



## Mustang SC Heat Policy

### Overview:

Mustang SC believes that ultimately parents are best positioned in most circumstances to protect their children from heat related illnesses. Parents best understand how their children react to heat and whether they have underlying respiratory issues. Parents are also best placed to monitor their children's hydration throughout the day and to influence what their children consume prior to attending a soccer game or training session. Therefore, we want parents to feel comfortable that they can hold their children out of a game or training session without consequence when they believe it is too hot for their children to participate.

### Training Sessions:

In most cases, training sessions will be held. Making a club wide decision in all but extreme conditions (as determined by the attached US Soccer Heat Guidelines) will be rare as the effects of the heat will be different based on the age of the players, the time of the session and whether or not the session is held on grass or on synthetic turf. If training proceeds as scheduled, parents need to determine whether or not their player will participate in the training session. If the parent withholds the player from participating in the training session, there will be no consequences for the player for missing the session. But we do ask that the parent notify the coach that their player will not participate as early as possible.

Coaches, when running training sessions in the heat, are reminded to:

1. Provide frequent breaks – no more than 15 minutes apart – and when possible, take the break in the shade. Breaks should also be longer than the normal breaks.
2. Allow any player who requests water, the ability to get water on request;
3. To modify the session's intensity and physical load to account for the weather; and
4. Pay particular attention to whether a player is showing signs of heat distress – and if such signs are seen, remove the player from the session and cool the player. In general, a player removed from a session due to heat should not be permitted to return.

### Games:

Except in the most extreme conditions, games will most likely proceed. With away games (including tournaments), we have no ability to cancel a match due to heat – it is not provided for in the NorCal rules – and decisions will be at the discretion of the hosting club. Due to the unlikelihood that games will be cancelled due to heat conditions, we will be hesitant to cancel training sessions. Acclimatizing to the heat by training in it is the best way to prepare a player for a game and to limit the possibility of the player suffering from a heat related injury or illness in a game.

With home games, we will make decisions on whether to play in two situations:

1. If we have engaged a Certified Athletic Trainer (as we do for tournaments but not league or State Cup games), we will defer to the advice of the Certified Athletic Trainer. That individual will be charged, in part, with monitoring the heat and humidity.
2. If we have not engaged a Certified Athletic Trainer (currently this is the situation for all game days other than tournaments), we will decide whether to play or not based on the US Soccer Heat Guidelines attached.

In conditions where it is hot, but we determine it is safe to play, we will advise referees officiating matches we host to give water breaks halfway through each half. If the temperature exceeds 90 degrees Fahrenheit, we will insist that heat breaks be given.

Additional information:

In addition, we advise that -

1. All teams purchase and have a shade structure that is taken to all home and away games;
2. All coaches, when offered the opportunity for water breaks accept the offer;
3. Teams, when possible are allowed to set their benches in shade, even if that requires the spectators to sit in the sun, or spectators and players be placed on the same side of the field; and
4. Parents work with their children to make sure the player:
  - (a) is adequately hydrated prior to the match, and
  - (b) has adequate fluid to remain hydrated at the match.

Any league or State Cup game cancelled due to heat will be rescheduled, if possible. Any tournament game or training session cancelled due to heat will not be rescheduled or refunded. Any camp or clinic cancelled due to heat will be rescheduled.

OSHA App:

A good app for parents to use to measure the heat index is OSHA. Download this app into your phone as it gives good information on heat conditions and additional precautions for activity participation in these conditions. [https://www.osha.gov/SLTC/heatillness/heat\\_index/heat\\_app.html](https://www.osha.gov/SLTC/heatillness/heat_index/heat_app.html)



# U.S. Soccer Heat Guidelines

**GOAL:** This document is intended as a guide for coaches, referees, and players for training in warmer climates. Additionally, this document is intended to also serve as a guide for match play, hydration breaks and participant safety during extreme temperature conditions. The information provided herein is not substitute for medical or professional care, and you should not use the information in place of a visit, consultation or the advice of your physician or other health care provider. For specific questions and concerns, please consult your health care provider or physician.

## Exertional Heat Illness

- Spectrum of conditions ranging from heat cramps and heat exhaustion to a potentially life threatening condition called exertional heat stroke (EHS)
- The ability to recognize early signs and symptoms of heat illness (including headache, nausea, and dizziness) allows for proper treatment with hydration and more rapid cooling of the body.
- Exertional heat stroke has two key components:
  1. Altered mental status (confusion, irritability, aggressive behavior, dizziness, or collapse)
  2. A rectal temperature  $>104^{\circ}\text{F}$ .

## Prevention

- Develop and implement a heat policy (heat acclimatization guidelines, activity modification guidelines based on environmental conditions, and management of heat-related illness) as part of your emergency action plan (EAP)
- Frequently monitor environmental conditions using Wet Bulb Globe Temperature (WBGT) device or Heat Index and make practice modifications (e.g., increase in the number and duration of hydration breaks, shortening practice, postponing practice/competition until cooler parts of the day)
- Follow heat acclimatization guidelines (below) during preseason practices and conditioning
- Ensure appropriate hydration policies are in place with athletes having unlimited access to water during practice and competition, especially in warm climates.
- Educate staff on the signs and symptoms of heat related illness and early management
- Consider an on-site health care provider such as an athletic trainer be onsite for all practices and competitions

## Resources/Equipment

- WBGT monitor
- Hydration capabilities- water bottles, coolers, hoses, etc.
- National Weather Service – [www.weather.gov](http://www.weather.gov)
- Phone App for WBGT - WeatherFX (iTunes or Android store)
- Ice
- Ice immersion tub or kiddie pools
- Towels and cooler
- Tent or other artificial shade if none available



Examples of WBGT monitors

## Management

### Heat Illness (Heat Exhaustion, Heat Cramps)

- Remove from training and source of heat
- Cool in a shaded area using ice towels
- Provide access to fluids/electrolytes and encourage rehydration

### Exertional Heat Stroke

- Is a medical emergency
- Immediately call EMS (911) and prepare hospital for heat related emergency
- Athlete may have confusion or altered mental status and a rectal temperature  $>104^{\circ}\text{F}$
- Remove excess clothing/equipment and immediately begin cooling the athlete by placing them in an ice-water-tub.
  - If no tub is present, rotate cold wet ice towels (every 2-3 minutes over the entire surface of the body or as much as possible)



## Acclimatization

- Acclimatization is the body's natural adaptation to exercising in the heat
- This process typically takes 10-14 days
- The protocol should require a gradual graded progression of exercise in the heat. This typically applies at the start of pre-season (summer months) where athletes are beginning fitness training and progressive training exposure in heat is recommended

## Guide for Acclimatization

- **Avoid** the hottest part of the day for training sessions (11am-4pm)
- Days 1-5
  - One formal practice a day
  - Maximum 3 hours of training time (this includes warm up, stretches and cool down)
- Days 6-14
  - Double practice days can begin on day 6 and not exceed 5 hours in total practice time between the two practices.
  - There should be a minimum of a 3 hours rest period between each training session during double practice days. The 3 hour rest period should take place in a cool environment to allow the body to fully recover
  - Each double practice day should be followed by a single practice day in which practice time on single practice days not exceeding 3 hours
  - Athletes should receive one day rest following 6 days continuous practice

## WBGT (Heat Stress Monitoring) & Region Specific Guidelines/Heat Index

- Recommend using WBGT on-site at time of training and check as often as possible.
- If on-site WBGT measures are not available, on-site measures of temperature and humidity can be used to predict WBGT using the chart below. (NOTE: Heat Index is not ideal because it doesn't factor the heat from the sun).
- If no on-site temperature measures are available, use temperature and humidity from local weather station measures and use the chart below to predict WBGT.

### Step 1: Find the WBGT

- Measure the temperature and humidity at your site
- Find the estimated WBGT corresponding below.

Wet Bulb Globe Temperature (WBGT) from Temperature and 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	84.2	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	89.6	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	100.4							
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	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														
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

### Step 2: Find your Regional Category

- Determine which region category you are in based on the map below, to determine which WBGT guidelines in the table you should follow.

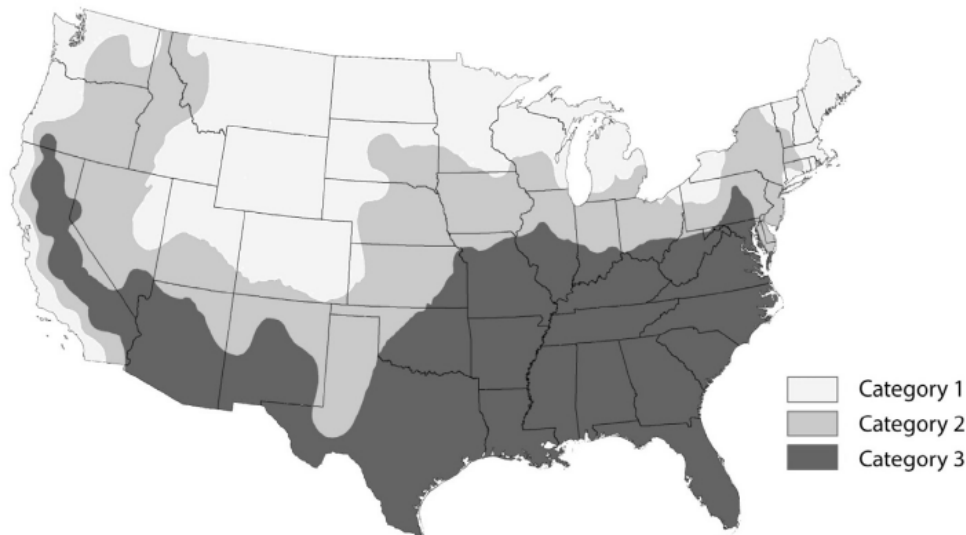


Figure: Regional Heat Category. Reprinted from "Regional heat safety thresholds for athletics in the contiguous United States", A. Grundstein, C. Williams, M. Phan, and E. Cooper, 2015, Applied Geography, Vol 56, p55-60.

### Step 3: Determine Your Conditions, Alert Level, and Recommendations

- Determine which region category you are in based on the map above, to determine which WBGT guidelines in the table you should follow.

Alert Level	WBGT by Region (°F)			Event Conditions	Recommended Actions & Breaks
	Cat 1	Cat 2	Cat 3		
Black	>86.2°	>89.8°	>92.0°	Extreme Conditions	<ul style="list-style-type: none"> <li>No Outdoor Training, delay training until cooler, or Cancel Training</li> </ul>
Red	84.2-86.1°	87.8-89.7°	90.1-91.9°	High Risk for Heat Related Illness	<ul style="list-style-type: none"> <li>Maximum of 1 hour of training with 4 by 4 minute breaks within the hour.</li> <li>No additional conditioning allowed.</li> </ul>
Orange	81.1-84.1°	84.7-87.7°	87.1-90.0°	Moderate Risk for Heat Related Illness	<ul style="list-style-type: none"> <li>Maximum of 2 hours of training with 4 by 4 minute breaks each hour, OR a 10 minute break every 30 minutes of training</li> </ul>
Yellow	76.3-81.0°	79.9-84.6°	82.2-87.0°	Less than Ideal Conditions	<ul style="list-style-type: none"> <li>3 Separate 4 minute breaks each hour, OR a 12 minute break every 40 minutes of training</li> </ul>
Green	<76.1°	<79.8°	<82.1°	Good Conditions	<ul style="list-style-type: none"> <li>Normal Activities</li> <li>3 Separate 3 minute breaks each hour of training, OR a 10 minute break every 40 minutes</li> </ul>

### Cancelation of Training

- Depending on your region category, recommend cancelation of training or delay until cooler when WBGT for Cat 1 >86.2°F; for Cat 2 >89.9°F; Cat 3 >92.0°F

### Step 4: Determine the Work to Rest Ratios – Modifications in Training

- Alert Level Green – Normal Activities, provide 3 separate 3 minute breaks each hour of training, or a 10 minute break every 40 minutes.
- Alert Level Yellow – Use discretion, provide 3 separate 4 minute breaks each hour, or a 12 minute break every 40 minutes of continuous training
- Alert Level Orange – Maximum 2 hours of training time with 4 separate 4 minute breaks each hour, or a 10 minute break after 30 minutes of continuous training
- Alert Level Red – Maximum of 1 hour of training with 4 separate 4 minute breaks within the hour. No additional conditioning allowed.
- Alert Level Black – No outdoor training, delay training until cooler or cancel

## Match Play Hydration Breaks

- WBGT of 89.6°F
- Provide hydration breaks of 4 minutes for each 30 minutes of continuous play (i.e., minute 30 and 75 of 90 minute match)

## Communication

- Provide adequate communication of environmental conditions, cooling modalities and other resources to players and staff including
  - Planned breaks for hydration
  - Duration and time of training
  - During warmer conditions, plan ahead for matches and trainings
- Ensure unlimited access to water and other fluids

Follow your Emergency Action Plan

**This guideline was developed by U.S. Soccer's Sports Medicine Department in collaboration with the Korey Stringer Institute**