



When is it too hot to practice?

There are 2 main methods of determining if it is too hot:

1. Wet Bulb Globe Temperature
2. Heat Index

1. Wet Bulb Globe Temperature (WBGT)

This is the most similar temperature to what an athlete FEELS on the field. It incorporates 1) temperature, 2) wind speed, 3) humidity, and 4) direction of the sun. To obtain the temperature, a WBGT thermometer is helpful. The temperature should be taken on the field where the practice or game is taking place. Ideally, a reading is obtained 30 minutes before practice to determine if it is safe to play BEFORE the athletes are on the field. It should be repeated about every 30 minutes during play. Readings should be obtained if the ambient temperature is above 80°F.

Geography matters!

When using WBGT, your activity modifications are dictated by what part of the country you live in. Lincoln, Omaha, and the eastern half of the state of Nebraska are in region 2. Below are the Region 2 cut offs along with activity modifications associated with them. Not sure if your area falls within Region 2? Check out the map at: <https://nsaa-static.s3.amazonaws.com/textfile/spmeds/wbgtregions.pdf>

Temperature cut offs for other regions can be found at: <https://ksi.uconn.edu/prevention/wet-bulb-globe-temperature-monitoring/>

“But I don’t own a WBGT thermometer!”

While not as accurate as using a thermometer at your location of practice, you can use the current WBGT found at: <https://www.weather.gov/oax/wbgt>

RECOMMENDATIONS FOR PARTICIPATION BASED ON WBGT

Region 2	Activity Guidelines
< 79.7	NORMAL ACTIVITIES 3 SEPARATE - 3 TO 5 MINUTE REST / WATER BREAKS PER HOUR
79.8 - 84.6	USE DISCRETION FOR INTENSE / PROLONGED PRACTICE 3 SEPARATE - 4 TO 6 MINUTE REST / WATER BREAKS PER HOUR MONITOR AT-RISK ATHLETES CLOSELY COLD WATER IMMERSION AVAILABLE
84.7 - 87.6	MAXIMUM PRACTICE TIME IS 2 HOURS HELMETS AND SHOULDER PADS ONLY REMOVE HELMETS AND SHOULDER PADS IF CONDITIONING 4 SEPARATE - 4 TO 6 MINUTE REST / WATER BREAKS PER HOUR MONITOR AT-RISK ATHLETES CLOSELY COLD WATER IMMERSION AVAILABLE CONTESTS: PER NFHS RULES, IMPLEMENT ADDITIONAL/EXTENDED TIMEOUTS FOR REST / WATER BREAKS
87.7 - 89.7	MAXIMUM PRACTICE TIME IS 1 HOUR HELMETS AND SHOULDERS PADS PROHIBITED NO CONDITIONING 4 SEPARATE - 5 TO 7 MINUTE REST / WATER BREAKS PER HOUR MONITOR AT-RISK ATHLETES CLOSELY COLD WATER IMMERSION AVAILABLE CONTESTS: PER NFHS RULES, IMPLEMENT ADDITIONAL/EXTENDED TIMEOUTS FOR REST / WATER BREAKS CONTESTS: CONSIDER DELAYING / POSTPONING START TIMES
> 89.7	NO OUTDOOR ACTIVITIES CANCEL OR DELAY OUTDOOR PRACTICES / CONTESTS UNTIL LOWER WBGT IS RECORDED

2. Heat Index

Heat Index has previously been widely used to determine if it is too hot to practice. It utilizes 1) temperature and 2) humidity. It does not calculate in wind speed or sun. This makes it less accurate in telling us how hot an athlete will feel, however it is an easy reading to find on many weather apps, so it may be more functional for some teams when a WBGT reading is not available.

HEAT INDEX											
ENVIRONMENTAL TEMPERATURE (F°)											
	70°	75°	80°	85°	90°	95°	100°	105°	110°	115°	120°
Relative Humidity	Apparent Temperature *										
0%	64°	69°	73°	78°	83°	87°	91°	95°	99°	103°	107°
10%	65°	70°	75°	80°	85°	90°	95°	100°	105°	111°	116°
20%	66°	72°	77°	82°	87°	93°	99°	105°	112°	120°	
30%	67°	73°	78°	84°	90°	96°	104°	113°	123°		
40%	68°	74°	79°	86°	93°	101°	110°	123°			
50%	69°	75°	81°	88°	96°	107°	120°				
60%	70°	76°	82°	90°	100°	114°					
70%	70°	77°	85°	93°	106°	124°					
80%	71°	78°	86°	97°	113°						
90%	71°	79°	88°	102°	122°						
100%	72°	80°	91°	108°							

* Combined index of heat and humidity... what it "feels like" to the body. Source: National Oceanic and Atmospheric Administration

**RECOMMENDED MODIFICATIONS
TO ATHLETIC PARTICIPATION BASED ON THE HEAT INDEX**

APPARENT TEMPERATURE	HEAT STRESS RISK WITH PHYSICAL ACTIVITY AND/OR PROLONGED EXPOSURE
90°- 104°	Heat cramps or heat exhaustion possible <i>Modify practice; take water breaks every 15 to 20 minutes.</i>
105°- 124°	Heat cramps or heat exhaustion likely, Heatstroke possible <i>Modify practice, NO HELMET OR SHOULDER PADS, t-shirt and shorts only; frequent (every 15 minutes) water and rest breaks.</i>
>125°	Heat stroke highly likely <i>Recommend NO PRACTICE!</i>

Note: This Heat Index chart is designed to provide 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. In addition, studies indicate that susceptibility to heat disorders tends to increase with age.

3. Monitor Athletes

At the end of the day, everyone reacts differently to heat. It is important to continue to monitor all athletes for signs of heat exhaustion and heat stroke. If there are concerns for heat related illness, cool them rapidly and have them discontinue practice.