

# ENVIRONMENTAL COLD INJURIES

## SYMPTOMS:

- **Mild:** Vigorous shivering, increased blood pressure, fine motor skill impairment, lethargy, apathy and mild amnesia
- **Moderate or severe:** Absence 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.
- For moderate or severe hypothermia, transport to a hospital for rewarming should be the priority.

## Hypothermia

OCCURS WHEN THE CORE BODY TEMPERATURE REACHES BELOW 95 DEGREES.



## SYMPTOMS:

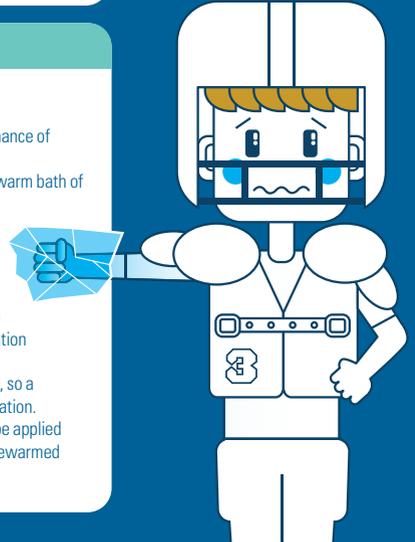
- **Mild:** Swelling, redness or mottled gray skin appearance, stiffness and momentary tingling or burning
- **Deep:** Edema, mottled gray skin appearance, tissue that feels hard and does not rebound, blisters and numbness or loss of sensation

## WHAT TO DO:

- Rule out the presence of hypothermia.
- Rewarm the tissue if there isn't a chance of refreezing.
- Immerse 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.
- Loose fitting wound dressings can be applied to the injured site once the area is rewarmed and dried.

## Frostbite

- THE FREEZING OF BODY TISSUE.
- A LOCALIZED RESPONSE TO A COLD, DRY ENVIRONMENT THAT CAN BE WORSENERD BY SWEAT COOLING THE TISSUE.



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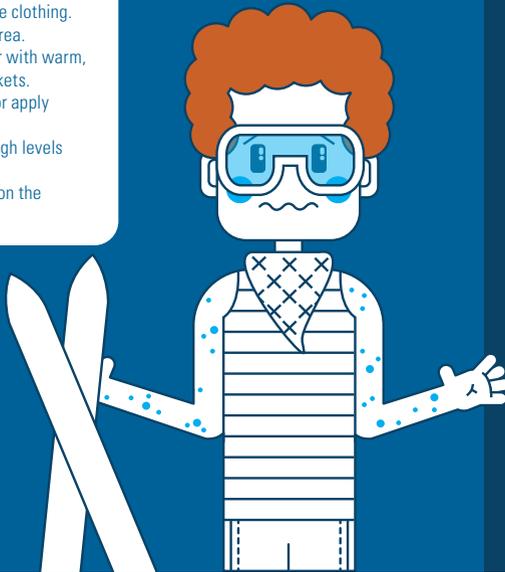
Small red bumps, swelling, tenderness, itching and pain

## WHAT TO DO:

- Remove wet or constrictive 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.

## Chilblain

- A NONFREEZING INJURY OF THE EXTREMITIES.
- OCCURS WITH EXTENDED EXPOSURE TO COLD, WET CONDITIONS.



## 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.

## Immersion Foot

- A NONFREEZING INJURY OF THE EXTREMITIES ALSO KNOWN AS "TRENCH FOOT."
- OCCURS WITH PROLONGED EXPOSURE TO COLD, WET ENVIRONMENTS.



## 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.