



DIAA WEATHER POLICY FOR ATHLETE SAFETY

HOT WEATHER CONDITIONS:

Exertional heat illness includes exercise-associated muscle cramps, heat syncope, heat exhaustion, and exertional heat stroke (EHS). Current best practice guidelines suggest that the risk of exertional heat injuries can be minimized with heat acclimatization and diligent attention to monitoring individuals participating in activities that place them at a higher risk for these types of injuries. In the event an athlete sustains a heat illness, immediate and proper treatment is needed. All venues should have an emergency action plan for EHS.

Football, especially linemen, are at greatest risk for EHS constituting 97% of all deaths, of which almost 100% occur during conditioning exercises.² While special care should be taken with lineman, all sports and positions must be individually considered when establishing heat related guidelines. National governing bodies, such as the National Federations of High School Associations, National Collegiate Athletic Association (NCAA) and numerous state athletic/activity associations, have published guidelines for the prevention, monitoring and treatment of exertional heat illnesses. In addition, national authorities such as the National Athletic Trainers' Association and the Korey Stringer Institute have published research to support best practices in this area. The development of Delaware Interscholastic Athletic Associations' heat guidelines will be based on the current best practice documents.

Guidelines:

All DIAA Secondary Schools must follow this DIAA policy for any activity that does not occur in a climate-controlled facility.

- Wet Bulb Globe Temperature Reading (WBGT) to dictate practice/competition modification **shall** be managed by a Certified Athletic Trainer, School Nurse, or certified coach or individual appointed by the athletic director. Documentation of heat levels **must** occur whenever the Wet Bulb Globe Temperature (WBGT) is above 79.8 degrees Fahrenheit.
- 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.
- On days when two practices are scheduled, two practices cannot occur in moderate or greater heat restrictions. (eg: If during the first practice, the temperature on the WBGT reaches 84.7 degrees or greater, a 2nd practice can only occur if the temperature is 84.6 degrees or less for the entire 2nd practice)
- All coaches and athletic directors shall familiarize themselves with appropriate acclimatization protocols.
 - a. [Heads Up Football Heat & Hydration Guidelines](https://tinyurl.com/kuysvys3) (https://tinyurl.com/kuysvys3)
 - b. [Preseason Heat Acclimatization Guidelines](https://tinyurl.com/5n87aeyb) (https://tinyurl.com/5n87aeyb)

Wet Bulb Globe Temperature (WBGT):

An instrument scientifically approved to measure WBGT must be utilized. 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, 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. **WBGT readings shall be taken on the field of participation, a minimum of every hour, beginning 30 minutes before the beginning of practice/competition.** All readings should be recorded or data logged (written or electronic form).

Rapid Cooling:

Cold-water immersion tubs or a tarp (taco/burrito method), when cold-water immersion tubs are not feasible, **shall** be available at all venues when the WBGT reading is >79.8°F. It recommended that a cold-water immersion tub is at least 100 gallons in size and the temperature of the water be less than 60°F. Accessibility to cooling should be within 5-10 minutes of each venue. External clothing/equipment should be removed prior to cooling or immediately after entering the tub. The water should be aggressively stirred during the 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 Cold Water Immersion or other approved cooling technique, until core temperature is at 103 Degrees 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 patient upon arrival and continues cooling for a minimum of 20 minutes or until proper rectal temperature is obtained. **Any athlete with signs and symptoms consistent with exertional heat illness shall not return to play on the same day and until cleared by a Qualified Healthcare Professional.**

References

1. Casa DJ, Demartini JK, Bergeron MF, et al. National Athletic Trainers' Association Position Statement: Exertional Heat Illnesses. *Journal of Athletic Training*. 2015;50(9):986-1000.
2. [Belval L. Wet Bulb Globe Temperature Monitoring | Korey Stringer Institute. March 2015.](https://tinyurl.com/r7r8uf7x) (https://tinyurl.com/r7r8uf7x) Accessed January 10, 2020.
3. [New Jersey State Interscholastic Athletic Association Heat Participation Policy.](https://tinyurl.com/47rhyxt4) (https://tinyurl.com/47rhyxt4)

Appendix A:

WBGT Reading	Flag	Risk for Heat Illness	ACTIVITY AND REST BREAK GUIDELINES
Under 79.7 Degrees Fahrenheit* (*WBGT Fahrenheit is different from air temp Fahrenheit)	Green	Very Low	Normal Activities – Provide at least 3 separate rest breaks each hour with a minimum duration of 3 minutes each. 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.
79.8 - 84.6 Degrees Fahrenheit	Yellow	Low	Use discretion for intense or prolonged exercise; watch at risk players carefully. For All Sports: Provide at least 3 separate rest/water breaks in the shade every hour, with a minimum duration of 4 minutes each.
84.7 – 87.6 Degrees Fahrenheit	Orange	Moderate	For Football, Lacrosse , and Field Hockey goalie: Helmets and shoulder pads only. No helmets/pads for conditioning work. If index rises to this level during practice, football players may continue to work out wearing football pants without changing into shorts. Lineman, non-acclimatized, and deconditioned athletes should reduce workload by 50%. Maximum length of practice 2 hours. For All Sports: provide at least 1 water and rest break after every 15 minutes with a minimum duration of 4 minutes each in the shade. Maximum length of practice 2 hours
87.7-89.6 Degrees Fahrenheit Practice may only occur if Qualified Health Care Professional present	Red	High	For Football, Lacrosse ,and Field Hockey goalie: no protective equipment may be worn during practice and there may be no conditioning activities. For All Sports: there must be 5 minutes of water and rest breaks in the shade after every 10 minutes of play. Maximum length of practice 1 hour under QHP supervision. Competition Limitations: Provide water/rest breaks halfway between every half, lasting 5 minutes in length, in the shade. Length of play may be shortened at the officials’ and/or Athletic Trainers discretion for health and safety.
Over 89.6 Degrees Fahrenheit	Black	Very High	NO OUTDOOR ACTIVITIES. Delay until a cooler WBGT level is reached. Competition Limitations: Competition should be postponed for 30 minutes followed by another WBGT reading. The game should not resume until the WBGT reading falls below a Black Flag.

WBGT RECOMMENDED DEVICES:
(if purchasing directly)

WBGT Device	Approx Price	Purchase Site
QUESTemp°34	\$3700	TSI.COM QuestTempProducts (https://tinyurl.com/39c34rcv)
Extech EN 510	\$212.99	Teledyne Flir.com ExtechEN510 (https://tinyurl.com/49e8fj5r)
Kestrel 5400 Heat Stress Tracker	\$549	KestrelInstruments.com HeatStressTracker (https://tinyurl.com/nhytyfzx)

COLD WATER IMMERSION TUB RECOMMENDATIONS

Cold Water Immersion Tub	Price	Purchase Site
Rubbermaid Structural Foam Stock Tank; 100 gallon	\$119	TractorSupply.com (https://tinyurl.com/42y8p5nz)
Portable Transport Unit, Tarps, Basic rectal thermometer	\$30; \$10	Amazon