SEVERE WEATHER POLICIES

LIGHTNING SAFETY PROTOCOL:

Lightning-Safety Slogans

"If you hear it clear it, if you see it flee it!"

"When thunder roars, go indoors!"

"Half an hour since thunder roars,
now it's safe to go outdoors!"

Monitoring the Weather

A designated person should actively be on the lookout for approaching or developing local thunderstorms such as **high winds, darkening clouds, or lightning and/or thunder**. The same person or additional personnel should utilize a **device or lightning detection service** to constantly monitor approaching storms or changes in the weather.

Device/Resources for Monitoring Lightning

- National Weather Service
- WeatherBug
- US National Lightning Detection Network
- US Precision Lightning Network

Flash to Bang

In the State of Texas, "Flash to Bang" is a recognized form of estimating the distance of lightning. It is a last resort however in regards to reliability so please consider other forms of lightning detection before relying solely on this method.

Method: Upon seeing the flash of lightning, start counting the seconds until thunder is heard. Divide the time in seconds by five to measure distance in miles. ie: 30 seconds or less would indicate storm is within 6 miles.

Identify Safe Locations

Recommended options for refuge from lightning:

- Fully enclosed building with wiring and plumbing
- Fully enclosed vehicle with a solid metal roof and sides

Avoid:

- Dugouts, rain shelters, golf shelters and picnic shelters, even if they are properly grounded for structural safety, are usually not properly grounded from the effects of lightning and side flashes to people
- Areas connected to, or near, light poles, towers and fences that can carry a nearby strike to people
- Vehicles that are convertible, nonmetal, or open, such as golf carts and most off-road vehicles
- Shelter under trees, open fields and spaces, and the use of land-line telephones during thunderstorms

Suspension of Activity

Alert Benchmarks

- **30 miles** or less: **Advisory**
- **20 miles** or less: **Caution**
- **10 miles** or less: **Not Safe** – Evacuate to a safe shelter.
- **6 miles** or less: **Safety procedures should be complete**

***Clear to return to athlete site/event: **30 min after last clap of thunder or lightning sighting**

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EXTREME COLD PROTOCOL

Wind Chill

A lower wind chill can increase the rate at which certain cold weather dangers, such as frostbite and hypothermia can develop. Conditions that lead to **hypothermia**:

- Cold temperatures
- Wetness
- Improper dress/equipment
- Exposed skin
- Poor food intake
- Prolonged exposure

Wind Chill Chart

Wind (mph) \ Temperature (°F)	Calm	40	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
5		36	31	25	19	13	7	1	-5	-11	-16	-22	-28	-34	-40	-46	-52	-57	-63
10		34	27	21	15	9	3	-4	-10	-16	-22	-28	-35	-41	-47	-53	-59	-66	-72
15		32	25	19	13	6	0	-7	-13	-19	-26	-32	-39	-45	-51	-58	-64	-71	-77
20		30	24	17	11	4	-2	-9	-15	-22	-29	-35	-42	-48	-55	-61	-68	-74	-81
25		29	23	16	9	3	-4	-11	-17	-24	-31	-37	-44	-51	-58	-64	-71	-78	-84
30		28	22	15	8	1	-5	-12	-19	-26	-33	-39	-46	-53	-60	-67	-73	-80	-87
35		28	21	14	7	0	-7	-14	-21	-27	-34	-41	-48	-55	-62	-69	-76	-82	-89
40		27	20	13	6	-1	-8	-15	-22	-29	-36	-43	-50	-57	-64	-71	-78	-84	-91
45		26	19	12	5	-2	-9	-16	-23	-30	-37	-44	-51	-58	-65	-72	-79	-86	-93
50		26	19	12	4	-3	-10	-17	-24	-31	-38	-45	-52	-60	-67	-74	-81	-88	-95
55		25	18	11	4	-3	-11	-18	-25	-32	-39	-46	-54	-61	-68	-75	-82	-89	-97
60		25	17	10	3	-4	-11	-19	-26	-33	-40	-48	-55	-62	-69	-76	-84	-91	-98

Frostbite Times: 30 minutes | 10 minutes | 5 minutes

$$\text{Wind Chill (°F)} = 35.74 + 0.6215T - 35.75(V^{0.16}) + 0.4275T(V^{0.16})$$

Where, T= Air Temperature (°F) V= Wind Speed (mph)

Effective 11/01/01

Suspension of Activity

Outside participation limited to 45 minutes:

Wind Chill reaches **32° F** (**35° F** for MS) or Rain + Wind Chill **35° F** (**40° F** for MS).

Termination of outside participation:

Wind Chill readings fall below **25° F** (**30° F** for MS) or Rain + Wind Chill **32° F** (**38° F** for MS).

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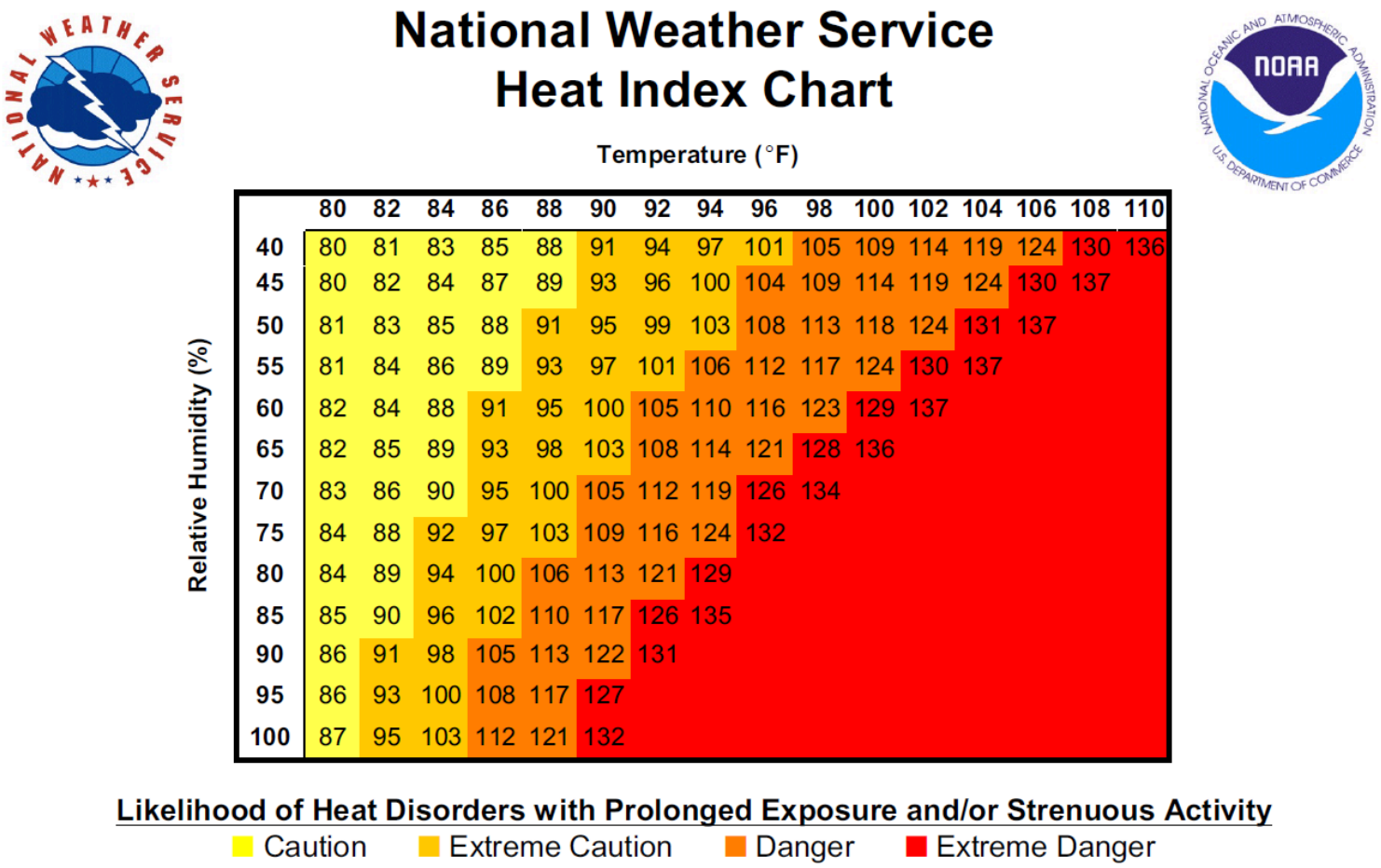
HEAT ILLNESS PREVENTION POLICIES

Exertional heat illness is major concern in athletics due to the risk for sudden death caused by exertional heat stroke. Although athletes are typically the ones susceptible to developing heat illnesses, staff members, coaches, medical professionals and anyone else present during practices and competitions can also be at risk. Coaches, administrators, parents, emergency medical services and athletes should be trained by the sports medicine staff or a medical professional on the prevention and recognition of **Exertional Heat Illnesses**. (NATA position)

Hot and humid environmental conditions can more readily expose an individual to exertional heat illness both indoors and outdoors especially in facilities where air conditioning is not available. (NATA Position statement)

HEAT INDEX:

Heat-related illnesses have many factors but can be caused when an individual is subjected to extreme temperatures and humidity and is unable to cool down (Gatorade).



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Monitoring the Weather

The **Certified Athletic Trainer/Medical Personnel** assigned to provide coverage for a sporting event will work with the **Athletic Director/Club President** to monitor local weather forecasts before all outdoor events and make a decision about cancelling events before they begin.

Devices/Resources for Monitoring Heat Index/Relative Temperature

- National Weather Service Heat Index Calculator
- Digital Sling Psychrometer
- Wet-Bulb Globe Temperature Device

Modification/Suspension of Activity

WBGT Activity Guidelines www.uiltexas.org

Class 3	Class 2	Activity Guidelines
< 82.0	<79.7	Normal Activities - Provide at least three separate rest breaks each hour with a minimum duration of 3 min each during the workout.
82.0 - 86.9	79.7 - 84.6	Use discretion for intense or prolonged exercise; Provide at least three separate rest breaks each hour with a minimum duration of 4 min each.
87.0 - 90.0	84.7 - 87.6	Maximum practice time is 2 hours; **For Football**: players are restricted to helmet, shoulder pads, and shorts during practice. If the WBGT rises to this level during practice, players may continue to work out wearing football pants without changing to shorts. **For All Sports**: Provide at least four separate rest breaks each hour with a minimum duration of 4 min each.
90.1 - 92.0	87.7 - 89.7	Maximum practice time is 1 hour; **For Football**: No protective equipment may be worn during practice, and there may be no conditioning activities. **For All Sports**: There must be 20 min of rest breaks distributed throughout the hour of practice.
≥92.1	≥89.8	No outdoor workouts. Delay practices until a cooler WBGT is reached.

Values in the above chart are WBGT measurements (not temperature or heat index measurements).

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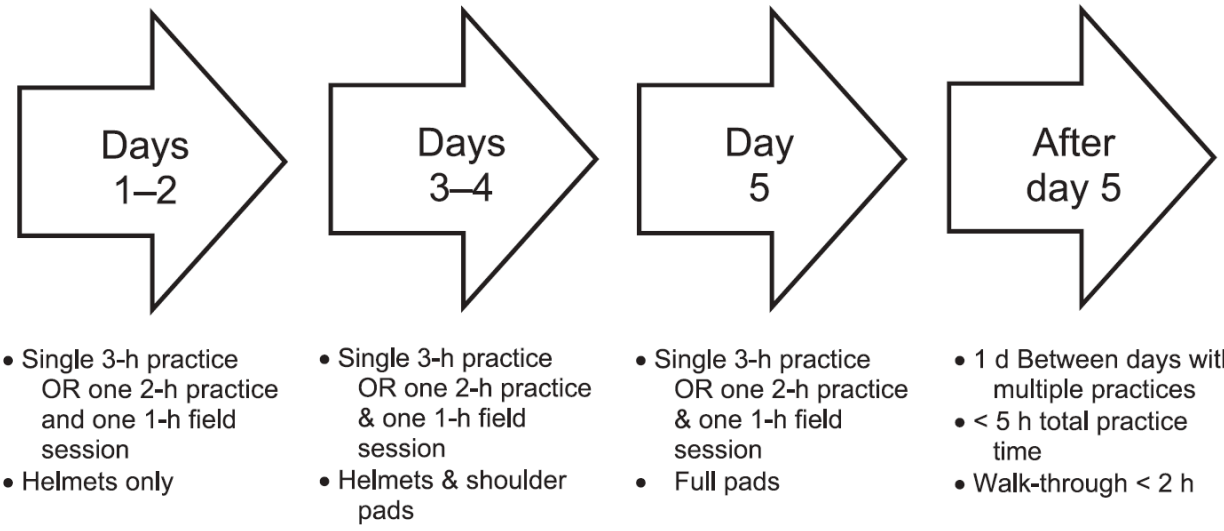
NATA Position on EHI, 2015

Heat Index	Considerations	Water Breaks (5-10 min)
Under 95° F		**Provide ample water**
95° F - 99° F	**Re-check temp & humidity every 30-45 min. Have cool down methods ready.**	**Every 20 - 30 minutes**
100° F - 104° F	**Games- Consider additional breaks for water and cooling. Have cool down methods ready.** **Practices- Consider changing times/going indoors. Remove non-necessary equipment. Have cool down methods ready.**	**Every 15 – 20 minutes**
Over 105° F	**All activity should be postponed/suspended.**	**Every 10 minutes**

HEAT-ACCLIMATIZATION PROTOCOL:

One significant factor in preventing heat illness is heat-acclimatization. The National Athletic Trainers' Association recommends that individuals should be acclimatized to heat gradually over 7-14 days. This involves slowly increasing the intensity and duration of physical activity performed in a warm or hot environment (whether indoors or outdoors) and phasing in protective equipment (NATA position). Heat-acclimatization protocols may differ depending on age group, sport or geological location. Differences also exist between collegiate settings and secondary schools. Utilize the following recommended guidelines to develop your sport-specific protocols.

National Collegiate Athletic Association heat-acclimatization guidelines



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National Athletic Trainers' Association- Secondary School Athletics

These guidelines should be used for all preseason conditioning, training, and practice activities in a warm or hot environment, whether these activities are conducted indoors or outdoors (NATA JAT 2009). The heat-acclimatization period is the initial 14 consecutive days of preseason/practice/competition (rest days do not count). For every 6 consecutive days of practice, there will be 1 day of rest (no activity besides athletic training treatment). Practices during this period will last no longer than 3 hours (includes warm-up, stretching and cool-down as well as conditioning and weight-room activities). Walk-throughs are not included in 3 hour practice time but cannot last more than 1 hour or occur within 3 hours of the practice and vice versa.

Heat Acclimatization Protocol by Sport

*Sports grouped by equipment type. Include any sports that practice/condition/compete in non-air-conditioned facilities. Special considerations should be given to athletes with **sickle cell trait** or other factors that pre-dispose the athlete to heat illness.

Football, Lacrosse, Field Hockey, Fencing (Full Contact & Equipment Heavy)

Days ____--____: _____

Days ____--____: _____

Days ____--____: _____

Days ____--____: _____

Baseball, Softball (Full Contact with Some Equipment)

Days ____--____: _____

Days ____--____: _____

Days ____--____: _____

Soccer, Rugby, Track, Cross Country, Tennis, Beach Volleyball, Golf, Wrestling, Rowing, Rifle (Little to No Equipment)

Days ____--____: _____

Days ____--____: _____

Days ____--____: _____

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HYDRATION PROTOCOL:

At minimum, a cooler with ice water and/or water bottles will be available for athletes at all practices, conditioning sessions, competitions and any other sport-related activity occurring outside of the Athletic Training Room.

Gatorade will be made available: ____[length of activity, sport, heat index, etc]_____

_____

Address hydration equipment/supplies for preseason acclimatization period vs. in-season practice vs. off-season vs. competitions

_____[Cold tubs, cold towels, weigh-in/outs, salt tablets, Gatorade,]_____

_____

_____

_____

_____

Salt Tablets

A signed **Medications Release** from a parent or guardian must be on file with the Athletic Trainer in order for an athlete to be administered salt tablets.

Dehydration Measurement

Hydration status will be determined by urine color or % change in body weight from pre-practice to post practice. Weight will be taken with athlete in practice uniform shorts and t-shirt.

Well Hydrated | Dehydrated | Severely Dehydrated

Hydration Status	% Change in Body Weight
Self-Hydrated	+1 to -1
Minimum Dehydration	-1 to -3
Significant Dehydration	-3 to -5

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Severe Dehydration	> -5

EMERGENCY MANAGEMENT OF EXERTIONAL HEAT ILLNESS:

Once an athlete has been identified as suffering from any form of heat illness, they need to be removed from activity and treated appropriately. Use the following guide to help identify and treat heat illness conditions.

Signs/Symptoms and Treatment of Exertional Heat Illness

Exertional Heat Stroke

A medical emergency exists when an athlete presents with **Exertional Heat Stroke**. This condition occurs when the body's ability to regulate heat is compromised. The only reliable way to determine core body temperature in an exercising athlete is by taking rectal temperature. In lieu of a rectal thermometer, the provider should access the athlete via signs and symptoms. A **Signed Consent** must be on file before performing rectal temperature.

Signs/Symptoms

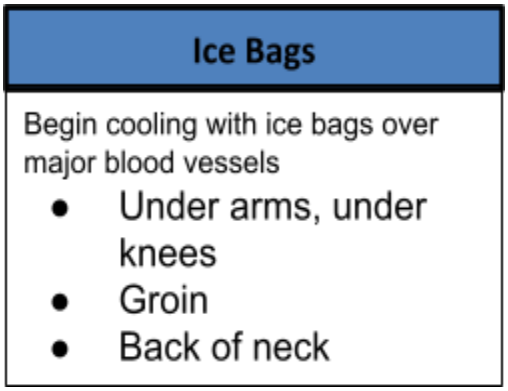
- Dry Skin
- Headache
- Hot and flush red skin
- Nausea/ and/or vomiting
- Exertional type: still sweating
- Weak, dizzy, and faint
- Very high body temperature- **104°-110°F**
- Rapid pulse
- Loss of or altered consciousness
- Decreased BP
- Staggering gait
- Collapse during activity

Emergency Management (Nata JAT 2017)

1. Establish and manage airway as needed
2. Activate EMS/ Call 911

**** If you have access to rectal thermometer ****

3. Move to cool place and remove wet clothing
4. Elevate legs
5. Begin cooling with ice bags over major blood vessels
    a. Under arms, under knees
    b. Groin
    c. Back of neck
6. Obtain rectal temperature



**** If no rectal thermometer **or** athlete is in major distress **or** temp is >104°F ****

7. Begin rapid cooling procedures
    a. Cold water immersion- Full body (45° to 60° F)
        Or
    b. Ice bags over major blood vessels
8. Administer electrolyte fluids slowly
9. Monitor vitals
10. Prevent over chilling

**** Cool first, transport second ****

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Suggested Equipment

- Rectal thermometer
- Cold tub (large feed/water trough, kiddie pool, empty trash can, large tarp)
- Coolers of ice (ready to add to cold tub as needed or to make ice bags)
- Ice Bags
- Access to water
- Towels
- Electrolyte Fluids (Gatorade/Powerade, Pedialyte, Pickle Juice, etc)
- Fans or misting fans
- Source of shade

Fluid replacement

Proper hydration is the best safeguard against heat illness. Remember to have athletes drink water and sports drinks before, during and after training and competition.

Before exercise

1. 2-3 hours before exercise, drink at least 17-20 oz. of water or a sports drink.
2. 10-20 minutes before exercise, drink another 7-10 oz. of water or sports drink.

During exercise

1. Every 10-20 minutes you should drink at least 8 oz. of water
2. During scheduled breaks, remember to drink sports drinks and water
3. Sports drinks should contain: >7% carbohydrate and sodium chloride
4. Drinks should be cool: 50° to 59° F
5. Thirst = 1% to 5 % dehydrated
6. Dehydration of 1%-2% of body weight (1.5-3 lbs for 150lb. athlete) can negatively affect performance.

After exercise

1. Consume 20 oz. of water or sports drink for every pound of weight loss.
    a. Ex. 5 lbs. loss would require 100 oz. of fluid consumption within two hours of finishing training or competition.
2. Eat a well-balanced meal, fruits and vegetables, and **avoid** fried foods. It is important to lightly salt food. **Avoid** caffeine, alcohol, fruit juices, and carbonated beverages.

Return to Participation after EHS (Nata JAT 2017, 2013)

A medical provider will develop an appropriate timeline for return to activity for all athletes that present with EHS. Written clearance from the medical provider will be based on progress made during recovery, blood tests and severity of illness.

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