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## Heat Illness Prevention is a Team Effort

Pennsylvania Athletic Trainers' Society members are taking the lead in educating coaches, parents, and student-athletes within their community regarding the prevention and management of heat-related illnesses. Knowing the common signs and symptoms of heat exhaustion and heat stroke, understanding additional risk factors, tracking environmental conditions, modifying activity, and monitoring hydration are simple yet effective ways to prevent a tragedy while exercising in hot and humid weather.



Ryan Wantz, ATC, LAT (Photo Credit - John Landis)

Athletic Trainers and coaches need to be vigilant to protect athletes from heat illness. Ryan Wantz, ATC, LAT Perkasio, Pennsylvania (PRWEB) August 22, 2012

Thousands of student-athletes across the Commonwealth of Pennsylvania are taking the field this month for the start of fall sports preseason practices. However, the most intimidating opponent they face this season will not line up against them in a different color jersey. Heat illness is an unseen and unforgiving adversary of physically active individuals. Athletic Trainers are often the first line of defense when it comes to the prevention, management, and care of this potentially fatal condition. Yet, the prevention of heat illness is a team effort which also requires active participation and observation from coaches, parents, and student-athletes.

While life threatening situations are rare in athletics, serious consequences can result from heat illness. Ryan Wantz, ATC, LAT, states "heat illness is a risk for any athlete, especially football players, who participate in hot and humid environment." For the past two years Wantz, the Athletic Trainer at Penridge High School in Perkasio, Pennsylvania, has organized a Sports Safety presentation to educate coaches, parents, school officials, and other members of the community regarding warning signs and preventative measures which can be taken to ensure the safety of student-athletes participating in extreme environmental conditions. "Athletic Trainers and coaches need to be vigilant to protect athletes from heat illness."

Heat illness prevention begins with adequate preparation. Recognizing signs and symptoms of heat illness, monitoring environmental conditions, and tracking weight loss during activity are proactive measures which can avert a tragic outcome. Acclimatization and hydration are also essential for avoiding heat exhaustion and heat stroke. Heat exhaustion is the most commonly diagnosed form of heat illness. Symptoms of this non-life threatening condition include headache, dizziness, fatigue, profuse sweating, nausea, vomiting, shallow rapid breathing, and weak rapid pulse. Heat stroke, conversely, is a medical emergency. Headache, red flushed face, hot dry skin, lack of sweating, strong rapid pulse, extremely high core temperature, and possible unconsciousness are among the symptoms of this heat illness.



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Clothing and protective equipment, such as helmets, shoulder pads, and shin guards, increase heat stress by interfering with the evaporation of sweat and inhibiting other pathways for heat loss. Other risk factors which contribute to heat illness include nutritional supplements, prescription medications, medical conditions, lack of aerobic conditioning.

Aerobic conditioning provides partial acclimatization to the heat. The more an individual exercises in a hot, humid environment, the better their body will be adapted to handle heat stress. Complete acclimatization requires up to 14 days while gradually increasing in workout intensity. The better student-athletes are acclimatized when pre-season practices begin, the less risk they will have of developing heat exhaustion or heat stroke.

Tracking environmental conditions and understanding levels of risk associated with heat index leads to educated decision making regarding the intensity, volume, and scheduling of physical activity during times of increased risk. Heat index is a measure of air temperature and relative humidity. Ideally, heat index should be assessed using a Wet Globe Bulb Temperature (WGBT) monitor. However, those who do not have access to a WGBT can easily utilize websites or mobile apps to check the forecast for a specific city or town.

Level of risk for physical activity can be determined by referring to the Heat Index Chart provided by the National Weather Service (<http://www.nws.noaa.gov/os/heat/index.shtml>). Athletic Trainers, coaches, parents, student-athletes, and other physically active individuals should be alert during extreme conditions and should consider modifying or re-scheduling activity when appropriate.

Student-athletes should be weighed before and after each practice in an effort to monitor water loss due to perspiration. Losses of 3-5% of body weight after practice indicates dehydration. Student-athletes should return to their pre-practice weight prior to the next practice. Urine color is another simple method through which hydration can be monitored. As an individual becomes dehydrated, their urine will become darker in color.

According to Wantz, heat illness is one of the most preventable conditions Athletic Trainers manage during the hot and humid days of preseason. Yet, the task is not left to Athletic Trainers alone. "It is important that parents and coaches have the information to be able to minimize the risks of participating in athletics. Heat illness can be prevented if an athlete is properly conditioned, adjusted to heat, and hydrated well."

For more information regarding this topic or to schedule an interview with PATS President Yvette Ingram, PhD, ATC, LAT, please contact Tim Doane, MA, ATC, LAT at [patspublicrelations@gmail.com](mailto:patspublicrelations@gmail.com).

The Pennsylvania Athletic Trainers' Society, Inc. is a progressive organization of licensed health care professionals who work under the direction of a licensed physician. Our society continues to increase public awareness and education regarding Athletic Trainers and the Athletic Training profession while serving as the premier source of information for public safety, injury and illness prevention, early intervention, patient care, and healthcare delivery for the physically active in the Commonwealth.

"The Keystone to a Healthy and Physically Active Life"

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