

Final Exam

Head Injuries

Chapter 26; class notes

Class Meeting: Wednesday, April 20, 2016

With regard to concussions, why are preparticipation exams considered important?

- (1) to acquire history of previous concussions; (2) to establish baseline markers

What are Meninges?

- Three (3) protective layers that cover and protect spinal cord and brain.

List three (3) membranes that make up the meninges.

- dura mater, arachnoid, pia mater

Where is the Dura Mater?

- It lies just under the skull. It is a dense fibrous tissue that protects the brain, and serves as the skull's periosteum.

Where is the Arachnoid Membrane?

- It is the membrane lying between the dura mater and pia mater.

Where is the Subdural Space?

- The space between the dura mater and arachnoid membrane.

Where is the Pia Mater?

- It is a thin inner layer adhering to the brain and spinal cord.

Where is the Subarachnoid Space?

- The space between the arachnoid and pia mater.

Define rotational (angular) motion.

- Force that creates rotation around a central point.

Define translational (linear) motion.

- Force that creates motion along a straight or curved line.

Athletic injuries are usually the result of which type of force, Rotational (Angular) or Translational (Linear)?

- Rotational (angular) force

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Define Concussion

- A clinical syndrome characterized by immediate and transient impairment of neural function due to mechanical forces.

What are most common symptoms of a concussion?

- headache, dizziness, confusion, amnesia

TRUE or FALSE? Most concussions involve loss of consciousness.

- FALSE

Describe four (4) mechanisms that may cause injury to the brain.

- (1) Shaking of the brain – sudden forceful impact to the head can agitate the brain; (2) Direct impact to the brain – may result in contusion or laceration of brain; (3) Contrecoup injury – brain is injured as it rebounds against opposite side of skull fr

What is a Contrecoup Injury?

- The brain is injured as it rebounds against the opposite side of skull from the blow.

True or False? Deciding when an athlete can return to play following a concussion is likely the most challenging task of any sports medicine clinician.

- TRUE

If you suspect an athlete has sustained a concussion during practice or game, for how long should you keep him out of the activity?

- He does not return for that practice or game; follow RTP guidelines after practice/game.

Describe Second Impact Syndrome.

- A phenomenon characterized by severe to fatal brain injury as a result of repeated mild brain injuries occurring within a short time, i.e., hours, days or weeks

Why should concern exist about repeated concussions?

- (1) athlete is 3x more likely to sustain a second concussion; (2) increased risk of post-concussive symptoms; (3) chance of SIS increased if second injury occurs before recovery from the first is complete; (4) repeat concussions lower age at which people

Where is the Epidural Space?

- Space between the skull and dura mater; may also be called the Extradural Space.

Describe risks of bleeding into the epidural/extradural space.

- Arterial bleeding which means a rapid compression of brain stem; emergency.