

Proper Layering Is Key to Avoiding Hypothermia



The frigid, windy winter weather is just as dangerous to workers who work outside as the heat and humidity are in the summer. One of the most fundamental safety measures to help such workers avoid hypothermia, a serious condition that can be fatal, is proper clothing. But it turns out that just wearing warm jackets, a hat and mittens isn't enough—layering is the key.

Workplace Safety North recently explained the elements of a proper layering system:

Wicking layer. This layer is the one next to your skin. It should remove moisture from the skin and transfer it to the next layer, to keep your body from cooling down due to sweat. Recommended layers are synthetic or polypropylene long johns, tops and socks. Don't use cotton!

Light insulating layer. This one goes on after the wicking layer. A light fleece or thin wool sweater is an excellent light insulating layer.

Heavy insulating layer. A heavier fleece or wool sweater is next and should trap heat in the body.

Windproof-waterproof layer. This layer protects your body from weather conditions such as wind, rain or wet snow.

Winter toque. Did you know that 30-50% of body heat is lost through the head? A winter hat adds as much warmth as all your layers. In winter conditions, everyone should be wearing a toque. Balaclavas can be worn under toques and are excellent for protecting faces from frostbite.

Gloves and mittens. Mittens are warmer than gloves but not always practical on the job. Workers can compromise by wearing a thin glove inside a mitten, which lets them remove the mittens for more technical work while not exposing bare skin to the cold. Once they're done, the mittens go back on.

Socks and gaiters. A two-layer sock system is recommended. A thin polypropylene sock with a wool sock over top allows moisture to be wicked from the feet. Plus,

wool will stay warm even when wet. If wearing hiking boots in the bush, gaiters are highly recommended. They prevent snow from sliding down into the boots and add warmth by trapping air.

OHS Insider Resources

The OHS Insider has additional resources to help you protect workers this winter, including:

- A Spot the Safety Violation on proper winter clothing
- Information on protecting workers with a cold exposure control plan, including a model plan
- A handout for workers on cold stress
- A checklist to ensure you've taken adequate steps to protect workers from cold stress.