



Throughout the year, there may be times when practices and events occur in hot environments. These athletic events can take place with provisions and recommendations to reduce the risk of heat related health risks. The WIAA recently updated their Heat Index Policy to include a Heat Index Calculator (wiaa.com/heatindex.aspx).

Prevention

- 1 Athletes should be encouraged to drink plenty of water **before, during** and **after** exertion, without restriction.
- 2 Educate athletes, coaches, parents and others about the **signs of heat illness**.
- 3 Exertion should be modified based on the heat index for the specific time of day. If the actual heat index is **95°F or higher**, activity should be altered and/or eliminated based on heat index ratings.

Heat Index Ratings

SAFE	< 80°F – SAFE FOR MOST – Maximum 5 Hours practice per day in divided sessions.
NOTICE	≥ 80-95°F – NOTICE – Maximum 5 Hours practice per day in divided sessions.
CAUTION	≥ 95-100°F – CAUTION – WIAA recommendation: consider postponing practice to later in day. Maximum 4 hours practice per day, individual practices limited to 2 hours. Mandatory 3-hour recovery period between practices. Limit extra clothing and equipment.
WARNING	≥ 100-105°F – WARNING – WIAA recommendation: consider postponing or canceling practice. Maximum 4 hours practice per day, individual practices limited to 2 hours. Mandatory 3-hour recovery period between practices. Limited equipment.
DANGER	≥ 105°F – DANGER – WIAA Recommendation: Stop all outside activity and stop all inside activity if air conditioning is unavailable.

Humidity

Higher humidity results in a lower rate of heat removal from the body, which causes the sensation of being overheated. This effect is subjective; however, studies have been performed to normalize heat index representation (www.ksi.uconn.edu).

		RELATIVE HUMIDITY (%)												
		40	45	50	55	60	65	70	75	80	85	90	95	100
TEMPERATURE (°F)	80	80	80	81	81	82	82	83	84	84	85	86	86	87
	81	81	81	82	82	83	84	85	85	86	87	88	90	91
	82	81	82	83	84	84	85	86	88	89	90	91	93	95
	83	82	83	84	85	86	87	88	90	91	93	95	97	99
	84	83	84	85	86	88	89	90	92	94	96	98	100	103
	85	84	85	86	88	89	91	93	95	97	99	102	104	107
	86	85	87	88	89	91	93	95	97	100	102	105	108	112
	87	87	88	89	91	93	95	98	100	103	106	109	113	116
	88	88	89	91	93	95	98	100	103	106	110	113	117	
	89	89	91	93	95	97	100	103	106	110	113	117		
	90	91	92	95	97	100	103	106	109	113	117			
	91	92	94	97	99	102	105	109	113	117				
	92	94	96	99	101	105	108	112	116					
	93	95	98	101	104	107	111	116						
	94	97	100	103	106	110	114	119						
95	99	102	105	109	113	118								
96	101	104	108	112	116									
97	103	106	110	114	119									
98	105	109	113	117										
99	107	111	115											
100	109	114	118											
101	112	116												
102	114	119												
103	116													
104	119													
105														

This table lists the heat index values aligned with the U.S. National Oceanic and Atmospheric Administration.

The colors correspond to WIAA's categorizations; notice, caution, warning, and danger.

BEAT THE HEAT

Summer's high temperatures put student athletes at increased risk of heat illness. There are several types of heat illness. They range in severity, from heat cramps and heat exhaustion, which are common but not severe, to heat stroke, which can be deadly. Although heat illnesses can be fatal, death is preventable if they're quickly recognized and properly treated.

DEHYDRATION & HEAT ILLNESS

Athletes should consume **200-300ml** of fluid for every **15 minutes** of exercise

It takes **30 minutes** for cell damage to occur with a core body temperature of **105°**

Exertional heat stroke a **top 3 killer** of athletes and soldiers in training

From 2010-2015, **20 athletic heat stroke fatalities** were reported

It takes **7-14 days** to adapt to exercising in the heat

Dehydration of **3-4% body mass loss** can reduce muscle strength by 2%

SAFETY TIPS



Have sports drinks for workouts lasting longer than an hour

Cold beverages are consumed 50% more than warm beverages

Hydrate before, during, and after activity

Remove unnecessary equipment, such as helmets and padding, when environmental conditions become extreme



Clothing worn by athletes should be colored, lightweight, and protect against the sun.

- For the first week hold shorter practices with lighter equipment so players can acclimate to the heat.
- Follow a work-to-rest ration, such as 10-minute breaks after 40 minutes of exercise.
- Get an accurate measurement of heat stress using a wet-bulb globe temperature, which accounts for ambient temperature, relative humidity, and radiation from the sun.
- If someone is suffering from exertional heat stroke, remember to cool first and transport second.
- Have large cold tubs ready before practices and games in case cold water immersion is needed to treat exertional heat stroke.



SIGNS OF MINOR EXERTIONAL HEAT ILLNESS



Cramps, muscular tightening, and spasms

Dizziness



Lightheadedness (when not associated with other symptoms)



EARLY WARNING SIGNS OF EXERTIONAL HEAT STROKE

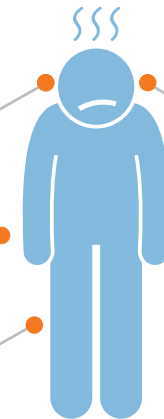
Headache, dizziness, confusion and disorientation

Excessive sweating and/or flushing

Fatigue

Nausea and/or vomiting

Chills and/or goose bumps



SIGNS OF EXERTIONAL HEAT STROKE



Core body temperature more than 105°

Signs of nervous system dysfunction; confusion, aggression, and loss of consciousness

Increased heart rate



Rapid breathing

Seizures



Low blood pressure

