

## Myths and Facts About Concussions

- **Myth:** Loss of consciousness is necessary to have a concussion.

**Fact:** Loss of consciousness (LOC) is not necessary to diagnose concussion; in fact, most individuals who have a mild to moderate traumatic brain injury, including concussions, do not have LOC. Rather, change in mental status such as confusion, disorientation, and memory problems are characteristic of concussion.

A concussion is a mild brain injury or head injury in which trauma to the head results in a temporary disruption of normal brain function. After a concussion, the brain does not work right for a while. Loss of consciousness may or may not occur, but confusion or problems with memory are usually present, at least initially.

- **Myth:** A normal head MRI or CT means a patient should be cleared to resume all normal activities.

**Fact:** A normal head MRI or CT does not provide enough information to guide decision-making about activities such as return to school and return to play sports. A head MRI or CT involves a structural image of the brain but does not provide information about functional aspects of brain physiology, which have been demonstrated in research as the key aspects of concussion. While sophisticated and expensive functional imaging studies are not the standard of care for clinical practice, thorough evaluation by a specialist in concussion management who may use balance testing, neurological exam, and neurocognitive testing is indicated. At Geisinger, such specialists include Sports Medicine physicians, neuropsychologists, and certified athletic trainers. Each concussion needs to be managed based on symptom presentation and neurocognitive functioning, which can be assessed by our specialists who then guide return to play, work, school, etc.

- **Myth:** All athletes should be held out for one week each time a concussion occurs.

**Fact:** There is no universal time period to keep an individual out of a sport or other activity. While there are some guidelines that help determine generally how long of a recovery period may be indicated before the individual is cleared to return to play sports or other activities, each individual and each concussion needs to be managed on an individual basis.

Different guidelines apply based on the individual, including personal medical history (e.g., prior history of concussions, migraine headaches, etc.) and age (i.e., there is research evidence that younger athletes such as high school students and children may require more time to recover following concussion and therefore need to remain out of play longer than adults/professional athletes).

Also, the length of time a person needs to rest before returning to usual activities cannot be accurately determined at the time of injury or initial presentation for medical care. Rather, monitoring of the individual's recovery process including post-concussion symptoms and neurocognitive functioning (such as memory, attention, reaction time and processing speed) are important.

There are well over a dozen sets of guidelines for "grading" concussion severity and recommendations for return to activities. Unfortunately, most of these are outdated and not based on empirical evidence (research data). More recently, the field has advanced to a point that it is now accepted that each person needs to be managed individually, applying guidelines and practice parameters while using evidence-based clinical management for each individual, each time there is a concussion.

Geisinger offers this high level of evidence-based, personalized care. Geisinger's concussion experts are Certified Consultants for ImPACT (Immediate Postconcussion Assessment and Cognitive Testing). ImPACT is an evidence-based neurocognitive test that is used along with a comprehensive physical examination by a physician that has been trained to treat concussions and determine when an athlete is ready to return to play. For more information on ImPACT testing, visit <http://www.impacttest.com/>.

The experts at Geisinger Sports Medicine help those with concussions recover using the most advanced and trusted techniques modern medicine has to offer. If you or your child sustains a minor head injury, contact us today for an appointment.

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