



The effects of cold weather can impact health and safety during practices and games. The definition of “cold stress” varies across the United States, depending on how accustomed people are to cold weather. A player from Minnesota will have a much different threshold for cold than a player from Florida.

U.S. Soccer’s **RECOGNIZE TO RECOVER** program prepared this guide for coaches, referees and players for training or playing in colder climates. Additionally, it serves as a guide for match play and participant safety during extreme temperature conditions. The information provided is not a 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 healthcare provider. For specific questions and concerns, please consult your health care provider or physician.

## COLD WEATHER SAFETY TIPS

### Dressing for the cold

When temperatures drop and wind increases, the body loses heat more rapidly. It is important to dress appropriately when training or playing in cold weather. This also means to not overdress.

Layering clothing in a specific way (see box) is recommended and very effective. The layers can be added or removed based on body temperature and changing environmental conditions, such as temperature and wind. Allow players to wear additional clothing, like gloves, sweatshirts, sweat pants and/or hats or headbands. Also, avoid sweating before going outside because your body will cool too quickly.

**Layering Technique for Effective Dressing in the Cold**

- Inner Layer 1:** wicking layer (wool or polyester)
- Middle Layer 2:** insulated layer (fleece or wool)
- Outer Layer 3:** water and wind proof layer

### Stay Dry

Wet and damp conditions add to the risk of injury or illness during cold weather. Players, coaches and referees should recognize these factors and use additional caution to watch for potential cold injuries.

If players do get wet during training or play, remove wet or saturated clothing and replace it with dry clothing. This becomes more important if the individual will remain out of play or anticipates standing around for a prolonged period of time. A hat, gloves and extra pair of socks can also keep extremities dry in case of snow or rain.

### Stay Hydrated

Cold weather often reduces our ability to recognize that we are becoming dehydrated. If you are thirsty you have already become dehydrated. Try putting warm or hot water in a water bottle so that your water doesn’t freeze when training for extended amounts of time outside.

### Take Action

If someone is suffering from a cold-related illness, get him or her into a warm location as soon as possible. Identify a nearby warming location before the start of training or play.

During games provide blankets or other items for players to stay warm while they are on the bench and allow additional substitutions or warming breaks.

### Wind Chill

Pay attention to the wind chill temperature (WCT) Index. (see chart below) Even prolonged exposure in relatively mild temperatures can lead to frostbite. The National Weather Service wind chill chart can serve as a guide to safe play in cold weather.



# COLD WEATHER GUIDELINES

## STEP ONE - DETERMINE WIND CHILL TEMPERATURE

The effects of cold weather can impact health and safety during practices and games. The definition of “cold stress” varies across the United States, depending on how accustomed people are to cold weather. A player from Minnesota will have a much different threshold for cold than a player from Florida.

WIND CHILL TEMPERATURE (WCT) INDEX														
TEMPERATURE IN DEGREES FAHRENHEIT														
		40	35	30	25	20	15	10	5	0	-5	-10	-15	-20
WIND SPEED	5	36	31	25	19	13	7	1	-5	-11	-16	-22	-28	-34
	10	34	27	21	15	9	3	-4	-10	-16	-22	-28	-35	-41
	15	32	25	19	13	6	0	-7	-13	-19	-26	-32	-39	-45
	20	30	24	17	11	4	-2	-9	-15	-22	-29	-35	-42	-48
	25	29	23	16	9	3	-4	-11	-17	-24	-31	-37	-44	-51
	30	28	22	15	8	1	-5	-12	-19	-26	-33	-39	-46	-53
	35	28	21	14	7	0	-7	-14	-21	-27	-34	-41	-48	-55
	40	27	20	13	6	-1	-8	-15	-22	-29	-36	-43	-50	-57
	45	27	19	12	5	-2	-9	-16	-23	-30	-37	-44	-51	-58
	50	26	19	12	4	-3	-10	-17	-24	-31	-38	-45	-52	-60

## STEP TWO - FIND YOUR ALERT LEVEL

Use this chart to determine the alert level at your location based on the wind chill temperature.

ALERT LEVEL	WCT (F)	EVENT CONDITIONS	RECOMMENDED ACTION
<b>BLACK</b>	< 0	Extreme Conditions*	Cancel or attempt to move activities indoors. Frostbite could occur
<b>RED</b>	1-15	High Risk for Cold Related Illness*	Consider modifying activity to limit exposure and allow for more frequent chances to rewarm
<b>ORANGE</b>	16-24	Moderate Risk for Cold Related Illness*	Provide additional protective clothing, cover as much exposed skin as practical, and provide opportunities and facilities for rewarming
<b>YELLOW</b>	25-30	Less than Ideal Conditions*	Be aware of the potential for cold injury and notify appropriate personnel of the potential
<b>GREEN</b>	>30	Good Conditions	Normal activities

\* In wet environments with colder conditions, the following situations are accelerated. Use additional caution to recognize potential cold injuries. (NOTE: These WCT guidelines were adapted from the NATA position statement: Environmental Cold Injuries by Cappaert et al. 2008.)



## COMMON COLD RELATED ILLNESSES

### Frostbite

Frostbite is what happens when skin and tissue actually begins freezing. It can cause numbness, tingling or stinging in the affected area. The skin may also lose its natural color, turning pale or bluish. Frostbite can permanently damage body tissue, leading to the loss of an extremity in severe cases.

The most commonly affected areas for frostbite include: nose, ears, cheeks, chin, fingers and toes. Use body heat or warm (but not hot) water to begin warming the affected area.

### Recognize

- Swelling/Edema
- Redness or mottled gray skin appearance
- Tingling or burning
- Blisters
- Numbness or loss of sensation

### Recover

Gradually rewarm affected area with warm water

### WARNING:

- Do not rub or massage the frostbitten area. This may actually increase the damage.
- Do not use heating pads, heat lamps or the heat of a stove, fireplace, or radiator for warming since affected areas are numb and can be easily burned.

\*If any of the symptoms persist for longer than a few hours, seek medical attention from emergency department or physician

### Hypothermia

Hypothermia is the result of your internal body temperature dropping to 95 degrees Fahrenheit (35 degrees Celsius) or less. It can be fatal if not detected promptly and treated properly.

Hypothermia typically begins with feelings of intense cold, shivering and behavior which are more quiet and disengaged than normal. As the condition worsens, the individual seems confused, sleepy and may begin slurring speech. To begin treating hypothermia, start by warming the center of the individual's body first. Make sure they are dry and cover them with layers of blankets, clothing, towels or whatever else is around to contain their body heat. Warm nonalcoholic beverages may also help increase body temperature. If hypothermia is suspected, get the on-site medical provider or call 911.

### Recognize

- Shivering vigorously or suddenly not shivering
- Increased blood pressure
- Lethargy
- Impaired mental function
- Slurred speech

### Recover

- Remove damp/wet clothing
- Apply heat to the trunk of the body, not limbs
- Provide warm fluids and food
- Avoid applying friction massage to tissues

### WARNING:

Do not use a hot shower or bath to treat hypothermia because it could cause the individual to go into shock.

\*If symptoms persist seek medical attention from a physician or Emergency department

**Heat loss can occur through head and hands**



**Exposed skin is a greater risk for frostbite**

NOTE: This table was adapted from the NOAA and NWS and is compiled from the following formula Wind Chill (°F) = 35.74 + 0.6215T - 35.75(V^0.16) + 0.4275T(V^0.16) Where, T= Air Temperature V=Wind Speed (mph)