

CAC Athletic Department

COLD WEATHER POLICY

Practice or competition in cold environmental conditions poses special problems for student- athletes and staff. Cold exposure is a primary concern as it can not only be uncomfortable, but also hinder athletic performance and even become life threatening. A drop in muscle temperature or body core temperature reduces physiological factors such as endurance, power, strength and aerobic capacity. Constant surveillance and education are necessary to prevent injuries and illness from exposure to excessive cold. Asthma attacks may be triggered when the excessive cold is combined with exertion. Additionally, the two primary conditions associated with exposure to the cold are frostbite and hypothermia.

Frostbite - the freezing of superficial tissues

- The most susceptible parts of the body are the extremities such as fingers, toes, ear lobes or the tip of the nose.
- Some predisposing factors include wet skin, wind chill, dehydration, gender, race, hypotension (low blood pressure), anemia, diabetes and sickle cell disease.

Hypothermia - a significant drop in core body temperature (below 95°F)

- Occurs when rapid cooling, exhaustion and energy depletion coincide.
- Warning signs include uncontrollable shivering, memory loss, disorientation, incoherence, slurred speech, drowsiness and exhaustion.
- Some unique predisposing factors: Exposure to rain and/or wind or increased sweating; individuals who have an active infection and those with diabetes.
- ***The resulting failure of temperature regulating mechanisms constitutes a medical emergency.***

Hypothermia frequently occurs at temperatures *above* freezing. A wet and windy 30° – 50° F exposure may be as serious as *subzero exposure*. When the body and clothing are wet (whether from sweat, rain or snow or immersion), the cooling is even more pronounced due to evaporation of the water held close to the skin by wet clothing. Therefore, CAC has a cold weather policy based on the wind chill factor not the ambient temperature, as wind speeds can attribute to a significant increase in body cooling.

General Guidelines:

A lower wind chill can increase the rate at which certain cold- weather dangers, such as frostbite and hypothermia can develop. There are precautions to take to avoid them when outside in extreme weather, such as wearing proper clothing, wearing dry clothing and using appropriate equipment.

Clothing Guidelines:

In cold weather conditions appropriate clothing should be worn to prevent cold exposure. Both the athletic trainer and the coaches should mandate that student-athletes implement the following:

- > Wear several layers around the body core, especially those who are not very active.
 - Inner layers should wick moisture away from the body
 - Middle layers should trap heat and block the wind
 - Outer layers should be wind and water-resistant or waterproof
 - Cotton is not preferable for any layer
- > Long pants designed to insulate and/or shield
 - Sweatpants are a good choice as a base layer
 - On windy or wet days wind pants or a nylon shell are preferable for the outer layer
- > Long sleeved garment that will break the wind
- > Gloves (mittens are preferable)

- > Heat loss from the head and neck can be as much as 50% of total heat loss; therefore the head and neck should be covered during cold conditions.
 - Hat or helmet to protect the ears (cover/tape ear holes of helmets for wind and cold protection)
 - Moisture wicking socks
 - Face protection

Additional Guidelines for coaches and student athletes:

In addition to the above guidelines it is recommended that additional directives be given to student athletes.

- Cold exposure/activity requires more energy from the body therefore, eat properly.
- Calorie intake above normal may be required.
- Cold exposure can be affected by poor hydration. Dehydration affects the body’s ability to regulate temperature and increases the risk of frostbite.
- Cold exposure/activity requires similar hydration to room temperature; however, the thirst reflex is not activated. Conscious efforts to hydrate before and after practice should be initiated.
- Never train alone. A simple ankle sprain in cold weather may become life threatening.
- **Student-athletes should be instructed on signs of cold stress (wind chill, frostbite and hypothermia).** Fatigue, confusion, slurred speech, red or painful extremities, swollen extremities, blurred vision, red watery eyes, dizziness, headache, numbness, tingling of skin and extremities, shivering, uncontrollable shivering, etc. are several warning signs of cold.



Wind Chill Chart



		Temperature (°F)																		
		Calm	40	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
Wind (mph)	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	26	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	
	55	25	18	11	4	-3	-11	-18	-25	-32	-39	-46	-54	-61	-68	-75	-82	-89	-97	
60	25	17	10	3	-4	-11	-19	-26	-33	-40	-48	-55	-62	-69	-76	-84	-91	-98		

Frostbite Times 30 minutes 10 minutes 5 minutes

Wind Chill (°F) = 35.74 + 0.6215T - 35.75(V^{0.16}) + 0.4275T(V^{0.16})
 Where, T= Air Temperatur · (°F) V= Wind Speed (mph) Effective 11/01/01

CAC Athletics Cold Policy: Practice Modifications *(Utilize Clothing and Additional Guidelines as listed above)*

Wind Chill Factor and/or Temperature of 38°F or above:

Wet or Dry Conditions • No modifications

Wind Chill Factor and/or Temperature of 33°F-37°F

- Wet Conditions** • 30 minutes of exposure with 20 minutes indoors
- May return (w/ dry clothing) for an additional 30 minutes outdoors for a maximum total of 60 minutes of exposure time
 - Dry clothing, particularly next to skin (hands, feet, head)
 - Athletes should be in warm ups or sweats with extremities and head covered
- Dry Conditions** • No modifications

Wind Chill Factor and/or Temperature of 31°F-32°F

- Wet Conditions** • All practices indoors. **No outside practices.**
- Dry Conditions** • 40 minutes of continuous exposure time with 15 minutes indoors
- May return for an additional 30 minutes outdoors for a maximum total of 70 minutes of exposure time
 - Athletes **MUST** be in warm ups or sweats with extremities and head covered

Wind Chill Factor and/or Temperature of 26°F-30°F

- Wet Conditions** • All practices indoors. **No outside practices.**
- Dry Conditions** • 30 minutes of continuous exposure time w/ 15 minutes in gym/indoors
- May return for an additional 30 minutes outdoors for a maximum total of 60 minutes of exposure time
 - Athletes **MUST** be in warm ups or sweats with extremities and head covered

Wind Chill Factor and/or Temperature of 25°F or lower

Wet or Dry Conditions • All practices will be indoors. **No outdoor practices**

Guidelines for Cold Weather apply to CAC practices only. Due to commitments with other schools and game officials, it can be extremely difficult to reschedule games. In order to maintain a good working relationship with other schools and game officials, games shall proceed as scheduled unless mutually agreed upon by both head coaches to reschedule events.

Individuals/groups involved with making decisions to modify game status will be:
CAC Administration, Athletic Trainer, Officials, Host Facilities Staff and Home and Visiting Coaching Staffs.

Weather measurements will be taken using www.weather.com or www.noaa.gov and zip code 72113.