



Gymnastics Ontario

Concussion Guidelines

www.gymnasticsontario.ca

***These informational guidelines have been prepared for general informational purposes only. They are not intended to and do not constitute any medical advice and do not contain any medical diagnoses, symptom assessments or medical opinions.**

Gymnastics Ontario CONCUSSION GUIDELINES

CONTEXT

Gymnastics Ontario has the responsibility to ensure a safe environment for participants. This means having policies, rules, regulations, standards and guidelines that promote safe programs in a safe environment, overseen by qualified/certified personnel.

Awareness of the signs and symptoms of a concussion and knowledge of how to properly manage a concussion is critical to recovery and helping to ensure the individual is not returning to physical activities too soon, risking further complications.

A concussion is a clinical diagnosis made by a medical doctor. It is critical that someone with a suspected concussion be examined by a medical doctor or nurse practitioner.

The main purpose of the following concussion guidelines is to increase safety awareness in making good decisions regarding gymnastics participation.

DEFINITION

A concussion is a type of traumatic brain injury that affects the way the brain functions due to a force applied to the brain. A concussion can be sustained by direct force (i.e. bump or blow to the head) or indirect force (i.e. blow to the body that causes the head to move rapidly back or forth). Direct contact with safety mats, apparatus, or equipment is frequently the cause of this injury. The whiplash effect of cervical flexion and extension (head forced forward and backward) may result in a concussion. Rotational forces of the head and neck (head forced to the right or left) are also possible causes of a concussion. Any part of the brain function can be affected. Concussions should be taken seriously.

COMMON SIGNS AND SYMPTOMS OF CONCUSSIONS

Concussions do not normally appear on a CT Scan or magnetic resonance imaging (MRI) of the brain because a concussion is a disturbance of the brain's neurometabolic dysfunction rather than a structural brain injury. A concussion affects the function not the structure of the brain.

Recognition of concussions often occurs through observing an injury and noticing changes in the gymnast's behaviour, thinking, or physical functioning. This form of brain injury is a complex mixture of physical, cognitive, emotional and sleep-related symptoms, which may include:

1. Visible clues of suspected concussion

(Any one or more of the following visual clues can indicate a possible concussion):

- Loss of consciousness or responsiveness
- Lying motionless on ground / Slow to get up
- Unsteady on feet / Balance problems or falling over/incoordination
- Grabbing / Clutching of head
- Dazed, blank or vacant look
- Confused / Not aware of plays or events

2. Signs and symptoms of suspected concussion

(Presence of any one or more of the following signs and symptoms may suggest a concussion):

- | | |
|--------------------------|----------------------------|
| • Loss of consciousness | • Headache |
| • Seizure or convulsion | • Dizziness |
| • Balance problems | • Confusion |
| • Nausea or vomiting | • Feeling slowed down |
| • Drowsiness | • "Pressure in head" |
| • More emotional | • Blurred vision |
| • Irritability | • Sensitivity to light |
| • Sadness | • Amnesia |
| • Fatigue or low energy | • Feeling like "in a fog" |
| • Nervous or anxious | • Neck pain |
| • "Don't feel right" | • Sensitivity to noise |
| • Difficulty remembering | • Difficulty concentrating |

3. Memory function

(Failure to answer any of these questions correctly may suggest a concussion):

"What venue are we at today?"

"Which event are you training/competing on right now?"

"What skill/routine did you perform last?"

"What do you remember just prior to the hit/fall?"

RESPONSE TO CONCUSSIONS

INITIAL RESPONSE

Coaches should be aware of the signs and symptoms of concussions, recognize if an athlete is displaying these signs and symptoms, and remove the gymnast from participation. The best treatment is to rest the gymnast's brain; sit the athlete down, preferably in a quiet place with little or no sensory stimulus to the brain, and contact the athlete's parent or emergency contact person. Following a fall, if a concussive injury is not initially recognized and the gymnast returns to practice, the coach should continue to closely monitor the gymnast to see if symptoms occur or performance decreases. If this occurs, the gymnastics should immediately cease practice until their concussion can be medically evaluated.

Depending on the severity of the symptoms, the gymnast may need immediate evaluation by medical personnel. Severe concussion symptoms, such as a headache that gets worse, weakness or numbness, repeated vomiting, and/or slurred speech, may be cause to seek emergency medical attention. It is recommended for clubs to include traumatic brain injuries in emergency action plans. For less severe concussions, medical evaluation within 24 hours of the injury is recommended. The athlete should not be allowed back to practice until a healthcare professional, experienced in evaluating concussions, deems it safe to return to gymnastics activity.

RECOVERY & TREATMENT

Recovery may take several days, weeks, months or even longer in more significant cases. The treatment for concussions is focused on physical and cognitive rest until the gymnast no longer has symptoms. This means rest, even from simple activities, such as conditioning. During the initial rest phase, it is beneficial for the gymnast to avoid reading, texting, keyboarding, video/computer games, watching televisions, loud music, bright lights and of course, physical activity. This may require the school-aged gymnast to stay home from school to rest the brain. Once the gymnast is asymptomatic, then the brain can gradually be challenged.

RETURN TO PHYSICAL ACTIVITY

The medical professional will advise when to start the brain's recovery process. The coach should receive a note from the physician allowing the gymnast to return to training before the coach becomes involved in the recovery process. It is up to the coach to gradually return the gymnast back to full gymnastics training. The steps below can be used to assist the coach by adding each activity to the gymnast's workout. Allow 24-48 hours after the successful completion of a step before advancing the gymnast to the next step. Advance through each step only if the gymnast remains symptom free.

Step 1: Symptom free with daily activity, including scholastic work.

Step 2: Jogging or aerobic warm-up and basic calisthenics (e.g. push-ups, sit-ups, chin-ups, etc.).

Step 3: Simple skills, such as leaps and jumps.

Step 4: Skills requiring inversion of the body, such as handstand and walkovers.

Step 5: Basic flipping and twisting acrobatic skills.

Step 6: More advanced gymnastics skills requiring multiple flips and twists and advanced skills on the variety of apparatus.

It is important that the gymnast not become disoriented or lose balance. The gymnast should be able to stay focused on the assigned skills, and the coach should closely monitor all activity to ensure concussion symptoms do not return.

PREVENTION

Gymnastics professionals play a key role in helping to prevent concussions and responding properly when they occur. Consider the following steps when preparing for concussive injuries.

- Create a concussion action plan. Check with provincial laws, local medical professionals and online resources to aid in developing the plan. Communicate this plan with all staff members.
- Educate athletes and parents about concussions. Provide information on the signs and symptoms, as well as action steps. Teach athletes that it is not safe to train or compete with a concussion.
- Insist that safety comes first. Teach proper techniques, encourage adherence to the rules and to use correct gear, apparatus and equipment.
- Monitor your athletes' health. Watch for signs following an injury, remove the athlete from participation, and insist the athlete seek medical evaluation. These steps can help to prevent long-term problems for the athlete.
- Review your plans. Keep track of concussions throughout the season and review your policies and action plans.

RESOURCES

McCrory et. Al. "Pocket CONCUSSION RECOGNITION TOOL". Concussions in Sport Group. British Journal of Sports Medicine. 47.5 (2013).

Ministry of Tourism, Culture and Sport . Concussion Guidelines. 27 May. 2014
<http://www.health.gov.on.ca/en/public/programs/concussions/docs/mtcs_concussion_guide_en.pdf>

USA Gymnastics. Gymnastics Risk Management: Safety Course Handbook. 2013