USA Swimming National Convention

Concussion Recognition and Management

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Concussion is treated the same for any age, any sport

Recognize – Manage - Treat

Understanding –

Develop education programs to raise awareness and change behavior

How will the concussion impact my swimmer’s training

Concussion – is a traumatic brain injury. Direct or indirect (whiplash) contact to the head or body

* Often results in short lived changes in normal brain function
* Swimmers with suspected concussion should not resume activity on the same day
* Treatment should be supervised by a qualified healthcare provider (as defined by state laws)
* Following healthcare provider protocol is critical
* Coaches should be in communication - Individual/family communicates with coach who suggests professional care
* Swimmers are susceptible to repeat concussion during recovery (7-10 days)
* Multiple concussions may lead to longer recovery for subsequent concussions
* Younger swimmers may have prolonged symptoms

Symptoms can vary

* Mental fatigue
* Sleep problems
* Headache
* Balance problems
* Eye, ear and stomach symptoms
* Concentration is difficult
* Memory issues
* Mentally foggy
* Slowed processing
* Emotional – depression, anxiety, behavior, personality (usual rest, get them to school and limited activity) Don’t want them isolated

Signs vs symptoms [www.cdc.gov/concussion](http://www.cdc.gov/concussion)

Post-Concussion Syndrome

* Typical takes about a week
* Longer can take weeks to recover – sequential evaluation and thorough follow-up are the keys to prevention

Two Rare Conditions

* Second Impact Syndrome
* Chronic Traumatic Encephalopathy (CTE) – protein deposits in brain

Both thought to be preventable with proper recognition and management of an initial concussion.

Three Basic Steps

* Remove from Play and Educate
* Rest, Reduce and Refer to specialists
* Academic Adjustments and Accommodation at school

Current Standard of Care – Concussion in Sport: the 5th International Conference on Concussion in Sport, Berlin 2016

* Return to school before return to sport
* Activity that does not lead to symptoms (walking the dog vs returning to sport practice)
* Each stage is separated by 1-2 days

Return to Swim (RTS) Guidelines

* The decision to keep the athlete out of school should be made by the healthcare provider
* There is no evidence that keeping the athlete out of school is useful (emotional, mental health issues from isolation)

RTS – requires athlete to be 100% symptom free or back to pre-concussion functioning

* Parents communicate that athletes are able to fully function
* School teachers/counselors indicate athlete is fully functional
* Testing (imaging, etc) indicates athlete is fully healed
* Medications – athlete is fully off all related meds

There is no single right timeline for progression through the stages

* Adequate pool space and appropriate supervision during return. If not available, use land work like stationary bike
* The symptoms must be absent the full day before progressing
* Light Aerobic Activity – 20 minutes 55-65% max heart rate or of best 100 time. Kicking on a board. Stationary bike, elliptical ok. No bike or treadmill because of rolling surface creating need for balance.
* Next level – 30 minutes 65-70% limited head movement. Use snorkel to start swimming again.
* Order of strokes to resume swimming – breast, back, free, fly, open turns
* Next level – 30 minutes 70-80% max heart rate or of best 100 times.
* More complex interval training, use all 4 strokes, add to the coordination and cognitive load, still only open turns
* Next level – full practice, 80% of heart rate.
* Reintroduce starts, flip turns
* Next level – return to full competition

Coach Training could become mandatory, Parent Education could become available and possibly mandatory