

Ice Hockey Injury Care and Prevention

Hockey is a collision sport – not a contact sport.

Even at young ages, the collisions occur at relatively high speeds. Injuries will occur.

Objective as a coach is to prevent as many injuries as possible and address conservatively.

If in doubt, hold an athlete out whenever you are having a tough decision. They are **not** getting paid to play. This is **not** their career.

Prevention is worth more than a pound of cure

- ASSURE that equipment fits. Especially helmets.
- Allow the children to be children – this actually will create better athletes in the long-term
- Have them do many different physical skills (multiple sports). The variety of activities causes varied nerve firing patterns (balances) and muscle adaptations. These decrease short-term hockey development, but improve long-term development.
- Progressive development in FBS-SSP (Flexibility, Balance, Stability – Strength, Speed, Power)
- Proper Warm-up will significantly reduce injury risk and also improve performance. NO STATIC STRETCHING.

What should be in a kit?

Only items you are comfortable using. The rest is wasted space.

As a coach, your medical kit should be to keep things from getting worse and if necessary to get them to the ER. That's it.

- Emergency contact Information** – cell phone / landline; insurance information,
- Pocket Mask** – All coaches should know CPR
- Scissors** – EMT Shears advised
- Nitrile Gloves** – better than latex gloves
- Sterile Gauze** – 4"x4" squares. Store in quart-sized ZipLock bag
- Cloth / Plastic Tape** – Tape is for holding on sterile gauze. If you do not know how to tape an injury, don't tape an injury.
- Elastic Band-Aids** - (knuckle shaped, straight shaped, 4-wing shaped). Store in quart-sized ZipLock bag
- Wound cleanser** – Soap and water best. Antibiotic wipes also good. Triple antibiotic ointment.
- Shoulder sling** – Can use for any shoulder injury plus also for any splint. Store in quart-sized ZipLock bag
- Splinting material** – hockey blades and sticks work, but invest in about a SAM Splint
- Elastic Wraps** – to keep swelling to a minimum and help hold on splints
- Gallon-sized ZipLock bags** – Rinks will often provide ice, but not bags. Can always use Zamboni snow. ZipLock bags are re-sealable.

Getting fancy?

- Save a Toot / Tooth Saver Kit
- Tweezers for composite splinters
- Saline for contacts and flushing eyes

Care of Injuries

- **Athletes that have seen physician still have to be able to demonstrate proper technique before you allow them to play full.**
- **Sprains** – Ligament stretching or tearing. Not excessively common in ice hockey due to lack of traction. Does occur in shoulder joints. Immediate action: R.I.C.E. If joint continues to 'not feel normal' or if on-ice technique is altered after 3 days, refer to MD.
- **Strains** – Muscle / tendon stretching or tearing. Less common if child is properly developed. Immediate action : R.I.C.E. After 3-4 days, if swelling is beginning to decrease, initiate warmth (not heat) before activity and ice after.
- **Fractures** – Not very common in ice hockey, but cannot eliminate. Splint, make comfortable and send for care.
- **Bruises** – Can drastically reduce frequency and severity with proper fitting, but **can not** eliminate. R.I.C.E. until peak swelling.
- **Open wounds** – Clean, dress and protect from further damage. Send for further care if any question.
- **Rashes** – Interpret as transmittable fungal and bacterial transmission until proven otherwise. MRSA very common. Do not allow sharing of towels. Frequent showering **at** rink.
- **Concussions** – Preventable. Effects are cumulative. If headache or any symptom persists, do not return to play. Should be symptom free for 1 week before return to play. Interpret any unconsciousness as a concussion.

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Management of Concussion in Sports

From: Brain Injury Association / Standard Assessment of Concussion (SAC) www.biausa.org

Grades of Concussion:

Grade 1	<ul style="list-style-type: none"> ▪ Transient confusion (inattention, inability to maintain a coherent stream of thought and carry out goal-directed movements) ▪ No Loss of Consciousness ▪ Concussion symptoms or mental status abnormalities on examination resolve in less than 15 minutes.
Grade 2	<ul style="list-style-type: none"> ▪ Transient confusion ▪ No Loss of Consciousness ▪ Concussion symptoms or mental status (including amnesia) on examination more than 15 minutes.
Grade 3	<ul style="list-style-type: none"> Any Loss of Consciousness <ul style="list-style-type: none"> ▪ Brief (seconds) ▪ Prolonged (minutes)

Management Recommendations

Grade 1	<ul style="list-style-type: none"> ▪ Remove from participation ▪ Examine immediately and at 5-minute intervals for the development of mental status abnormalities or post-concussive symptoms at rest and with exertion <p>May return to contest if no mental status abnormalities or post-concussive symptoms clear within 15-minutes.</p>
Grade 2	<ul style="list-style-type: none"> ▪ Remove from participation and disallow return that day ▪ Examine immediately and at 5-minute intervals for intracranial pathology ▪ A trained person should reexamine the athlete the following day ▪ A physician should perform a neurologic examination to clear the athlete for return to play after 1 full asymptomatic week at rest and with exertion
Grade 3	<ul style="list-style-type: none"> ▪ Transport the athlete from the field to the nearest emergency department by ambulance if still unconscious or if worrisome signs are detected (with cervical spine immobilization - if needed) ▪ A thorough neurologic evaluation should be performed emergently, including appropriate neuroimaging if indicated ▪ Hospital admission is indicated if any signs of pathology are detected, or if the mental status of the athlete remains abnormal

When to Return to Play

Grade of Concussion	Return to Play ONLY after asymptomatic with Normal Neurologic Assessment at Rest and with Exercise
Grade 1 Concussions	15 minutes
Multiple Grade 1 Concussions	1 week
Grade 2 Concussions	1 week
Multiple Grade 2 Concussions	2 weeks
Grade 3 – Brief Loss of Consciousness (seconds)	1 week
Grade 3 – Prolonged Loss of Consciousness (minutes)	2 weeks
Multiple Grade 3 Concussions	1 month or longer, based upon decision of evaluating physician

Fluid Replacement for Athletes

- Performance decreases with as little a change as 1-2% loss of body fluid. For a 150-pound player, this is 2-3 pound loss after practice. This can also occur from illness if diarrhea is present.
 - Cold fluid does not give you cramps. Chugging fluid could! The amount of water your stomach can absorb at one time is small, but steady.
 - Best overall fluid choice is water at 42°F (ice water) but sports drink may be very helpful immediately after a contest or practice.

Adapted From: National Athletic Trainer Association www.nata.org

Event	Fluid Goals
2 hours before event (practice or game)	16 to 24 ounces intake
15 minutes before event	8 to 16 ounces intake
Every 10 to 20 minutes during	7 to 10 ounces intake
Within 2 hours after activity	look for pale and colorless urine.
Daily normal intake	look to have to urinate every 2 to 4 hours

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Dental Emergencies

From: Academy of Sports Dentistry www.sportsdentistry-iasd.org

Avulsion (Entire Tooth Knocked Out)

- Avoid additional trauma to tooth while handling. **Do not** handle tooth by the root. Do not brush or scrub tooth.
- **Do not** sterilize tooth. If debris is on tooth, *gently* rinse with water.
- If possible, re-implant tooth and stabilize by biting down gently on the towel or handkerchief. Do only if athlete is alert and conscious.
- If unable to re-implant:

Best - Place tooth in Hank's Balanced Saline Solution, i.e. "Save-a-toot."

2nd best - Place tooth in milk.

3rd best - Wrap tooth in saline-soaked gauze.

- Time is very important. Reimplant within 30 minutes has the highest degree of success rate. **TRANSPORT IMMEDIATELY TO DENTIST.**

Luxation (Tooth in socket, but wrong position)

Extruded Tooth - Upper tooth hangs down and/or lower tooth raised up.

- Reposition tooth in socket using firm finger pressure.
- Stabilize tooth by gently biting on towel or handkerchief.
- **TRANSPORT IMMEDIATELY TO DENTIST**

Lateral Displacement - Tooth pushed back or pulled forward.

- Try to reposition tooth using finger pressure.
- Athlete may require local anesthetic to reposition tooth; if so, stabilize tooth by gently biting on towel or handkerchief.
- **TRANSPORT IMMEDIATELY TO DENTIST**

Intuded Tooth - Tooth pushed into gum - looks short.

- Do nothing - avoid any repositioning of tooth.
- **TRANSPORT IMMEDIATELY TO DENTIST**

Fracture (Broken Tooth)

- If tooth is totally broken in half, save the broken portion and bring to the dental office as described under Avulsion, Item 4. Stabilize portion of tooth left in mouth by gently biting on towel or handkerchief to control bleeding.
- **IMMEDIATELY TRANSPORT PATIENT AND TOOTH FRAGMENTS TO DENTIST**

