

Concussion Facts and Protocols for Athletes, Parents, Coaches, and Trainers

What is a concussion? What causes a concussion?

A concussion is a brain injury that can't be seen on x-rays, CT, or MRI scans. It affects the way an athlete thinks and can cause a variety of symptoms. Any blow to the head, face, or neck, or somewhere else on the body that causes a sudden jarring of the head may cause a concussion. Examples include getting whiplash from a car accident or hitting one's head on the floor at practice.

When should I suspect a concussion?

A concussion should be suspected in any athlete who sustains a significant impact to the head, face, neck, or body and reports ANY symptoms or demonstrates ANY visual signs of a concussion. A concussion should also be suspected if an athlete reports ANY concussion symptoms to one of their peers, parents, teachers, or coaches or if anyone witnesses an athlete exhibiting ANY of the visual signs of concussion. Some athletes will develop symptoms immediately while others will develop delayed symptoms (beginning 24-48 hours after the injury).

What are the symptoms of a concussion?

A person does not need to be knocked out (lose consciousness) to have had a concussion. Common symptoms include:

- Headaches or head pressure
- Dizziness
- Nausea and vomiting
- Blurred or fuzzy vision
- Sensitivity to light or sound
- Balance problems
- Feeling tired or having no energy
- Not thinking clearly
- Feeling slowed down
- Easily upset or angered
- Sadness
- Nervousness or anxiety
- Feeling more emotional
- Sleeping more or less
- Having a hard time falling asleep
- Difficulty working on a computer
- Difficulty reading
- Difficulty learning new information

What are the visual signs of a concussion?

Visual signs of a concussion may include:

- Lying motionless on the floor/carpet
- Slow to get up after a direct or indirect hit to the head
- Disorientation or confusion or inability to respond appropriately to questions
- Blank or vacant stare
- Balance, gait difficulties, motor un-coordination, stumbling, slow laboured movements
- Facial injury after head trauma
- Clutching head

What should I do if I suspect a concussion?

If any athlete is suspected of sustaining a concussion during sports they should be immediately removed from practice and competition. Any athlete who is suspected of having sustained a concussion during sports must not be allowed to return to the same practice or competition.

It is important that ALL athletes with a suspected concussion undergo medical assessment by a medical doctor or nurse practitioner as soon as possible. It is also important that ALL athletes with a suspected concussion receive written medical clearance from a medical doctor or nurse practitioner before returning to sport activities.

Rhythmic Gymnastics-Specific Return-to-Sport Strategy

The following is an outline of the Return-to-Sport Strategy that should be used to help athletes, coaches, trainers, and medical professionals to partner in allowing the athlete to make a gradual return to sport activities. After sustaining a concussion, an initial period of 24-48 hours of rest is recommended before starting the Rhythmic Gymnastics-Specific Return-to-Sport Strategy. The athlete should spend a minimum duration of 24 hours without symptom increases at each stage before progressing to the next one. If the athlete experiences new symptoms or worsening symptoms at any stage, they should go back to the previous stage. It is important that youth and adult student-athletes return to full-time school activities before progressing to stage 5 and 6 of the Rhythmic Gymnastics-Specific Return-to-Sport Strategy. It is also important that all athletes provide their coach with a *Medical Clearance Letter* prior to returning to full contact sport activities.

Stage	Aim	Permitted Activities	Goal
1	Symptom-limiting activity	<p>Try: Daily activities that do not provoke symptoms (e.g.: eating, showering, school work, easy chores around the home)</p> <p>Avoid: Any activities that provoke symptoms, and all aerobic activity.</p> <p>Symptoms? Return to rest until symptoms have resolved. If symptoms persist, consult a physician.</p> <p>No symptoms for 24 hours? Proceed to Stage 2 the next day.</p>	Gradual re-introduction of work/school activities
2	Light aerobic activity	<p>Try: Activities at a light intensity that do not provoke symptoms. These may include:</p> <ul style="list-style-type: none"> • Light intensity walking, jogging, or stationary cycling at a slow to medium pace (15-20 minutes). • Light stretching and very basic lines (e.g.: walking on toes, pliés, etc.) <p>Avoid: Any activities that provoke symptoms, apparatus handling, deep arches, rapid movements, and all acrobatic elements.</p> <p>Symptoms? Return to rest until symptoms have resolved. If symptoms persist, consult a physician.</p> <p>No symptoms for 24 hours? Proceed to Stage 3 the next day.</p>	Increase heart rate
3	Sport-specific exercises	<p>Try: Activities at a moderate intensity that do not provoke symptoms. These may include:</p> <ul style="list-style-type: none"> • Basic conditioning and stretching • Bar/ballet exercises (kicks, pliés, etc.) • Basic leaps/jumps and balances that do NOT involve deep arches and rapid movements (note: this rules out a number of body difficulties) 	Add movement

		<ul style="list-style-type: none"> • Basic apparatus elements in isolation from body elements (e.g.: rotations of the apparatus, rolls of the apparatus, small flicks, rotations around the axis of the hoop, spirals, snakes, mills, etc.) <p>Avoid: Any activities that provoke symptoms, apparatus handling in combination with body elements (apparatus elements should be performed in isolation only), deep arches, rapid movements, and all acrobatic elements.</p> <p>Symptoms? Return to rest until symptoms have resolved. If symptoms persist, consult a physician.</p> <p>No symptoms for 24 hours? Proceed to Stage 4 the next day.</p>	
4	Most training exercises	<p>Try: Activities at a higher intensity that do not provoke symptoms. These may include everything listed in Stages 1-3 PLUS:</p> <ul style="list-style-type: none"> • Rotations (pivots) • Full dance sequences with and without apparatus • Throws and catches • Simple risks with rotations around the longitudinal axis (e.g.: chainés, cat leaps, spanish rolls, passé, etc.) in isolation from other elements • Apparatus difficulties (complex apparatus elements) that do not include pre-acrobatic elements • Body elements that involve deep arch and rapid movement • Acrobatic elements in isolation (without apparatus) • Simple collaborations and exchanges in group (without performing any acrobatic elements) • Small or medium sequences of routines with and without apparatus (without performing any acrobatic elements) <p>Avoid: Any activities that provoke symptoms, and acrobatic elements in combination with apparatus or other elements (should be performed in isolation only).</p> <p>Symptoms? Return to rest until symptoms have resolved. If symptoms persist, consult a physician.</p> <p>No symptoms for 24 hours? Proceed to Stage 5 the next day.</p>	Exercise, coordination and increased thinking
5	Regular practice	<p>Following medical clearance, the athlete may participate in the full practice without activity restriction.</p> <p>Try: Activities at full intensity that do not provoke symptoms. These may include everything listed in Stages 1-4 PLUS:</p> <ul style="list-style-type: none"> • Full routines with and without apparatus • All acrobatic elements <p>Avoid: Any activities that provoke symptoms.</p>	Restore confidence and assess functional skills by coaching staff

		<p>Symptoms? Return to rest until symptoms have resolved. If symptoms persist, consult a physician.</p> <p>No symptoms for 24 hours? Proceed to Stage 6 the next day.</p>	
6	Return to sport	The athlete may return to regular training methods, and can perform in displays as well as compete in competitions.	

McCroly et al. (2017). Consensus statement on concussion in sport – the 5th international conference on concussion in sport held in Berlin, October 2016. *British Journal of Sports Medicine*, 51(11), 838-847.

Who do these guidelines apply to?

These guidelines apply to all athletes registered with Rhythmic Gymnastics Alberta. All athletes, coaches, trainers, and medical professionals are required to abide by these guidelines. Coaches must not let athletes return to regular training/competition until they are presented with a Medical Clearance Letter, and the athlete progresses through all stages of the Return-to-Sport Strategy.

How long will this process take?

The process takes as long as needed for the athlete to proceed through the stages symptom-free. The amount of time it takes to progress through the stages depends on the severity of the concussion, the presence of symptoms, and the intensity of regular training. Whenever symptoms appear, the athlete should rest until symptoms are resolved (minimum 24 hours). While it may be frustrating for athletes, **it is important to remember that proper rest is the only way for the brain to heal.**

What if symptoms persist during the Return-to-Sport process?

In some cases, returning to sport can cause concussion symptoms to return, which simply means that the brain has not yet healed and requires more rest time. Athletes should stop activity and rest if any symptoms return during the Return-to-Sport process. Athletes who have sustained concussions need a minimum of 24 hours of rest between each activity – this time also allows the athlete to assess whether symptoms persist or worsen within 24 hours of the activity. **It is important that athletes DO NOT return to activity if their symptoms persist or worsen, as it can put them at further risk for prolonged/increased symptoms or sustaining concussions again in the future. If the athlete has difficulty progressing through the stages, it is important to contact a physician.**