

Quick Sports Injury Management Guidelines

MGH Sports Physical Therapy

Wound Care

1. If available, always wear protective gloves when dealing with bodily fluids (i.e. blood, urine, saliva, etc.)
2. Apply a sterile gauze pad to the wound (if not available use a clean towel), elevate the wound and apply direct pressure for until bleeding stops. If the bleeding continues past 5-10 minutes seek medical attention.
3. If the wound is soiled, irrigate with a disinfectant, or if nothing else is available, clean water.
4. Cover the wound with a clean or sterile dressing to prevent infection.
5. Clean blood spills (or blood on uniforms or clothes) with a diluted water/bleach solution (10 parts H₂O and 1 part bleach).

Tooth Injury

1. Key elements:
 - a. If available always wear protective gloves
 - b. Never pick up the tooth by the roots. Grasp the tooth by the crown.
 - c. If the tooth is dirty rinse the tooth off in water. Do Not scrub the tooth or dry it.
 - d. If possible reposition the tooth in its socket immediately. Hold the tooth in place by gently biting down on it or have the athlete gently hold it in place with his or her fingers. A tooth has the best chance of survival if placed back in its socket within the first 30 minutes.
2. If you are not able to place the tooth back into its socket the following are recommended methods of transport (in order of preference):
 - a. Emergency tooth preservation kit (available at your local pharmacy)
 - b. Cold whole milk
 - c. Saline solution
 - d. Saliva – Have the athlete hold the tooth between their cheek and gum
 - e. If not of the above is available use clean water
3. Remember to keep the tooth moist at all times

Nasal Injuries

1. Early treatment of a nose injury consists of applying a cold compress and keeping the head higher than the rest of the body.
2. You should seek medical attention in case of
 - a. Breathing difficulties
 - b. Deformity of the nose
 - c. Persistent bleeding
 - d. Deep cut
 - e. Known fracture



MASSACHUSETTS
GENERAL HOSPITAL

Sports Physical Therapy

175 Cambridge Street, Suite 470, Boston, MA 02114; Tel 617-643-9999

Quick Sports Injury Management Guidelines

MGH Sports Physical Therapy

Bloody Nose

1. If available always wear protective gloves
2. Nosebleeds are common and usually short lived
3. Control the bleeding by squeezing the nose with constant pressure for 5-10 minutes. Ice may be applied to both sides of the nose to help speed coagulation and stop bleeding.
4. Do not tilt the head back
5. Do not let the athlete blow his or her nose
6. If bleeding persists, seek medical attention

Eye Contusion/Object In The Eye

Eye Contusion

1. If available always wear protective gloves
2. Be cautious of a fracture of the orbit (eye socket). Things to look for:
 - a. Blurred vision
 - b. Swelling
 - c. Discoloration of the area surrounding the eye
 - d. Broken blood vessels in the eye
 - e. Injured eye appears lower than un-injured eye
3. Gentle application of cold compress
4. Seek medical attention

Object in Eye

1. If available always wear protective gloves
2. If an object such as dirt, eyelash or chemical substance is in the eye:
 - a. Gently flush the eye with clean water or saline
 - b. Continue to flush until the object is removed
 - c. If you are unable to flush the eye successfully cover **both** eyes and transport the athlete to medical attention. Covering both eyes will minimize movement of the eye with the foreign substance in it.
3. If the eye is penetrated with a sharp object or if the eye is bleeding cover both eyes with a light dressing and seek immediate medical attention. Do not attempt to remove the object.

Created by: Jim Zachazewski PT, DPT, SCS, ATC
Clinical Director, MGH Sports Physical Therapy



MASSACHUSETTS
GENERAL HOSPITAL

Sports Physical Therapy

175 Cambridge Street, Suite 470, Boston, MA 02114; Tel 617-643-9999

Quick Sports Injury Management Guidelines

MGH Sports Physical Therapy

Dehydration and Fluid Replacement

Anyone can be susceptible to the effects of heat illness due to dehydration and the lack of adequate fluid replacement. These things can not only occur when exercising in the heat but also with other things like working outside, spending a day at the beach or even exercising inside if it is warm enough and you have not had enough to drink. Some key factors to remember are:

- Anyone exercising can be effected in less than 1 hour – or sooner if you begin dehydrated
- Dehydration of greater than 3% of your body weight increases the athlete's risk of heat illness (heat cramps, heat exhaustion, heat stroke)

Warning Signs of Dehydration

○ Thirst	○ Headache	○ Dizziness
○ Nausea	○ Irritability	○ Cramps
○ Weakness	○ Poor Performance	

What To Drink During Exercise

- Athletes will benefit from drinking water which should be able to be consumed as needed/liberally
- If exercise lasts more than 45-50 minutes or is intense, a sports drink containing electrolytes and/or carbohydrates (<6% solution) may need to be considered during the session
- Fluids with salt (sodium chloride) are beneficial to increasing third and voluntary fluid intake, as well as offsetting the amount lost in sweat
- Cool beverages (water or electrolyte drinks such as Gatorade®) at temperatures of 50-59 degrees are recommended

What Not To Drink

- Fruit juices, carbohydrate gels, sodas and sports drinks with high carbohydrate levels are not recommended during exercise
- Beverages containing caffeine, alcohol and carbonation are discouraged during activity because they can dehydrate the body by stimulating excess urine during production or decrease voluntary fluid intake

Hydration Tips

- Drink according to a schedule based on needs. By the time you become thirsty, you are becoming dehydrated
- Drink before, during and after practices and games
- Avoid soft drinks and juices during play



MASSACHUSETTS
GENERAL HOSPITAL

Sports Physical Therapy

175 Cambridge Street, Suite 470, Boston, MA 02114; Tel 617-643-9999

Quick Sports Injury Management Guidelines

MGH Sports Physical Therapy

Fluid Guidelines

- 2 to 3 hours before exercise drink 17-20 ounces of water or a sports drink
- 10-20 minutes before exercise drink 7-10 ounces of water or a sports drink
- During exercise – drink early, even minimal dehydration effects performance
- Every 10-20 minutes drink at least 7-10 ounces of water or a sports drink
- To maintain hydration, drink beyond your thirst
- After exercise – within 2 hours, drink enough to replace any weight loss from exercise. Drink 20-24 ounces of sports drink per pound of weight loss
- Avoid caffeine and alcohol

Heat Related Illness

Muscle Cramps – Painful spasm of muscles

- Application of ice, remove restricting clothing, remove athlete from the sun
- Encourage stretching of the muscle that is cramping and stopping activity that is causing the athlete to use that muscle
- Encourage fluids

Heat Exhaustion – The most common type of heat illness. Caused by a decrease in blood volume due to dehydration. Common signs and symptoms are dizziness, headache, nausea, profuse sweating, cool/clammy skin, rapid weak pulse and body temperature at or slightly below normal.

- Move athlete to a cooler area
- Elevate legs and encourage fluids
- Monitor vital signs (i.e. respiration, pulse and level of consciousness)

Heat Stroke – Least common, but most serious problem that can even be fatal. In this case the blood volume is so low that the body's cooling system has shut down, the person stops sweating and goes into shock. Common signs and symptoms are disorientation, possible unconsciousness, no sweating, hot/dry skin, rapid/strong pulse and an increased body temperature. *This is a medical emergency and requires rapid cooling and immediate transport to the hospital.*

- Move athlete to a cooler area
- Reduce body temperature by applying cold wet towels to the head and body
- Monitor vital signs (i.e. respiration, pulse and level of consciousness)
- Activate the Emergency Medical System – Call 911. Seek immediate medical attention

*Reference: NATA Position Statement: "Fluid Replacement for Athlete"
D Casa et al. J Athletic Training 35:212-224, 2000.*

Created by: Jim Zachazewski PT, DPT, SCS, ATC
Clinical Director, MGH Sports Physical Therapy



MASSACHUSETTS
GENERAL HOSPITAL

Sports Physical Therapy

175 Cambridge Street, Suite 470, Boston, MA 02114; Tel 617-643-9999

Quick Sports Injury Management Guidelines

MGH Sports Physical Therapy

Ten Keys When Dealing with an Injured Player On and Off The Field

1. **Recognize that an injury or illness exists**
2. **Don't Panic**
 - Staying calm helps keep the injured athlete, coaches or parents calm as well
3. **Mentally prepare yourself for the possibility of a significant injury but know that severe injuries are infrequent**
4. **Survey the scene**
 - Has the play stopped? Is the injured athlete moving?
 - If yes, then the athlete has a heart beat, probably is conscious and probably does not have a neck injury
5. **When you reach the athlete on the field:**
 - a) ***What to ask the athlete***
 - Are you OK? Where does it hurt?
 - Do you remember what happened?
 - If the athlete can answer these you know that they are breathing, have a pulse and are conscious. Go to letter D.
 - If the athlete does not answer you, suspect no pulse, no breathing and possibly a head and/or neck injury. Call 911. Go to letter B
 - b) ***Is the athlete breathing?***
 - Look – Listen and Feel for Breathing
 - i) Look for the chest to rise and fall
 - ii) Listen for wheezing, gurgling and breath sounds
 - iii) Feel the breath hit your ear
 - If no breathing, go to letter C.
 - If the athlete is breathing, monitor their breathing and go to letter C.
 - c) ***Does the athlete have a pulse***
 - Check pulse at the neck. If no pulse, Start CPR
 - If the athlete has a pulse monitor their vital signs and go to letter D.
 - d) ***Look for any deformities***
 - Is the athlete in an abnormal position?
 - Can you see any swelling, bleeding, or protruding bones?
 - If no, Go to Letter E
 - If yes, then assume a possible fracture has occurred. Do not move the athlete and if 911 has not been called, do so now.



MASSACHUSETTS
GENERAL HOSPITAL

Sports Physical Therapy

175 Cambridge Street, Suite 470, Boston, MA 02114; Tel 617-643-9999

Quick Sports Injury Management Guidelines

MGH Sports Physical Therapy

- e) **Look for any bleeding**
 - Check for excessive bleeding that may be life threatening
 - Check skin discoloration or warmth for internal bleeding
 - If Yes, try to control it with direct pressure on the injury with a gauze pad or clean towel.
 - If No, monitor vitals and go to #6
- 6. Determine if the athlete should be moved**
 - If 911 was called do not move the athlete
 - If emergency medical attention is not needed, and the athlete is able to move without harming themselves, assist them off of the field.
- 7. Monitor the player OFF the field**
 - Signs and symptoms of injury may appear once the athlete is off the field
 - Never leave the athlete alone until serious injury is ruled out
- 8. Return to play**
 - Only allow the player to return if they are capable of playing at 100% with no signs and symptoms present
- 9. Parental or guardian permission and notification**
 - Notify the parent if an injury occurred that precluded the athletes ability to continue play
 - If the player is under the age of 18, always get parental or guardian permission before treating the player. This may be done before the season begins or by the permission of the parent at the field of play
- 10. Follow-up treatment and return to play**
 - Consider requiring physician clearance to return to play
 - Make sure the athlete sees a physician if they continue to have signs and symptoms

Created by: Jim Zachazewski PT, DPT, SCS, ATC
Clinical Director, MGH Sports Physical Therapy



MASSACHUSETTS
GENERAL HOSPITAL

Sports Physical Therapy

175 Cambridge Street, Suite 470, Boston, MA 02114; Tel 617-643-9999

Quick Sports Injury Management Guidelines

MGH Sports Physical Therapy

Sprains and Strains

“Sprains and strains” are the most common injuries that occur in sports regardless of the type of sport or age of the athlete.

Sprains

A sprain involves the stretching and/or tearing of a ligament that provides support and stability to a joint. Sprains usually occur as a result of some type of trauma such as twisting an ankle or knee.

Strains

A strain involves an injury to a muscle and/or tendon that allows us to move a joint or body part. Strains may occur as a result of trauma from a force that causes us to “overstretch” a muscle or from a sudden increase in activity or use that we are not prepared for.

Degrees of Injury

First Degree

- Ligament, muscle or tendon is not stretched or torn, but is painful

Second Degree

- Ligament, muscle, or tendon is stretched and painful, but still functional; Partial tear may be present

Third Degree

- Ligament, muscle or tendon is significantly, and may be completely, torn and not functional

Signs and Symptoms

- Pain, tenderness and swelling, especially at the site of injury
- Pop or tearing sensation at the time of injury
- Bruising – “black and blue” coloration a few days after the injury

Expected Outcome

- First Degree – Usually heals enough in 5-7 days to allow modified activity and requires up to 6 weeks to heal completely
- Second Degree – Requires 6-10 weeks to heal completely
- Third Degree – Requires 12-16 weeks to heal completely

Created by: Jim Zachazewski PT, DPT, SCS, ATC
Clinical Director, MGH Sports Physical Therapy



MASSACHUSETTS
GENERAL HOSPITAL

Sports Physical Therapy

175 Cambridge Street, Suite 470, Boston, MA 02114; Tel 617-643-9999

Quick Sports Injury Management Guidelines

MGH Sports Physical Therapy

Management – P.R.I.C.E.

The initial management of Sprains and Strains is quite similar and may be best summed of by the letters P.R.I.C.E.

P – Protection

Once injured the body part must be protected. The athlete should be removed from competition or play to assess the extent of the injury. Once the severity of the injury is determined treatment may be started. Protection may also involve the use of supportive bracing or taping if appropriate to attempt to protect the injured ligament, muscle or tendon from further injury as the athlete returns to play.

R – Rest

The injured ligament, muscle or tendon should be rested to allow healing to begin. Rest may be absolute (complete cessation of activity) or relative (activity modified to avoid stressing the injured tissue further) until healing and recovery occur.

I – Ice

The injured body part (ligament, muscle, tendon) should be iced down. Ice significantly helps to minimize pain, swelling and inflammation. Ice may be applied in the form of an ice pack (crushed or cubed ice in a plastic bag or towel; commercially available chemical ice pack or flexible gel filled pack from your freezer), ice massage (large ice cube rubbed directly on the skin), or ice bath (immersion of the body part in water that is approximately 50⁰). Ice should be applied for 15-30 minutes every 3-4 hours, for up to the first 2-4 days depending on the extent of the injury.

C – Compression

Compression of an injured joint, muscle or tendon through the use of a compressive wrap may help to minimize swelling. This can be accomplished with an elastic bandage or other type of compressive garment wrap.

E – Elevation

Elevating the injured joint, muscle or tendon may also help minimize swelling that can occur as the result of an injury.



MASSACHUSETTS
GENERAL HOSPITAL

Sports Physical Therapy

175 Cambridge Street, Suite 470, Boston, MA 02114; Tel 617-643-9999