

# SPORT RELATED CONCUSSIONS FOR PHYSICIANS

Created by the OMA Section of Sport & Exercise Medicine



## DIAGNOSIS

### Cognitive Symptoms:

- Difficulty thinking/remembering
- Feeling slowed down
- Difficulty concentrating

### Physical

- Headache, fuzzy/blurred vision
- Nausea/vomiting, dizziness, balance problems, sensitivity to light/noise, having no energy, tired

### Emotional/Mood

- Irritability, sadness, more emotional, nervousness or anxiety

### Sleep

- Sleeping more or less, trouble falling asleep



## ASSESSMENT

**SCAT3** The SCAT3 is a screening evaluation tool to assess injured athletes >age 13 for concussion. It includes a symptom evaluation, Standardized Assessment of Concussion, neck, balance & coordination exam. The SCAT3 does not independently determine the diagnosis of concussion but can assist to monitor recovery & return to play status.

**CHILD SCAT** Modified Sport Concussion Assessment Tool for children ages 5-12 years with parental input.

**EXAMS** Neuro, neck, ENT, balance tests

**IMAGING** Not generally indicated; consider if GCS <15, prolonged LOC, focal neurological symptoms, worsening headache, protracted vomiting or confusion



## POST-CONCUSSION SYNDROME

- Concussion symptoms persist beyond the “normal” expected duration; occurs in 10-15% of patients, can last from weeks to months.
- Treatment options include: sleep aids, anti-depressants, headache prophylaxis, physiotherapy, vision therapy, vestibular therapy, nerve block, OT for cognitive retraining etc.
- Referral to a physician experienced in PCS is often helpful



## TREATMENT

85% of adult patients recover in 7-10 days; kids often take longer.

Best treatment is **cognitive & physical rest**, good **sleep hygiene** & pacing.

**Mental rest** is not all or nothing! When symptoms start to improve, begin light progressive cognitive activity (computer, TV, reading) as tolerated. If symptoms worsen, stop until resolves.

**Physical rest** required until mental activity tolerated. Then a gradual stepwise approach can be implemented for return to play.



## RETURN TO LEARN

This step begins when the patient is ready to move on from cognitive rest, but not ready for physical activity.

If the patient still has symptoms but is improving, they will start at OPHEA step 2a. This step includes individualized classroom strategies to gradually increase cognitive activity:

- allow frequent breaks
- provide a daily organizer
- reduce/prioritize homework and assignments
- extra time & quiet room for exams
- provide access to natural lighting

If the student is symptom-free at rest and completes step 2a, they proceed to step 2b. At this stage, they return to the classroom without any individualized plans.



## RETURN TO PLAY

**Step 1: Physical rest and mental activity** as tolerated; stop if symptoms worsen

**Step 2: Light aerobic exercise** (e.g. walking/stationary bike for 10-15 min at <50% intensity, increasing duration and intensity as symptoms allow)

**Step 3: Sport specific exercises** (e.g. skating, running, throwing, individual skills)

**Step 4: Non-contact training/drills** Wear a “red/yellow jersey” for scrimmage, resistance training (weights, push-ups, core exercises)  
\* get clearance from MD before proceeding to contact

**Step 5: Contact practice** If symptom free with full contact training/practice, can proceed to competition/game

**Step 6: Return to Game**

There should be a minimum of 24 hours between each step. If symptoms persist or worsen, rest and do not proceed to the next step.

## RESOURCES

[parachutecanada.org](http://parachutecanada.org)  
[casem-acmse.org](http://casem-acmse.org)  
[ophea.net](http://ophea.net)  
[onf.org](http://onf.org)  
[bjsm.bmj.com/content/47/5/250.full](http://bjsm.bmj.com/content/47/5/250.full)

(Recommendations are based on the 2012 International concussion consensus statement)



Consult your local Sport and Exercise Medicine Physician for assistance.  
[sportsandexercisemedicine.ca](http://sportsandexercisemedicine.ca)