

A.1 APPENDIX

CARE & PREVENTION

I. Prevention

The first line of defense in the treatment of athletic injuries is to prevent them. This is accomplished by a well-planned conditioning program; competition among equal ability and size groups, proper warm-up and adherence to the laws of the game. Other factors that can lead to prevention of injuries:

- A. Proper use of equipment (shin guards, no jewelry, uniforms designed for climate).
- B. Continuous upkeep of the playing surfaces.
- C. Proper fitting shoes, proper type of shoes for surface.
- D. Ample water supply and breaks to give players a rest.
- E. Avoid scheduling training during the hottest periods of the day and when there is intense humidity.
- F. Full rehabilitation of initial injury prior to return to play.
- G. Use of proper pre-season screening program by qualified personnel:
 1. Will ensure that players are not entering the season with a pre-existing injury.
 2. Insures that rehabilitation is complete.
 3. Gives the player and team physician a chance to get to know each other.
 4. Determines the general health of the player.
 5. May need some suggestions for rehabilitation or conditioning. It is suggested that the coach or someone from the team be responsible for assisting with injuries, which may include attending a certified Red Cross First Aid Course.

It is recommended that the coach should follow-up with a phone call immediately after the game to the parents regarding any type of injury, should the parents not be in attendance at the game.

Each team should have and know how to use a First Aid kit that includes but is not limited to: Team Safety and Information Card, plastic bags and ties for ice, ice in a cooler, tape, band aids, scissors, antiseptic, sterile pads, towelettes, gauze pads, ACE wrap, and antibiotic First Aid cream.

II. Care

The care of the injured athlete will begin the moment that an injury occurs. Immediate care will reduce the severity of the injury and the possibility of long term disability. The coach, upon seeing an injured player on the field should:

- A. Make sure that the airway is clear.
- B. Determine if the player is conscious and breathing.
- C. Ask how the injury occurred: where did you get hit, did you twist, did your leg give out.
- D. Ask the player where it hurts.
- E. If the player is unable to continue, he should be checked to determine the extent of the injury.

After determining that the injury is life threatening, the nature of the injury can be further determined:

- A. Note the position of the injured part.
- B. Look for swelling and deformity.
- C. Compare with the opposite side.
- D. Ask the player or teammates what happened.

Treatment should be as follows remembering R.I.C.E.:

- R: Remove the athlete from the contest
I: Apply ice to the injured part
C: Apply compression bandage
E: Elevate the body part

The ICE treatment is the only first aid treatment that is safe treatment for a sports injury without professional advice. The ICE treatment helps in three different ways:

- A. Applying ice chills the injured area causing the blood vessels to contract, closing circulation to the injured area.
- B. Applying pressure with the elastic bandage inhibits the accumulation of blood and fluids in the area, thereby minimizing pain and swelling.
- C. Elevating the injured area decreases fluid accumulation to the injured area. puts the area to rest and helps reduce painful muscle spasms.

ICE treatments can do no harm to any type of injury. Almost anything else - including heat applications - can cause harm in some instances.

After the evaluation of the injured athlete, follow-up should be considered if:

- A. Gross swelling or deformity is present.
- B. The player is unable to bear weight on the injured part.
- C. Severe pain or discomfort is present.

Some familiar terms that you should know in dealing with athletic injuries:

1. **SPRAIN:** ligaments are bands of tissue that attach a bone to a bone and stabilize joints. A sprain is an injury to one or more ligaments. Use R.I.C.E. Principle.
2. **STRAIN:** is a tearing injury to a muscle or a tendon (tendon attaches muscle to bone except achilles tendon). Athlete may experience a hearing of the muscle tearing, muscle fatigue and spasm before occurrence, severe weakness or loss of function of muscle, sharp pain upon occurrence, spasmodic contraction (flexion of body part), extreme tenderness to touch and/or indentation of the body part.
3. **CONTUSION:** a crushing injury to a muscle or tendon caused by an outside force, which causes hemorrhaging to surrounding tissue. Immediate Care R.I.C.E.
4. **ABRASION:** a loss of surface area of the skin caused by sliding on synthetic surface or bare grass field.

CARE FOR AN ABRASION: the area should be cleaned with an antiseptic to prevent infection. An antibiotic ointment should be applied to keep the wound moist and to destroy bacteria present.

5. **BLISTER:** the collection of fluid under the skin usually caused by friction (improperly fitting shoes).

CARE FOR A BLISTER: if the blister is open, it should be cleaned as for an abrasion. If the blister is closed with the fluid under the surface, it should only be drained by a qualified person.

6. **HEAT EXHAUSTION:** body temperature approximately normal, skin pale and clammy, profuse perspiration, tired and weak, headache - perhaps cramps, nausea, dizziness, possible vomiting, and possible fainting (the player will probably regain consciousness as the head is lowered).

Immediate care — give player water (1/2 glass of water every 15 minutes) over a period of about 1 hour, have player lie down with feet raised 1 to 12 inches, loosen players clothing, apply cool wet cloths and fan player or remove to air conditioned area, if player vomits do not give him/her any more fluids but take to hospital immediately and after an attack of heat exhaustion refer player to physician for further diagnosis, treatment and to return to activity.

7. **HEAT STROKE:** body temperature is high, skin is hot, red and dry, sweating mechanism is blocked, pulse is rapid and weak player may be unconscious.

Immediate care — seek medical help and attention immediately, try to cool the body by removing clothing (within modesty and sexual differences), repeatedly sponge the bare skin with cool water or apply cold packs continuously or place player in a tub of cold water (do not add ice) until players temperature is lowered, use of fans or air conditioning will promote cooling, if temperature goes up start process again, do not give the player stimulants and avoid overcooling the player, may have to care for shock.

8. **CRAMPS:** an involuntary contraction of a muscle or muscle group that is repetitive and rapid in nature.

Immediate care — hydrate player with water, and exert firm pressure with your hands on the cramped muscle and gently massage to relieve spasm.

9. **CONCUSSION:** head injuries — most injuries to the head are the result of direct or indirect blows causing dizziness, dull to severe headache, ringing in the ears, loss of consciousness, failure to relate to events before receiving the blow, disorientation, neurological signs (eyes — dilation of pupils or irregularity of pupils, blurred vision, poor light accommodation by pupils, involuntary movement of eyeballs) convulsions, coma, vomiting, and possible loss of muscle control.

Immediate care - seek medical attention at once for cautionary measures.



Rules of thumb when handling an injured player:

- Avoid panic.
- Check for breathing, bleeding, consciousness, deformity, discoloration and shock.
- Dependent upon nature of injury avoid moving the patient.
- Inspire confidence and reassure patient.
- Use common sense.
- Seek professional help.
- Check to see how injury occurred (history of).

Use certified athletic trainers when available.
Always ERR on the side of caution.

It is recommended that if a player has had medical attention, he/she must have written permission from the doctor to return to activity.

Resumption of activity-following an injury:

The athlete should not be able to return to play in practice or game conditions until the following criteria have been met:

1. The player should be able to run straight without pain; run and turn in a figure eight without a sign of a limp.
2. He should be able to support weight with the injured part. If the injury is an ankle or knee, he should be able to do a toe raise on the injured side without being supported.
3. The player should have practiced with the team prior to entering competition.
4. There should be no pain or swelling or disability following activity.

A.9 APPENDIX



If Your Sweat Could Talk...

Athletes of all levels need to rapidly replenish fluids and electrolytes to help prevent heat illness and for optimal performance on the playing field.

Test your "Sweat IQ" and see what your sweat is telling you.

How does age affect sweating?

Even new-born babies sweat when they get hot, but the capacity for sweating increases considerably after puberty. From that time on, our ability to sweat depends mostly on our fitness and acclimation to the heat. Because fitness often declines with age, so does maximal sweat rate.

Why do we sweat when we're physically active?

The evaporation of sweat from the skin enables us to maintain a safe body temperature.

Who are better sweaters, men or women?

There is no meaningful difference in sweat response between genders. Both males and females exhibit a wide range of sweat rates.

When does our body trigger sweating?

We sweat whenever our body temperature reaches the sweat threshold, the internal temperature at which our sweat glands are triggered to secrete sweat onto the skin.

Where does sweat come from?

Sweat comes from fluid in the bloodstream, from the fluid inside our cells, and from the fluid that bathes our cells. The human body is about 65% water and we lose some of that fluid any time we sweat.

How does sweating make us thirsty?

Sweat loss reduces blood volume and increases the saltiness of the blood. Both of these changes stimulate the brain to trigger thirst.

What else is in sweat in addition to water?

Sweat contains minerals (electrolytes such as sodium, potassium, and chloride) as well as a number of other electrolytes and other compounds, but all in very small quantities.

How much sweat loss does it take to impair body function?

It takes only 1% dehydration – just 1.5 lbs of sweat loss for a 150-lb person – to begin to impair body function and exercise performance.

Where is the least concentrated area and the most concentrated area of sweat glands?

Least concentrated: the back
Most concentrated: the feet

Why is dehydration bad?

Dehydration (loss of body fluid) puts a strain on the cardiovascular system and makes it difficult for the body to maintain a safe internal temperature. Also, dehydration impairs performance.

How much sweat can an athlete lose?

Sweat loss can vary from as little as about 16 oz (about 500 ml) to over 4 quarts (liters) during each hour of exercise. That means dehydration can develop very quickly.

How does fitness affect sweating?

As we become more fit, we sweat sooner, we sweat over a larger surface area of our bodies, and we sweat more. That means we have to drink more during exercise to prevent dehydration.

Approximately how many sweat glands do our bodies have?

Our bodies have approximately 2-to-4 million sweat glands, weighing a total of approximately 100 grams (3 oz). As we become more fit, our sweat glands actually become larger in size.

What determines how much sweat is lost?

You will sweat more the harder you work, the more clothes you wear, and the hotter and more humid the environment. You also sweat more as you get into better shape. In addition, some people are genetically predisposed to higher or lower sweat rates.