

Los Angeles Pediatric Society E-Newsletter

Volume 1 No. 1

August 2014

LAPS WITH L.A.P.S. : THE SPORTS MEDICINE CORNER



Keeping Cool as the Fall Sports Season Heats Up!

Tracy Zaslow, MD
Pediatric Sports Medicine Specialist

With fall sports set to begin practices in the height of summer's heat and humidity, it is important to be proactive to prevent heat illness. Heat illness occurs because the body creates heat, especially during exercise, and normally the body cools itself off by sweating and releasing (radiating) heat through the skin. But, when the temperature heats up and the humidity increases, it is much more difficult for the body to release all the heat generated during physical activity and this extra heat can lead to varying severities of heat illness.

What is heat illness?

Heat illness refers to a spectrum of illness ranging from mild heat cramps to heat exhaustion and severe heat stroke.

Heat cramps occur in the muscles, usually the legs although sometimes in the arms and abdomen. Heat cramps, while not serious, can be painful and should not be ignored as they signal too much exposure to heat and exertion without enough fluids.

Heat exhaustion is a more serious form of heat illness. Some symptoms include fatigue, weakness, headache, nausea, vomiting, rapid breathing and irritability. If you get a call from a parent describing these symptoms in their child recommend immediate medical evaluation and in the meantime, suggest moving the child to a cool, shady area, remove/loosen clothing, placing the child in a cool (not ice cold) bath and encourage the child to drink fluids.

Heat stroke is the most severe form of heat illness and is considered a medical emergency. According to the National Federation of High Schools(NFHS), exertional heat stroke is the *leading cause* of preventable death in high school athletes. When heat stroke occurs, the body is unable to regulate its own temperature and body temperatures can climb to 106°F leading to brain damage, and if left untreated, death. Heat stroke symptoms include: flushed hot skin (with or without sweating), elevated temperature, severe headache, weakness, fatigue, dizziness, confusion, seizure, appearing "out of it"(not responding appropriately) or passing out (loss of consciousness). If your patient demonstrates any of the symptoms of heat stroke after

exercising in hot temperatures, contact emergency services immediately. It is also important to know that checking a child's temperature with a thermometer in the mouth, ear and underarm is highly inaccurate and must be checked with a rectal thermometer in the rectum; if rectal temperature measurement is not an option then emergency services should be contacted regardless of other temperature measurements.

What are the risk factors for exertional heat illness?

- 1) Kids don't drink enough! Inadequate hydration prior to and during athletics.
- 2) Not enough time for recovery between physical activities (i.e repeat sprints)
- 3) Closely scheduled practices/games (i.e "two-a-days")
- 4) Wearing too much: Uniforms and protective equipment hold in excess heat.
- 5) Exercising in hot and/or humid weather
- 6) Poor preparation; this includes not being accustomed to the heat, inadequate prehydration and poor conditioning. After enjoying a summer of rest and relaxation, children lose some of their in-season fitness and should not jump into intense practices right away but gradually increase over a few weeks.

What anticipatory guidance can you provide to PREVENT heat illness?

Luckily, the risk factors for exertional heat illness are all changeable so there's a lot you can do to help your active patients avoid heat illness. Here are a few ideas:

- 1) **Hydration:** Recommend drinking fluids regularly before, during and after activity. Water is the drink of choice for activities less than once hour, however if exercise will be prolonged (>1 hour) a sports drink will be best.
- 2) **Time:** Allow time to adapt to the climate, physical intensity and duration of activity. Activity increases should be made over a period of weeks, not days, as young athletes take more than a few weeks to gain appropriate conditioning.
- 3) **Proper clothing:** Gradually introduce heat-retaining uniforms and protective gear.
- 4) **Be flexible:** On especially hot/humid days consider decreasing the time and intensity of activity, increasing the frequency and duration of breaks or even cancel/reschedule activity to a cooler time.
- 5) **Breaks:** Take rest breaks in cool and shady places.
- 6) **Smart scheduling:** Ensure there is enough rest and recovery when multiple practices/matches are scheduled for the same day.
- 7) **Take a sick day:** Avoid participation if you're young athlete is ill, especially if he/she has vomiting and diarrhea that will cause dehydration.

A free online course, aimed at coaches, but informative for parents and athletes is available for review by all athletes and their families: www.nfhslearn.com