

QUESTIONS – Musculoskeletal

Hour 1 Multiple Choice Questions

1. Dislocations along with strains/sprains account for _____ percent of musculoskeletal injury episodes.
 - A. 0
 - B. 40
 - C. 50
 - D. 60
2. Regarding high school – collegiate athletes of the injuries requiring surgery, the majority are related to the _____.
 - A. Ankle
 - B. Knee
 - C. Elbow
 - D. Shoulder
3. Regarding professional athletes, musculo-tendon strains are the most common type of injury during preseason practice with _____ injuries as the most common.
 - A. Quadricep
 - B. Rotator Cuff
 - C. Hamstring
 - D. Calf
4. Which of the minimum to maximum recovery times below is incorrect?
 - A. Acute Phase 48 hours to 72 hours.
 - B. Repair Phase 48 hours to 6 weeks.
 - C. Remodeling Phase 3 months to 12 months.
 - D. Rehab Phase 3 weeks to 12 months

Hour 2 Multiple Choice Questions

5. Constant immobilization should generally be controlled and limited to _____ hours.
 - A. 24
 - B. 48
 - C. 72
 - D. 96
6. The 'Kinetic Chain' is defined as the interrelation of the _____ systems.
 - A. nervous, muscular, and skeletal
 - B. tendon and ligamentous
 - C. joint and ligamentous

D. fascial and muscular

7. Which of the following is NOT considered a cardinal finding of Acute Inflammation?
- A. Pain
 - B. Swelling
 - C. Heat
 - D. Range of Motion
8. Static stretching may decrease muscular strength and impair performance for up to ____ minutes.
- A. 10
 - B. 20
 - C. 30
 - D. 40

QUESTIONS – Nutrition

HOUR ONE

A typical, healthy daily meal plan for an athlete emphasizes high intake of which foods.

- A. Fresh, whole, colorful fruits and vegetables
- B. Sports drinks with added sugars and electrolytes
- C. Fried and breaded meats from beef and pork
- D. Saturated fats from coconut and butter.

Which would be an indication that a specific food is causing problems for the athlete?

- A. The food causes weight gain.
- B. The food causes bloating and gas.
- C. The food causes a sense of fullness.
- D. The food causes increased energy.

What is considered the most effective method for carbohydrate loading before an endurance event?

- A. 60% low glycemic index foods for 5 days before the event
- B. 70% low glycemic index foods for 3 days before the event
- C. 70% high glycemic index foods the day before the event
- D. 60% high glycemic index foods for 3 days before the event

Which meal plan helps replete tissue during the post-event "anabolic window of recovery"?

- A. Omega 3 fats in a 4 to 1 ratio with branched chain amino acids
- B. Low glycemic index carbohydrates in a 3 to 1 ratio with omega 3 fats
- C. Essential amino acids in a 2 to 1 ratio with low glycemic carbohydrates
- D. High glycemic index carbohydrates in a 4 to 1 ratio with high quality proteins

HOUR TWO

Which branched chain amino acid appears to be most effective at rebuilding muscle mass?

- A. Glutamine
- B. Valine
- C. Tryptophan
- D. Leucine

What is the purpose of increasing omega 3 fatty acids during the recovery phase of injuries?

- A. Reduces inflammatory hormones
- B. Prevents spikes in blood insulin
- C. Improves flexibility of joint motion
- D. Enhances absorption of electrolytes

Besides low body mass, which are significant indicators of the "female athlete triad"?

- A. Fatigue and chronic electrolyte imbalance
- B. History of fractures and lack of menses
- C. Menstrual cramping and mood swings
- D. Cyclic breast tenderness and fluid retention

Which common ergogenic aid is acceptable to the World Anti-Doping Agency?

- A. Caffeine
- B. DHEAs
- C. Ephedrine
- D. Colostrum

HOUR THREE (HYDRATION/HYPONATREMIA)

What is the diagnostic indicator of "hyponatremia"?

- A. Low blood sodium
- B. Dark orange urine
- C. High core temperature
- D. Muscle cramping

What is the argument for using thirst as the indicator to drink rather than drinking to time or weight?

- A. Fully replenishes lost fluids
- B. Prevents excessive urination
- C. Enhances sweat production
- D. Prevents electrolyte dilution

What is the first treatment intervention for "heat cramps"?

- A. Oral sodium until symptoms reduce
- B. Cool down internally and externally
- C. Massage and stretch cramping muscles
- D. Call 911 immediately

"Energy drinks" differ from a "sports drink" in that they have high amounts of which nutrients?

- A. Vitamins and minerals
- B. Artificial sweeteners
- C. Lactose and gluten
- D. Caffeine and sugar

QUESTIONS – Concussion

How long will it take most patients to recover from sports concussion?

- A. 48 hours
- B. 7 – 10 days
- C. 7 – 10 weeks
- D. 7 – 10 months

In what age group is Second Impact Syndrome most common, by far?

- A. Toddlers and children
- B. Teens and young adults
- C. Middle age
- D. Elderly

Chronic Traumatic Encephalopathy is identified by deposits of Tau proteins in specific areas of the brain.

Tau proteins are with which neuronal function?

- A. Mitochondrial function
- B. Synaptic release of neurotransmitters
- C. Cell body protein production
- D. Axon microtubule transport

At the time of concussion, neuronal membranes stretch and allow massive ion flow across this barrier. This weakens the cell membrane energy. Calcium abnormally enters the cell which activates enzymes that cause which of the following.

- A. Reduced glucose absorption into the cell
- B. Reduced amino acid absorption into the cell
- C. Reduced conversion of glucose to ATP
- D. Reduced conversion of ATP to ADP

Following head trauma, which of these cervical spine findings would necessitate spine board stabilization and transport to an emergency room?

- A. Sternocleidomastoid tenderness to palpation
- B. Paraspinal muscle tenderness to palpation
- C. Cervical spinous process tenderness to palpation
- D. Temporomandibular joint tenderness to palpation

Which of the following is an indication of increasing intracranial pressure?

- A. Weak, rapid pulse
- B. Widening pulse pressure

- C. Double vision
- D. Amnesia

Which of the following is an indication of orbital skull fracture?

- A. Amnesia
- B. Double vision
- C. Weak, rapid pulse
- D. Widening pulse pressure

The Balance Error Scoring System (BESS) is a part of the SCAT 3 exam and is performed on the sidelines when athletes experience concussion. Serial exams are performed. At what point is the athlete released from sideline evaluation?

- A. When a perfect BESS score is achieved.
- B. When the baseline BESS score is achieved.
- C. When steady improvement of BESS score is achieved.
- D. The BESS score is irrelevant to sideline release.

Following concussion, rest is necessary to allow the brain to recover most rapidly. Which of the following describes the most appropriate rest prescription following concussion?

- A. Cocooning – complete rest in a dark room with no stimulus
- B. Complete physical rest but allow reading and homework
- C. Complete mental rest but allow short walks as physical activity
- D. Allow only activities that do not reproduce or aggravate symptoms

According to international consensus guidelines, when can a concussed athlete safely return to play in contact sports?

- A. The day of injury if no symptoms persist
- B. The day following injury if no symptoms persist
- C. Whenever a medical professional signs a release form
- D. After gradual, stepwise evaluation with stress, at least 5 days.

Which of the following exercises is believed to reduce the risk of concussion?

- A. Cervical strengthening exercise
- B. Cervical stretching exercise
- C. Jaw strengthening exercise
- D. Jaw stretching exercise

The NCAA recently released guidelines for college football suggesting that contact practices be limited to three times per week. Why?

- A. Less training could result in more exciting competitions
- B. College athletes need more time for study
- C. Sub-concussive contact could result in brain trauma
- D. More time in the weight room can strengthen and stabilize the neck.