LOWER MERION SOCCER CLUB

CARE AND PREVENTION OF ATHLETIC INJURIES

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April, 2004

Basic Care and Prevention of Athletic Injuries

I. Prepare for Athletic Injuries

A. Always err on the side of caution. Safety first!! Always remember that we are dealing with kids, not multi-million dollar athletes. The game is secondary; the safety and well being of the child must be your priority.

B. Designate injury/treatment duty among coaching staff. It may be helpful to designate one coach on your staff that will be responsible for handling any injuries that may arise, as well as the subsequent treatment (bandaging, wrapping, follow-up phone calls, etc…) This may be helpful simply for the continuity of care. The American Red Cross offers several courses that would be very beneficial for coaches to take; these courses include Standard First-Aid, Adult or Child CPR, AED (Automatic External Defibrillator), Sports Safety Training. These courses will prepare you for any emergency that you may face.

C. First Aid kit is a must! Every team should be equipped with at least a basic first aid kit. More advanced "extras" can be added for extra capabilities. Most of these items can be purchased at any pharmacy.
   1. Contents (basic): White athletic tape, pre-wrap, gauze pads, band-aids (variety), gloves (latex/*non-latex*), hydrogen peroxide, antibiotic ointment (Neosporin), anti-septic towelettes, scissors, elastic (ACE) wraps, bee sting swabs, temporary cold packs.
   2. Contents (extras): - mole-skin/second skin/nu-skin *(for blister care)*
      - Iodine/iodine swabs *(for disinfecting wounds)*
      - Q-tips *(for application of antibiotic ointments)*
      - tongue depressors *(can be used as a finger splint)*
      - triangle bandage *(to be used as a shoulder sling)*
      - tweezers
      - CPR mask
   3. Emergency information cards for every team member! (See **D.** below)

D. Emergency info cards: You should have emergency medical information for every player on your team. At a minimum this information should include: name, address, parents names and #s (home/work/cell), emergency contact names and #s, **known allergies, all medications** being taken. For extended trips, you should also have: medical treatment release forms signed by parents with insurance information. Familiarize yourself with any kids that have any medical conditions or allergies.

II. Care for Athletic Injuries

A. ABC's of first aid

1. **DO NOT** immediately move the athlete!!
2. "Survey the scene": look for consciousness, deformities, bleeding
3. **AIRWAY**, **BREATHING, CIRCULATION**
   - If the athlete is unconscious, make sure the airway is unobstructed
   - look, listen and feel for signs of breathing
   - Call 9-1-1
4. S t a y c a l m……Reassure the athlete w/ confidence.

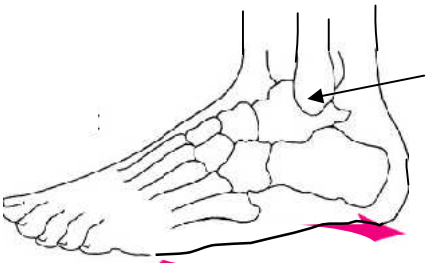
B. **R. I. C. E.**: When in doubt, the basic, immediate care for most athletic injuries is "R. I. C. E." This acronym stands for **R**est, **I**ce, **C**ompression, and **E**levation. Rest implies that the athlete will need some time away from running, playing or whatever activity caused the injury. The athlete does not necessarily need to stay out of activity until he/she is completely pain-free, but rather he can make a gradual return to partial activity and make a gradual, safe return to full activity. Ice obviously implies the application of ice or some other form of cold therapy. Ice should be applied for approximately 20 minutes at a time to achieve maximum benefit, but no longer than 25 minutes. The ideal model would be to apply ice 20 minutes out of every hour (20 minutes on, 40 minutes off, etc…) With only a few exceptions, ice is preferred to any kind of heat therapy inside the first week of an injury. After the first week heat can be used in some circumstance, but ice is still the appropriate treatment for most injuries. Compression implies the application of an elastic wrap around the injured body part. This is for the purpose of controlling or minimizing swelling which can become a problem later in the healing process. Elevation allows gravity to assist in the removal or minimizing of swelling.

C. INJURIES:

1. **Strains:** Strains are injuries to muscles or tendons. A strained muscle or tendon is commonly referred to as a "pulled muscle". Strains usually occur from "dynamic overload" which is to say that the muscle tears (to some degree) as a result of a quick, forceful contraction. The athlete will typically complain of pain over the injured muscle-possibly described as a burning/tingling pain. He/she will also have some weakness of the muscle displayed as an inability to use the muscle without pain. More severe injuries may appear swollen. Depending on the severity of the injury, the basic care will consist of "RICE" and gentle stretching of the injured muscle. The athlete should make a slow, gradual return to activity as he/she can tolerate.

2. **Sprains**: Sprains are injuries to ligaments. A ligament is the tissue that connects bone-to-bone for joint stability. Most commonly soccer players will sprain the ligaments in the ankle or knee. These injuries occur when a joint is moved beyond its normal range of motion to the point of tearing ligaments.

Ankle: When an athlete goes down on the field complaining of pain in the ankle, begin by feeling around the bony structures of the ankle-particularly on the outer (lateral) portion where most ankle sprains occur. This should be done **before removing the shoe**. If there is severe tenderness over the lateral malleolus ("ankle bone") or the lower end of the fibula, you should suspect a possible fracture. In this case, apply ice without removing the shoe, and transport for x-rays. If there is only moderate or minimal tenderness over the fibula, and more pain on the soft tissue around the bones, you should suspect a sprain. Apply the R.I.C.E. principle. Sprains can take 2-4 weeks to heal depending on severity.



Knee: Knee sprains can occur in one or more of the 4 main ligaments of the knee: Anterior Cruciate (ACL), Posterior Cruciate (PCL), Medial Collateral (MCL) or Lateral Collateral (LCL). These injuries will typically result from a twisting type movements, or when the knee "bends the wrong way", either hyperextending or being bent sideways. The athlete will usually report hearing or feeling a snap or pop. These injuries will be accompanied by severe pain, and usually swelling. Assist the athlete off the field without bearing weight on the injured leg and apply the R.I.C.E. principle.

3. **Blisters**: Blisters occur as a result of friction, most commonly on the foot from improperly fitting shoes. Blisters may begin as a red, hot friction spot, but can quickly progress to a fluid-filled "bubble". A fluid-filled blister should be left intact for about 24 hours; after that point, the blister can be punctured to allow the fluid to drain. However, this procedure MUST be done in as close to a sterile environment as possible to reduce the chance of infection; disinfectants such as iodine can be used to sterilize the wound. Whether you puncture the blister or not, proper care includes trying to minimize friction on that tissue; this can be accomplished with properly fitting shoes, 2 thin layers of socks, or the use of bandages with products like second-skin, new-skin, or simply Vaseline.

4. **Fractures vs. contusions**: If an athlete receives a traumatic blow to any bony area, he/she may sustain a contusion (bruise) or a fracture of a bone. Fractures can be seen if there is gross deformity (compared to the non-injured side). If there is no obvious deformity, but the athlete still has significant pain, severe tenderness to the touch, and swelling accumulates quickly, you should suspect a fracture. In the absence of any obvious deformity, the only way to know for sure if a fracture is present is through x-rays. The immediate care for an athlete suspected to have a fracture is to immobilize the injured body part by applying a rigid splint of some type, or by simply supporting the injured limb against the body. Assist the athlete off the field, apply ice if possible, and make arrangements for follow-up care. Most importantly, DO NOT MOVE THE INJURED BODY PART!

5. **Concussion**: In the most simple terms, a concussion is a bruise to the brain resulting from any jarring blow to the head or even a blow to the body that causes the head to snap or rotate violently. In other words, any time an athlete sustains a blow to the body or head and reports any of the following symptoms, you must suspect that the athlete has received a concussion. Symptoms of a concussion may include:

   headache
   dizziness
   lightheadedness
   nausea
   blurred vision
   confusion/lethargy
   memory loss
   loss of consciousness (even if only for a few seconds)
   pupils are unequal (or extremely dilated or constricted)

   Any athlete who receives a concussion should be removed from activity immediately and not allowed to return to play until he/she receives clearance from a physician. Be advised that in cases of moderate to severe concussions, the athlete may be told to avoid physical activity for as long as 2 weeks.

6. **Heat Illnesses**: The spectrum of heat illnesses can occur any time athletes are playing in warm weather conditions. In warm or hot conditions, the body needs to cool itself in order to function properly. The main mechanism that the body uses to cool down is sweating. When you sweat, you lose water and electrolytes (minerals such as sodium and potassium) If the water and electrolytes are not replenished adequately, the following conditions may occur:
   a. *Heat cramps*: As a result of depleted sodium and/or potassium, the muscles (usually the hamstrings, calves, or quads) will begin to cramp. In this case, stretching is crucial in addition to rehydrating with some form of sports drink.
   b. *Heat Exhaustion*: As the body overheats the athlete may begin to show signs of heat exhaustion which include profuse sweating, general fatigue, nausea, lightheadedness, cool and clammy skin, dilated pupils, and possibly confusion and/or dizziness. In this case, remove the athlete from activity and begin to cool the body *gradually*. Remove as many layers of clothing as possible, try to find some shade, and allow the athlete to sip on small amounts of water as tolerated. The athlete should not return to play that day.

c. *Heat Stroke*: This condition is a TRUE MEDICAL EMERGENCY. Heat stroke is sometimes (but not always) a progression of heat exhaustion; it can strike without any prior warning signs. The symptoms differ from heat exhaustion in that the athlete's skin is red, hot and dry; the pupils will usually be constricted; the athlete may experience an altered state of consciousness, and may in fact lose consciousness. The most obvious sign is that the athlete is not sweating. In cases of heat stroke, call 9-1-1, but if possible transport the athlete to the emergency room immediately rather than waiting for an ambulance. Cool the athlete rapidly by placing him/her in the shade, apply ice bags to the head, neck, groin and/or armpits.

7. **Nosebleeds**: Nosebleeds can occur as a result of trauma to the head and nose, but can also occur seemingly at random in some kids. The immediate care for a bleeding nose is to use a gauze pad or some other clean cloth to absorb the blood. If bleeding continues (athlete may describe feeling like he/she has a runny nose) you can also instruct the athlete to pinch across the bridge of the nose (at the top near where the nose meets the forehead) not at the soft part over the nostrils. Instruct the athlete to tilt his/her head **forward, not backward**; doing so can result in the blood running back into the throat. In addition, ice can be applied to the bridge of the nose to stimulate vasoconstriction to stop the bleeding. If the nosebleed occurred as a result of trauma or contact, control the bleeding first, then assess the athlete for potential concussion (see above) and/or broken nose. Observe the nose from the tip up to the forehead to ensure a straight alignment. Touch the bones of the nose to check for severe tenderness. Any deformity or severe pain can be an indication of a broken nose; the athlete should be referred to his or her doctor for further evaluation.

8. **Bee stings**: For most people, bee stings are uncomfortable, but not present a major health risk unless a person is allergic to bee stings (this should be reported on your players' medical information/waiver). For athletes who are not allergic he/she may experience discomfort and possibly some minor swelling and redness at the sting site. Treatment should focus on controlling the discomfort of the sting. This can be accomplished with application of ice. In addition, there are over-the-counter medicated products available to minimize the discomfort; some such products are: "sting kill swabs", "sting kill wipes", "Nox-a-sting", etc… *If an athlete is allergic* to bee stings, he/she may experience severe swelling in the area of the sting and elsewhere in the body. More importantly, the athlete may experience difficulty breathing. This could be a sign of anaphylactic shock which is a serious medical condition; in this case, call 9-1-1 or transport the athlete to the hospital.

D. **<u>Water vs. sports drinks</u>**: Proper hydration is critical to peak athletic performance. The most important element in hydrating your athletes is to have adequate amounts of water, and to make sure that they are drinking enough. In warmer conditions, when athletes are sweating more it becomes necessary to *supplement* the water with a sports drink of some kind (Gatorade, Powerade, All-Sport, etc…) Sports drinks should only be used as a supplement to water, and not as a replacement for water on your sideline.

E. **<u>Stretching</u>**: Recent research has been presented which has shown that stretching before activity does little to reduce the risk of injury in athletics; however, stretching is still important for increasing flexibility which is a part of good health. Warm muscles stretch much better that cold muscles; therefore it is a good idea to put your athletes through a general warm-up which could consist of simply jogging around the field. The idea of a warm-up is to increase the heart rate, and to increase core body temperature as well as the temperature of the muscles. Stretching *after* practice or a game is helpful in the athletes' recovery following activity.

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