



Fayette County Public School System

Athletic Coordinator's Office  
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# Heat Related Illness

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The following guidelines for heat related illness, extreme cold temperatures, and lightning safety are suggested, though each student and situation is unique, and may not require every step listed or may call for different or additional measures:

The Fayette County School System through its Athletic Administrators or designee will hold a meeting with the coaches whose sport begins prior to the school year to distribute and/or review the material concerning heat related illness and to review the system guidelines with respect to outdoor practices during the summer months.

A meeting must be held at your school for all fall/spring sports coaches before the beginning of each school year. This is a mandatory meeting. At the meeting, the Athletic Administrator must go over the procedures regarding heat related illnesses. Review taking the Heat Index Temperature Readings and the Guidelines that follow those readings with respect to practice and participation.

Information that must be reviewed is attached. It is important that all coaches sign in for the local school meeting as a record that they have received the heat related in-service. A copy of the sign-in sheet must be kept on file at the local school. Please send the information regarding the date and time the meeting was conducted to the Athletic Coordinator's Office.

Any coach who does not attend the meeting must be in-serviced at a make-up session before the start of the fall sports season.

If you have any questions, please do not hesitate to contact me.

attachment

*"Where Excellence Counts"*

# **AGENDA**

- 1. Sign in**
- 2. Review Medical Emergency Plan and Procedures.**
- 3. Importance of having Parent Consent/Waivers on hand.**
- 4. Review Guidelines for outdoor extracurricular activities during extreme hot and humid weather.**
- 5. Discuss weather reports concerning 'code orange' smog alerts.**
- 6. Football: Document Heat Index readings daily.**
- 7. Lightning Safety for Athletic Events.**

# HEAT INDEX

The Heat Index (HI) is the temperature the body feels when heat and humidity are combined. This Heat Index Chart provides general guidelines for assessing the potential severity of heat stress. Individual reactions to heat will vary. It should be remembered that heat illness can occur at lower temperatures than indicated on the chart. Studies indicate that susceptibility to heat illness tends to increase with age.

## HOW TO USE THE HEAT INDEX CHART:

1. Across the top of the chart, locate the Air Temperature (F°)
2. Down the left side of the chart, locate the RELATIVE HUMIDITY.
3. Follow across and down to find the HEAT INDEX.

		AIR TEMPERATURE (F°)										
		70	75	80	85	90	95	100	105	110	115	120
R E L A T I V E	30	67	73	78	84	90	96	104	113	123	135	148
	35	67	73	79	85	91	98	107	118	130	143	
	40	68	74	79	86	93	101	110	123	137	151	
	45	68	74	80	87	95	104	115	129	143		
	50	69	75	81	88	96	107	120	135	150		
	55	69	75	81	89	98	110	126	142			
	60	70	76	82	90	100	114	132	149			
	65	70	76	83	91	102	119	138				
	70	70	77	85	93	106	124	144				
	75	70	77	86	95	109	130					
H U M I D I T Y	80	71	78	86	97	113	136					
	85	71	78	87	99	117						
	90	71	79	88	102	122						
	95	71	79	89	105							
	100	72	80	91	108							

## HEAT INDEX TABLE

HEAT INDEX	Affects on the human body
90 to 105	Cramps or heat exhaustion possible
105 to 130	Cramps or heat exhaustion likely, heat stroke possible
130 to above	Heat stroke highly likely

## HEAT INDEX WARNING LEVEL GUIDELINES

These are guidelines for outdoor practice.

<b>LEVEL</b>	<b>HEAT INDEX TEMPERATURES</b>	<b>AFFECTS ON BODY</b>	<b>PRACTICE HOURS</b>	<b>BREAKS</b>	<b>FLUIDS</b>
<i>Caution</i>	80° - 89° F		Use Caution	<b>Remove Helmet</b> 5 Minute Break Every 20 Minutes	Cold Water
<i>Extreme Caution</i>	90° - 104° F	Cramps or heat exhaustion possible	Use Extreme Caution	<b>Remove Helmet</b> 5 Minute Break Every 15 Minutes	Cold Water
<i>Danger</i>	105° - 129° F	Cramps or heat exhaustion likely, heat stroke possible	<b>Helmets Only</b> Practice Time Should be Shortened With Low Intensity	<b>Remove Helmets</b> 5 Minute Break Every 10 Minutes	Cold Water
<i>Extreme Danger</i>	130° F and Above	Heat stroke highly likely	<b>NO PRACTICE</b>	<b>NO PRACTICE</b>	Cold Water

**FAYETTE COUNTY PUBLIC SCHOOL SYSTEM  
GUIDELINES FOR OUTDOOR EXTRACURRICULAR ACTIVITIES  
DURING EXTREME HOT AND HUMID WEATHER**

1. Each school shall have and use a digital heat index monitor, a device for measuring environmental factors. The digital monitor is used to measure the Wet Bulb Temperature (WBT), which is derived by evaluating the combined dry air temperature, humidity, ground radiated heat, and the wind speed at that particular location. Conditions are subject to change during the practice/activity; therefore, measurements should be taken at regular intervals throughout the practice activity. Measurements should be taken at the practice/activity site.
  - a. All Activities: Monitor and follow all guidelines.
  - b. Football Only: Will be required to measure and document the Heat Index Monitor prior to outdoor practice through the months of July and August, and during spring practice in May, and other times when conditions warrant. This can be done by the school Athletic Administrator, Athletic Coordinator, First Aid-Facilitator, or a football coach.
2. Practices and games should be held early in the morning and later in the evening to avoid times when environmental conditions are generally more severe.
3. An unlimited supply of cold water shall be available to participants during practice games.
  - a. Coaches/Supervisors shall inform all students participating that cold water is always available or accessible and they will be given permission anytime he/she asks for water.
  - b. Hydration and fluid replacement is a daily process. Students should hydrate themselves before, during, and after practice. Meals should include an appropriate amount of fluid intake in addition to a healthy diet.
4. Give adequate rest periods. Remove appropriate equipment or clothing when possible. Exposed skin cools more efficiently.
  - a. Football players shall be allowed to remove helmets.
  - b. Shoulder pads should be removed if conditions warrant.
5. Gradually acclimatize participants to the heat.
  - a. Research indicates 80% acclimatization may be achieved in 7-10 days, but could take up to 14 days. In some cases, it may take several weeks to become fully acclimated.
  - b. The length and intensity of practice should be adjusted according to the Heat Index until acclimatization occurs.
6. Athletic participants should weigh in before practice and weigh out after to monitor water loss to identify those who are becoming dehydrated.
7. Participants should wear clothes that are light in weight and color.
8. Students who need careful monitoring include:
  - a. Overweight students
  - b. Weight control problems (fluctuation)
  - c. Those taking over-the-counter and prescription medication
  - d. Students who have done absolutely no exercise at all
9. Be familiar with all heat related symptoms and corresponding treatments.
10. Be familiar with the Heat Index Temperature Chart and utilize guidelines determining length and rest periods.

# **FLUID REPLACEMENT**

(From the NATA)

## **Weight Lost During Workout**

2 pounds  
4 pounds  
6 pounds  
8 pounds

## **Fluid Amount Needed to Refuel**

32 oz. (4 cups or one sports drink bottle)  
64 oz. (8 cups or two bottles)  
96 oz. (12 cups or three bottles)  
128 oz. (16 cups or four bottles)

# **GUIDELINES FOR HYDRATION DURING EXERCISE**

(From the NATA)

1. Drink 16-24 oz. of fluid 1 to 2 hours before the workout or competition.
2. Drink 4-8 oz. of water or sports drink during every 20 minutes of exercise.
3. Drink before you feel thirsty. When you feel thirsty, you have already lost needed fluids

# HEAT ILLNESS SYMPTOMS AND TREATMENTS

(As Recommended by the National Athletic Trainers Association, (NATA) July 1999)

Heat illness is used to define several types of afflictions suffered when an individual experiences a rising body temperature and dehydration. Following are the different forms identified by the NATA.

	<b>Symptoms</b>	<b>Treatment</b>
<b>Heat Cramps</b>	<ul style="list-style-type: none"> <li>- Muscle spasms caused by an imbalance of water and electrolytes in muscles</li> <li>- Usually affects the legs and abdominal muscles</li> </ul>	<ul style="list-style-type: none"> <li>- Rest in a cool place</li> <li>- Drink plenty of fluids</li> <li>- Proper stretching and massaging</li> <li>- Application of ice in some cases</li> </ul>
<b>Heat Exhaustion</b>	<ul style="list-style-type: none"> <li>- Can be a precursor to heat stroke</li> <li>- Normal to high temperature</li> <li>- Heavy sweating</li> <li>- Skin is flushed or cool and pale</li> <li>- Headaches, dizziness</li> <li>- Rapid pulse, nausea, weakness</li> <li>- Physical collapse may occur</li> <li>- Can occur without prior symptoms, such as cramps</li> </ul>	<ul style="list-style-type: none"> <li>- Get to a cool place immediately and out of the heat</li> <li>- Drink plenty of fluids</li> <li>- Remove excess clothing</li> <li>- In some cases, immerse body in cool water</li> </ul>
<b>Heat Stroke</b>	<ul style="list-style-type: none"> <li>- Body's cooling system shuts down</li> <li>- Increased core temperature of 104° F or greater</li> <li>- If untreated it can cause brain damage, internal organ damage, and even death</li> <li>- Sweating stops</li> <li>- Shallow breathing and rapid pulse</li> <li>- Possible disorientation or lose of consciousness</li> <li>- Possible irregular heartbeat and cardiac arrest</li> </ul>	<ul style="list-style-type: none"> <li>- Call 911 immediately</li> <li>- Cool bath with ice packs near large arteries, such as neck, armpits, groin</li> <li>- Replenish fluids by drinking or intravenously, if needed</li> </ul>

# GUIDELINES FOR EXTREME COLD TEMPERATURES

1. The local school principal, or designee, will make the final decision as to whether outdoor practice will be allowed. The health, safety, and welfare of the students should be the determining factors.
2. The wind chill factor should be used to determine the severity of the cold temperature, NOT just the temperature alone.
3. Warm-up and stretch properly up until immediately before the competition or practice.
4. Clothing should be selected for comfort. Do not overdress. Multiple layers provide good insulation.
5. Properly cover the head, neck, legs, and hands. Much of your body heat is lost through these areas.
6. Extreme cold blocks some sensations of pain. Thus, frostbite can easily affect the fingers, toes, ears, and facial areas. Check these areas regularly.
7. Hypothermia is a dangerous and severe level that can occur in cold temperatures. Add extra clothing and move to a warm environment immediately after exercising or practice. Drink warm fluids if possible. Hypothermia has occurred in air temperatures of 50° - 65° F.
8. Early signs and symptoms of hypothermia include shivering, euphoria, confusion, and behavior similar to intoxication. Severe signs include lethargy, muscular weakness, disorientation, depression, hallucinations, and even combative behavior.

## WIND CHILL CHART Wind Speed in MPH

		<u>0</u>	<u>10</u>	<u>20</u>	<u>30</u>
<b>Temperature</b>	30° F	30	16	4	2
<b>Reading</b>	20° F	20	4	-10	-18
	10° F	10	-9	-25	-33
	0° F	0	-24	-39	-48
	-10° F	-10	-33	-53	-63
	-20° F	-20	-46	-67	-79

# LIGHTNING SAFETY FOR ATHLETIC EVENTS

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The National Lightning Safety Institute (NLSI) recommends that all organizations prepare a Lightning Safety Plan and inform all personnel of its contents. Lightning safety is “anticipating a high-risk situation and moving to a low risk location.” Just as practice and training increase athletic performances, similarly preparedness can reduce the risk of the lightning hazard. Lightning is the most frequent weather hazard impacting athletic events. All outdoor sports have been visited by lightning. That is why education is the single most important means to achieve lightning safety. Lightning Safety Plans should be site-specific, but they all share a common outline:

**1. Advance warning of hazard:**

- a) “If you can see it, flee it. If you can hear it, clear it”.
- b) TV Weather Channel; Weather Radio
- c) Lightning detectors

**2. Make a decision to suspend activities and notify people.**

- a) Notify people via radio, siren or other means.

**3. Move to safe location:**

- a) A large permanent building.
- b) **Unsafe** places are near metal or water; under trees; on hills; near electrical/electronic equipment.
- c) The 30/30 Rule says to shut down when lightning is six miles away. Use a “flash to bang” (lightning to thunder) count of five seconds equals one mile (10 = 2 miles; 20 = 4 miles; 30 = 6 miles).

**4. Reassess the hazard.**

It is usually safe after no thunder and no lightning have been observed for thirty minutes. Be conservative here.

**5. Inform people to resume activities.**

# NATA Lightning Safety Guidelines

Due to the alarming rise in lightning casualties in recreational and sports settings in recent decades, the National Athletic Trainers' Association (NATA) has released the following guidelines to follow when participating in outside athletic or recreational activities.

- 1) Establish a chain of command that identifies who is to make the call to remove individuals from the field.
- 2) Name a designated weather watcher. (A person who actively looks for the signs of threatening weather and notifies the chain of command if severe weather becomes dangerous.)
- 3) Have a means of monitoring local weather forecasts and warnings. (Know weather definitions – **Watch** indicates conditions are favorable for severe weather; **Warning** means severe weather has been detected in the area, and all persons should take the necessary precautions.)
- 4) Designate a safe shelter for each venue.
- 5) Use the Flash-to-Bang count to determine when to go to safety. By the time the flash-to-bang count approaches thirty seconds all individuals should be already inside a safe structure.
  - a) Once activities have been suspended, wait at least thirty minutes following the last sound of thunder or lightning flash prior to resuming an activity or returning outdoors.
  - b) Avoid being the highest point in an open field, in contact with, or proximity to the highest point, as well as being on the open water. Do not take shelter under or near trees, flagpoles, or light poles.
  - c) Assume the lightning safe position (i.e. crouched on the ground, weight on the balls of the feet, feet together, head lowered, and ears covered) for individuals who feel their hair stand on end, skin tingle, or hear “crackling” noises. Do not lie flat on the ground.
- 6) Observe the following basic first aid procedures in managing victims of a lightning strike:
  - Survey the scene for safety.
  - Activate local EMS.
  - Lightning victims do not ‘carry a charge’ and are safe to touch.
  - If necessary, move the victim with care to a safer location.
  - Evaluate airway, breathing, and circulation, and begin **CPR** if necessary.
  - Evaluate and treat for hypothermia, shock, fractures and/or burns.
- 7) All individuals have the right to leave an athletic site in order to seek a safe structure if the person feels in danger of impending lightning activity without fear of repercussions or penalty from anyone.





**FAYETTE COUNTY PUBLIC SCHOOLS**  
**EMERGENCY MEDICAL PLAN**

**PROCEDURES**

Organization: \_\_\_\_\_ Activity: \_\_\_\_\_

Team: \_\_\_\_\_ Year: \_\_\_\_\_

In the event of a medical emergency the on-duty physician, certified athletic trainer or paramedic will administer immediate emergency aid to the injured person. If none of the above are present, then the head coach or the designated first aid facilitator will assume responsibility.

Each school will designate a person for each sport who will immediately contact the Emergency Medical System (EMS). Please follow these procedures for a prompt and efficient response.

1. The designated care provider will remain with the injured athlete at all times.
2. Designated person go to predetermined phone location and dial 911.
  - A. Identify self and exact location.
  - B. State nature of injury (head/neck, fracture, loss of consciousness or heat illness).
  - C. Instruct the emergency vehicle exactly where and how to reach activity area:
    - 1) Street access
    - 2) Entry gate
    - 3) Building location
    - 4) Building entry
  - D. Stay on line until operator disconnects.
  - E. Return to injury scene in case needed for other assistance.
3. Designated person meet the vehicle at the gate entrance. **This person will have all necessary gate/door keys in his/her possession.**
4. Designated person contact security for crowd control and other needs.
5. Designated person immediately call parents and advise them of circumstances; then call designated administrator and advise of circumstances.
6. Designated person is responsible for documenting all information relating to injury and emergency response.
7. Designated person accompany the injured athlete to the hospital and remain until parents or designated administrator arrive.

**FAYETTE COUNTY PUBLIC SCHOOLS**  
**EMERGENCY MEDICAL PLAN**

**PROCEDURES FOR CALLING 911:**

This is to be filled out by the designated caller prior to the activity session and kept in his/her possession until the session is concluded.

1. REMAIN CALM. This will aid the operator in receiving your information.
2. Dial **911**. (Remember you may need to access outside line first!)
3. My name is \_\_\_\_\_.
4. I need paramedics at \_\_\_\_\_.
5. The exact address is \_\_\_\_\_.

The major cross streets are \_\_\_\_\_, which is \_\_\_\_\_ blocks away.

6. There is an athlete with a \_\_\_\_\_ injury (head/neck, fracture, loss of consciousness, heat illness, cardiac arrest, etc.).

The athlete's name is \_\_\_\_\_.

7. The athlete is located at \_\_\_\_\_, which is  
(activity area)

on the \_\_\_\_\_ side of the facility.  
(north, west, etc.)

8. I am calling from \_\_\_\_\_ (give phone number).

9. \_\_\_\_\_ will meet the ambulance/paramedics at \_\_\_\_\_  
(name)

\_\_\_\_\_ and guide them to the injured athletic.  
(specify exact location)

10. Wait until the operator hangs up first.

**FAYETTE COUNTY PUBLIC SCHOOLS**  
**EMERGENCY MEDICAL PLAN**  
**REQUIRED INFORMATION**  
(Complete prior to activity/event)

1. The closest working phone is located \_\_\_\_\_  
\_\_\_\_\_.
2. Keys to access phone are: \_\_\_\_\_.
3. The exact address of the activity site is \_\_\_\_\_. The major cross streets are \_\_\_\_\_ and \_\_\_\_\_ which is \_\_\_\_\_ blocks away.
4. The exact entry location for the closest emergency vehicle is \_\_\_\_\_  
\_\_\_\_\_.
5. To access the activity area, emergency personnel must pass through \_\_\_\_\_ (number) exterior gate(s) and \_\_\_\_\_ door(s). Keys to unlock these passageways will be at the (number) site in the possession of \_\_\_\_\_ (name).
6. The designated health care provider/first aid rider for the activity is \_\_\_\_\_ (name) who is a \_\_\_\_\_ (title).
7. The Automated External Defibrillator (AED) is located \_\_\_\_\_, which is \_\_\_\_\_ from the activity site. Normal travel time is \_\_\_\_\_ (distance) from the activity site. Normal travel is \_\_\_\_\_.

# FAYETTE COUNTY PUBLIC SCHOOLS

## EMERGENCY MEDICAL PLAN

### DESIGNATED ROLES

(Complete prior to activity/event)

#### NAME

1. \_\_\_\_\_ Attends to injured athletes, controls scene.
2. \_\_\_\_\_ Calls 911.
3. \_\_\_\_\_ Supervises team.
4. \_\_\_\_\_ Calls security and initiates crowd control.
5. \_\_\_\_\_ Meets paramedics at gate and guides to injured athlete.
6. \_\_\_\_\_ Gives Insurance/Consent Waiver Form to paramedics.
7. \_\_\_\_\_ Calls parents.