**Daniel:**

**Return to play protocol**

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* **GRTP = graduated return to play**
* **The majority (80-90%) of concussions resolve in a short (7-10 days) period**
* **This may be longer in children and adolescents**

**GRTP**

1. **Rest 14 days**
2. **Light aerobic exercise 2**
3. **Rugby-specific exercise 2**
4. **Non contact training 2**
5. **Full contact 2**
6. **After 24hrs - return to play 23**

**Dennis:**

[**http://bjsm.bmj.com/content/bjsports/47/5/259.full.pdf**](http://bjsm.bmj.com/content/bjsports/47/5/259.full.pdf)

**Brendan:**

**Symptoms:**  
  
Balance issues  
Difficulty communicating/ slow answers  
drowsiness/Fatigue

Feeling emotionally/mentally foggy  
Headaches  
Iritiability

Memory difficulties  
Nausea  
Nervousness  
Numbness  
Sensitivity to light or noise  
Visual problems/blurry vision

**Diagnosed by:**

Focused neurological exam  
Orientation exam testing short term memory - event that caused concussion  
Orientation exam testing long term memory - names, birthday  
Assessment of athletes ability to stay attentive to complex tasks  
MRI or CT scans  
Balance assessment

**Second-impact syndrome**Occurswhen the brain swells rapidly after someone suffers a second concussion before the initial concussion symptoms have passed. Often results in death or severe disability. It is speculated to be caused by the **brains arterioles** losing their ability to regulate their diameter, resulting in loss of control over **cerebral blood flow**, causing **cerebral edema**.

It is most common in young people and is prevented by prohibiting athletes from returning to a game prematurely after an injury.