



## Concussion Management in Youth Athletes

### DID YOU KNOW?

An estimated 1.5 million Americans sustain traumatic brain injuries each year, most of which are concussions.



### WHAT IS A CONCUSSION?

A type of traumatic brain injury that can change how your brain and related body systems function. There are many potential effects including headaches and dizziness, as well as challenges with concentration, balance and memory. While symptoms may range from mild to severe, all concussions should be skillfully evaluated and treated.

### WHAT MAY CAUSE A CONCUSSION?

A direct hit to the head or forceful impact which shakes your body. Either of these stimuli can cause the brain to suddenly move, twist or rebound and strike the inner skull walls.



### HOW CAN THE INNER EAR BE AFFECTED BY A CONCUSSION?

Suddenly forceful brain impact shakes up the inner ear and may result in dizziness, imbalance, blurry vision, nausea, ringing in the ear or hearing loss.

### WHAT IS THE VESTIBULAR SYSTEM?

Inner ear structures, including small tubular canals that provide a sense of balance, space and motion, as well as hearing-related sensory information to our brain.



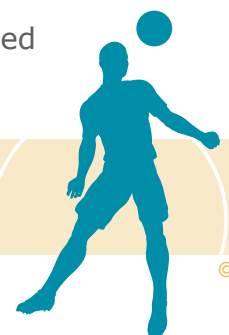
### POST-CONCUSSION TESTING AND TREATMENT

- Vestibulo-ocular reflex testing to measure coordination of eye and head movements.
- Vestibular spinal reflex testing to measure how sensory information influences postural control and stability.
- Vestibular rehabilitation therapy, a specific physical exercise program to help improve balance and reduce dizziness.
- Physical head maneuvers for a type of positional vertigo known as BPPV, which use gravity to relocate free floating inner ear particles and restore balance.



### WHAT SHOULD I DO?

- Take action promptly, the sooner you see an inner ear specialist, the better.
- Learn more at *vestibular.org* and from other reputable online resources.
- Find a highly-trained and well-respected local expert who will provide a fact-based assessment and personalized treatment plan.



FOR MORE INFORMATION ABOUT CONCUSSIONS,  
VISIT: [vestibular.org/concussions](http://vestibular.org/concussions)