ENVIRONMENTAL COLD INJURIES

**Hypothermia**  
**Symptoms:**  
- Mild: Vigorous shivering, increased blood pressure, fine motor skill impairment, lethargy, apathy and mild amnesia  
- Moderate or severe: No more of shivering, very cold skin, depressed vital signs, impaired mental function, slurred speech, unconsciousness and gross motor skill impairment

**What to Do:**  
- Remove wet or damp clothing then insulate the body, including the head, with warm, dry clothing or blankets.  
- Move the athlete to a warm shelter, protected from wind and rain.  
- Apply heat only to the trunk and heat transfer areas of the body, such as armpits, chest wall and groin.  
- Don’t rewarm the extremities — it could send cold blood to the core and lead to a drop in core temperature, which may cause cardiac arrhythmias and death.  
- Provide warm fluids and foods.  
- Avoid applying friction massage to tissue, which can increase damage if frostbite is present.

**Chilblain**  
**Symptoms:**  
- Small red bumps, swelling, tenderness, itching and pain

**What to Do:**  
- Remove wet or constriction clothing.  
- Gently wash and dry the area.  
- Elevate the area and cover with warm, loose, dry clothing or blankets.  
- Don’t disturb the blisters or apply friction massage.  
- Avoid lotions, creams or high levels of heat.  
- Avoid any weight bearing on the affected area.

**Frostbite**  
**Symptoms:**  
- Mild: Swelling, redness or mottled gray skin appearance, stiffness and momentary tingling or burning  
- Deep: Edema, mottled gray skin appearance, tissue that feels hard and does not rebound, blisters and numbness or loss of sensation

**What to Do:**  
- Rule out the presence of hypothermia.  
- Rewarm the tissue if there isn’t a chance of refreezing.  
- Immers the affected tissue into a warm bath of gently circulating water for 15 to 30 minutes.  
- Rewarming should be done slowly, so water temperature shouldn’t exceed 98 degrees.  
- thawing will be complete when the tissue is pliable and color and sensation have returned.  
- Note that rewarming can be painful, so a physician may prescribe pain medication.

**Immersion Foot**  
**Symptoms:**  
- Burning, tingling or itching, loss of sensation, bluish or blotchy skin, swelling, pain or sensitivity, blisters, skin fissures and maceration

**What to Do:**  
- Thoroughly clean and dry the feet.  
- Apply warm packs or soak the affected area in warm water for approximately five minutes.  
- Put on clean dry socks.  
- Allow footwear to dry before reusing.

**Staying warm, staying safe**  
- Wear insulated clothing that also allows moisture to evaporate.  
- Dress in layers that can be adjusted with changes in the weather.  
- Use external heaters.  
- Take regular indoor breaks.  
- Maintain a well-balanced diet  
- Stay hydrated with water or sports drink.  
- Have extra shoes, socks and gloves available to replace wet clothing.  
- Athletes who are young, old, diabetic, women or African-American should take extra precaution as they are at greater risk.

Source: National Athletic Trainers’ Association