What is a concussion?

A concussion is an injury to the brain. It occurs when the brain is violently rocked back and forth or twisted inside the skull as a result of a blow to the head or body. The resulting injury to the brain changes how the brain functions in a normal manner. The signs and symptoms of a concussion can show up immediately after the injury or may not appear for hours or days after the injury.

What are the signs and symptoms of a concussion?

Signs and symptoms of a concussion are typically noticed right after the injury, but some might not be recognized until days, weeks, or longer after the injury. Symptoms of concussion may or may not include, but are not limited to:

**Cognitive**
- Difficulty remembering
- Difficulty concentrating
- Confusion
- Feeling foggy

**Physical**
- Headache
- Blurry vision
- Nausea/vomiting
- Dizziness
- Sensitivity to light/sound
- Balance/coordination problems
- Fatigue

**Emotional**
- Irritability
- Sadness
- Moodiness
- Crying more
- Anxiety/worry

**Sleep**
- Sleeping more
- Sleeping less
- Drowsiness

If any of the following problems develop, seek medical attention immediately:

- Loss of or decreasing level of consciousness or responsiveness.
- Unequal pupils.
- Weakness, numbness or tingling in the arms or legs, pain in the neck, clear fluid from nose or ears.
- Increased confusion, drowsiness, fogginess, irritability or agitation.
- Seizure or convulsions.
- Repeated nausea and vomiting.
- Increased dizziness, poor balance, or unsteadiness.
- Worsening headache.
- Inability to recognize or remember people, places, or events.
- Double vision, slurred speech, problems with taste, and/or hearing.

Things that are OK to do:

- Use a cold pack on head or neck as needed for comfort.
- Encourage sleep (a minimum of 8 hours of rest is very important).
- If you are concerned, quietly check the student-athlete's pulse and respirations while they sleep as opposed to waking them up every hour.
- Complete brain rest (no strenuous activity, chores, yardwork, homework, or sports).
Things that should NOT be allowed:

• Drive (do not allow until athlete experiences NO dizziness, or trouble with attention or concentration while turning head).
• Excessive TV, phone, computer, or video games.
• Excessive reading and/or studying.
• Exposure to bright lights or loud noises.
• Any Strenuous Activity or Sports (PE, ROTC, etc.).
• NO Ibuprofen/Advil for the first 24 hours to avoid “masking” the signs and symptoms of a concussion.

What are the risks of returning to activity too soon after a concussion?

Long-term life-threatening injuries such as Second Impact Syndrome, Post-Concussion Syndrome, and death can and do occur. If an athlete has a concussion, their brain needs time to heal. Don’t let them return to play the day of the injury and until a health care professional, experienced in evaluating and managing concussion, says they are symptom-free and it’s OK to return to play.

Concussion Nutrition:

• Feed your brain! Increase your caloric intake 2x your normal diet. Focus on good fats and carbohydrates. Try to drink 32oz. of water at each meal.
• Protein/Omega 3’s: Eggs, Grass-Fed Meats, Fish, Green Vegetables, and other healthy meats have essential amino acids and Omega 3’s which are necessary for brain health as they decrease inflammation, aid in energy metabolism and improve cognitive function.
• Probiotics: Yogurt, cheese, and other fermented foods positively affect the bacteria in your gut, which has been shown to produce more neurotransmitters in the brain.
• Whole Foods: Vegetables, fruits and whole grains all help with mental, emotional and physical health by improving your immune system health and increasing your body’s ability to heal.
• Supplements: A multi-vitamin, fish oil, coconut oil and melatonin at bedtime may also be beneficial.

Return to School and Daily Activities

The key to recovery is Expose and Recover. Light physical and cognitive activity may be performed while still experiencing symptoms but cease when the symptoms intensify. Try to maintain a regular schedule/lifestyle and reduce stress and anxiety if possible.

Return to Play

The student-athlete should NEVER return to PE, sports or physical activity until they have been evaluated by an approved healthcare professional. The provider will determine when the student-athlete may begin the Return to Play (RTP) protocol. The athletic trainer has the final determination of status of the student-athlete. If the student-athlete remains asymptomatic throughout the RTP protocol and has WRITTEN clearance, they may return to full activity.

Please, refer to the LCPS “Return to Learn” and “Return to Play” protocols to safely progress the student-athlete back to a normal school day and to ensure they are fully prepared to return to their respective sport. If you have any additional questions or concerns, please contact your school’s Athletic Trainer.