9250 SW Hall Blvd., Tigard, OR 97223
503-293-0161

Heat Illness

WHAT IS IT?

Heat illness occurs during warm, hot and/or humid weather when the body becomes overheated and can no longer cool itself. During exercise your body produces heat and your temperature rises. Your body naturally cools itself by sweating but if the weather is too hot or humid, sweating may no longer cool your body enough to keep your temperature from rising to dangerous levels. As the body sweats to try and cool itself, it loses a great deal of fluids and electrolytes and can become dehydrated which can also lead to heat illness.

HOW DO I PREVENT IT?

The keys to preventing heat illness are staying well hydrated, properly acclimatizing to the heat and following activity & rest guidelines based on temperature & humidity levels.

The medical task force* stated that exertional heat stroke is the leading cause of preventable non-traumatic exertional sudden death for young athletes in the U.S. Their studies have strongly suggested that heat acclimatization appears to be one of the best strategies for reducing the risk of heat illness.

Simple things like the time of day can have a big effect. The weather is more of a factor between the hours of 10 am -4 pm so exercising before or after these hours can reduce the risk of heat illness. Please see below for more specifics on these prevention guidelines because heat illness can be prevented & treated successfully in most cases.

TYPES OF HEAT ILLNESS

- Heat cramps are a mild form of heat illness that can easily be treated and are usually a result from dehydration. These intense muscle spasms are treated by drinking more fluids (water or sports drinks that contain electrolytes), stretching and massaging the cramping muscles.

- Heat exhaustion is a moderate form of heat illness and should be treated immediately by stopping all activity & removing the person from the heat and placing them into either the shade or an air-conditioned area. You should cool them off with cold water, wet towels and/or a spray bottle. Fanning them and removing excess equipment and clothes also helps. Symptoms include increased body temperature, dizziness, weakness, nausea, vomiting, headaches, and increased sweating.

- Heat stroke is the least common but most serious form of heat illness and can be fatal. Heat stoke can occur & come on rapidly when the body becomes so overheated and is unable to cool itself --the core temperature rises to dangerous levels, usually above 104 F. Symptoms include very hot skin (can be dry or wet), altered mental status (confusion, combativeness & emotional instability), dizziness, seizures & vomiting. **THIS IS A MEDICAL EMERGENCY**-you should begin aggressive cooling methods and **call 911**.

ARE YOU WELL HYDRATED?

Not replacing body fluids lost by sweating can cause dehydration which could lead to heat illness. Children are more susceptible than adults because they sweat less than adults making it harder for them to cool off. One of the first sign that someone is becoming dehydrated is developing muscle cramps and this can occur even if the weather is not hot.

It is important to drink fluids before, during and after activity or prolonged heat exposure. Avoid caffeine and alcohol which can contribute to dehydration. Check the color of your urine to see if your fluid intake is adequate-it should be a clear light yellow color. You should also be urinating throughout the day. You may want monitor your weight by taking a pre-activity and post-activity weight measurement that ideally would be the same if enough fluid is taken in during activity.

HOW LONG SHOULD THE ACTIVITY & REST BREAKS LAST FOR?

Fluid and rest breaks should be scheduled into all practice sessions and become more frequent as the heat and humidity levels rise. Typically, children should have a 5-10 minute rest & fluid break every 15-30 minutes of activity, depending on the level of heat & humidity.

HAVE YOU ACCLIMATIZED TO THE WEATHER?

In June 2009, the NATA released an inter-association task force consensus statement which includes comprehensive recommendations on heat-acclimatization guidelines for secondary school athletic programs.*

The key strategies of this plan are offered to reduce the number of heat-related injuries by increasing heat tolerance and enhancing the ability to exercise safely & effectively in warm and hot conditions. When an athlete goes through a proper heat-acclimatization program, the body's response to exercise and heat is improved. The athletic programs that have a proper plan in place will minimize the risks associated with heat illness. The NCAA has had a similar plan in place for collegiate athletes for over the past 6 years.

The following guidelines are recommended for all ages and all levels of athletes. The consensus statement lists seven key recommendations for a 14 consecutive day heat acclimatization period (HAP) prior to full-scale athletic participation by secondary school students.

1. During the first five days, athletes may not participate in more than one practice per day.
2. If a practice is interrupted by inclement weather or heat restrictions, the practice should recommence once conditions are deemed safe. Total practice time should not exceed 3 hours per day.
3. A 1 hr maximum walk-through is permitted during the first five days of the program; however, a 3 hr recovery period should be inserted between the practice & walk-through.
4. For those sports that use protective equipment; Day 1-2 is helmets only, Days 3-5 is helmet with shoulder pads, and beginning on day 6 all protective equipment may be worn and full contact may begin.
5. Double-practice days must be followed by single-practice days and begin no earlier than Day 6 and continuing through Day 14.
6. On a double-practice day, neither practice's duration should exceed 3 hrs total, and student-athletes should not participate in more than 5 hrs total of practice. Warm-up, stretching, cool-down, walkthrough, conditioning and weight-room activities are included as part of the practice time. The two practices should be separated by at least 3 hrs in a cool environment.
7. Because the risk of exertional heat illness during pre-season heat-acclimatization period is high, the consensus statement strongly recommends that an athletic trainer be on site before, during, and after all practices.