

## Cold stress

### Why it's important

There are many health benefits from working outside on a winter day. But there are also risks. Hypothermia and frostbite are two hazards forestry workers working outdoors in the winter need to be aware of.

Hypothermia occurs if the body is exposed to prolonged extreme cold conditions or is immersed in cold water. This results in a lowering of body core temperature. If the body's core temperature reaches 35° C, the body will react with severe shivering.

If there is a drop in core temperature below 33° C, this is considered severe hypothermia. Blood pressure will drop and the person will likely lose consciousness.

Hypothermia can be fatal if a person does not receive immediate medical attention.

Frostbite is damage to the skin and tissues from extreme cold. Frostbite usually happens in the body extremities furthest from the heart, such as the fingers and toes. The combined effect of cold temperatures and inadequate blood flow can result in damage to the body tissue.

### How to control the hazards

#### Preventing hypothermia

- The main factors to consider when working outdoors in the winter are:
  - Air temperature
  - Wind speed
  - Type of work being done
  - Rain or snow.
- Air temperature and wind speed combine to form a wind chill factor. Depending on the severity of the wind chill, periodic breaks need to be taken to enable the body to warm up.
- If the type of work doesn't involve a lot of physical movement, the body is more prone to the effects of cold.

- Physical work may keep a person warm, but it also may produce sweat, which can cause a lowering of body core temperature once the person stops moving.
- Rain or snow will have a negative effect on the ability of the worker's clothing to maintain a barrier against the cold and the wind. Once clothing is wet, a worker's internal core temperature will begin to drop.

#### How to prevent frostbite

- One of the defenses of the human body to keep warm is to constrict the blood vessels close to the skin.
- Frostbite usually happens in the fingers, toes and ears.
- Cold temperatures and inadequate blood flow can result in damage to the body tissue.
- Wear multiple layers of clothing, well-insulated boots, hat and gloves. Synthetic or wool fabrics are recommended because they wick moisture away from the skin.
- Poor circulation can also contribute to frostbite. Make sure that circulation is not constricted by boots, gloves or clothing that are too tight.
- Contact frostbite occurs when the skin comes in contact with extremely cold surfaces. Mechanics working in cold conditions should always wear anti-contact (propylene) gloves in order to prevent contact frostbite.

### Show and tell

Talk about your company's cold weather policy and procedures.

Emphasize that the colder it gets, the more frequent breaks workers require to warm up.

#### Notes:

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