

CCA Head Injury/Concussion Protocol



Importance

Concussions are a known injury in cycling and it can be difficult to know what to do if you suspect an athlete might have one. If concussions are understood and managed properly, including using a step-by-step return to play guideline, then the chance of persistent symptoms and complications can be drastically decreased and the athlete may return to full health more quickly.

If an athlete returns to sport while they still have symptoms, it can lead to serious and permanent conditions such as post-concussion syndrome (persistent headaches, nausea, memory loss, coordination loss, and confusion), potentially second impact syndrome (when a mild blow to a previously concussed brain leads to massive brain swelling), and multiple impact syndrome (can lead to permanent and irreversible changes including memory loss, concentration, headaches, etc). It should also be noted that concussion clearly affects balance, focus, and reaction time. Early return can therefore lead to crashes and injury that may not have otherwise occurred, putting the athlete and anyone riding around them at risk.

The following protocol defines concussion, outlines the signs and symptoms, and provides a step-by-step protocol for all CCA staff to abide by. It also includes the standardized SCAT assessment tool, and an education card containing information on how to safely return to cycling.

What is a concussion?

A concussion is an injury to the brain that happens when the brain hits the skull. This can happen when you hit your head, when you stop or twist suddenly, or if someone hits you. The injury can cause brain swelling and other complications, and because the injury is internal we have to rely on mental, physical, and emotional symptoms to diagnose it.

A RIDER DOES NOT NEED TO HAVE DIRECT CONTACT TO THE HEAD OR LOSE CONSCIOUSNESS TO HAVE A CONCUSSION

Common Signs and Symptoms

- Headache
- Dizziness
- Confusion, disorientation
- Feeling “dinged” “bell rung” “dazed” “slow” “foggy”
- Ringing in the ears
- Pressure in the head
- Neck pain/stiffness
- See stars/flashing lights
- Memory problems – events leading up to the injury and events after the injury
- Ringing in the ears
- Vision problems

- Balance problems
- Nausea/Vomiting
- Personality changes
- Concentration problems
- Coordination/Balance problems
- Slurred speech
- Slow to respond to questions

Serious Signs and Symptoms

- Severe pain or pressure in head or neck
- Sensory or motor deficits
- Blood or fluid from nose or ears
- Head bruising
- Impaired breathing

Athlete Management

If an athlete has a suspected head injury follow the management protocol below, ***after the athlete has immediately been removed from competition/training.***

- 1) Have athlete assessed by on-site medical or trained CCA staff (Includes Jenn Turner, Tara Baker, Dr. Bruce Davison, Dr. Susan Labrecque)
- 2) If staff listed above are not available, transport athlete to the hospital if any of the serious signs and symptoms are present or if loss of consciousness occurred (more than 1 minute). If in doubt take to the hospital for medical clearance.
- 3) If the athlete has been cleared by medical staff and/or transport to the hospital is not necessary be sure the athlete is comfortable and able to be monitored (~ every 2 hours)
- 4) Complete the SCAT (see Figure 1.) Use McGill ACE if rider/staff speak French.
- 5) Transport athlete to hospital if any of the signs and symptoms become worse or if new signs and symptoms appear
- 6) Distribute the CCA Concussion Education Card to the athlete and be sure they understand the return to play guidelines
- 7) Contact Dr. Bruce Davidson (BMX, MTB, Road, Track) or Dr. Susan Labrecque (Para) to advise of the injury, include SCAT findings and details of athlete's current care and condition
- 8) Advise athlete to seek follow up care by a sport medicine physician upon return to city of residence
- 9) Advise athlete's personal coaches/staff of the injury and the advised return to cycling guidelines
- 10) DO NOT: allow the athlete to consume alcohol, wake the athlete every 2 hours (once sleeping, rest is good, monitor during waking hours), leave the athlete unattended for more than 1-2 hrs, allow the athlete to return to cycling unless appropriate (see next section on return to cycling steps)

Return to Cycling Steps

- The athlete must remain asymptomatic throughout the steps - if they experience symptoms, they must back up one step
- There should be at least one day between progression to the next step

STEP 1

Rest until asymptomatic (physical and mental rest)

STEP 2

Light aerobic exercise such as trainer, rollers or stationary bike

NO resistance training

STEP 3

Sport Specific Training (Low intensity)

Road: flat, non-paceline, low stress

Track: non-group ride on track or road ride

MTB: road ride, no technical

BMX: low intensity, road ride, no technical

STEP 4

Training Drills and Resistance Training (Increased intensity)

Road: climbs, intervals, pacelines

Track: group riding on track, intervals

MTB: training drills - low/moderate technical skills, intervals

BMX: training drills - low/moderate technical skills, intervals

STEP 5

Regular Training and skill execution

Road: motorpacing or group riding

Track: motorpacing

MTB: course pre-riding, technical riding

BMX: course pre-riding, technical riding

STEP 6

Race Ready

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References

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CASM/ACMS. Guidelines for the assessment and management of sport related concussion, 2000.

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