How to Protect Workers from Cold Stress

Are you doing enough to protect your workers against the risks of cold-stress? If one of your workers should suffer a serious or fatal cold-stress injury, could you and your company be liable?

When Is Cold Stress a "Recognized Hazard"?

The first thing the Guidance clarifies is when cold stress becomes a recognized hazard. It's not temperature alone, guidance says. It's how cold the air actually *feels* on the body. Guidance cites 4 factors that employers must consider in determining how cold is too cold:

- Temperature of the air;
- Wind or other factors causing the air to move at a high velocity—thereby making it feel colder;
- Dampness of the air; and
- Contact with cold water or surfaces.

Mere lack of comfort isn't determinative. A cold stress hazard exists when the working climate makes the risk of cold-induced problems a real one. Guidance cites 3 of the most common problems:

- Hypothermia, i.e., when body temperature drops below the normal 98.6° F to around 95° F or lower;
- Frostbite, i.e., actual freezing of the skin which can lead to amputation; and
- Trench foot, i.e., freezing of the foot caused by immersion in cold water or prolonged exposure to extremely cold air.

The 4 Things You Must Do to Protect Workers from Cold Stress

There are 4 kinds of protective measures that employers should take to prevent workers from suffering cold stress:

1. **Require Protective Clothing**

First, you need to ensure workers exposed to cold stress wear protective clothing. Here are 6 things employers must make workers do:

- Wear at least 3 layers of clothing—an inner layer of wool, silk or synthetic to wick moisture, a middle layer of wool or synthetic for insulation and an outer layer of wind and rain protection that allows for ventilation;
- Wear a hat or hood on their head;
- Wear boots or other footwear that's insulated;
- Keep a change of dry clothes on hand;
- Wear loose clothing (other than the wicking layer which needs to be tight); and
- Consider the wetting effects of sweat.

2. **Implement Work Practices**

Employers must implement steps to ensure the work is done safely such as:

- Making workers drink plenty of liquids and avoid caffeine and alcohol so they don't become dehydrated;
- Scheduling the heaviest work for the warmest part of the day;
- Letting workers take frequent breaks so they can come out of the cold; and
- Having workers work in pairs so they can keep an eye on each other and monitor for signs of cold stress.

3. **Use Engineering Controls**

Employers should use things like radiant heaters, shields, insulating materials and other engineering measures to make the air warmer.

4. **Provide Safety Training**

Last but not least, employers need to train workers about the dangers of cold stress, how to recognize when cold stress occurs and how to respond if they experience or see one of their co-workers experiencing such symptoms.

How to Create a Cold Stress Exposure Policy

One of the best ways to comply with requirements is to adopt a written cold stress exposure plan for your workplace. Your plan should:

Explain Purpose. Help workers understand the dangers they are trying to prevent, such as frostbite and hypothermia, by explaining them in the policy.

Require Periodic Monitoring of Temperature, Wind Chill, and Other Factors. The obligation to protect workers against cold stress involves monitoring temperature and wind chill levels.

Require Supervisors to Protect Workers Subject to Cold Exposure. Your supervisors should also monitor workers performing light, moderate or heavy work. While moderate work provides a warming effect, heavy work produces perspiration which makes workers more vulnerable to cold stress injuries. Another important factor is whether working conditions are wet – which would require additional protection – or dry.

Make Workers Work in Groups. Cold stress problems can creep up on a worker before he realizes what's going on. The best way to protect your workers is to have them work together, putting each worker in charge of another's safety.

Provide for Worker Training. The plan should require somebody at your facility to train all workers and supervisors about the signs, symptoms and prevention of cold stress. Too many workers regard being cold as a mere discomfort, something a "real man" (or woman) wouldn't complain about.