



ONTARIO EQUESTRIAN FEDERATION

Concussion Guidelines for Equestrian Sport

Like all sports, riding is an activity that comes with a certain level of risk. All riders, regardless of age, discipline or experience level are encouraged to wear a certified riding helmet when working around and riding horses. While helmets save lives, concussions can still occur and can threaten the long-term health of equestrian athletes. If a concussion is not properly identified and managed, it can lead to permanent damage or even death.

As the provincial sport organization for equestrian disciplines, the Ontario Equestrian Federation plays an integral role in the education and development of equestrian athletes. As such, we also have an essential role to play in promoting safety awareness, which is why we have developed these concussion guidelines.

This document is intended to fulfill two functions:

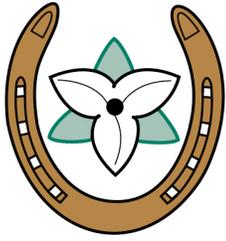
- 1) To help riders, parents and coaches learn to recognize a concussion;
- 2) To guide equestrians as they prepare to return to riding/driving following a concussion.

What is a concussion?

According to Parachute, a charitable organization helping Canadians prevent predictable and preventable injuries, “A concussion is a common form of head and brain injury, and can be caused by a direct or indirect hit to the head or body (for example, a car crash, fall or sport injury). This causes a change in brain function, which results in a variety of symptoms. With a concussion there is no visible injury to the structure of the brain, meaning that tests like MRI or CT scans usually appear normal.”

Common Signs and Symptoms of Concussion

Possible Signs Observed by Coaches	Symptoms Reported by Athlete
Physical <ul style="list-style-type: none">• Slowed reaction time• Inability to perform or poor performance of sports activity• Appears dazed or stunned• Slurred speech• Loss of consciousness or lack of responsiveness	Physical <ul style="list-style-type: none">• Headache or pressure• Neck pain• Nausea and/or vomiting• Balance difficulties or dizziness• Blurry or double vision• Sensitivity to light or noise• Feeling sluggish or groggy



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<ul style="list-style-type: none"> • Poor coordination or balance • Seizure or convulsion • Drowsiness or insomnia • Amnesia (can't remember things before or after the injury) • Grabbing or clutching of head 	<ul style="list-style-type: none"> • Ringing in the ears • Pain at injury site • Fatigue • Feeling "off"
<p>Cognitive</p> <ul style="list-style-type: none"> • Confusion • Easily distracted • Forgets instructions • Difficulty concentrating • Does not know the activity, class etc. they were participating in 	<p>Cognitive</p> <ul style="list-style-type: none"> • Issues concentrating • Memory problems • Confusion • Dazed or "foggy"
<p>Behavioural</p> <ul style="list-style-type: none"> • Change in mood, behaviour or personality • Strange or inappropriate emotions (e.g. easily angered, laughing, crying etc.) 	<p>Behavioural</p> <ul style="list-style-type: none"> • Irritable or unusually emotional • Nervous, anxious, depressed • Drowsy • Difficulty falling asleep • Sleeping more/less than usual

The signs/symptoms listed above are a broad guideline and each person's presentation may differ to some degree. It's important to remember that while signs/symptoms generally appear immediately after the injury, sometimes it takes hours or days before they appear.

Signs can be difficult to recognize in children, particularly young children under the age of 10 who might not communicate how they are feeling. It can be equally problematic to assess those with special needs or athletes who don't speak English or French as their first language.

Remember, dusting yourself off and getting "right back on the horse" isn't always the best approach. A second impact is no joke!

Initial Response

If you believe a rider has suffered a concussion following a fall from a horse, a blow to the head, face, neck or body (hard hits to the body can transmit force to the head), take immediate action as outlined below.



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If the individual is unconscious (eyes closed, motionless, non-responsive):

- Call 911
- Assume that they have a possible head or neck injury. Immobilize them prior to the ambulance arriving, **only if you are trained to do so.**
- Do not remove their riding helmet unless they are having difficulty breathing.
- Contact their parent/guardian or emergency contact to inform them of the injury and that they are being transported to the hospital.
- Document any physical, cognitive or behavioural changes including the duration of any seizure activity (if present) the individual exhibits and stay with them until paramedics arrive.
- The rider should be transported by ambulance to an emergency facility where a thorough neurological evaluation should be performed.

If the individual is conscious:

- Prevent the individual from getting back on their horse or continuing their activity.
- Contact the individual's parent/guardian or emergency contact to notify them of the incident and the need to be examined by a medical professional.
- Remain with the individual until their parent/guardian or emergency contact arrives.
- Monitor and document any physical, cognitive or behavioural changes the individual exhibits.
- If signs of concussion are not observed and a trained medical provider deems the athlete fit to continue, the individual can resume their regular riding activities with caution. However, parents/guardians of athletes under the age of 18 must first provide their consent.

The Ministry of Tourism, Culture and Sport recommends that parents/guardians of riders under the age of 18 notify their child's school principal if a concussion is suspected. The school principal can then inform school staff and any coaches of other sports the child participates in that he/she should not participate in any educational or physical activities until the parent/guardian reports back to the principal with confirmation from their doctor that such activities can be resumed.

If the rider is involved with other sports outside of school, his/her parent/guardian should also notify the coaches of those activities that a concussion is suspected. This is critical as there is high potential for serious neurological consequences if the athlete is concussed a second time before symptoms from the initial brain injury are resolved. Conversely, if an athlete suffers a suspected concussion during participation in another sport, their coach should notify the athlete's riding instructor of the incident.



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Graduated Return to Play Guidelines

Athletes diagnosed with a concussion should follow a medically supervised plan to return to physical activity, or play. An individualized approach should be created through a collaborative team comprised of:

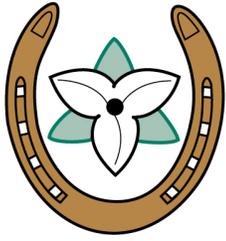
- The concussed individual
- His/her parents or guardians, if applicable
- His/her coach or trainer
- School staff, if applicable
- A medical doctor or nurse practitioner

The Return to Play plan outlined below is only a guideline. Typically, however, a Return to Play plan is made up of six steps. A minimum of 24 hours must be observed before each step is assessed, although this time could be considerably longer depending on the condition of the individual. If symptoms return at any step, the athlete must return to the previous stage until symptoms disappear.

Oversight should be provided by a medical professional throughout the entire return to play process.

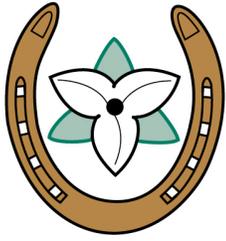
Suggested Stages of Return to Play

Rehabilitation Stage	Suggested Exercise	Objective
Stage 1: Complete rest	No activity in this stage. This includes limiting cognitive activities that provoke symptoms, such as reading, texting, television, activities requiring concentration, etc.	Recovery
Stage 2: Light aerobic exercises	Walking, swimming or stationary cycling at low intensity. No resistance training.	Increased heart rate without symptom recurrence
Stage 3: Sport-specific exercises	No activities that could result in head impact. Exercises could include walking/jogging a course or pattern without a	Add movement



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	horse, grooming, stretching, or practicing riding position on a stability ball. Helmet use when in contact with horse mandatory.	
Stage 4: Training drills	Progression to more complex training drills. May start progressive resistance training. Exercises could include barn chores, lunging a horse, light riding lessons on a lunge line on a suitable horse, or light supervised riding (walk-trot) on a suitable horse. Helmet use when in contact with horse mandatory.	Exercise, coordination and cognitive load
Stage 5: Full practice	Resume full schedule of riding on a suitable horse in stable weather conditions (no young or spooky horses). No trail riding, unsupervised rides, or competitions. Helmet use when in contact with horse mandatory.	Restore confidence and access functional skills
Stage 6: Return to regular riding activities	Rider rehabilitated. Return to competition, if applicable. Helmet use when in contact with horse mandatory.	Recover



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Recovery from concussion

Although most athletes are eager to return to their sport as quickly as possible, concussion symptoms must not be ignored. Equestrian athletes must not begin riding again until they have fully returned to their academics or employment, have no symptoms of concussion with or without exercise and have undergone a comprehensive medical assessment that clears them to resume their normal equestrian activities.

Children and adolescents, in particular, require a conservative approach when returning to play. Concussions can have more serious effects on a young, developing brain and need to be managed appropriately.

Riders need to be honest with themselves and medical staff when assessing their recovery progress. Parents or other collateral sources of observational information regarding behaviour and symptom pattern are critical to assure a complete understanding of the problems. The risks associated with returning to the saddle prematurely are serious. A second head impact in an individual who has not fully recovered from a concussion can lead to dangerous neurological implications, including death. Research also suggests a link between repeated brain injuries and long-term degenerative brain diseases.

Lastly, before resuming riding activities, the helmet worn at the time of injury will need to be replaced due to subtle damage to the cushioning materials as they exert their protective capacities. Even if damage is not visible, the helmet still needs to be replaced.

Resources

Coaching Association of Canada – Visit www.coach.ca and download the Concussion Recognition Tool in the Coach Resources section

Parachute – A charitable organization dedicated to preventing injury and saving lives. Visit www.parachutecanada.org

Canadian Academy of Sport and Exercise Medicine – Find a sports medical physician in your area by visiting www.casm-acms.org

Concussions Ontario – www.ConcussionsOntario.org is the website of the Concussion/mTBI Strategy, which aims to improve the recognition, diagnosis, and management of concussion/mTBI in Ontario.