

Heat

Dustin Bradstreet, MS, ATC/LAT

During the hot and humid summer months, a primary concern for athletes and others who exercise outside should be preventing heat related health problems during summer competitions or preparation for the fall workouts, practices, and games. One of the first defenses against heat illness is to adjust activity according to the weather. Coaches, trainers and others who supervise summer workouts have access to charts that recommend how active an athlete should be in relation to the dry temperature and the relative humidity. Unfortunately, here in Louisiana during the summer, we are almost always in an extreme or hazardous heat environment level.

It is very important to pay attention to both the dry temperature and the relative humidity and adjust practices, amount of pads or equipment worn, and activity levels appropriately. To avoid serious risks, adjustments should be made when the relative humidity is between 50 and 60% and the temperature is 90 degrees or higher. A heat acclimation period that occurs over 10-14 days is recommended, where the level of intensity and duration of the activity, as well as the time spent in the heat, increases gradually. Keeping a weigh in/out chart is a way to keep an eye on the status of the athlete. Athletes should try not to fall below a 2 to 3% weight difference between the previous practice weigh out and the current practice weigh in. If they do, they have not replenished the water required to keep them hydrated. Prevention is the key to overcoming heat related illnesses.

Three common heat related illnesses are heat cramps, heat exhaustion and heatstroke. Heat cramps are painful muscle spasms that occur due to excessive loss of water and electrolytes that are essential components of muscle function. This will usually occur in an athlete who is in good condition but overexerts in the heat. Treatment for heat cramps is generally ingesting large amounts of water with mild stretching. Prevention involves proper preseason acclimation and regular unlimited access to fluids.

Heat exhaustion is the next step in the heat illness spectrum. It is overheating as a result of dehydration and will usually include symptoms of profuse sweating, headache, dizziness, nausea, hyperventilation, and rapid pulse. People with heat exhaustion should be taken out of the heat into cool shade, or preferably air conditioning, given plenty of fluids, and adequate rest with lots of cooling.

Heatstroke is a serious life threatening emergency characterized by sudden collapse, loss of consciousness, hot skin with low or lack of sweating, shallow breathing, and a core internal temperature of 106 degrees F or higher. This results from a breakdown of how the body regulates its temperature. If symptoms of a heatstroke occur, every effort should be made to lower the athlete's body temperature with removal of clothing or equipment, fanning, drenching in cool water, and immediate transportation to a hospital for further treatment. Unfortunately, this may occur with an abrupt onset and no warning.

Prevention of heatstroke is like other heat illnesses with proper acclimation, regular breaks, and access to fluids.

Prevention and preparation is the key to being safe in the heat. Remember to go through an acclimation period, replenish fluids, and take regular cooling breaks when participating in activities in hot and humid conditions. Doing these things will reduce the chance of having a problem and reduce the severity of heat illness if it occurs.

(Dustin Bradstreet is a certified athletic trainer with CHRISTUS Schumpert Health System, and works with Centenary College athletes through the health system's partnership with the college)