

HARFORD COUNTY PHYSICAL EDUCATION/ATHLETICS

COLD WEATHER Updated 7/21/22

BEST PRACTICES FOR MODIFICATION OF PARTICIPATION

COLD INJURY

- 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

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

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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)
- PE teachers should be vigilant and monitor student's physical condition and mental status

Clothing:

In cold weather conditions appropriate clothing should be worn to prevent cold exposure. Both the Athletic Trainer(s) and teachers should require the student 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, underarmour)
 - 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.
 - Sweatpants are a good choice.
 - 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/earmuffs to protect the ears
- Face protection
- Moisture wicking socks (preferably wool blend)

-It is important that students 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)

HARFORD COUNTY PHYSICAL EDUCATION COLD WEATHER BEST PRACTICES FOR MODIFICATION OF PARTICIPATION

STEPS FOR MONITORING COLD WEATHER:

- Weather should be monitored by the designated physical education department personnel (if a Certified Athletic Trainer is not present) and an advisory should be issued to PE staff when applicable.
- Temperature, wind speed, and wind chill will be monitored.
- Physical Education Department teachers will use a Wind Chill Index Chart as a measurement for impending weather situations.
 - The Wind Chill Index considers effects of temperature and wind speed (see below)
 - The chart is available at: <https://www.weather.gov/safety/cold-wind-chill-chart>
- 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.

RISK	Temp/Windchill	MODIFICATIONS[#]
Low Risk	30°F & above	Outside participation allowed w/appropriate clothing
Moderate Risk	29°F – 20°F	Mandate additional protective clothing (hat, gloves) Provide re-warming facilities
High Risk	19°F – 10°F	Outside participation limited to 45 minutes* All participants must have appropriate clothing Provide re-warming facilities
Extreme Risk	9°F or below	Termination of all outside activities #

*Frostbite can occur in 30 minutes.