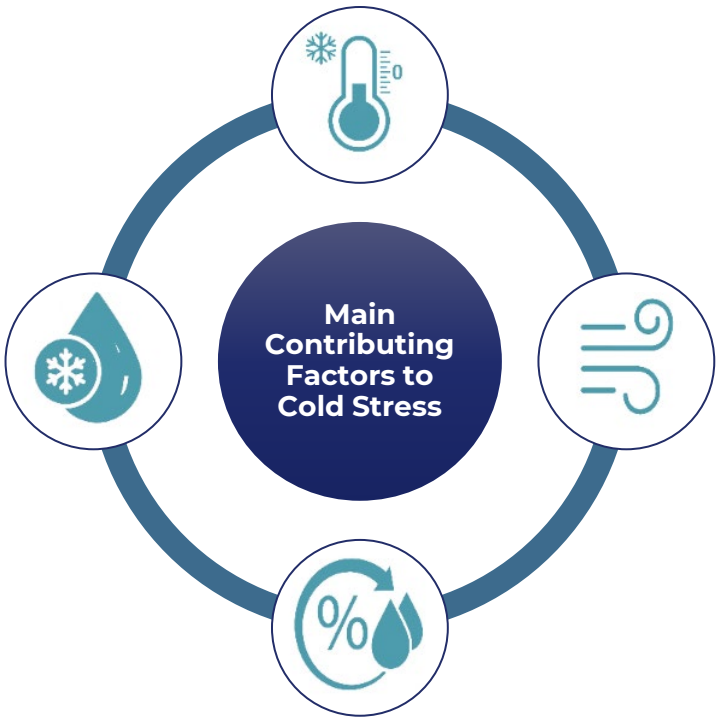
SAFETY TALKS
Cold Stress

Cold Stress

Cold is a physical hazard in many workplaces. It may occur naturally (i.e. weather conditions) or be created artificially (i.e. refrigerated environments). Cold stress occurs by driving down the skin temperature, and eventually the internal body temperature. When the body is unable to warm itself, serious cold-related illnesses and injuries may occur, leading to permanent tissue damage and even death

Cold Stress Main Risk Factors:

Cold Temperatures
- Naturally or artificially cooled environments



Cold Water
- Immersion can cool the body 25 times faster than cold air.

High or Cold Wind
- Pulls heat away from the body in any environment

Dampness
- Wet clothing, from sweat or water

What's the Danger?

Cold stress health hazards include:

Hazard	Description	
Frostbite	Injury to the body that is caused by freezing. Frostbite causes a loss of feeling and color in the affected areas. It most often affects the nose, ears, cheeks, chin, fingers, or toes. Can lead to permanent damage or amputation of the affected areas.	
	Symptoms	**Treatment**
	• Reduced blood flow to hands and feet • Numbness • Tingling or stinging • Aching • Bluish or pail, waxy skin	• Get medical aid • Warm the area with body heat – do not rub • Don't thaw hands and feet unless medical aid is far away and there's no chance of refreezing.

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<table>
<tr><th>Hazard</th><th colspan="2">Description</th></tr>
<tr><td rowspan="2">Hypothermia</td><td colspan="2">When exposed to cold temperatures, your body begins to lose heat faster than it can be produced. Prolonged exposure to cold will eventually use up your body's stored energy, resulting in hypothermia. A body temperature that is too low affects the brain, making the victim unable to think clearly or move well.</td></tr>
<tr><td>Symptoms</td><td>Treatment</td></tr>
<tr><td><u>Early Symptoms</u>
• Shivering
• Fatigue
• Loss of coordination
• Confusion and disorientation
<u>Late Symptoms</u>
• No shivering
• Blue skin
• Dilated pupils
• Slowed pulse and breathing
• Loss of consciousness</td><td>• Hypothermia can kill – get medical aid immediately
• Carefully move the person to a shelter. (Sudden movement can upset heart rhythm)
• Keep the person awake. Remove any wet clothing and wrap them in warm covers.
• Apply direct body heat – rewarm neck, chest, abdomen, and groin, but not extremities.
• If conscious, give warm, sweet drinks.</td></tr>
</table>

Safety Tips

- ✔ Wear several layers of clothing rather than one thick layer to capture air as an insulator
- ✔ Wear synthetic fabrics next to the skin to wick away sweat
- ✔ Wear a waterproof or wind resistant outer layer if conditions require
- ✔ Wear warm gloves, hats, and hoods. You may also need a balaclava
- ✔ Avoid tight-fitting footwear, as this restricts blood flow. Advise wearing either one thick or two thin pairs of socks
- ✔ If your clothing gets wet at 2˚C or less, change into dry clothes immediately and get checked for hypothermia
- ✔ If you get hot while working, open your jacket but keep your hat and gloves on
- ✔ Consume warm, high-calorie drinks and food
- ✔ Monitor the condition of other workers around you. If you notice something could be wrong get them into a warm area and notify a supervisor

Demonstrate

Show workers where they can get relief from the cold (i.e. heated shelters), some hot food and warm, sweet drinks.

Discussion

Where might you be exposed to the cold in your job?

What are some ways we can eliminate or minimize the risk of cold stress when exposed to the cold?

Ask workers if they understand wind chill and explain using the provided example.

Wind Chill speeds up heat loss.

- If the air temperature is -30˚C with 16 km/h wind (strong enough to fully extend a flag), your skin can freeze in about a minute.
- If the air temperature is -30˚C with 48 km/h wind, your skin can freeze in about 30 seconds.

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Cold Stress

Manitoba Workplace Safety and Health Act and Regulation

Part 4 General Workplace Requirements, 4.12 Thermal Stress

Workers Involved in this Safety Talk

Date:_____

Name	Signature

Name	Signature

Notes

Please contact S2SA with any questions or concerns!
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