

MONTHLY SAFETY NEWSLETTER

NIPISSING UNIVERSITY



COLD STRESS

TIPS ON HOW TO COMBAT THE COLD

Cold climates and temperatures have arrived and with it comes the possibility of **cold stress**, a combination of various factors (temperature, wind speed, clothing, etc.) that lower the body’s internal temperature below 36 degrees Celsius. In its basic form, cold stress may cause: **pain and numbness, fatigue, lack of concentration, poor decision making, a reduction in productivity**, and even **poor mental health**. However, it can also lead to the potential for cold injuries, such as **hypothermia** and **frostbite**.

To avoid the immediate threat of cold stress, **relocate to a warm area** to gradually return the body to its normal temperature. Remove and replace wet clothing with **warm and dry clothing**. **Gradually drink** a warm beverage but **avoid coffee**, since its effect as a diuretic will cause you to lose more body heat. If severely cold, place **warm packs** on the brain stem, the sides of the neck and groin, and under the armpits.

Risk reduction of cold stress begins with **proper planning** and **personal care**:

- **Dress according to the conditions** and wear layered clothing, as required.
- Take several **short breaks** throughout your outdoor work.
- Ensure your work areas are **properly heated and ventilated**.
- **Track the temperature and wind chill** to determine work habits and safe working conditions.

The Canadian Centre for Occupational Health and Safety (CCOHS) released a Cold Environments Response Plan containing a **Wind Chill Temperature Index** (index on right side of page). The index allows employees to assess how to respond to cold temperatures when correlated with wind speed conditions.

Stay warm and stay safe this holiday season by knowing what you need to **combat cold stress!**

WORKER’S RIGHTS

KNOW

You have the right to know about health and safety matters in the workplace.

PARTICIPATE

You have the right to participate in conversations and decisions that could affect your health and safety in the workplace.

REFUSE

You have the right to refuse work that could affect your health and safety in the workplace.

WIND CHILL TEMPERATURE INDEX													
Frostbite Times are for Exposed Facial Skin													
		Air Temperature (°C)											
		5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45	-50
Wind Speed (km/h)	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	-69
15	2	-4	-11	-17	-23	-29	-35	-41	-48	-54	-60	-66	-72
20	1	-5	-12	-18	-24	-30	-37	-43	-49	-56	-62	-68	-74
25	1	-6	-12	-19	-25	-32	-38	-44	-51	-57	-64	-70	-76
30	0	-6	-13	-20	-26	-33	-39	-46	-52	-59	-65	-72	-78
35	0	-7	-14	-20	-27	-33	-40	-47	-53	-60	-66	-73	-79
40	-1	-7	-14	-21	-27	-34	-41	-48	-54	-61	-68	-74	-80
45	-1	-8	-15	-21	-28	-35	-42	-48	-55	-62	-69	-75	-81
50	-1	-8	-15	-22	-29	-35	-42	-49	-56	-63	-69	-76	-82
55	-2	-8	-15	-22	-29	-36	-43	-50	-57	-63	-70	-77	-83
60	-2	-9	-16	-23	-30	-36	-43	-50	-57	-64	-71	-78	-84
65	-2	-9	-16	-23	-30	-37	-44	-51	-58	-65	-72	-79	-85
70	-2	-9	-16	-23	-30	-37	-44	-51	-58	-65	-72	-79	-85
75	-3	-10	-17	-24	-31	-38	-45	-52	-59	-66	-73	-80	-86
80	-3	-10	-17	-24	-31	-38	-45	-52	-59	-66	-73	-80	-86

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