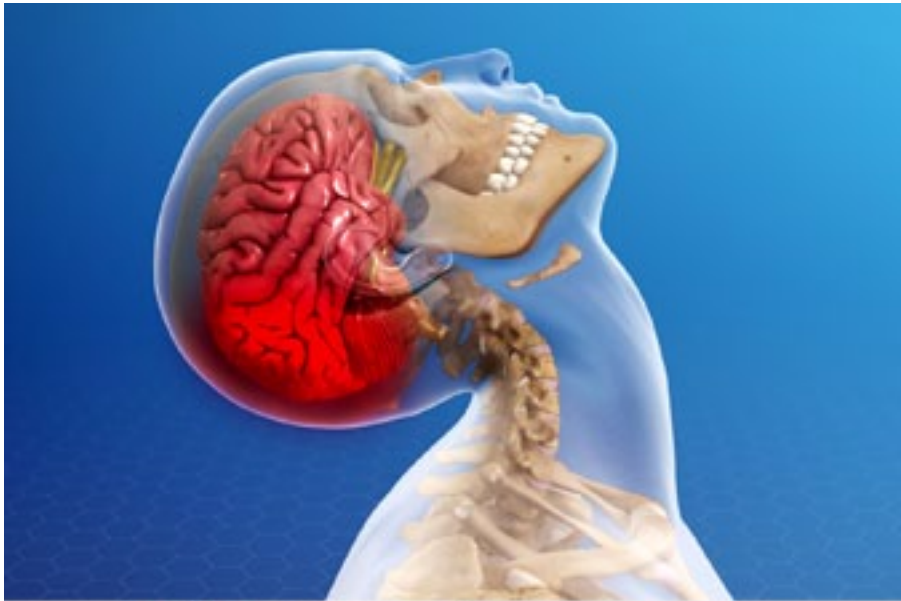


Concussion



Overview

This common brain injury is caused by an impact to the head or upper body. A concussion interferes with brain function. In most cases the effects are mild and temporary, and the concussion does not cause permanent injury. But a concussion is a serious injury that can cause lasting brain damage or death if not treated properly.

Anatomy

The brain is a soft and pliable organ. It is cushioned by a fluid, called cerebrospinal fluid, which flows through and around the brain. The brain is also wrapped in layers of protective tissue called the meninges. The brain, the cerebrospinal fluid and the meninges are all protected by the skull.

How a Concussion Occurs

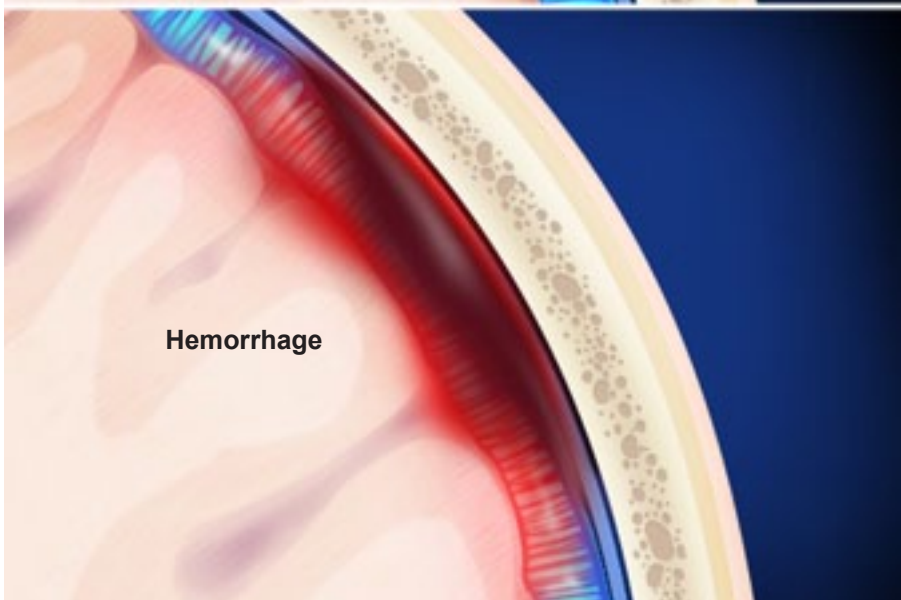
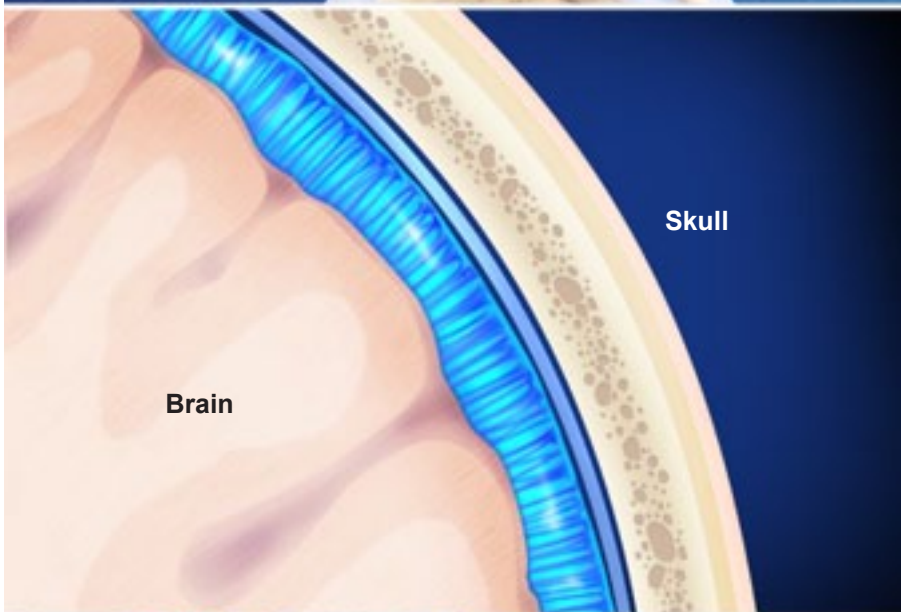
When the head or upper body is struck or shaken violently, the brain can slosh back and forth within the cerebrospinal fluid. If the force is violent enough, the brain can strike the hard inside of the skull. This is a concussion. During a concussion, the meninges can also be crushed, or even torn, resulting in a hemorrhage that can press harmfully against the brain.

Symptoms

Symptoms of a concussion can vary greatly depending on the person and the severity of the injury. In some cases it results in a temporary loss of consciousness. The person may have a headache, and may feel confused and tired. A concussion can also cause dizziness, nausea, and ringing in the ears. The person may not recognize any of these symptoms, and may not realize that they have been injured.

Symptoms (Continued)

Other symptoms may be delayed for several hours or days after the concussion. These can include memory lapse, sleep disorders, mood shifts, and sensitivity to light or noise. These symptoms may be long-lasting.



Concussion



Treatment

Treatment options for concussion include rest from physical and mental activity and acetaminophen (for headache). For at least 24 hours after a concussion, the person should be monitored closely for signs of worsening symptoms. Conditions that worsen can indicate swelling or bleeding in the brain. This is a medical emergency. Patients should consult a physician before returning to sports, and there should not be a return to play while signs or symptoms of a concussion are present.

