

Kea'au High School Athletic Training Heat Illness Prevention Policy

The National Athletic Trainer's Association (NATA) has released an official Position Statement regarding exertional heat illnesses. This paper adapts the NATA's recommendations to prevent illness and death during hot and humid weather activities.

The NATA has identified five conditions associated with exercising in hot, humid environments: heat cramps, heat syncope, heat exhaustion, heat stroke, and hyponatremia.

Exercise Associated Muscle Cramps: Will likely show 1 or more of the following signs and symptoms: visible cramping in all of the muscle or muscle groups, localized pain, dehydration, thirst, sweating, or fatigue.

Heat Syncope: A brief episode of fainting associated with dizziness, tunnel vision, pale or sweaty skin, and a decreased pulse rate while standing in the heat or after vigorous exercise.

Exertional Heat Exhaustion: May be present if a patient demonstrates excessive fatigue, faints. Or collapses with minor cognitive changes.

Exertional Heat Stroke: Core body temperature greater than 40.5°C.

Hyponatremia: Disorientation, altered mental status, headache, vomiting, lethargy, swelling of hands and feet, seizures due to low sodium levels in blood caused by ingesting water well beyond sweat losses, or sodium losses not being replaced adequately (usually after four hours of constant activity).

Heat Illness Prevention Guidelines

- 1) Ensure adequate health care is available during practices and events. Ensure that health care personnel are allowed to examine athletes showing signs of heat illness and are authorized to restrict ill athletes from further participation
- 2) Ensure athletes receive a thorough pre-participation evaluation to identify predisposed athletes and identify those athletes with a history of heat illness.
- 3) Slowly adapt athlete to hot/humid conditions over a 10-14 day period. Progressively increase intensity and duration of work.
- 4) Educate participants regarding the prevention, recognition, and treatment, of exertional heat illnesses.
- 5) Educate participants on matching fluid intake with sweat rates.
- 6) Encourage athletes to sleep at least 6-8 hours each night in a cool environment, eat a balanced diet, and if exercising in hot/humid environments, take in more sodium, whether in food or hydrating drinks.
- 7) Develop activity guidelines for hot/humid weather. Guidelines follow this list of prevention strategies.
- 8) Check environmental conditions before and during activity and adjust the practice schedule accordingly.
- 9) Plan rest breaks according to environmental conditions, activity levels, and amount of equipment/clothing worn. Rest breaks should take place in shady/breezy areas with hydration equipment/supplies close by.
- 10) Meal-time should be followed by 2-3 hours of rest to allow food to pass into the small intestine and bloodstream before the next scheduled activity.
- 11) Provide an adequate supply of fluids (water and/or sports drinks) to maintain hydration. The goal is to lose no more than 2-3% body weight each session due to sweat losses.
- 12) Weigh all athletes before and after each practice session to estimate the amount of sweat lost during practice. Participants should ingest one pint (16oz) of water or sports drink for each pound of weight lost.
- 13) Minimize the amount of equipment and clothing worn during hot/humid weather.
- 14) Minimize warm-up time and conduct warm-up activities in the shade when possible.
- 15) Allow athletes to practice in shady areas and use cooling fans to circulate air if feasible.
- 16) The following supplies and equipment should be located at the practice site and other appropriate areas: Water or sports drinks, ice, rectal thermometer (if feasible), telephone or walkie talkie, tub or wading pool to rapidly cool ill participants.
- 17) Notify local hospitals and emergency rooms before mass participation events (cross country, wrestling, etc.)
- 18) Mandate a check of hydration status at weigh-in to ensure weight class athlete are not dehydrated. Any procedure used for rapid weight loss by dehydration are strictly prohibited
- 19) Return to activity: Heat cramps, heat syncope, or heat exhaustion should be discussed with the athlete's personal physician. Athletes who suffered heat stroke and hyponatremia must be cleared by a physician and athletic trainer.

**Kea'au High School
Athletic Training
Heat Illness Emergency Action Plan**

The following guidelines are in place in case a participant shows signs or symptoms of exertional heat illness.

ACTIVATE EMS IMMEDIATELY if an athlete experiences the following signs and symptoms:

- Hot and dry skin (indicating sweating has ceased)
- Loss of consciousness/fainting
- Altered mental status/disorientation
- Seizure

ATHLETE CEASES PRACTICE AND ATC NOTIFIED for the following symptoms:

- Dizziness
- Excessive sweating
- Pale skin
- Headache
- Hyperventilation
- Nausea
- Diarrhea / urge to defecate
- Vomiting
- Disorientation (without impact)

If an athlete shows signs or symptoms of exertional heat illness they should be removed from participation and brought to a cool/shady area or air conditioned location. Cold water immersion should be implemented as soon as possible. If cold water immersion is not available ice packs and/or cold shower should be applied to as many body parts as possible to commence cooling. Cold water or sports drinks should be administered.

If an athlete's condition deteriorates follow Kea'au High School's Emergency Action Plan.

In the near future the State of Hawaii will mandate for Certified Athletic Trainers to obtain and monitor rectal temperatures of athletes with progressed heat illness. Each case will be evaluated individually and rectal temperatures will **ONLY BE TAKEN IN EXTREME CASES OF HEAT ILLNESS** in order to give the EMS/Emergency room personnel the most accurate medical information with which to treat the child.

Please understand that this is a mandate by the State of Hawaii and not an option for our student-athletes/parents in the event such treatment is necessary. Our ATC's have undergone training for the proper care and utilization of equipment needed to properly monitor such situations.