Heat Exhaustion Information

Prevent Heat Exhaustion and Dehydration

Temperatures of synthetic turf are often higher than the surrounding air, which can play a factor in heat-related stress. Coaches and Teachers are advised to monitor the playing conditions and use good judgment in adapting activities, rest periods and hydration breaks.

The following recommendations from Dr. Amadeus Mason, M.D. should be applied to minimize the risk of Heat Exhaustion and Dehydration.

What are we talking about?

Heat-related illness and dehydration syndromes include heat rash, heat cramps, heat exhaustion and heat stroke. These should not be seen as individual entities but as part of a continuum. The earlier the intervention, the better the chances to avert a disastrous chain reaction.

How does this work?

The skin is the key to the body's ability to regulate its temperature (thermoregulation). Once the brain senses that there is an increase in temperature, it initiates thermoregulatory mechanisms. The skin is the main cooling organ. It maximizes heat loss by using radiation, convection, conduction and evaporation. Radiation – heat is directly lost to the atmosphere. Convection – heat loss is facilitated by moving air or water vapor. Conduction – heat loss by direct contact with a cooler body. Evaporation – heat is lost by turning liquid (sweat) into vapor (the skin's major heat loss mechanism).

What to look for?

Confusion – cannot remember simple things or complete simple/routine tasks

Irritability – a change in temperament

Belligerence – easily frustrated, compounded by the confusion and irritability

Lightheadedness

Lack of coordination

Fatigue – in excess of what would be anticipated

Paradoxical chills – goose bumps and shivering in the face of high environmental temperature (an ominous sign)

If you or someone else displays these symptoms:

Stop the activity immediately

Move to a cool (shaded) area

Get some fluid (water, sports drink, IV)

Contact a health professional or your sport safety certified coach

It's not so much the heat, it's the humidity

If the skin is so effective at cooling, why do athletes get into trouble? First, for any of the skin's cooling mechanisms to work, there needs to be adequate skin exposure. The problem is the much-needed sports safety equipment does not facilitate optimal skin exposure. Secondly, the environment needs to be conducive for heat transfer from the body. The combination of high temperatures and humidity severely impair the cooling mechanisms, especially evaporation. It is often the environment that athletes are training and competing in. For morphologic and physiologic reasons children do not adapt as effectively when exposed to heat stress, making young athletes more susceptible to heat- related illness and dehydration syndromes.

What you can do…

Stay cool:

Work out in early morning or late evening. Avoid the hottest times of the day.

Reduce the intensity and duration of your workout.

Take the time to get into shape before arriving at training camp. Know the climate you are going to and try to get acclimated before getting there.

Take frequent rests and remove your headgear. The head has an ideal body-mass to surface-area-ratio to maximize heat loss.

Stay hydrated:

Drink often and drink regularly. Do not rely on thirst, by the time you are feeling thirsty, there is already a significant fluid deficit.

Drink more than just water. When you exert yourself, you lose electrolytes as well as fluid. Replacing the fluid alone (with just water) can lead to electrolyte imbalances. These imbalances can be life threatening.

Monitor your urine; it should be the color of lemonade, not apple juice.

Stay healthy:

Eat and sleep well. Maintain a well-balanced diet. Replenish salt and rehydrate. Avoid alcohol, soda, caffeine and other stimulants.

Gain or lose weight slowly, allowing your body time to acclimate to the change.

Sharp drops in weight after exertion can be an indicator of excessive fluid loss.

Know the warning signs of heat related illness and dehydration syndromes.