

U.S. Department of Labor  
Mine Safety and Health Administration  
Educational Field and Small Mine Services



Location \_\_\_\_\_ Date \_\_\_\_\_

Competent Person \_\_\_\_\_ Duration \_\_\_\_\_ Time \_\_\_\_\_

### **Body Reaction to Cold**

- Cold injuries are classified as either localized (such as frostnip, frostbite) or generalized as in hypothermia (a lowering of the body's core temperature)

**Frostnip** occurs when the face or other extremities are exposed to cold wind which caused the skin to turn white. Symptoms may include firm, cold, white areas on the face, ears, or other extremities, peeling or blistering that may appear similar to sunburn. Treatment for the frostnip area should be treated by re-warming the area with an unaffected hand or warm object. DO NOT use hot water.

**Frostbite** occurs when there is freezing of the skin. It can occur without hypothermia when the extremities do not receive sufficient heat from central body stores because of inadequate clothing or circulation. The most vulnerable parts of the body are the nose, cheeks, ears, fingers, and toes. Damage from frostbite can be serious, scarring, tissue death, and amputation is all possible. Symptoms may include in these areas cold, hard, white and anesthetic. On warming it becomes blotchy red, swollen and painful. Depending on the extent of the injury the area may recover normally or deteriorate into something more serious. Treatment would be to warm the area and seek medical attention.

**Hypothermia** occurs when the body cannot maintain a normal core temperature of 98.6 degrees F. Hypothermia can take an employee by surprise since it can occur above freezing. Wind, physical exhaustion, and wet clothing all make a person more prone to hypothermia. Air temperature alone is not enough to judge the cold hazard of an environment. Wind chill should also be considered. Symptoms may include, numbness, stiffness or pain (especially in the neck arms, and legs) poor coordination, slurred speech and drowsiness, slow, irregular breathing and heartbeat, severe shivering. Treatment for an unconscious person would be to get them out of frozen, wet or tight clothes treated by experienced medical personnel and transported to the hospital.

**Fatalgrams:**

**Attendees:**