



Cold Stress

With the impending cold temperatures, we want to remind everyone about the importance of protecting yourself when you are exposed to cold winter weather.

What is [Cold Stress](#)?

Cold is a physical hazard, and cold stress can impact people who are not adequately protected against cold conditions. When the human body is unable to sufficiently warm itself, cold-related illnesses and injuries can occur that could lead to tissue damage and potentially stress.

Environmental factors that influence the severity of cold stress include air temperature, wind speed and humidity. Personal factors include physical activity, work/rest timing, protective clothing, age, gender, medical conditions, etc.

Dressing for Winter

- ✓ Wear gloves or mittens to protect your hands. Your hands and feet get cold quicker than the center of your body and may need to be covered even if your chest feels warm.
- ✓ Wear a hat that covers your ears. Body heat is often lost through your head.
- ✓ Choose waterproof clothing. Especially when shoveling, working or playing in the snow we can get damp or wet, making us colder faster. Waterproof boots, mitts, and snow pants can help keep us dry and protect our skin from frostbite.
- ✓ Dress in layers. The weather changes in Nova Scotia quickly and dressing in layers can help us stay warmer. Wear long johns or leggings under your pants, an extra pair of socks, or a pair of thin gloves under your bulky mittens.
- ✓ Nova Scotia can be very windy. Try to get outer wear that is wind proof.

Cold Stress related illnesses/injuries, include:

Hypothermia is a medical emergency that occurs when your body loses heat faster than it can produce heat, causing a dangerously low body temperature. It can happen because of long exposure to the cold. Symptoms include:

- Shivering which may stop as hypothermia progresses;
 - Slow, shallow breathing and weak pulse;
 - Confusion and slurred or mumbled speech; and
 - Drowsiness, loss of coordination.
- ✓ Get medical care immediately if you suspect Hypothermia.
 - ✓ If you cannot get medical help, remove wet clothing and replace with warm, dry clothes and blankets.
 - ✓ Warm with heating pads or your own body heat.
 - ✓ Encourage warm, non-alcoholic liquids if the person is conscious.



Frostbite is trauma due to being exposed to freezing temperatures. This cold can freeze the fluids in your skins and other tissues and cause damage to your body. The earlobes, cheeks, nose, hands, and feet are the most likely to feel the nip of winter and areas we need to be conscious of during the winter freeze.

There are three stages of frostbite:

1. Frostnip

- Skin appears white.
- Skin is numb and pain free.
- This is early frostbite and reversible at home with warming and warm fluids, it may tingle and/or burn slightly when rewarming. It is still serious and should be watched. If you suspect frostbite you should seek medical treatment.

2. Frostbite (superficial)

- Skin is white and waxy looking.
- Skin feels stiff but soft, will still have some “give” to it.
- Skin is numb.

3. Frostbite (deep)

- Skin is white, yellow-white, or blue-white.
- The surface and tissue underneath will feel frozen and hard.
- The area will be completely numb to touch.

WIND CHILL TEMPERATURE INDEX Frostbite Times are for Exposed Facial Skin												
		Air Temperature (°C)										
Wind Speed (km/h)	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45	-50
5	4	-2	-7	-13	-19	-24	-30	-36	-41	-47	-53	-58
10	3	-3	-9	-15	-21	-27	-33	-39	-45	-51	-57	-63
15	2	-4	-11	-17	-23	-29	-35	-41	-48	-54	-60	-66
20	1	-5	-12	-18	-24	-30	-37	-43	-49	-56	-62	-68
25	1	-6	-12	-19	-25	-32	-38	-44	-51	-57	-64	-70
30	0	-6	-13	-20	-26	-33	-39	-46	-52	-59	-65	-72
35	0	-7	-14	-20	-27	-33	-40	-47	-53	-60	-66	-73
40	-1	-7	-14	-21	-27	-34	-41	-48	-54	-61	-68	-74
45	-1	-8	-15	-21	-28	-35	-42	-48	-55	-62	-69	-75
50	-1	-8	-15	-22	-29	-35	-42	-49	-56	-63	-69	-76
55	-2	-8	-15	-22	-29	-36	-43	-50	-57	-63	-70	-77
60	-2	-9	-16	-23	-30	-36	-43	-50	-57	-64	-71	-78
65	-2	-9	-16	-23	-30	-37	-44	-51	-58	-65	-72	-79
70	-2	-9	-16	-23	-30	-37	-44	-51	-58	-65	-72	-80
75	-3	-10	-17	-24	-31	-38	-45	-52	-59	-66	-73	-80
80	-3	-10	-17	-24	-31	-38	-45	-52	-60	-67	-74	-81

FROSTBITE GUIDE

- Increasing risk of frostbite for most people in 10 to 30 minutes of exposure
- High risk for most people in 5 to 10 minutes of exposure
- High risk for most people in 2 to 5 minutes of exposure
- High risk for most people in 2 minutes of exposure or less

Source: ACGIH

When to Seek Medical Care

- ✓ If you or someone you know has signs or symptoms of deep frostbite, you or they need medical attention. This is a serious concern and needs to be seen by health professionals.
- ✓ Don't try to warm the area up by yourself.
- ✓ Do not rub the area.
- ✓ Do not remove gloves, socks, etc. that may be frozen to that area.
- ✓ Pad the area with extra blankets or layers so that it does not get bumped or damaged on the way to getting medical attention.
- ✓ If it is an emergency, call 911.