GRSM Grand River Sports Medicine Centre — INJURY INFO

CONCUSSION PREVENTION

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A concussion is a diffuse "shaking" injury to the head that temporarily alters brain function. A concussion can occur either from a direct blow to the head or from a severe twisting motion (whiplash or rotational mechanism). The most common concussion symptoms are headache, dizziness, nausea, blurred vision, memory and concentration problems, and occasionally loss of consciousness. Concussions can cause long-term problems in brain function that can have a severe impact on school and work, and have even caused many professional hockey players to retire.

The hottest area in concussion prevention these days is "neurocognitive" testing. Because a concussion cannot be detected by standard medical tests (e.g., X-rays, CT scans, MRI's) physicians needed new ways of measuring the ill-effects of concussions. Neurocognitive assessment involves a set of tests that measure brain function such as memory, attention, concentration and information processing.

This type of testing has been used extensively in the National Hockey League and the Ontario Hockey League. A player takes a "baseline" test at the start of the season, and if he sustains a concussion during the season then a follow-up neurocognitive test is done and compared to the baseline.

The results of this testing helps a physician decide whether the player is still suffering from the effects of a concussion and when he or she can safely return to playing hockey. A critical rule in concussion management is that no player should ever return to contact sport while suffering any symptoms from a concussion.. Also, if a player goes back to play too soon after recovering from a concussion, he or she will be much more susceptible to suffering another one. Neurocognitive testing also detects the long-term complications that can occur from multiple concussions.

Besides neurocognitive testing, there may be other ways of preventing concussions. All hockey players should be taught to keep their heads up while on the ice. They should be aware of other players around them, especially when going into the boards for pucks or carrying the puck to mid-ice while crossing the blue line. Strengthening neck muscles and "core" abdominal muscles may be able to reduce the impact forces transmitted to the brain. Proper rule enforcement is essential to prevent hits from behind and "high (head) hits". Ensuring that helmets are properly fitted and maintained is also very important.

Please consult with a sports medicine physician for further information regarding the medical aspects of concussion treatment and prevention.

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