

# NEW JERSEY STATE INTERSCHOLASTIC ATHLETIC ASSOCIATION

1161 Route 130 North, Robbinsville, NJ 08691

Phone 609-259-2776 Fax 609-259-3047

## Heat Participation Policy

### Introduction

History shows that most exertional heat stroke deaths occur during August; however, athletes will be at risk whenever in the presence of elevated ambient temperatures with high humidity. For many years, coaches have utilized the Heat Index to determine safe conditions for exercise in a hot environment. Evidence-based research, first initiated with the military, proves that Wet Bulb Globe Temperature (WBGT) should be the environmental monitoring measure during athletic participation in the heat.

The Heat Index was developed as a measurement of ambient temperatures and relative humidity while resting in the shade. It is intended to provide outdoor restrictions for the elderly and adolescents during times of elevated temperatures. It is not relevant to a athletic activity settings. However; the WBGT is a measurement of ambient temperature, relative humidity, radiant heat from the sun and wind speed. When outdoor activities are conducted in the direct sun, the WBGT is the most pertinent to use. Although read in degrees, the WBGT does not reflect degrees of air temperature. A WBGT reading of 92 F may equate to a Heat Index reading of 104-105 degrees F.

### Method

**The NJSIAA Heat Participation Policy will be utilized in conjunction with the NJSIAA Pre-Season Heat Acclimatization Policy.** Monitoring the environmental conditions through the WBGT and making the appropriate activity modifications is an effective preventative measure in reducing the risk of exertional heat stroke. The athletic trainer, certified designee or individual (e.g. coach) appointed by the athletic director must use a scientifically-reliable WBGT measuring device and take an on-site reading 30 minutes prior to activity and a minimum of every hour during activity. Readings must be recorded on the *NJSIAA Heat Participation Policy Record Chart*. All corresponding modifications must also be recorded on the chart.

### References

<http://ksi.uconn.edu/prevention/wet-bulb-globe-temperature-monitoring/>

<http://ksi.uconn.edu/high-school-state-policies/wbgt-policies/>

<http://ksi.uconn.edu/prevention/heat-acclimatization/>

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## Heat Participation Policy Frequently Asked Questions

### **Is the *NJSIAA Heat Participation Policy* just for football in the fall preseason?**

The *NJSIAA Heat Participation Policy* must be followed by all sports and has no specific ending date. Athletic trainers and coaches must follow the policy anytime the Wet Bulb Globe Temperature (WBGT) readings are at an elevated level. During this time, practices and games must be held in accordance with the *NJSIAA Heat Participation Activity Guidelines*.

### **What does the Wet Bulb Globe Temperature (WBGT) mean and how is this different from the heat index?**

The Heat Index is a measurement of ambient temperatures and relative humidity while resting in the shade. It is intended to provide outdoor restrictions for the elderly and adolescents during times of elevated temperatures. It is not relevant to an athletic practice setting.

The Wet Bulb Globe Temperature (WBGT) is a measurement of ambient temperature, relative humidity, radiant heat from the sun and wind speed. When outdoor activities are conducted in the direct sun, the WBGT is the most pertinent to use. Although read in degrees, it does not reflect degrees of air temperature. A WBGT reading of 92 F may equate to a Heat Index reading of 104 – 105 degrees F.

### **How frequently should WBGT readings be taken during practices and games?**

WBGT readings must be taken on the practice and game site a minimum of every hour, beginning 30 minutes before the beginning of the practices and games. All readings must be recorded on the *NJSIAA Heat Participation Policy Record Chart*.

### **Does the *NJSIAA Heat Participation Policy* apply to both practices and games?**

The *NJSIAA Heat Participation Policy* applies to both practices and games. At least 30 minutes prior to the start of a game, the officials must be informed of the on-site WBGT reading and the recommended modifications if the WBGT reaches an Orange Flag or Red Flag (e.g. built-in water breaks). There have been very few documented catastrophic heat-related incidents during a game; likely due to the nature of games having built in rest breaks already (e.g. quarters and half-time). Therefore, modifications during games should include increased rest breaks, access to fluids, and cooling zones. Protective equipment must be worn during a game according to the rule book. However, for sports requiring protective equipment, the equipment must be removed and active cooling (e.g. cold towel rotation, misting fans) initiated during the built-in water breaks. Keep in mind that scrimmages take place during the preseason acclimatization period and are considered practices; therefore, must also follow the *Heat Participation Activity Guidelines*. If the WBGT reaches a Black Flag during the game, the game must be postponed for 30 minutes followed by another WBGT reading (similar to the lightning rule). The game must not resume until the WBGT falls below a Black Flag.

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## Heat Participation Policy Guidelines

Schools must follow this best practice policy when conducting outdoor practices and games in all sports. The policy follows modified guidelines of the American College of Sports Medicine, and is specific to New Jersey, in regard to:

1. The scheduling of practices during times of various Wet Bulb Globe Temperature (WBGT) levels
2. The ratio of workout time to time allotted for rest and hydration during times of various WBGT levels
3. The WBGT levels which will result in practices and contests being modified or terminated.

An instrument scientifically approved to measure WBGT must be utilized at each practice and game. WBGT readings must be taken on the practice and game site a minimum of every hour, beginning 30 minutes before the beginning of practice and game. All readings must be recorded or data logged (e.g. written or electronic form). In the event that a modification or cancellation was required, documentation using the WBGT *NJSIAA Heat Participation Policy Record Chart* must be completed.

WBGT READING	Flag	Risk for Heat Illness	ACTIVITY GUIDELINES AND REST BREAK GUIDELINES
Under 80.0°F	Green	Very Low	Normal activities – Provide at least three separate rest breaks each hour of minimum duration of 3 minutes each during workout.
80.0 F – 85.0°F	Yellow	Low	Use discretion for intense or prolonged exercise; watch at-risk players carefully; Provide at least three separate rest breaks each hour with a minimum duration of 4 minutes each.
85.1 F – 88.0°F	Orange	Moderate	Maximum practice time is 2 hours, <u>For Football, Lacrosse and Field Hockey</u> : All helmets and shoulder pads must be removed for practice and conditioning activities. If the WBGT rises to this level <b>during</b> practice, football players may continue to work out wearing football pants without changing into shorts. <u>For All Sports</u> : provide at least four separate rest breaks each hour with a minimum duration of 4 minutes each.
88.1 F – 90°F	Red	High	Maximum length of practice is 1 hour. <u>For Football, Lacrosse and Field Hockey</u> : No protective equipment may be worn during practice and there must be no conditioning activities. <u>For All Sports</u> : there must be no conditioning and there must be 20 minutes of rest breaks distributed throughout the hour of practice.
Over 90°F	Black	Very High	<b>NO OUTDOOR WORKOUTS.</b> Delay practice until a cooler WBGT level is reached.

## **GUIDELINES FOR HYDRATION AND REST BREAKS**

1. Rest time must involve unrestricted access to fluids (e.g. water or electrolyte beverages).
2. With sports requiring helmets (e.g. football, lacrosse, field hockey), the helmets must be removed during rest time.
3. The site of the rest time must be in a shaded area.
4. When the WBGT reading is >85.0°F
  - a. Ice towels, spray bottles filled with ice water or equivalent must be available to aid in the cooling process within the shaded area.

### **Definitions**

1. Game: any NJSIAA sanctioned event.
2. Practice: the period of time that a participant engages in coach-supervised, school-approved sport or conditioning-related activity. Practices are timed from the time the players report to the field until they leave.
3. Walk through: this period of time shall last no more than one hour and is not considered to be a part of the practice time regulation, and may not involve conditioning or weight-room activities. Players may not wear protective equipment.

### **Implementation Note to be included in NJSIAA Handbook:**

The aforementioned policy must be carried out by the athletic trainer, certified designee or individual as appointed by the athletic director which includes a coach or any individual responsible or sharing duties for making decisions concerning the implementation of modifications or cancellation of practices and games based on WBGT.

### **Compliance note to be included in NJSIAA Handbook:**

In accordance with the current school compliance checks, the compliance monitors checklist will include items specific to:

- Presence of a WBGT device
- Documentation of all practices and games requiring modification on the NJSIAA Heat Participation Policy Record Chart
- Proof of written and signed off Heat Participation Policy document



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### Cold Water Immersion Tub Policy

All schools participating in interscholastic athletics must have a comprehensive, detailed Emergency Action Plan (EAP), including heat injury. When treating a potential Exertional Heat Stroke (EHS), schools must be properly *prepared and equipped* to initiate Cold Water Immersion (CWI) or other approved cooling technique. Cooling techniques must be implemented immediately, and concurrently EMS should be contacted. This must be followed during all summer conditioning, pre-season practices/contests on school grounds, or when a coach, paid or otherwise, is present. This includes the 1<sup>st</sup> 21 days of fall practice, and any day the temperature is greater than 80°F WBGT.

WBGT READING	Flag	COLD WATER IMMERSION TUB GUIDELINES
Under 80.0°F	Green	Mandatory alternative cooling measures of a cooler with ice and towels or a tarp (taco/burrito method) must be available at the practice, game and event site.
80.0 F – 85.0°F	Yellow	It is required a 150 gallon cold water immersion tub or a tarp (taco/burrito method) must be filled with water temperature of less than 60°F and accessible for cooling within 5-10 minutes of the practice/contest site. Remove external clothing/equipment prior to cooling or immediately after entering tub. Aggressively stir water during cooling process.
85.1 F – 88.0°F	Orange	It is required a 150 gallon cold water immersion tub or a tarp (taco/burrito method) must be filled with water temperature of less than 60°F and accessible for cooling within 5-10 minutes of the practice/contest site. Remove external clothing/equipment prior to cooling or immediately after entering tub. Aggressively stir water during cooling process.
88.1 F – 90°F	Red	It is required a 150 gallon cold water immersion tub or a tarp (taco/burrito method) must be filled with water temperature of less than 60°F and accessible for cooling within 5-10 minutes of the practice/contest site. Remove external clothing/equipment prior to cooling or immediately after entering tub. Aggressively stir water during cooling process.
Over 90°F	Black	<b>NO OUTDOOR WORKOUTS.</b> Delay practice until a cooler WBGT level is reached. If the WBGT rises to this level <b>during</b> practice, it is required a 150 gallon cold water immersion tub (or a tarp (taco/burrito method) must be filled with water temperature of less than 60°F and accessible for cooling within 5-10 minutes of the practice/contest site. Remove external clothing/equipment prior to cooling or immediately after entering tub. Aggressively stir water during cooling process.

#### TREATMENT OF EXERTIONAL HEAT STROKE

If the athletic trainer/medical staff is onsite, utilize the principle of **Cool First, Transport Second**. When cooling, use CWI or other approved cooling technique, until core temperature is at 103°F. If the athletic trainer/medical staff is not onsite, cool immediately until the athlete starts to shiver, or for a minimum of 20 minutes based upon the known cooling rate of 1 degree per 3 minutes. If athletic trainer/medical staff **is not** present, EMS assumes control of the EHS patient upon arrival and continues cooling for the minimum of 20 minutes or until rectal temperature is obtained.