



LEHIGH ATHLETICS

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Second-Impact Syndrome

Student-athletes, coaches and medical staff need to be aware of the often lethal consequences of the second impact syndrome that occurs when an individual sustains a second, often minor, blow to the head before the initial symptoms of the mild head injury (MHI) are resolved. The resulting loss of auto regulation of the brain's blood supply could result in vascular engorgement and herniation of the lower brain, **resulting in death**. There is approximately a **50% mortality rate** associated with second-impact syndrome. Treatment is prompt intubation, hyperventilation and IV osmotic diuretics.

The attending medical staff should not allow a player to resume participation in sports until the injured student-athlete has fully recovered from his/her post mild head injury symptoms. With regard to injury prevention in football, coaches, athletic trainers and other medical personnel should strive to educate the student-athletes in proper tackling techniques so these injuries can be minimized. Neck strengthening exercises are important in preventing rapid acceleration/ deceleration injuries that can occur without a direct blow to the head. In addition, proper equipment and maintenance, including adequate helmet fit (inflation of the air bladder in helmet) and shock-absorbing mouthpieces are essential in preventing mild head injuries. All medical personnel need to be reminded that all unconscious student-athletes should be suspected of a cervical spine injury until proven otherwise. Special care to the cervical spine should always be used in transporting an unconscious player.