displaced tension side stress
 - d. Medial side of the femoral shaft
- 124. Which quadriceps muscle is most commonly strained?**
- a. Vastus lateralis
 - b. Vastus medialis
 - c. Vastus intermedius
 - d. Rectus femoris
- 125. Ultra sound, radiation and NSAIDs are recommended treatment options for _____.**
- a. Compartment Syndrome
 - b. Myositis Ossificans
 - c. Osteitis Pubis
 - d. Quadriceps Strain
- 126. Athletes with patello femoral pain usually have the following symptoms:**
- a. Joint clicking
 - b. Localized tenderness
 - c. Significant joint swelling
 - d. Patellar subluxation
- 127. Iliotibial Band Syndrome is most common to which group of athletes?**
- a. Cyclists, runners, and tri-athletes
 - b. Football, rugby and baseball players
 - c. Golfers, hockey players and ice skaters
 - d. Swimmers, long jumpers and gymnasts
- 128. A medial collateral ligament tear is caused by an impact to the _____.**
- a. Back side of the knee
 - b. Lateral side of the knee
 - c. Medial side of the knee
 - d. Front of the patella

- 129. The Lachman Test is used to identify _____.**
- a. Anterior cruciate ligament tears
 - b. Medial collateral ligament tears
 - c. Meniscal tears
 - d. Posterior cruciate ligament tears
- 130. Treatment of posterior cruciate ligament tears should focus on _____.**
- a. Strengthening the hamstrings
 - b. Strengthening the quadriceps
 - c. Stretching the quadriceps
 - d. Stretching the hamstrings
- 131. Which of the following sports has a higher rate of athletes with patellar tendinitis?**
- a. Baseball
 - b. Basketball
 - c. Golf
 - d. Swimming
- 132. In young athletes, Osgood-Schlatter syndrome can be identified by _____.**
- a. Tenderness under the patella
 - b. Tenderness at the tibial plateau
 - c. Tenderness at the femoral condyle
 - d. Tenderness at the tibial tubercle
- 133. The ankle's PRIMARY function is to _____.**
- a. Allow inward-outward rotation
 - b. Stabilize the foot while walking on uneven surfaces
 - c. Stabilize the leg in pivoting actions
 - d. Transfer energy from landing to push off
- 134. An athlete increases her running distance and duration and begins to experience burning and aching over the tibia on her medial side. These symptoms indicate _____.**
- a. Lower leg stress fracture
 - b. Anterior compartment syndrome
 - c. Shin Splints
 - d. Achilles' tendonitis

- 135. Fasciotomy is a surgical treatment for _____.**
- a. Achilles' tendonitis
 - b. Bone spurs
 - c. Compartment syndrome
 - d. Tibial stress syndrome
- 136. A soccer player is being evaluated on the sideline after feeling a pop on the back of her ankle. She cannot flex her ankle and is experiencing significant pain when she tries to put weight on her leg. Based on the scenario, what injury would be most likely?**
- a. Achilles' tendon rupture
 - b. Calf tear
 - c. Lower leg compartment syndrome
 - d. Lisfranc's sprain
- 137. Most athletes experiencing a Grade I ankle sprain will be able to return to action in _____.**
- a. 3-4 days
 - b. 1-2 weeks
 - c. 2-4 weeks
 - d. 4-6 weeks
- 138. Posterior tibial tendinitis is most common in _____.**
- a. Flat foot runners
 - b. Cavus foot runners
 - c. Simian foot runners
 - d. Peasant foot runners
- 139. A basketball player who is complaining of pain and swelling on the front of her ankle and who is unable to completely dorsiflex her ankle is exhibiting signs of _____.**
- a. Ankle fracture
 - b. Ankle bone spurs
 - c. Plantar fasciitis
 - d. March stress fracture

- 140. One of your athletes mentions that for the last week she has a sharp pain in her heel when she gets out of bed in the morning. This is a symptom of _____.**
- a. Bone spurs
 - b. Hallux rigidus
 - c. Linfranc's sprain
 - d. Plantar fasciitis
- 141. Which of the following foot injuries usually requires surgery?**
- a. March Stress Fracture
 - b. Navicular bone stress fracture
 - c. Painful accessory navicular bone
 - d. Tennis Toe
- 142. Stiffness and pain in the big toe, along with a bump on the joint are indicators for which of the following difficult to treat condition?**
- a. Bunions
 - b. Freiberg's disease
 - c. Hallux rigidus
 - d. Turf toe
- 143. Bunions are caused by _____.**
- a. Inherited disorders
 - b. Tight fitting shoes
 - c. Wide shoes
 - d. Osteoarthritis
- 144. Tennis toe is _____**
- a. A contusion or bruise under the toe nail
 - b. A serious injury requiring immediate medical attention
 - c. Treated with ice and immobilization
 - d. Treated with minor surgery to remove the toe nail

- 145. A player on the women's college soccer team comes to you complaining of chronic pain and stiffness in her right foot toward the middle of the forefoot. She has had X-rays, but they have been inconclusive. From this scenario, what foot condition would be the most likely cause of her pain?**
- a. Morton's Neuroma
 - b. Joplin's Neuroma
 - c. Freiberg's Disease
 - d. Talon Noir
- 146. Which of the following botanicals has been shown to reduce inflammation, lower blood pressure, and reduce glucose levels?**
- a. Turmeric
 - b. Devil's Claw
 - c. Stevia
 - d. Ginger
- 147. Which of the following botanicals were noted as an effective anti-inflammatory for osteoarthritis?**
- a. Turmeric, and Devil's Claw
 - b. Stinging Nettle and Ginger
 - c. Ginger, Willow Bark and Devil's Claw
 - d. Ginger and Capsicum
- 148. Athletes with milk allergies should avoid _____.**
- a. Capsicum
 - b. Creatine
 - c. Ginger
 - d. Whey protein
- 149. For athletes, acupuncture is most commonly used for _____.**
- a. Increasing concentration and pain reduction
 - b. Pain reduction and musculoskeletal injuries
 - c. Stress reduction and nausea
 - d. Weight loss and myalgia

150. Counter strain, cranial osteopathy and thrust technique are procedures used in _____.

- a. Acupuncture
- b. Ayurveda
- c. Chiropractic medicine
- d. Osteopathic medicine