



# SAFETYGRAM

January 2004



## OSHA Offers Tips To Protect Workers In Cold Environments

WASHINGTON -- With the onset of cold weather, OSHA is reminding employers and workers to take necessary precautions to prevent and treat cold-related health problems. Prolonged exposure to freezing or cold temperatures may cause serious health problems such as trench foot, frostbite and hypothermia. In extreme cases, including cold-water immersion, exposure can lead to death. Danger signs include uncontrolled shivering, slurred speech, clumsy movements, fatigue and confused behavior. If these signs are observed, call for emergency help.

### Tips include:

- \* Recognize the environmental and workplace conditions that may be dangerous.
- \* Learn the signs and symptoms of cold-induced illnesses and injuries and what to do to help workers.
- \* Train workers about cold-induced illnesses and injuries.
- \* Encourage workers to wear proper clothing for cold, wet and windy conditions, including layers that can be adjusted to changing conditions.
- \* Be sure workers in extreme conditions take a frequent short break in warm dry shelters to allow their bodies to warm up.
- \* Try to schedule work for the warmest part of the day.
- \* Avoid exhaustion or fatigue because energy is needed to keep muscles warm.
- \* Use the buddy system - work in pairs so that one worker can recognize danger signs.
- \* Drink warm, sweet beverages (sugar water, sports-type drinks) and avoid drinks with caffeine (coffee, tea, sodas or hot chocolate) or alcohol.
- \* Eat warm, high-calorie foods such as hot pasta dishes.
- \* Remember, workers face increased risks when they take certain medications, are in poor physical condition or suffer from illnesses such as diabetes, hypertension or cardiovascular disease.

## Hypothermia

### Introduction

People who work outside or enjoy outdoor recreational activities face certain risks. Hypothermia is one of these risks that is often overlooked or not recognized. Because hypothermia can affect reasoning and judgment, you can quickly find yourself in a life-or-death situation without realizing that you are in danger.



### Recognition

The symptoms of hypothermia are varied and depend on the body's core temperature. A person suffering from a mild case may exhibit shivering and a lack of coordination, while a person suffering from severe hypothermia may be incoherent, exhibit muscular rigidity and can potentially succumb to cardiac arrest. The chart below shows the correlation between core body temperature and hypothermia symptoms.

Severity of Hypothermia	Body Temperature (°F)	Symptoms
<b>Mild</b>	<b>98.6 - 97</b>	Shivering Begins
	<b>97 - 95</b>	Cold sensation, skin numbness, goose bumps, lack of hand coordination
<b>Moderate</b>	<b>95 - 93</b>	Intense shivering, general lack of muscular coordination, slow or stumbling pace, mild confusion, pale skin.
	<b>93-90</b>	Violent shivering, gross lack of muscular coordination, mental sluggishness, amnesia, difficulty speaking.
<b>Severe</b>	<b>90 - 86</b>	Shivering stops, muscular stiffness, extreme confusion or incoherence, irrational behavior, inability to stand, skin appears blue and or puffy.
	<b>86-82</b>	Muscular rigidity, semiconscious, pulse and respiration decrease, dilation of pupils, skin ice-cold to touch.
	<b>82 - 78</b>	Unconsciousness, pulmonary edema, pulse and heartbeat erratic, cardiac and respiratory failure, death.

### Prevention

There are several steps you can take to reduce your risk of hypothermia before you head out into cold, wet conditions. These steps include:

- Wear proper clothing. The ideal clothing for extended periods in a cold and/or wet environment consists of a breathable layer next to the skin (such as cotton or polypropylene), an insulating middle layer (wool, which continues to insulate even when wet, is a good choice) and a waterproof, but breathable, outer layer (such as nylon or Gore-Tex™).
- Stay hydrated when outdoors.
- Use the buddy system when spending time outdoors, if possible.
- Be familiar with the signs of hypothermia. Early recognition of hypothermia can help prevent you from facing a life or death situation.

### Commonly Asked Questions

**Q. Can hypothermia be a problem even if the temperature is well above freezing?**

A. Yes. Hypothermia can occur any time that the body cannot generate enough heat to maintain its core temperature, regardless of the time of year. Even on a sunny summer day, a person immersed in 40° to 50°F water may reach the exhaustion point (due to a lowered core temperature) in as little as 30 minutes, and death from hypothermia may result in only three hours.

**Q. Can the medications I'm taking make me more susceptible to hypothermia?**

A. Yes. A number of commonly prescribed medications can affect the body's resistance to hypothermia. Sedatives, anti-depressants, tranquilizers and cardio-vascular drugs can all affect the body's ability to regulate temperature. If you are concerned about the effect your medications may have on your body's resistance to hypothermia, please contact your doctor or pharmacist for more information.

## Most Frequently Cited OSHA Standards

The following were the top 10 most frequently cited standards in fiscal year 2003 (October 2002 through September 2003):

1. Scaffolding, general requirements, construction ([29 CFR 1926.451](#))
2. Hazard communication standard, general industry ([29 CFR 1910.1200](#))
3. Fall protection, construction ([29 CFR 1926.501](#))
4. Control of hazardous energy (lockout/tagout), general industry ([29 CFR 1910.147](#))
5. Respiratory protection, general industry ([29 CFR 1910.134](#))
6. Machines, general requirements, general industry ([29 CFR 1910.212](#))

7. Electrical, wiring methods, components and equipment, general industry ([29 CFR 1910.305](#))
8. Powered industrial trucks, general industry ([29 CFR 1910.178](#))
9. Bloodborne pathogens, general industry ([29 CFR 1910.1030](#))
10. Electrical systems design, general requirements, general industry ([29 CFR 1910.303](#))

For more detailed information, visit [Frequently Cited OSHA Standards](#). At that site, you can generate a report on the most frequently cited federal or state OSHA standards by your SIC code and the number of employees in your establishment.

OSHA provides a number of resources to help employers comply with these standards, including:

- [Safety and Health Topics page](#)
- [Web Site Index](#)
- [Laws & Regulations](#)
- [Compliance Assistance page](#)
- [OSHA Publications](#)
- [Contact Us](#)

## Inventive Ladder Extension ... Not!

Click image to enlarge



Displayed for you right here are a couple of crazy construction workers. Check out the method they're using to climb to the top of this steep roof. They've extended one ladder, which reaches to just above the middle of the roof. Then they took another ladder and balanced it on top of the first. Kinda like a life-sized erector set ... except these ladders aren't connected in any way.

Now it would be bad enough if these fellas were just climbing to the top to look around. But, fact is, they were carrying bundles of shingles way up there to replace the roof. It wasn't an easy task either. The guy at the top kept losing his balance when the ladder shifted, and neither was wearing a harness to break a fall.



Had these guys used Operational Risk Management, they never would have found themselves in this situation. Folks, there are better ways of doing business ... but I know you're all smart enough to recognize that. A job like this just ain't worth dying for.

[Naval Safety Center Photo of the Week](#)



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