

# Concussion in Young People

## "Return to Learn" Following Concussion

Parents, teachers and lecturers, you are the guardians of growing minds and therefore need to adhere to these rules (even if it is exam time) and consider the patient first. Remember not all concussions present immediately and if a child was suspected of concussion and is now 'misbehaving' or complaining about concentrating, being tired in class or having problems focusing on the board, don't assume these are excuses. In many cases of concussion the development of signs and symptoms is delayed, and special care needs to be taken with children who may not know how to explain what they are feeling.

Therefore, when concussion is suspected, but the players do not show any classic signs or symptoms of concussion to initially confirm diagnosis, they should be monitored and treated in exactly the same way as the confirmed cases of concussion.

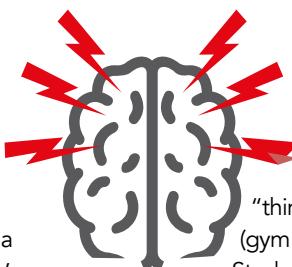
### What's happening to the concussed brain?

There is microscopic damage to the cells and nerves of the concussed brain and brain function is disrupted following complex chemical changes. There appears to be a "mismatch" between the brain's energy requirements and needs. This causes a variety of symptoms and affects the brain's ability to think, to concentrate for sustained periods and to absorb and retain information.

Adding cognitive ("thinking") activities to an energy-deprived brain worsens symptoms. These changes are not visible which makes it difficult to see the need for resting the brain. Although guidelines for reducing cognitive stress exposure are not as well-defined as the guidelines for reducing physical activity, they are equally important.

### What does this mean for students?

As a result of these changes in the brain it is not unusual for performance in the classroom to be affected. Learning new tasks and



recalling previously learnt material might become difficult. Moreover, stressing the brain by expecting it to cope with normal teaching loads may make students' symptoms either reoccur or worsen, and may slow recovery.

Just as a strained hamstring muscle requires time to readjust to running as it repairs, a "strained" brain requires time to readapt to learning. There is no one set of ideal guidelines that fit all concussed students, therefore doctors, lecturers and teachers should adapt protocols to suit individual needs and recovery. Special considerations for extending exam time, or delaying tests or deadlines may be required.

Cognitive recovery after concussion for scholars or students is variable but usually occurs within 3 weeks. Recovery lasting longer than this requires further medical evaluation. Full return to academic and

physical activities requires the student to be cleared using a spectrum of assessments that evaluate performance under conditions of both cognitive (computer and paper-based "thinking" tests) and physical (gym or field based activity) stress. Students need to pass all of these parameters to be properly cleared to return to full learning and rugby participation.

### How to help with cognitive recovery

#### At home:

- Keep stressful brain activities to the more essential ones such as homework and reading
- Avoid texting, non-academic computer work, video games and television
- Read and study in a quiet and dimly lit area
- Take regular breaks (every 20 minutes)
- Organise your day by creating a list of tasks to be completed
- Report symptom patterns following learning exposure to your doctor

#### At school/tertiary education:

- Consider returning to school or tertiary education when you can tolerate 30-45 minutes of reading or studying without worsening symptoms
- Discuss your injury with your teachers, head teacher, lecturers, school or tertiary education nurse and/or psychologist
- Discuss attending fewer classes, or a shorter day initially
- Schedule academic "time outs" during the school or tertiary education day during which you can rest
- Avoid brightly lit and noisy areas
- Ask a fellow student to take notes for you
- Request more time for assignments and tests
- Ask your doctor to provide feedback to your teachers or lecturers and your coaches regarding your progress

### A team approach works best

Many young sports players suffering a suspected or confirmed concussion are in a learning environment that stresses the injured brain. Recognising this fact helps the recovery process. The most comprehensive evaluation and successful recovery from any concussion occurs when players, coaches, parents, teachers/lecturers and medical staff cooperate to completely evaluate and correctly manage the injured player. This process should involve a carefully monitored and safer progression to full academic activities and sports participation.

Returning too soon following a concussion may have serious short and long-term consequences including:

- More serious brain injury and even death
- Prolonged symptoms lasting weeks or months
- Greater risk of further concussions
- Interference with studies (school and university) and work
- Poor performance on the rugby field
- Long-term, permanent brain effects including memory loss and emotional disturbances.

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