

## **Concussions**

### **Introduction**

A concussion is a type of traumatic brain injury that impairs normal function of the brain. It occurs when the brain moves within the skull as a result of a blow to the head or body. What may appear to be only a mild jolt or blow to the head or body can result in a concussion. The understanding of sports-related concussion continues to evolve. We now know that young athletes are particularly vulnerable to the effects of a concussion. Once considered little more than a “ding” on the head, it is now understood that a concussion has the potential to result in a variety of short- or long-term changes in brain function or, rarely, death.

### **What is a concussion?**

You’ve probably heard the terms “ding” and “bell-ringer.” These terms were previously used to refer to “minor” head injuries and thought to be a normal part of collision sports. Research has shown that a concussion is a brain injury and by no means minor. Any suspected concussion must be taken seriously. The athlete does not have to be hit directly in the head to injure the brain. Any force that is transmitted to the head may cause the brain to bounce or twist within the skull, resulting in a concussion.

### **What to do**

#### **Rest**

The first step in recovering from a concussion is rest. Rest is essential to help the brain heal. Athletes with a concussion need rest from physical and mental activities that require concentration and attention as these activities may worsen symptoms and delay recovery. Exposure to loud noises, bright lights, computers, video games, television and phones (including texting) all may worsen the symptoms of concussion. Athletes typically require 24-48 hours of rest, though some may require longer.

#### **Return to Learn**

Following a concussion, many athletes will have difficulty in school. These problems may last from days to weeks and often involve difficulties with short- and long-term memory, concentration and organization. In many cases, it is best to lessen the student’s class load early on after the injury. This may include staying home from school during the short period of rest, followed by a lightened schedule for a few days, or longer, if necessary. Decreasing the stress to the brain in the early phase after a concussion may lessen symptoms and shorten the recovery time. Additional academic adjustments may include decreasing homework, allowing extra time for assignments/tests, and taking breaks during class. Such academic adjustments are best made in collaboration with teachers, counselors and school nurses.

#### **Return to Play**

After suffering a concussion, no athlete should return to play or practice on that same day. An athlete should never be allowed to resume play following a concussion until symptom free and given the approval to resume physical activity by an appropriate health-care professional. Once an athlete no longer has signs or symptoms of a concussion and is cleared to return to activity by an appropriate health-care professional, he/she should proceed in a step-wise fashion to allow the brain to re-adjust to exercise. In most cases, the athlete should progress no more than one step each day, and at times each

step may take more than one day. Below is an example of a return to physical activity program:  
Progressive Physical Activity Program (ideally under supervision) S

tep 1: Light aerobic exercise- 5 to 10 minutes on an exercise bike or light jog; no weight lifting, resistance training or any other exercises.

Step 2: Moderate aerobic exercise- 15 to 20 minutes of running at moderate intensity in the gym or on the field without equipment.

Step 3: Non-contact training drills in full uniform. May begin weightlifting, resistance training and other exercises.

Step 4: Full contact practice or training.

Step 5: Full game play