



U.S. Figure Skating
Concussion Education Information

Introduction

The following information is intended for the general education of figure skating officials, coaches, athletes, parents, team physicians, and volunteers in regards to evolving guidelines and practices in identifying and dealing with concussion-related matters affecting athletes. It reviews the most common signs, symptoms, and general management principles of concussion. This information is not a substitute for more complete concussion recognition educational materials and courses which are available or, when seeking to identify and manage concussions, for individual evaluations by medical professionals with experience in concussion management. This information is based on current knowledge and developing best practices, and will need to be modified as more information emerges. Also be aware that numerous states have enacted concussion laws which apply to youth sports, and you are encouraged to check the laws of your state to determine any applicable legal requirements.

General Information

A concussion is a type of traumatic brain injury, or TBI, caused by a bump, blow, or jolt to the head that can change the way the brain normally works. Concussions can also occur from a blow to the body that causes the head to move rapidly back and forth. Even a “ding,” “getting your bell rung,” or what seems to be a mild bump or blow to the head can be serious. An athlete can sustain a concussion without losing consciousness or actually hitting their head. Concussion reflects a functional rather than structural injury and standard neuro-imaging (MRI, CT scan of the brain) is typically normal.

Concussion can result in symptoms that are evident immediately, or may evolve and persist over the course of hours, days, and even months. Some signs and symptoms of a concussion are only evident with specific testing or questioning. Additionally, certain symptoms of concussion, such as disequilibrium and slowed reaction times, increase the risk for further injury to the concussed skater and those around him/her if precautions are not taken before returning to training and/or competition. Once an athlete has had a concussion, the brain is more susceptible to repeat injury.

This information pertains to both adult and minor athletes. However, as children and adolescents are at a higher risk of protracted recovery, it is strongly recommended these skaters with findings consistent with concussion are evaluated by a licensed healthcare professional with training and experience in concussion management as soon as possible.

Key Points and Protocols

- A concussion is a brain injury and is a serious condition.
- Most concussions occur without loss of consciousness.
- Recognition and proper response to concussions when they first occur can help prevent further injury or even death.



- A skater should be immediately removed from the ice and from competition/training if a concussion is suspected.
- The parent or guardian of a minor skater should be notified.
- Giving information in verbal format to a concussed athlete is not reliable, as they may not remember or be able to follow instruction.
- The skater should not return to skating (including competition/training) until the skater undergoes medical evaluation by a licensed healthcare profession who is trained and experienced in concussion management and the skater receives written clearance to return to skating.
- CT Scans and MRIs of the brain are typically negative. They are useful, however, in ruling out more serious injuries.
- Physical and cognitive rest are important for recovery, especially in the initial phases of recovery. Some skaters may be helped by limiting physical activities or screen time (texting, computer, TV) or major cognitive demands, in the initial phases of recovery, and then progressing with more activity as tolerated.
- After the skater has been evaluated and receives clearance to return to skating, the skater's return should involve a supervised step-wise/managed return-to-play plan.
- While most skaters will recover quickly and fully following a concussion, some will have symptoms for weeks or longer. A repeat concussion that occurs before the brain recovers from the first—usually within a short period of time (hours, days, or weeks)—can slow recovery or increase the likelihood of having long-term problems. In rare cases, repeat concussions can result in edema (brain swelling), permanent brain damage, and even death.
- Young athletes are particularly susceptible to the effects of a concussion. Appropriate conservative management is essential for reducing the risk of long-term symptoms and complications.

Recognition and Evaluation of a Concussed Athlete

1. Signs and symptoms of a concussion may include, but are not limited to the following:

Physical Symptoms - Loss of consciousness, Headache, Sleep disturbance, Pressure in the head, Neck pain, Nausea, Vomiting, Blurred vision, Dizziness, Fatigue prolonged or greater than expected.

Cognitive Symptoms – Confusion, Feeling slowed down, Sensitivity to light, Sensitivity to noise, Impaired balance, Feeling in a fog, Difficulty concentrating, Difficulty remembering.

Emotional/Behavioral Symptoms - More emotional, Irritability, Restlessness, Not feeling like oneself, Social withdrawal or interaction changes, Drowsiness, Sadness, Anxiety, Nervousness.



Coaches may observe the following about the athlete:

Confused about what they should be doing
Forgets an instruction, poor attention
Is unsure of the details of their event
Moves clumsily
Answers questions slowly
Loses consciousness (even briefly)
Shows mood, behavior, or personality changes
Can't recall events prior to hit or fall
Can't recall events after hit or fall
Social withdrawal or interaction changes

Athlete may report the following symptoms:

Headache or "pressure" in head
Nausea or vomiting
Balance problems or dizziness
Double or blurry vision
Sensitivity to light
Sensitivity to noise
Feeling sluggish, hazy, foggy, or groggy
Concentration or memory problems
Confusion
Does not "feel right" or is "feels down"

Feeling drowsy

2. Signs of symptoms of a more significant head injury may include, but are not limited to the following:

- Loss or change in consciousness
- Nausea and/or Vomiting
- Severe headache
- Disorientation
- Inability to speak or swallow
- Amnesia
- Skull fracture
- Leakage of clear or bloody fluid from the nose or ears
- Inability to walk in a straight line
- Seizure
- Arm or leg weakness or numbness



- Neck pain

If any of these symptoms are reported or observed, a medical professional should be contacted immediately or 911 should be accessed. These symptoms may represent signs of increasing pressure in the brain.

Information and Education

- Skaters, parents, coaches, and officials should educate themselves regarding the signs and symptoms of concussion. These websites offer additional information:

http://fs.ncaa.org/Docs/health_safety/ConFactSheetsa.pdf

<http://www.cdc.gov/concussion/sports/>

- Coaches, in particular, are encouraged to complete an annual concussion recognition program.
- Establishing an athlete's baseline neurological and/or neurocognitive functioning level allows for a more accurate assessment of post-injury difficulties, and is helpful in managing a safe return to skating. Baseline evaluation may be particularly important for skaters with certain risk factors for prolonged recovery, such as history of prior concussion or other brain trauma, learning disabilities, attention deficit disorder, history of migraine, or psychiatric diagnoses.

List of Resources and Helpful Websites:

1. U.S. Figure Skating – Chair, Sports Sciences and Medicine Committee
Ellen Geminiani MD – Ellen.Geminiani@childrens.harvard.edu
2. CDC - <http://www.cdc.gov/concussion/sports/>
Heads Up online training course: http://www.cdc.gov/concussion/headsup/online_training.html
3. NCAA - http://fs.ncaa.org/Docs/health_safety/ConFactSheetsa.pdf
4. Consensus Statement on Concussion in Sport – the 4th International Conference on Concussion in Sport Held in Zurich, November 2012 - <http://www.medscape.com/viewarticle/781420>
5. American Medical Society for Sports Medicine position statement: Concussion in sport - http://www.amssm.org/Content/pdf%20files/2012_ConcussionPositionStmt.pdf