



Synchro Swim Ontario Concussion Information and Guidelines for Athletes and Parents

Introduction

Concussions most commonly occur in organized contact sports such as football, wrestling, and soccer, but they can also occur in synchronized swimming. Since concussions can lead to serious health consequences, it is essential that synchronized swimmers, coaches, parents, and healthcare providers learn the signs and symptoms of concussion and what to do if a concussion occurs.

What is a Concussion?

A concussion is a type of mild traumatic brain injury (or mTBI) caused by a bump, blow, or jolt to the head or body that shakes the head and can alter the way the brain normally functions. Fewer than 10% of concussions involve a loss of consciousness. In synchronized swimming, common causes of concussion are from a collision with another synchronized swimmer, hitting the wall, falling from a lift, being hit or kicked in the head by an arm or a leg, etcetera. What ensues are a number of possible symptoms that may adversely affect the synchronized swimmer's ability to perform daily mental and physical tasks, alter mood and personality, and reduce the ability to safely participate in synchronized swimming. Each concussion is unique and can affect the injured synchronized swimmer in a different way. Recognition and proper response to concussions when they first occur is imperative to help prevent further injury or even death.

How to Recognize Signs and Symptoms of a Concussion?

Keys to identifying concussion include an observed or reported forceful bump, blow or jolt to the head or body that results in rapid movement of the head AND any changes in the synchronized swimmer's behavior, thinking, or physical function. It is important to remember that you can't "see" a concussion and that not all synchronized swimmers will experience or report the symptoms right away. Some synchronized swimmers may wait for hours or even days after the injury to report a problem. The following is a list of common symptoms of concussion. Keep in mind that it is not uncommon to have some of the symptoms before an injury. For example, an athlete may feel tired and have a headache from overtraining, a cold or lack of sleep. A concussion would be an increase in the severity or number of symptoms.

Signs Observed by Others	Symptoms Reported by Synchronized Swimmer
– Confusion	– Headache or “pressure” in head
– Foggy	– Nausea, vomiting, numbness or tingling
– Forgetful	– Balance problems or dizziness
– Disoriented	– Double or blurry vision, ringing in the ears
– Lack of coordination	– Sensitivity to light and noise
– Slow to respond	– Increased emotional behavior or irritability
– Brief unconsciousness	– Concentration or memory problems
– Mood, behavior or personality changes	– Feeling sluggish, low energy, foggy or groggy
– Inability to recall events prior to hit or fall	– Confusion
– Inability to recall events after hit or fall	– Does not “feel right” or “feeling down”
– Seizures immediately after hit or fall	– Problems with insomnia or excessive sleep



Management

Most individuals with a concussion will recover fully in a timely manner (7 – 10 days) given early and proper care. But for some individuals, signs and symptoms of concussion can last for days, weeks, or longer and may be present during daily functioning in addition to exercise or synchronized swimming activity. Research informs us that some aspects of cognition and the body's balance system can be affected for months following concussion.

Concussion management includes both physical and cognitive (mental) rest until symptoms resolve to pre-injury levels for all activities of daily living prior to returning to synchronized swimming. If there is any question whether or not a synchronized swimmer should participate, current guidelines state: **“When in doubt, sit them out.”**

Important aspects of early-stage recovery:

- **Monitoring for mental or physical deterioration** over the initial few hours after injury is essential
- **Restful sleep and relaxation.** Like any injury, the injured body part (in this case the brain) needs rest from activity to promote the healing. This means rest from television, computers, reading, texting and even music
- **Acetaminophen** (Tylenol) can be taken safely
- **DO NOT** drink alcohol, take sleeping medication, aspirin or anti-inflammatory medication (e.g., Advil)
- **DO NOT** return to synchronized swimming the same day as the injury, even if symptoms resolve
- **DO** return to synchronized swimming only after being cleared by a licensed healthcare provider experienced in concussion management, which may include a variety of tests designed to assess brain function (neurocognitive tests)

Return to Activity:

The following is a guideline. The return to activity must be led by a health care provider who is trained and experienced in concussion management. It is recommended that the physician be able to communicate directly with the athlete and/or parent in directing return to sport and providing step-by-step guidance. Once the synchronized swimmer's symptoms have resolved to pre-injury levels, the synchronized swimmer should follow a step-wise return to full activity. **Medical clearance is required to progress from Stage 1 to Stage 2.** Within each stage, activity is introduced and increased gradually. The athlete should be symptom free for 24 hours before progressing to the next stage. **If at any stage the synchronized swimmer experiences a recurrence of symptoms of concussion, he/she needs to return to the previous level of activity until the symptoms resolve and should not try to progress for at least 24 hours.** Each step may take a minimum of one day, depending on the duration or recurrence of symptoms. Synchronized swimmers will progress through the following stages at differing rates:

Stage	Home Activity	School Activity
1 No Activity	Rest quietly, nap and sleep as much as needed. Avoid bright light if bothersome. Use sunglasses/ earplugs as needed. Drink plenty of fluids and eat healthy foods every 3-4 hours. Avoid "screen time" (text, computer, cell phone, TV, video games).	No school. No homework or take-home tests. Avoid reading and studying.
2 Introduce Light Activity	Allow 8-10 hours of sleep per night. Avoid napping. Drink lots of fluids and eat healthy foods every 3-4 hours. "Screen time" less than 1 hour a day. Spend limited social time with friends. Avoid bright light and loud noise. Use sunglasses/ earplugs as needed.	No school. May begin easy tasks at home (e.g., drawing, baking, cooking). Soft music and 'books on tape' okay. Once your child can complete 60-90 minutes of light mental activity without a worsening of symptoms he/she may go to the next step.



3 Moderate Activity	Allow 8-10 hours of sleep per night. Avoid napping. Drink lots of fluids and eat healthy foods every 3-4 hours. "Screen time" less than 1 hour a day. Spend limited social time with friends outside of school. Use sunglasses/earplugs as needed.	Gradually return to school. Start with a few hours/half-a-day. Take breaks in the nurse's office or a quiet room every 2 hours or as needed. Avoid loud areas (music, band, choir, shop class, locker room, cafeteria, loud hallway and gym). Use sunglasses/ earplugs as needed. Sit in front of class. Use preprinted large font (18) class notes. Complete necessary assignments only. No tests or quizzes. Limit homework time. Multiple choice or verbal assignments are better than lots of long writing. Tutoring or help as needed. Stop work if symptoms increase.
4 Begin Return to Full Activity	Allow 8-10 hours of sleep per night. Avoid napping. Drink lots of fluids and eat healthy foods every 3-4 hours. "Screen time" less than 1 hour a day. Spend limited social time with friends outside of school.	Progress to attending core classes for full days of school. Add in electives when tolerated. No more than 1 test or quiz per day. Give extra time or untimed homework/tests. Tutoring or help as needed. Stop work if symptoms increase.
5 Full Activity	Allow 8-10 hours of sleep per night. Avoid napping. Drink lots of fluids and eat healthy foods every 3-4 hours. Increase "screen time" but avoid screens for at least one hour before bed. Increase social time with friends.	Return to full school program. If symptoms return, return to previous stage.

Who Might a Synchronized Swimmer Work with Following a Concussion?

A synchronized swimmer may work with a number of licenced healthcare providers who will assist in his/her recovery including: sports medicine physicians, certified athletic trainers/therapists, physiotherapists, neuro-psychologists, psychiatrists, and/or osteopaths.

References:

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