

VERMONT PRINCIPALS' ASSOCIATION

Procedure for Athletic Participation in the COLD

COLD INJURY

- Cold weather is defined as any temperature that can negatively affect the body's thermoregulatory 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 and/or windy conditions are at risk for environmental cold injuries
- **Reminder: Windy & Wet conditions reduce body temperature 3-5 times quicker**

STEPS FOR MONITORING COLD WEATHER:

- Weather should be monitored by designated athletic department personnel (Athletic Trainer if present) and an advisory should be issued to school coaching staff when applicable. Usually by email **the day prior** to the event warning of the potential, **and the day of the** event with potential modifications.
- Temperature, wind speed, and wind chill will be monitored.
- Athletic Department officials will use a **Wind Chill Index Chart (Chart 1)** as a measurement for impending weather situations and adjust outside activities as necessary using the **Activity Modification Table 1**
 - The Wind Chill Index considers effects of temperature and wind speed (see Chart 1 below)
 - Keeping in mind that precipitation increases risk dramatically
 - This chart is available at: <http://www.nws.noaa.gov/om/winter/windchill.shtml>
- Based on information from the National Weather Service, local weather stations and local/on-site Cold Index measurements, determine the risk of potential danger to participants. Issue a warning and implement the practice or game plan for that day to be distributed to all coaches.

Activity Modification Table 1

<u>RISK</u>	<u>Temp/Windchill</u>	<u>MODIFICATIONS[#]</u>
Low Risk	30°F & below	Outside participation allowed w/appropriate [^] clothing
Moderate Risk	25°F & below	Mandate additional protective clothing (hat, gloves, layers) Limit practice time to 60-90 minutes/15 min rewarm Provide re-warming facilities (warm dry environment, fluids, blankets, hot packs)
High Risk	15°F & below	All participants must have appropriate clothing as above Cover all exposed skin (cover helmet ear holes) Outside participation limited to 45 minutes/15min rewarm Provide re-warming facilities (warm dry environment, fluids, blankets, hot packs)
Extreme Risk	0°F or below	Termination of all outside activities * #

*Frostbite can occur in 30 minutes with minimal wind. See attached Windchill chart

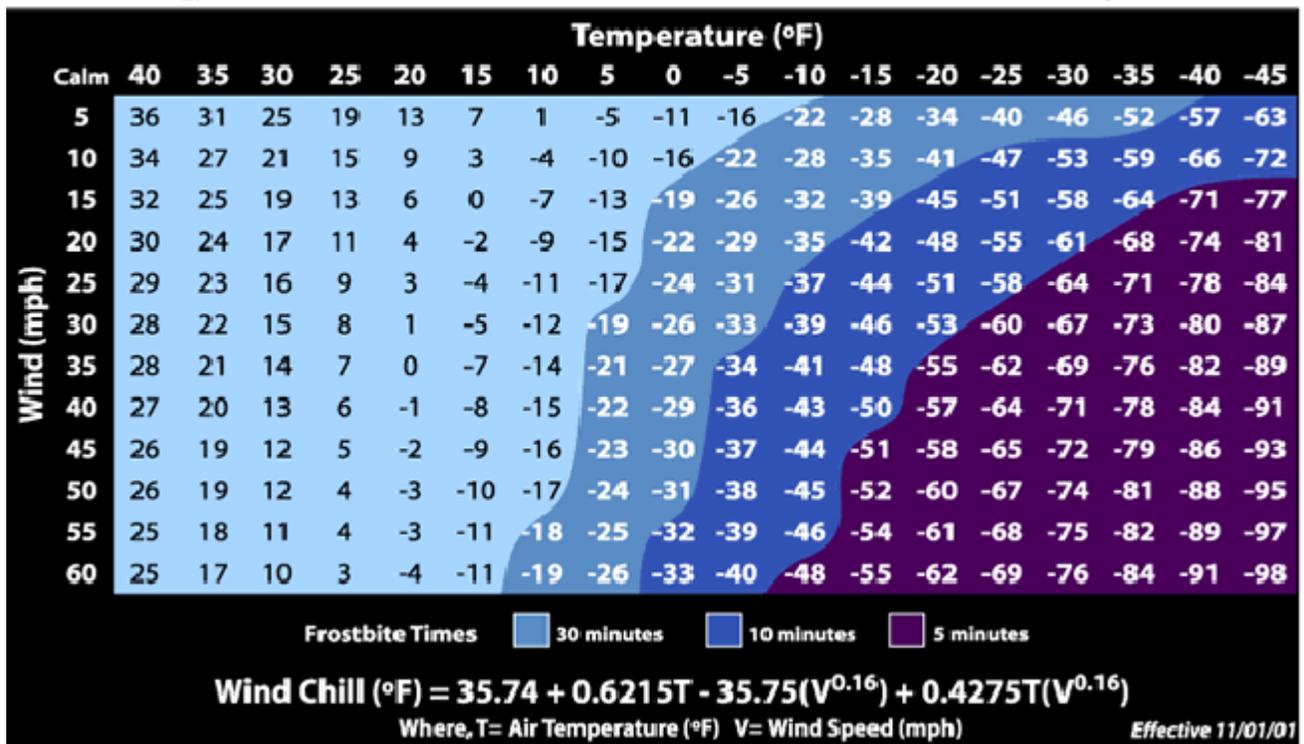
#Nordic ski teams, Alpine ski teams, and snowboard teams are subject to coach's and venue location discretion. These participants and the nature of their sport dictate necessary equipment/clothing for such extreme weather. Venues issue warnings & "wind holds".

[^]See appropriate clothing on following page under Clothing Recommendations

Chart 1



NWS Windchill Chart



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POLICY for Athletic Participation in the COLD

Recommended Preventative Strategies:

Competition/Practice Modifications:

- Consider extended half-times to allow for rewarming
- Provide access to a warm building
- Consider abbreviated introductions
- Ensuring/mandate proper clothing (hats, gloves, pants)
- Consider a "EZ" up tent for players/officials for protection from the elements
- Coaches should be vigilant and monitor player's physical condition and mental status
- Have adequate rehydration fluids available, consider warm beverages
- Have hotpacks, blankets, additional warm, dry clothing available

Appropriate Clothing^:

In cold weather conditions appropriate clothing should be worn to prevent cold exposure. Both the Athletic Trainer(s) and coaches should require 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 (DryTech, underarmor)
 - The top layers should trap heat, block the wind (fleece, windblock)
 - No cotton as inside layer.
 - Outside layer should be water resistant/waterproof
- Long pants designed to insulate.
 - On cold/and or windy days windpants or a nylon shell should be worn on the surface layer to break the wind.
- Long sleeved garment that will break the wind
- Gloves
- Hat or helmet to protect the ears; tape helmet ear holes for cold/wind protection
- Face protection
- Moisture wicking socks (preferably wool blend)

-It is important that athletes avoid wearing multiple layers of cotton. When the body sweats the cotton will become dense and permeated with sweat

Factors Affecting Body Temperature Regulation in Cold:

- Wind and moisture (rain) *dramatically* increase heat loss from the body
- Cold exposure/activity requires more energy from the body. Additional calorie intake may be required.
- 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 (see above)
- Increased risk factors: Previous cold injury, females, low body weight, asthma, CV conditions

COLD INJURY DEFINITIONS:

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. Most susceptible are fingers, toes, earlobes, nose.
- Symptoms include:
 - dry, waxy skin
 - burning, tingling
 - white/blue/gray patches
 - swelling
 - limited movement
 - aching, throbbing, shooting pain

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

Chillblain:

- An exaggerated or uncharacteristic inflammatory response to cold exposure
- Symptoms include:
 - red or blue lesions
 - tenderness
 - increased temperature
 - swelling
 - itching, numbness, burning

Treatment: wash, dry area, elevate, cover with loose clothing/blankets, avoid friction, lotion

General Signs/ Symptoms of Cold Stress:

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

References: www.NATA.org/position-statements Environmental Cold Injuries
NCAA Sports Medicine Handbook 2014

