

The College of Saint Rose Athletic Department

Hot Weather Policy

Exertional Heat Illness Protocol

Practice or competition in hot and/or humid environmental conditions poses special problems for student-athletes. Heat stress and resulting heat illness is a primary concern in these conditions. Although deaths from heat illness are rare, constant surveillance and education are necessary to prevent heat-related problems.

Prevention of Heat Illness:

In addition to monitoring local weather reports/information, regular measurements of environmental conditions at the venue are required. Each ATC should specify the monitoring procedure with their coaching staff, especially during preseason. The NCAA recommends employing the Temperature-Humidity Activity Index when needed. The covering ATC will notify the coaching staff and/or officials about unsafe conditions and assist in making the decision to delay the practice or contest. The ATC will also assist in deciding what type of clothing and scheduling of water breaks would be most appropriate for specific temperature conditions. In addition, the sports medicine staff is responsible for adhering to common heat prevention practices such as: discussion at team meetings, identifying susceptible SA's, posting hydration urine charts, encouraging nutrition and hydration, identifying heat illness and providing immediate care.

Treatment of Heat Illnesses:

Heat Cramps

Signs and Symptoms:

- Dehydration, thirst, sweating, transient (short term) muscle cramps, and fatigue
- Painful, involuntary muscle spasms (usually occurring in the legs) associated with exercise in the heat when athletes have been sweating profusely
- A precursor to the initial onset of cramps involves muscle twitches or fasciculation's. If this occurs, remove the athlete from the heat and encourage rehydration with an electrolyte beverage

Heat Cramps are often confused with Exertional Sickling; these guidelines can be used to assist in differentiation:

Symptom/Factor	Heat Cramps	Exertional Sickling
Pain	More excruciating pain; can be pinpointed to a location	Pain is strong, however, is more generalized over body

State of Muscles	Muscles “lock-up”; Visibly contracted and rock hard	Muscles are weak; athletes slump, push through instances of collapse
Physical Symptoms	Athletes may writhe or yell in pain	Sickling athletes lie fairly still without yelling
Prodrome of Muscle Twinges	Yes	None
Occurrence during Workout/Session	Occurs during or after intense workouts (after 30 minutes)	Generally occurs within first half hour during intense workouts
Body Temperature	Athlete’s core temperature is elevated	Athlete’s core temperature is not greatly elevated

Treatment:

- Remove the athlete from the exercise session, workout, or practice and have them rest in the shade or an air-conditioned room.
- Stretch, massage and knead the muscle that are cramping in its full-length position (joints should be extended).
- Provide the athlete with cold fluids, such as water or an electrolyte sports drink to replace sweat losses.
- Provide food high in salt content to replenish the electrolytes lost from sweat.
- In cases of heat cramps that persist, use ice massage on the affected muscle.

Return to Play:

- Once an athlete has rested and replenished the fluids and electrolytes lost from their sweat, they can usually return to play during that same exercise session or practice **at the discretion** of the athletic trainer.

Heat Exhaustion:

Signs and Symptoms:

- Fatigue, headache, nausea, vomiting, weakness, dizziness
- Pale skin, heavy sweating, dehydration, sodium loss, irritability
- Decreased muscle coordination, decreased blood pressure, core body temperature between 98-104°F (oral 97-103°F).

Treatment:

Individuals experiencing heat exhaustion should respond quickly to treatment. If not, exertional heat stroke should be suspected. If the person is experiencing heat exhaustion, the core body

temperature should be <104°F (oral 103°F). To treat heat exhaustion:

- Move the individual to a cool/shaded area and remove excess clothing
- Elevate legs to promote venous return
- Cool the individual with fans, rotating ice towels, or ice bags
- Provide oral fluids for rehydration

Return to Play:

- Returning to activity the same day of an episode is not prudent or advised. Individuals should wait at least 24 hours before returning to activity. Further medical evaluation might be recommended to rule out other conditions.

Heat Stroke

Signs and Symptoms:

- The two **main** criteria for diagnosing EHS are **core body temperature** >104°F immediately post collapse and **central nervous system** dysfunction
- Dehydration, dry mouth, thirst;
- Headache, confusion or just look "out of it";
- Profuse sweating, decreasing performance or weakness;
- Muscle cramps, loss of muscle function/balance, inability to walk;
- Irritability, irrational behavior, and/or emotional instability;
- Dizziness, disorientation, altered consciousness, and/or coma;
- Nausea or vomiting, and/or diarrhea;
- Sluggish feeling, staggering, and/or collapse;
- Rapid pulse, low blood pressure, quick breathing
- Other outside factors may include:
 - Athlete did not adequately prepare for preseason or obese
 - It is a hot and humid day
 - Practice is near the start of the season, and near the end of the practice session
 - It is the first day in full pads and equipment

Treatment:

Heat stroke is a medical emergency.

- Remove all equipment and excess clothing.
- Cool the athlete as quickly as possible within 30 minutes via whole body ice water immersion (place them in a tub/stock tank with ice and water approximately 35–58°F); stir water and add ice throughout cooling process.
- If immersion is not possible (no tub or no water supply), take athlete into a cold shower or move to shaded, cool area and use rotating cold, wet towels to cover as much of the body surface as possible.
- Maintain airway, breathing and circulation.
- **After** cooling has been initiated, activate emergency medical system by calling 911.
- Monitor vital signs such as rectal temperature, heart rate, respiratory rate, blood pressure, monitor CNS status.
- Cease cooling only when rectal temperature reaches 101–102°F and then transport via EMS to nearest medical facility. If rectal temperature is not available, **DO NOT USE AN ALTERNATE METHOD** (oral, tympanic, axillary, forehead sticker, etc.). These devices are not accurate and should never be used to assess an athlete exercising in the heat.
- Exertional heat stroke has had a 100% survival rate when immediate cooling (via cold water immersion or aggressive whole body cold water dousing) was initiated within 10 minutes of collapse.

Return to Play:

After an EHS episode occurs, there may be physiological changes, such as heat tolerance, that are temporarily, and occasionally, permanently compromised. Long-term complications and morbidity are directly related to the time that the core body temperature remained above the

critical threshold. To safely return an athlete to full participation following an EHS, a specific return-to-play (RTP) strategy should be implemented. The following guidelines are recommended for RTP:

- Physician clearance prior to return to physical activity. The athlete must be asymptomatic and lab tests must be normal.
- The length of recovery time is primarily dictated by the severity of the incident.
- The athlete should avoid exercise for at least one (1) week after the incident.
- The athlete should begin a gradual RTP protocol in which they are under the direct supervision of an appropriate health-care professional such as an athletic trainer or physician.
- The type and length of the RTP program may vary among individuals, but a general program may include:
 - Easy-to-moderate exercise in a climate-controlled environment for several days, followed by strenuous exercise in a climate-controlled environment for several days
 - Easy-to-moderate exercise in the heat for several days, followed by strenuous exercise in the heat for several days
 - If applicable to the individuals' sport: easy-to-moderate exercise in the heat with equipment for several days, followed by strenuous exercise in the heat with equipment for several days

Hot Weather Management Procedure

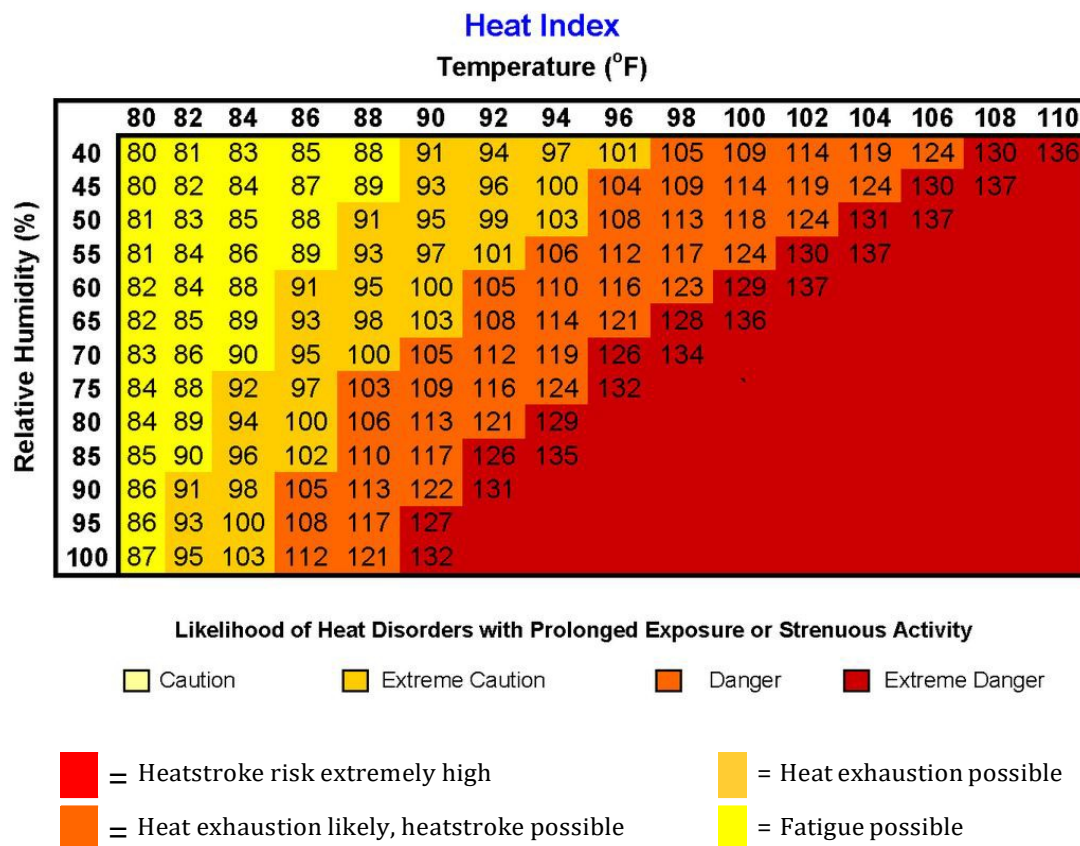
1. If the outside temperature is higher than 82 F, the coach and/or sports medicine staff have a duty to check the local weather for the Wet-Bulb-Globe and outdoor temperature and heat index ["real-feel" temperature] **1 hour BEFORE** the scheduled outdoor practice or competition at DTN WeatherSentry.
 - a. DTN WeatherSentry is the conference wide weather app that provides real-time weather data as per the user entered zip code, Albany, NY 12209.
 - b. Making special note of any National Weather Service heat index "advisory" or "warning" and/or air quality or increased ozone "warnings" in the area.
2. The sports medicine staff will check the Wet-Bulb-Globe temperature using a sling or digital psychrometer.
3. Administrative personnel (e.g. coach, athletic trainer, game administrator) must continually monitor the environmental conditions, via an appropriately enabled smart phone, for changes in risk in any of the following deteriorating weather conditions:
 - a. Wet-Bulb-Globe temperature (WBGT): combines temperature, humidity, wind speed sun angle and cloud cover.
 - b. Temperature
4. Heat index ("real-feel" temperature: relative humidity with actual air temperature) The table below outlines the restrictions of any outdoor practice and/or hosted event:

WBGT	Action or restriction of the outdoor practice or hosted event
WBGT <82	Low risk. <ul style="list-style-type: none">• Full unrestricted activities, All contests can be conducted.• Be cautious of those not acclimatized to the conditions.• Add extra water breaks, when necessary.
WBGT = 82.0-85.9	Moderate risk. <ul style="list-style-type: none">• Provide unrestricted water with frequent water breaks.• Monitor student-athletes for signs/symptoms of heat illness.• Consider reducing the amount of outdoor session time.

WBGT = 86.0-89.9	<p>High Risk-Extreme Caution.</p> <ul style="list-style-type: none"> • Provide unrestricted water with more frequent and water breaks every 15-20 minutes. • Monitor student-athletes for signs/symptoms of heat illness. "At risk" student-athletes should not participate. • Consider reducing the amount of outdoor session time. Consider postponing practice time when the heat index is lower. Encourage light weight, loose fitting clothing. • For the protective equipment laden athlete - helmet only. • For double-sessions - provide 1 hour of recovery time for every hour of previous outdoor practice time.
WBGT = >90	<p>Extreme or hazardous danger</p> <ul style="list-style-type: none"> • All outside contests must be postponed until conditions improve or be rescheduled. • Inside activity should be considered if held in an air conditioned facility.

The heat index (see chart below) is the "feels like", or apparent, temperature. As relative humidity increases, the air seems warmer than it actually is because the body is less able to cool itself via evaporation of perspiration. Physical activity and prolonged exposure to the heat increase the risks.

The following chart shows the health risks as temperature and relative humidity rise.



References:

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