

Cold weather is defined as any temperature that can negatively affect the body's regulatory system. It is important to remember that temperatures do not have to be freezing to have this effect. Individuals engaged in sports activities in cold, wet or windy conditions are at risk for environmental cold injuries

**Recommended Preventative Strategies:**

**Competition/Practice Modifications:**

- The Athletic Trainer (ATC) will monitor and issue an advisory when applicable.  
(If no ATC is present the AD will make the decision followed by the coaching staff).
- Athletic Department officials will monitor temperature, wind speed, wind chill, and precipitation through the National Weather Service and will be in contact with the coaching staff.
- Based on information from the National Weather Service and local weather stations, measurements, ATC will determine the risk of potential danger to participants.

<b>RISK</b>	<b>TEMP/WINDCHILL</b>	<b>MODIFICATIONS</b>
• Low Risk	30°F & above	Outside participation allowed w/ appropriate Clothing.
• Moderate Risk	20° – 29° F	Additional protective clothing (hat, gloves) Provide re-warming facilities
• High Risk	10° F -19° F	Outside participation limited to 45 minutes* All participants must have appropriate clothing. Provide re-warming facilities
• Extreme Risk	Below 10° F	Termination of all outside activities#

\* See attached chart for Frostbite information

**Competition Modifications:**

When necessary, competition modifications should be considered to ensure the safety of the athletes.

This may include:

- Extended half times
- access to a warm building
- Abbreviated introductions
- ensuring/mandating proper clothing

**Additional Directives for coaches and student athletes:**

- Exercise in windy or rainy conditions or water immersion in cold temperatures has unique challenges to the body's ability to maintain normal temperature. The transfer of body heat in water may be 70 times greater than in air.
- In Cold exposure; activity requires more energy from the body. Additional calorie intake may be required.
- In Cold exposure; activity requires similar hydration to room temperature; however the thirst reflex is not activated. Conscious efforts before and after practice to hydrate should be initiated.
- Never train alone. A simple ankle sprain in cold weather may become life threatening.
- Appropriate clothing must be closely monitored and **mandated**

**Clothing Guidelines:**

In cold weather conditions appropriate clothing should be worn to prevent cold exposure. Both the Athletic Trainer(s) and the coaches should mandate the student-athletes to implement the following:

- Wear several layers around the core of the body (especially those who are not very active).
  - The first layer should wick moisture away from the body (**Dry Tech, Underarmor**)
  - The top layers should trap heat and block the wind (fleece)
  - The Outer layer should be wind and water-resistant or waterproof
  - No cotton as inside layer.
- Long pants designed to insulate.
  - Sweatpants are a good choice as a base layer
  - On windy or wet days, wind pants or a nylon shell should be worn on the surface layer
- Long sleeved garment that will break the wind

- Gloves
  - Hat or helmet to protect the ears (cover/tape ear holes of helmets for wind, cold protection)
  - Face protection
  - Moisture wicking socks
- It is important that athletes avoid wearing multiple layers of cotton. When the body sweats the cotton will become dense and permeated with sweat

**Signs/ Symptoms of Cold Stress:**

- Fatigue
- Confusion
- Slurred Speech
- Red or Painful extremities
- Dizziness
- Blurred vision
- Numbness/tingling of skin
- Uncontrollable shivering
- Swollen Extremities
- Headache

**COLD INJURY**

**Hypothermia:** Body Core Temperature below 95°F

Symptoms include:

- Shivering
- Impaired motor control
- Decreased heart rate
- Impaired mental function
- Lethargy, amnesia
- Pale, cold face and extremities
- Slurred speech

*Treatment:* Remove wet clothing, warm with dry insulating blankets, cover the head, get to a warm environment. Provide warm beverages, avoid friction, avoid warming extremities initially

**Frostnip/Frostbite:** Frostbite is actual freezing of body tissues.

Symptoms include:

- Dry, waxy skin
- Burning, tingling
- White/blue/gray patches
- Swelling
- Limited movement
- Aching, throbbing, shooting pain

*Treatment:* Re-warm slowly in warm water (not hot); avoid friction/rubbing tissue

**Chilblain:** is an exaggerated or uncharacteristic inflammatory response to cold exposure.

Symptoms include:

- Red or blue lesions
- Tenderness
- Swelling
- Itching, numbness, burning
- Increased temperature

*Treatment:* Wash, dry area; elevate, cover with loose clothing/blankets; avoid friction, lotion.

Wind Speed	Air Temperature (°F)																		
	40	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45	
5	36	31	25	19	13	7	1	-5	-11	-16	-22	-28	-34	-40	-46	-52	-57	-63	
10	34	27	21	15	9	3	-4	-10	-16	-22	-28	-35	-41	-47	-53	-59	-66	-72	
15	32	25	19	13	6	0	-7	-13	-19	-26	-32	-39	-45	-51	-58	-64	-71	-77	
20	30	24	17	11	4	-2	-9	-15	-22	-29	-35	-42	-48	-55	-61	-68	-74	-81	
25	29	23	16	9	3	-4	-11	-17	-24	-31	-37	-44	-51	-58	-64	-71	-78	-84	
30	28	22	15	8	1	-5	-12	-19	-26	-33	-39	-46	-53	-60	-67	-73	-80	-87	
35	28	21	14	7	0	-7	-14	-21	-27	-34	-41	-48	-55	-62	-69	-76	-82	-89	
40	27	20	13	6	-1	-8	-15	-22	-29	-36	-43	-50	-57	-64	-71	-78	-84	-91	
45	27	19	12	5	-2	-9	-16	-23	-30	-37	-44	-51	-58	-65	-72	-79	-86	-93	
50	26	19	12	4	-3	-10	-17	-24	-31	-38	-45	-52	-60	-67	-74	-81	-88	-95	

Wind speed based on measures at 33 feet height. If wind speed measured at ground level multiply by 1.5 to obtain wind speed at 33 feet and then utilize chart.

Risk of Frostbite		
Green	Yellow	Red
Slight Danger (frostbite occurs in less than two hours in dry, exposed skin)	Increased Danger (frostbite could occur in 45 minutes or less in dry, exposed skin)	Great Danger (frostbite could occur in 5 minutes or less in dry, exposed skin)
Wet skin could significantly decrease the time for frostbite to occur		