

# Sports Medicine Monthly

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## ON THE FIELD EVALUATION

It is the last week of the high school football regular season in the state of Oklahoma and the games are heating up while the temperature is cooling off.



Troy A. Glaser, MD

Volleyball and softball have wrapped up, but basketball and wrestling are running full tilt. From late July into late May, the scholastic athletic season runs and runs. And while there is such a thing as an off season for each

individual sport, there really is no such thing as down time during this 10-month swing other than a few weeks in December. Gymnasiums are hopping year round and the stadium lights just keep burning throughout the year.

As the athletic season rolls on, the opportunity for injury does as well. Most of the time injuries are fairly simple to manage. However, emergency medical concerns can occur in any competitive sport. What constitutes a medical emergency you may ask? ABC's.

### A. Airway:

-Is there an open airway?

### B. Breathing:

-Is the patient breathing?

-Is the patient having difficulty breathing?

### C #1. Circulation:

-Is there a pulse?

-Is there any significant bleeding?

### C #2. Consciousness:

-Is the athlete awake and oriented?

### D. Deformities

-Are there any deformities (fractures, dislocations, etc.) that could affect ABC's?

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## Evaluation of the Cervical Spine

Catastrophic cervical spine injuries are exceedingly rare in today's athletic setting. Better coaching, better equipment, and better conditioning have all come together to make our athletes safer. As a result, the likelihood of such injuries has decreased over the years.



Randi N. Lunow, ATC

In order to provide certified athletic trainers and team physicians with recommendations on how to best manage a catastrophic cervical spine injury in an athlete, the National Athletic Trainers' Association issued a position statement regarding pre-hospital care of the spine-injured athlete in 2009. They noted four specific complaints/findings that presenting alone or in any combination would warrant immobilization and transportation of an athlete via EMS.

### A. Bilateral C-Spine Neurological Findings

-Numbness, Tingling, or Loss of Strength on One or Both Sides

### B. Altered Mental Status

-Disorientation, Confusion, Unresponsive

### C. Cervical Spine Deformity

### D. Significant Midline Cervical Spine Pain

These evaluations come with tremendous risk and consequences and should not be left to just anyone. Therefore, when sports with the greatest risk of injury are in season, always look for an athletic trainer or sports medicine-trained physician to be on standby.



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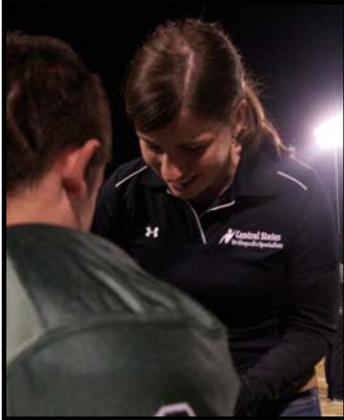
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**Evaluation of the Chest & Abdomen**

Chest and abdominal injuries are rare in sports. In fact, according the National High School Sports-Related Injury Surveillance Study for 2010-2011, these injuries accounted for only 5% of all injuries reported in high school athletics. And most of these injuries are bruises or muscle strains. However, from time to time in sports where collisions or blows to the chest or abdomen can occur, having qualified medical staff such as an athletic trainer or a sports medicine-trained physician is of the utmost importance. Why?



Kristi Krebs, PA-C

Here are a few examples:

**Referred Pain:**

*Kehr's Sign:* Abdominal injury to the spleen will oftentimes refer pain to the left shoulder

*Liver:* Injury to the liver will oftentimes refer pain to the right shoulder

*Kidney:* Injuries to the kidneys usually cause mid to low back pain and can also affect the color of urine output.

*McBurney's Point:* Acute inflammation of the appendix will usually come on very quickly (2-4hrs) with abdominal pain, possibly a fever, and referred pain to McBurney's Point, which is halfway between the prominent right hip bone and the umbilicus.

**Rebound Tenderness and Abdominal Rigidity:**

Upon palpation, abdominal tissues are usually quite soft and moldable under pressure. However, rigidity or the presence of pain when pressure is released (rebound tenderness) occurs when abdominal tissues have become injured or inflamed.

**Orthopedic Evaluation**

Orthopedic evaluation of the bones and joints is an art form. It requires a tremendous understanding of how the bones and joints are constructed (anatomy) and how they move, work, and change (physiology) based on positioning. How is it that we know when an athlete has a sprained ankle, hamstring strain, or a torn ACL? Well, in short, evaluation is based on three basic principles that are required in order to test the integrity of a structure (i.e. radius, ACL, hamstring, etc.).



Bryan J. Hawkins, MD

- #1. You must isolate the structure to be tested and evaluated by exact positioning.
- #2. You must know what directional stress to apply in that position in order to apply stress directly to the isolated structure.
- #3. You must know how that structure responds to stress when it is uninjured, partially injured, and completely disrupted.

Whenever there is a risk for injury, it will always be a good plan of action to have your AT or MD on-site or on-call as doing so will get you the best evaluation.

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