

# Sports Safety Guidelines: Cold Weather

## Washington County Schools Athletic Training

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A safety threat exists when the physically active cannot maintain heat. Cold exposure can be uncomfortable, impair performance, increase injury risk and may be life threatening. Cold Weather is defined as any temperature that can negatively affect the body's regulatory system. These do not have to be freezing temperatures.

The following guidelines have been established for practice and event participation.

### Cold Weather Practice Recommendations:

Wind Chill Temperature ABOVE 36°	Normal Practice
33°- 35° with Precipitation	No more than 40 minutes outside per session May return outside after 20 minutes indoors
32° or Below with Precipitation	No Outside Practice
32°- 35° without Precipitation	No more than 1 hour outside per session May return outside after 30 minutes indoors
26°- 31° without Precipitation	No more than 30 minutes outside per session May return outside after 15 minutes indoors
25° or Below without Precipitation	No Outside Practice

The wind chill temperature is how cold people and animals feel when outside. Wind chill is based on the rate of heat loss from exposed skin caused by wind and cold. As the wind increases, it draws heat from the body, driving down skin temperature and eventually the internal body temperature. Therefore, the wind makes it FEEL much colder and poses a more severe threat to our bodies.

### **Cold Exposure Can Be Life Threatening; Know the Signs:**

Early recognition of cold stress is important. Shivering, a means for the body to generate heat, serves as an early warning sign. Excessive shivering contributes to fatigue and makes performance of motor skills more difficult. Other signs include numbness, pain, swelling and redness in fingers and toes or a burning sensation of the ears, nose or any exposed flesh. Eyes may be red and watery, and athlete may complain of headache or dizziness.

As cold exposure continues, the core temperature drops. When the cold reaches the brain, a victim may exhibit sluggishness, poor judgment and may appear disoriented. Speech becomes slow and slurred, and movements become clumsy. If the participant wants to lie down and rest, the situation is a medical emergency and the emergency action plan should be activated.

## Prevention of Cold Exposure Injury

- In cold weather temperatures proper layered clothing should be worn and encouraged. These include:
  - Several layers around the core of the body to insulate, especially for those individuals who are least active
  - Long pants designed to insulate. A nylon shell or windpant on top serves well as a wind break.
  - Long sleeve shirt/sweatshirt/coat designed to block wind and insulate. These may be layered
  - Gloves
  - Ear Protection/Hat
  - Wicking socks that do not hold moisture inside. Cotton absorbs and holds moisture, wool is a better alternative.
  - Athletes who are not dressed adequately for the weather should not be allowed to participate for his or her safety.
- Cold exposure requires more energy from a body. Additional caloric intake may be required to support energy needs.
- Cold weather activity has similar hydration needs to warm weather activity. Athletes lose more water through respiration and sweat as the air is much drier than in warmer less windy months. Though the thirst reflex is not activated as quickly in cold, a conscious effort to hydrate before, during and after activity should be made.
- Never allow athletes to train alone in cold weather.

## Common Cold Exposure Injuries

<b>Frostnip</b>	<p>A nonfreezing injury of the skin, usually of the fingers, toes, ears, cheeks, and chin. Redness, numbness and tingling are present, but no tissue freezing occurs. Symptoms develop when blood vessels supplying the affected tissues narrow because of the cold temperature. Frostnip occurs at temperatures of about 59° or below.</p> <p>Do not rub affected area, but gently rewarm the skin with clothing or skin contact.</p>
<b>Chilblain</b>	<p>A more significant nonfreezing injury of the skin, which can also occur at temperatures at or below 59°. Swelling of the exposed area is noted due to the rupturing of blood vessel walls in addition to the redness, numbness and tingling of frostnip.</p> <p>Do not rub affected area, but gently rewarm the skin with clothing or skin contact.</p>
<b>Frostbite</b>	<p>Frostbite is the destruction of body tissues due to freezing which occurs at temperatures 32°F and below. Ice crystal formation in the tissues breaks apart cells, thereby destroying the tissues.</p> <p>Do not rub. Immerse the affected area in a warm, not hot, bath to reheat quickly.</p>
<b>Hypothermia</b>	<p>Abnormally low core body temperature. Because it happens gradually and affects thinking, an athlete may not realize he or she needs help. That makes it especially dangerous. A body temperature below 95° F is a medical emergency and can lead to death if not treated promptly.</p> <p>Symptoms include pale, bluish skin, mental and motor impairment, slurred speech, fatigue, decreased or abnormal heart rate and pulse, slow and shallow breathing.</p> <p>Warm the body as best as possible and activate EMS.</p>

Factors that may contribute to cold injuries include: dehydration; poor conditioning; wearing wet or tight clothing; malnutrition; altitude; or medical conditions associated with poor circulation, such as diabetes, heart disease, anemia, or sickle cell disease.

