

Agriculture – Working In Cold Weather

Exposure to Cold and Freezing Temperatures

Cold weather primarily affects the extremities of the body. Hands and feet are farthest from the body core and have less blood flow than the core. The extremities of the body are thinner than the core and cool down faster. Cold exposure can occur in weather that is not freezing. How one will be affected by the weather depends upon the conditions. When the wind blows, the wind chill factor takes effect. The wind, humidity and moisture remove body heat. (See the section on physical ailments caused by cold weather for information on treating exposure to cold and freezing temperatures.)

Prevention of Cold-Weather Ailments

Dress according to the weather. In cold weather, wear several layers of loose, bulky clothing. These provide better insulation, and a layer can be removed if the body becomes over heated. Tight clothing reduces blood circulation and should be avoided. In extremely cold weather, protect the ears, face, hands and feet. A hat will keep your entire body warmer by reducing heat loss from the head. Body heat will be available for other parts of your body if it is not lost through the head. Wear a couple pairs of socks and insulated, water-proof boots.

Follow simple rules when working in cold weather. On extremely cold days, limit the amount of time outside. Keep yourself as warm as possible. Move into a warm location periodically. Carry cold weather survival gear with you. This gear should include a thermos of hot liquid, a change of clothes, extra socks, gloves, hats, a jacket and blankets.

Cold Weather and Equipment

Cold weather affects equipment. When it is cold, do not touch or brush up against metal surfaces with bare skin. The skin may stick to it and get immediate frostbite. Greases and oils get thick and hard which makes equipment difficult to use. If equipment must be heated to make it work, follow the proper procedures and use the right tools. Tools also get brittle in the cold, so use caution when working with them.

Physical Ailments Caused by Cold Weather

There are very serious ailments caused by cold weather. These need medical attention. Working with the feet under cold water or in wet fields for a long time causes **trench foot or immersion foot**. The feet feel cold and numb and blisters often form. As the feet begin to warm, they become red and feel hot to the person. To care for trench foot, gradually warm and elevate the feet. Put on a sterile dressing, taking care not to break the blisters. Get medical attention, because trench foot can cause severe disability.

Repeated, prolonged exposure to cold weather can cause **chilblains**. They are red, swollen areas that feel hot, tender and itchy. Chilblains can occur on the ears, fingers, and toes and are chronic. This means they can reoccur when there is another prolonged exposure to cold weather. If chilblains occur, cover the affected area and get to a physician.

Hypothermia is the general cooling of the entire body. The normal temperature for a human is 98.6 degrees Fahrenheit. When body temperature drops very much below this, serious problems can arise. Symptoms of hypothermia include uncontrollable shivering, numbness, drowsiness and trouble doing simple tasks. As hypothermia progresses, the shivering stops, the breathing and pulse rate slow, and eyesight may begin to fail. The person may begin to stagger and become uncoordinated. If the person does not receive treatment, he may become unconscious, and then the heart will stop. To treat hypothermia victims, immediately get them into a warm environment and gradually warm them.

Immersing the person in warm water warms them too quickly and should never be done. Remove any wet clothing, dry the person and dress them in dry clothing. Wrap them in blankets and use heating pads and other heat sources to warm them. Keep a barrier, such as a blanket, towel or clothing between the person and the heat source. If the person is alert, give them warm liquids. Get medical treatment for the victim immediately. Handle the person gently until medical help arrives.

Frostbite occurs when parts of the body actually freeze. Ice crystals form inside the skin. This can destroy the tissue and kill the affected part. The areas most often affected are the ears, nose, fingers and toes. Frostbitten areas in white-skinned people turn reddish and can be painful. Frostbitten areas turn pale on dark-skinned people. The pain subsides and the area can become numb. The area then becomes white or grayish-yellow and very cold to the touch. To heat, gradually warm the area. Do not use alcohol or rub the frostbitten skin. The affected area can be warmed by soaking it in lukewarm water. Loosely bandage the area with a dry, sterile dressing, taking care not to break any blisters. Get medical attention as soon as possible.