

Frostbite is damage to the [skin](#) and other tissue after exposure to very cold conditions, usually below 0.55C or 31F. Cold weather makes [blood](#) vessels get smaller, affecting blood flow and the supply of oxygen. It usually affects the hands, [feet](#), [ears](#), nose and lips, but can affect any part of the body. Symptoms often start with [pain](#) from the cold, pins and needles and numbness.

- **Stages of frostbite:** There are three stages of frostbite:
 - Frostnip** - The early stage: symptoms include pins and needles, tingling, throbbing, aching or numbness and may show as white patches of numb skin.
 - **Intermediate** – Superficial Frostbite: increased tissue damage after a longer exposure to cold. Skin may feel hard and frozen, may red and [blister](#) once warmed up and can be painful. May swell and itch. Medical attention is required to assure no lasting damage.
 - Advanced – Deep Frostbite** - The advanced stage: requires urgent medical attention. May cause damage under the skin, to tendons, muscles, bones and nerves. Skin may look blotchy, white or blue. After it thaws out, blisters and black scabs may appear. If any tissue has died, it may require surgical removal to help prevent infection.

The longer the exposure to extreme cold, the worse the frostbite damage can become. Additional damage can happen after repeated freezing, thawing and freezing.

Depending on how cold it is, how long one is exposed to the cold and what one is wearing during said exposure. [Wind chill](#) is also a critical consideration.

According to Environment Canada, risk of frostbite is fairly minor when temperatures range from -10°C to -27°C (14°F to -16.6°F) but increases considerably below that. For example, temperatures with or without wind chill that range between -28°C (-18.4°F) and -39°C (-38.2°F) can lead to frostbite IF skin is exposed for anywhere from 10 to 30 minutes. Below -40°C (-40°F) can lead to frostbite in under 10 minutes. Below -55°C (-67°F)? Two minutes or less is all it takes for tissue damage if not dry and bundled up properly.

Average Winter Temperatures in Edmonton

Month	Average Temp. (Celcius)	Record Low	Record High
November	(-10 / 0°C)	-34.1	21.7
December	(-17 / -6°C)	-48.3	16.7
January	(-19 / -8°C)	-44.4	11.7
February	(-16 / -4°C)	-46.1	14
March	(-7 / 1°C)	-36.1	20.6
April	(-3 / 9°C)	-25.6	31.1