KSHSAA RECOMMENDED ACTIVITY MODIFICATION POLICY

Based on Wet Bulb Globe Temperature (WBGT)

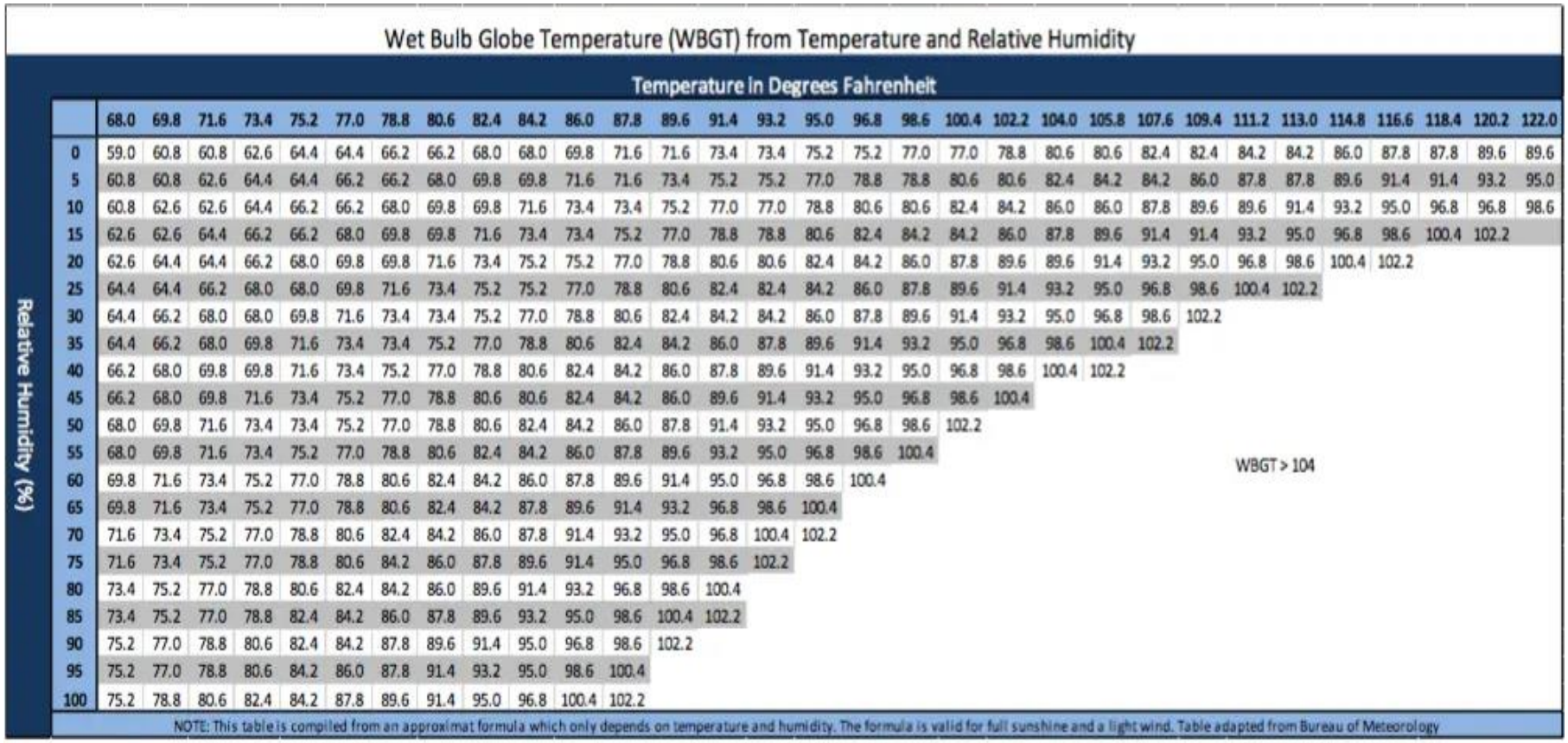
- Each school should have a policy in place for appropriate activity modification during periods of excessive heat and humidity. The KSHSAA recommended policy is provided below.
- Activity modification decisions should be based on the wet bulb globe temperature (WBGT) which is the most reliable indicator in determining the overall risk of heat illness during athletic participation in periods of elevated heat and humidity. WBGT is a measure of air temperature, relative humidity, wind speed, sun angle, and cloud cover.
- Each school should have access to a WBGT monitor. Click HERE for information on selecting a device.
- In the absence of a WBGT monitor, a chart is provided with estimated WBGT levels based on air temperature and humidity.
- WBGT levels should be obtained anytime the ambient air temperature is 80 degrees or greater. Readings should be taken at the site of activity, 30-60 minutes before the activity begins. **Schools are recommended to obtain the average WBGT over a 15-20 minute span, and use this value for the day unless there is an obvious change in weather that warrants another measurement.**
- These recommended modifications should be applied to any activity taking place outdoors OR in un-airconditioned facilities.
- Regardless of your zone, all participants should have unrestricted access to water during activity participation.
- At-risk athletes should be monitored more closely when in any elevated zone.

WBGT LEVEL/ZONES	ACTIVITY MODIFICATION
≤ 79.9° F	• Normal activities • Provide at least 3 separate rest breaks each hour with a minimum duration of 3 minutes each.
80° - 84.6° F	• MINIMUM 3 separate rest breaks each hour with a minimum duration of 4 minutes each. • Cold water immersion tub or other rapid cooling method should be prepared and ready.
84.7° - 87.7° F	• MINIMUM 4 separate rest breaks each hour with a minimum duration of 4 minutes each. • 2 HOUR MAXIMUM length of practice (not including rest breaks) • Cold water immersion tub or other rapid cooling method prepared and ready • Consider competition alterations – Coordinate with contest officials to allow for additional breaks – Shorten length of sub-varsity competitions – Shorten length of course (Cross Country) • Football specific: – Protective equipment should be limited to helmets and shoulder pads, and these should be removed for conditioning. – If practice begins in a cooler range (green or yellow), but increases to orange during practice, players may continue practice in full protective gear.
87.8° - 89.7° F	• 1 HOUR MAXIMUM length of practice (not including rest breaks) • MINIMUM 20 minutes of rest breaks distributed throughout the 1 hour of practice • Cold water immersion tub or other rapid cooling method prepared and ready • Consider competition alterations – Coordinate with contest officials to allow for additional breaks – Shorten length of sub-varsity competitions – Shorten length of course (Cross Country) • Consider delaying practice/competitions until a cooler WBGT is reached • Football specific: – No protective equipment should be worn. – No conditioning activities
≥ 89.8° F	• No outdoor workouts. Delay practice/competitions until a cooler WBGT is reached.

Approved KSHSAA SMAC & Executive Board, April 2022
Updated KSHSAA SMAC, April 2023

ESTIMATED WET BULB GLOBE TEMPERATURE CHART

- Use this chart in the absence of a WBGT monitor.
- Chart values are based on full sunlight and light wind.



Wet Bulb Globe Temperature (WBGT) from Temperature and Relative Humidity

Relative Humidity (%)	Temperature in Degrees Fahrenheit																														
	68.0	69.8	71.6	73.4	75.2	77.0	78.8	80.6	82.4	84.2	86.0	87.8	89.6	91.4	93.2	95.0	96.8	98.6	100.4	102.2	104.0	105.8	107.6	109.4	111.2	113.0	114.8	116.6	118.4	120.2	122.0
0	59.0	60.8	60.8	62.6	64.4	64.4	66.2	66.2	68.0	68.0	69.8	71.6	71.6	73.4	73.4	75.2	75.2	77.0	77.0	78.8	80.6	80.6	82.4	82.4	84.2	84.2	86.0	87.8	87.8	89.6	89.6
5	60.8	60.8	62.6	64.4	64.4	66.2	66.2	68.0	69.8	69.8	71.6	71.6	73.4	75.2	75.2	77.0	78.8	78.8	80.6	80.6	82.4	84.2	84.2	86.0	87.8	87.8	89.6	91.4	91.4	93.2	95.0
10	60.8	62.6	62.6	64.4	66.2	66.2	68.0	69.8	69.8	71.6	73.4	73.4	75.2	77.0	77.0	78.8	80.6	80.6	82.4	84.2	86.0	86.0	87.8	89.6	89.6	91.4	93.2	95.0	96.8	96.8	98.6
15	62.6	62.6	64.4	66.2	66.2	68.0	69.8	69.8	71.6	73.4	73.4	75.2	77.0	78.8	78.8	80.6	82.4	84.2	84.2	86.0	87.8	89.6	91.4	91.4	93.2	95.0	96.8	98.6	100.4	102.2	
20	62.6	64.4	64.4	66.2	68.0	69.8	69.8	71.6	73.4	75.2	75.2	77.0	78.8	80.6	80.6	82.4	84.2	86.0	87.8	89.6	89.6	91.4	93.2	95.0	96.8	98.6	100.4	102.2			
25	64.4	64.4	66.2	68.0	68.0	69.8	71.6	73.4	75.2	75.2	77.0	78.8	80.6	82.4	82.4	84.2	86.0	87.8	89.6	91.4	93.2	95.0	96.8	98.6	100.4	102.2					
30	64.4	66.2	68.0	68.0	69.8	71.6	73.4	73.4	75.2	77.0	78.8	80.6	82.4	84.2	84.2	86.0	87.8	89.6	91.4	93.2	95.0	96.8	98.6	102.2							
35	64.4	66.2	68.0	69.8	71.6	73.4	73.4	75.2	77.0	78.8	80.6	82.4	84.2	86.0	87.8	89.6	91.4	93.2	95.0	96.8	98.6	100.4	102.2								
40	66.2	68.0	69.8	69.8	71.6	73.4	75.2	77.0	78.8	80.6	82.4	84.2	86.0	87.8	89.6	91.4	93.2	95.0	96.8	98.6	100.4	102.2									
45	66.2	68.0	69.8	71.6	73.4	75.2	77.0	78.8	80.6	80.6	82.4	84.2	86.0	89.6	91.4	93.2	95.0	96.8	98.6	100.4											
50	68.0	69.8	71.6	73.4	73.4	75.2	77.0	78.8	80.6	82.4	84.2	86.0	87.8	91.4	93.2	95.0	96.8	98.6	102.2												
55	68.0	69.8	71.6	73.4	75.2	77.0	78.8	80.6	82.4	84.2	86.0	87.8	89.6	93.2	95.0	96.8	98.6	100.4													
60	69.8	71.6	73.4	75.2	77.0	78.8	80.6	82.4	84.2	86.0	87.8	89.6	91.4	95.0	96.8	98.6	100.4								WBGT > 104						
65	69.8	71.6	73.4	75.2	77.0	78.8	80.6	82.4	84.2	87.8	89.6	91.4	93.2	96.8	98.6	100.4															
70	71.6	73.4	75.2	77.0	78.8	80.6	82.4	84.2	86.0	87.8	91.4	93.2	95.0	96.8	100.4	102.2															
75	71.6	73.4	75.2	77.0	78.8	80.6	84.2	86.0	87.8	89.6	91.4	95.0	96.8	98.6	102.2																
80	73.4	75.2	77.0	78.8	80.6	82.4	84.2	86.0	89.6	91.4	93.2	96.8	98.6	100.4																	
85	73.4	75.2	77.0	78.8	82.4	84.2	86.0	87.8	89.6	93.2	95.0	98.6	100.4	102.2																	
90	75.2	77.0	78.8	80.6	82.4	84.2	87.8	89.6	91.4	95.0	96.8	98.6	102.2																		
95	75.2	77.0	78.8	80.6	84.2	86.0	87.8	91.4	93.2	95.0	98.6	100.4																			
100	75.2	78.8	80.6	82.4	84.2	87.8	89.6	91.4	95.0	96.8	100.4	102.2																			

NOTE: This table is compiled from an approximat formula which only depends on temperature and humidity. The formula is valid for full sunshine and a light wind. Table adapted from Bureau of Meteorology

REFERENCES

1. American College of Sports Medicine Position Stand: Exertional Heat Illness During Training and Competition. Med: Sci Sport Exerc. 2007;39(3):556-72.
2. Grundstein A, et.al. Regional heat safety thresholds for athletics in the contiguous United States. Applied Geography. 2015; 56: 55-60.
3. The Inter-Association Task Force for Preventing Sudden Death in Secondary School Athletics Programs: Best-Practices Recommendations. Journal of Athletic Training. 2013;48(4):546–553
4. National Athletic Trainers' Association Position Statement: Exertional Heat Illness. Journal of Athletic Training. 2015; 50(9): 986-1000.
5. Wet Bulb Globe Temperature Monitoring. Accessed April 2022 at https://ksi.uconn.edu/prevention/wet-bulb-globe-temperature-monitoring/.