

# Cold-Related Illness

## INFORMATION & RESOURCES ON HOW TO AVOID COLD-RELATED ILLNESSES

Cold-related illnesses can be an issue outdoors when temperatures fall and the wind chills rise. It is important to know the signs, symptoms and precautions that should be taken as hypothermia can be deadly.

| Cold-Related Illness                      | Symptoms  | Action Needed  |
|---|---|--|
| <b>Frostbite or Trench/Immersion Foot</b> | Redness, Numbness, Tingling, Stinging, Aching, Bluish-Waxy Skin, Grey/White Patches, Blisters | Move to a warm place. Remove wet clothing. Dry the skin. Do not walk if on feet. Immerse in warm water or put hand under armpits. Do not rub.                  |
| <b>Early Hypothermia</b>                  | Shivering, Fatigue, Confusion, Disorientation, Loss of Consciousness                          | Move to a warm place. Remove wet clothing. Warm the core first. Drink warm non-alcoholic beverages. Seek medical attention as needed.                          |
| <b>Late Hypothermia</b>                   | Shivering Stops, Blue Skin, Dilated Pupils, Slow Pulse, Slow Breathing, Loss of Consciousness | Call 911. Quickly move the person to a warm place. Remove wet clothing. Warm the body core first with electric blanket or body heat. Provide CPR as necessary. |

While there is no specific PESH/OSHA standard to protect workers from low working temperatures, cold-related illnesses are a recognized hazard and controls can be enforced using the General Duty Clause. Severe cold related situations could be considered imminent danger.

Workers are at greatest risk of cold illnesses when low temperatures are combined with greater wind speeds creating the feeling of lower temperatures known as the wind chill. OSHA recommends that employers use the Work/ Warm Up Schedule for a 4 Hour Shift.

| Air Temperature--Sunny Sky<br>°C (approximate) | °F (approximate) | No Noticeable Wind              |                  | 5 mph Wind                      |                  | 10 mph Wind                     |                  | 15 mph Wind                     |                  | 20 mph Wind                     |                  |
|--|------------------|---------------------------------|------------------|---------------------------------|------------------|---------------------------------|------------------|---------------------------------|------------------|---------------------------------|------------------|
|  |                  | Maximum Work Period             | Number of Breaks | Maximum Work Period             | Number of Breaks | Maximum Work Period             | Number of Breaks | Maximum Work Period             | Number of Breaks | Maximum Work Period             | Number of Breaks |
| -26 to -28                                     | -15 to -19       | (Normal Breaks ) 1              |                  | (Normal Breaks ) 1              |                  | 75 min                          | 2                | 55 min                          | 3                | 40 min                          | 4                |
| -29 to -31                                     | -20 to -24       | (Normal Breaks ) 1              |                  | 75 min                          | 2                | 55 min                          | 3                | 40 min                          | 4                | 30 min                          | 5                |
| -32 to -34                                     | -25 to -29       | 75 min                          | 2                | 55 min                          | 3                | 40 min                          | 4                | 30 min                          | 5                | Non-emergency work should cease |                  |
| -35 to -37                                     | -30 to -34       | 55 min                          | 3                | 40 min                          | 4                | 30 min                          | 5                | Non-emergency work should cease |                  |                                 |                  |
| -38 to -39                                     | -35 to -39       | 40 min                          | 4                | 30 min                          | 5                | Non-emergency work should cease |                  |                                 |                  |                                 |                  |
| -40 to -42                                     | -40 to -44       | 30 min                          | 5                | Non-emergency work should cease |                  |                                 |                  |                                 |                  |                                 |                  |
| -43 & below                                    | -45 & below      | Non-emergency work should cease |                  |                                 |                  |                                 |                  |                                 |                  |                                 |                  |

Schedule applies to any 4-hour work period with moderate to heavy work activity; with warm-up periods of ten (10) minutes in a warm location and with an extended break (e.g. lunch) at the end of the 4-hour work period in a warm location.

Adopted from ACGIH 2012 TLVs

# WHAT EMPLOYERS SHOULD DO

- Train employees to recognize signs and symptoms of cold-related illnesses and proper first aid treatment.
- Use the OSHA recommended work/warm up schedule to assist in limiting exposure to extreme cold.
- Assign indoor work or work that can be done from a heated vehicle during extreme low temperatures.
- Schedule required outdoor work tasks when the temperatures are the highest during the day. Postpone any unnecessary outdoor tasks until warmer weather.
- When cold weather starts, begin activities in shorter time periods until workers are used to the colder temperatures.
- Rotate workers through long outdoor work activities with plenty of warm up breaks.
- Provide warming/rest areas where heat is available.
- Have employees moved to warming areas at the first signs of cold-related illnesses and provide first aid treatment.
- Provide water, electrolyte and warm drinks. Hydration is key.

## OUTDOOR CLOTHING

Even though there are no regulations that require employers to provide cold weather gear, employers should consider supplying proper winter clothing for employees who are expected to work outdoors in cold temperatures. Employers should evaluate any provided cold weather gear to ensure that each garment is appropriately designed for the temperatures that workers will be exposed to.

Workers should wear three layers:

- an inner and a middle layer of wool or synthetic and
- an outer layer that is preferably waterproof.

The head and ears should always be covered and gloves and boots should be insulated and waterproof if possible.

If gloves or socks become saturated, the feet and hands should be dried and garments should be swapped out for a dry pair.

For more information and resources visit:

[www.cseany.org/safety](http://www.cseany.org/safety)



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