

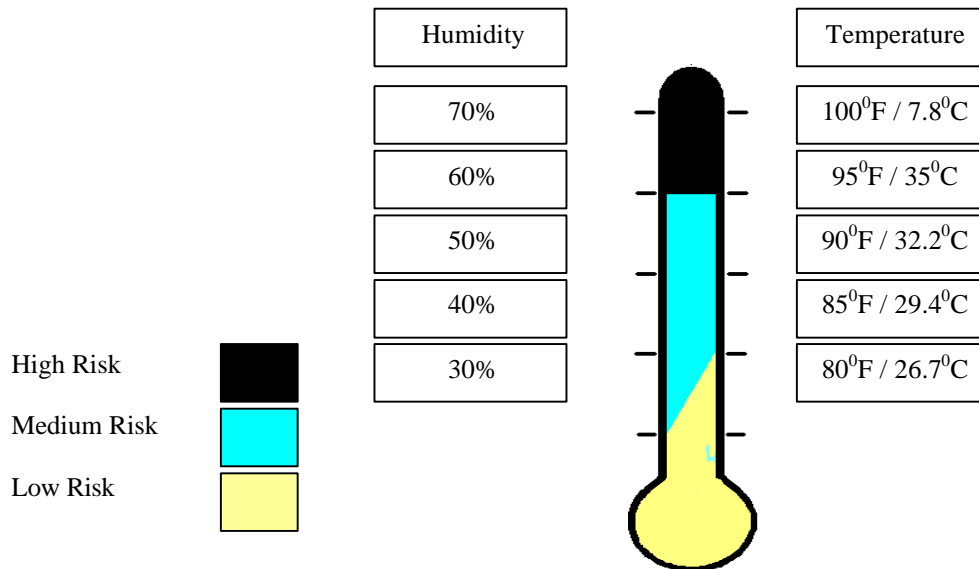
Extreme Temperatures

- > Extreme Heat
- > Extreme Cold

EXTREME HEAT

Most people are familiar with the term humidex. The humidex is a Canadian innovation created in 1965. It is a calculated factor that gives a measure to the amount of discomfort felt by the combined effect of temperature and humidity.

Humidex Range	Degree Of Discomfort
Less than 29	No discomfort
30 – 39	Some discomfort
40 – 45	Great discomfort
Above 45	Dangerous
Above 54	Heat stroke very possible



High Temperature + High Humidity + Physical Activity = Possible Heat Illness

As the temperature and humidity increase so does a person's chance of suffering from a heat related injury. A person's body cools itself through the process of sweating. Sometimes though sweating isn't enough and the body temperature rises rapidly. Without proper cooling, damage can be done to the brain and other vital internal organs. Some of the factors that can affect a persons' ability to cool themselves include old age, obesity, heart disease, poor circulation, sunburn or drug and alcohol use. The groups that are at highest risk of heat related injuries are infants and children up to age 4, adults over 65, overweight individuals, people who overexert themselves during work or exercise and anyone who is ill or on certain medications

To protect yourself during periods of extreme heat remember these following tips;

- ?? Drink plenty of fluids (caution – if you are on a fluid restricted diet or diuretics ask your doctor on how much you should drink).
- ?? Replace salt and minerals. Drink fruit juice or sport drinks. Do not take salt pills unless directed by your doctor.
- ?? Wear light colored, lightweight, loose fitting clothing. A wide brimmed hat will provide shade and keep you cool.
- ?? Use sunscreen when outside. Use a sunscreen with a SPF factor of 15 or higher. Apply 30 minutes before going out and re-apply according to package directions.
- ?? Pace yourself. Stop and rest in a cool area if your activities make your heart pound and leave you gasping for breath, or if you feel lightheaded, confused, weak, dizzy, or faint.
- ?? Schedule outdoor activities carefully. If you must be outside plan your activities for either early morning or in the evening. Rest frequently in a shaded area.
- ?? Stay cool inside. Stay in air conditioned areas. If you do not have an air conditioner visit a local mall or library for a few hours. Fans can help but do not rely on them if the temperature is above 90⁰F/32⁰C. A cool shower or bath is a more effective way to cool off. Use your oven and stove less to keep your house cooler.
- ?? Adjust to the environment. Limit your physical activity until you have become accustomed to the heat. If travelling to a hotter climate allow several days to become acclimatized.
- ?? Use common sense. Avoid hot foods and heavy meals. Do not leave infants and pets in parked cars. Dress infants and children in cool, loose clothing and shade their heads. Limit exposure during mid-day hours and drink plenty of fluids.

Sunburn:

Is the actual burning of the skin due to prolonged exposure to the sun. The skin becomes red, painful and abnormally warm after exposure. Consult a doctor if sunburn affects an infant under one year or if these symptoms are present.

☞☞Fever

☞☞Fluid filled blisters

☞☞Severe pain

Treatment

- ?? Avoid repeated sun exposure
- ?? Apply cold compress or immerse in cool water
- ?? Apply moisturizing lotion. Do not use butter or salve
- ?? Do not break blisters

Heat rash:

Is an irritation of the skin caused when blocked sweat glands become inflamed. The rash looks like a red cluster of pimples or small blisters. It is likely to appear on neck, upper chest, groin area, under breasts, or in elbow creases.

Treatment

- ?? Provide a cooler less humid environment
- ?? Keep affected area dry

?? Use dusting powder and avoid creams and lotions

Heat cramps:

Usually affect people who sweat a lot during strenuous activity. The sweating depletes the body's supply of salt and fluid. The low salt level causes painful muscle spasms. Heat cramps may be a symptom of heat exhaustion. Cramps usually occur in abdomen, arms, or legs. If you are on a low salt diet, seek medical attention for heat cramps.

Treatment

- ?? Stop all activity and sit in a cool place
- ?? Drink clear juice or sports beverage
- ?? Do not return to heavy activity for a few hours after cramps subside
- ?? Seek medical attention, if cramps do not subside in 1 hour

Heat Exhaustion:

Occurs with an excessive loss of water and salt. People most prone to heat exhaustion are the elderly or people with high blood pressure.

Symptoms

- ?? pale clammy skin
- ?? pulse is quick and shallow
- ?? heavy sweating
- ?? muscle cramps
- ?? headache
- ?? fainting
- ?? tiredness/weakness
- ?? dizziness/light headedness
- ?? nausea/vomiting
- ?? decreased and dark coloured urine

Treatment

- ?? Move the person to a cool shaded area
- ?? Rest
- ?? Have the person drink cool drink cool non-alcoholic beverages
- ?? Cool the person though a shower or bath

If heat exhaustion is not treated, the illness may advance to heat stroke.

Heat Stroke:

The body's system of temperature regulation (sweating) fails and the body temperature rises to critical level. Internal body temperature may rise to 106⁰F/41⁰C. Can cause permanent disability and even death if treatment is not given.

Symptoms

- ?? red, dry, hot skin

- ?? lack of sweating
- ?? high body temperature
- ?? rapid, strong pulse
- ?? throbbing headache
- ?? dizziness
- ?? nausea
- ?? confusion
- ?? unconsciousness
- ?? seizures/convulsions

Treatment

- ?? Call for emergency help
- ?? Move the person to a cool shaded area. Don't leave the person alone. Lay person on their back and if seizures begin, prevent the victim from injury. Maintain airway, if there is vomiting by laying person on their side.
- ?? Remove any heavy and outer clothing.
- ?? Have the person drink some cool water (a small cup every 15 minutes) if they are alert enough to drink anything and not feeling sick to their stomach.
- ?? Cool victim using any means possible, immersion in cold water, fanning, etc.
- ?? If ice is available, place ice packs under the arm pits and groin area.
- ?? Monitor body temperature and continue cooling until temperature drops below 102°F
- ?? Seek medical attention

EXTREME COLD

When winter temperatures drop significantly, staying warm and safe can become a challenge. Exposure to cold temperatures, whether indoors or outside, can cause other serious or life-threatening health problems. Infants and the elderly are particularly at risk, but anyone can be affected. To keep yourself and your family safe, you should know how to prevent cold-related health problems and what to do if a cold-weather health emergency arises.

The most important aspect for cold weather safety is proper clothing. Appropriate clothing should include a water resistant coat with sleeves that are snug at the wrist, several layers of loose fitting clothing, water resistant footwear, a scarf, a hat and mittens (as they are warmer than gloves). Be sure the outer layer of your clothing is tightly woven, preferably wind resistant, to reduce body-heat loss caused by wind. Wool, silk, or polypropylene inner layers of clothing will hold more body heat than cotton. Stay dry. Wet clothing chills the body rapidly. Excess perspiration will increase heat loss, so remove extra layers of clothing whenever you feel too warm.

When there are high winds, serious weather-related health problems are more likely to occur even when temperatures are only cool. This is because the wind actually draws off your body heat. This is known as the wind chill factor and it is why it feels colder on windy days than the actual temperature says it is.

WIND CHILL FACTOR											
Actual Air Temperature ⁰ C / ⁰ F											
10 / 50 4 / 39 -1 / 30 -7 / 19 -12 / 10 -18 / -0.5 -23 / -9 -29 / -20 -34 / -29 -40 / -40											
Apparent Air Temperature ⁰ C / ⁰ F											
Wind Speed	0	10 / 50	4 / 39	-1 / 30	-7 / 19	-12 / 10	-18 / -0.5	-23 / -9	-29 / -20	-34 / -29	-40 / -40
	8	9 / 48	3 / 37	-3 / 26	-9 / 15	-14 / 7	-21 / -6	-26 / -15	-32 / -26	-38 / -36	-44 / -47
	16	4 / 39	-1 / 30	-11 / 13	-20 / -4	-29 / -20	-36 / -33	-43 / -45	-50 / -58	-57 / -70	-64 / -83
	24	2 / 36	-6 / 21	-13 / 9	-21 / -6	-28 / -18	-38 / -36	-43 / -45	-50 / -58	-58 / -72	-65 / -85
	32	0 / 32	-8 / 18	-16 / 3	-23 / -9	-32 / -26	-39 / -38	-47 / -53	-55 / -67	-63 / -81	-71 / -96
	40	-1 / 30	-9 / 16	-18 / -0.5	-26 / -15	-34 / -29	-42 / -44	-51 / -60	-59 / -74	-67 / -89	-75 / -103
	48	-2 / 28	-11 / 12	-19 / -2	-28 / -18	-36 / -33	-44 / -47	-53 / -63	-62 / -80	-70 / -94	-78 / -108
	56	-3 / 27	-12 / 10	-20 / -4	-29 / -20	-37 / -35	-45 / -49	-55 / -67	-63 / -81	-72 / -98	-80 / -112
	64	-3 / 27	-12 / 10	-21 / -6	-29 / -20	-38 / -36	-47 / -53	-56 / -69	-65 / -85	-73 / -99	-82 / -116

Serious health problems can result from prolonged exposure to the cold. The most common cold-related problems are frostbite and hypothermia. Do not ignore shivering. It's an important first sign that the body is losing heat. Persistent shivering is a signal to return indoors.

Frostbite:

Frostbite is the freezing of tissues. Frostbite causes a loss of feeling and color in affected areas. It most often affects the nose, ears, cheeks, chin, fingers, or toes. Frostbite can permanently damage the body, and severe cases can lead to amputation. The risk of frostbite is increased in people with reduced blood circulation and among people who are not dressed properly for extremely cold temperatures. At the first signs of redness or pain in any skin area, get out of the cold or protect any exposed skin as frostbite may be beginning. A victim is often unaware of frostbite until someone else points it out because the frozen tissues are numb.

Symptoms

- ?? a white or grayish-yellow skin area
- ?? skin that feels unusually firm or waxy
- ?? numbness

Treatment

- ?? Get into a warm room as soon as possible.
- ?? Unless absolutely necessary, do not walk on frostbitten feet or toes as this increases the damage.
- ?? Immerse the affected area in warm (NOT HOT) water (the temperature should be comfortable to the touch for unaffected parts of the body).
- ?? Or, warm the affected area using body heat.
- ?? Do not rub or massage the frostbitten area at all. This can cause more damage.
- ?? Do not use a heating pad, heat lamp, or the heat of a stove, fireplace, or radiator for warming as affected areas are numb and can be easily burned.
- ?? These procedures are not substitutes for proper medical care. If you have suffered a frostbite injury seek medical care immediately.

Hypothermia:

Hypothermia occurs when your core body temperature begins to decrease and drops below 35⁰C/ 95⁰F. This happens as you are exposed to cold temperatures and 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. Body temperature that is too low affects the brain, making the victim unable to think clearly or move well. This makes hypothermia particularly dangerous as a person may not know it is happening and will not be able to do anything about it. Hypothermia is most likely at very cold temperatures, but can occur even at cool temperatures (above 40°F) if a person becomes chilled from rain, sweat, or submersion in cold water. Hypothermia occurs most often in elderly people with inadequate food, clothing, or heating, babies sleeping in cold bedrooms and people who remain outdoors for long periods (i.e. the homeless, hikers, hunters, etc.,)

Symptoms

Adults

- Shivering/fumbling hands
- Exhaustion
- Confusion
- Memory loss
- Slurred speech
- Drowsiness

Infants

- Bright red cold skin
- Very low energy

Treatment

- ?? Getting the victim into a warm room or shelter.
- ?? If the victim has on any wet clothing, remove it.
- ?? Slowly warm the center of the body first (chest, neck, head, and groin) using an electric blanket, if available or use skin-to-skin contact under loose, dry layers of blankets, clothing, towels, or sheets.
- ?? Warm beverages can help increase the body temperature, but do not give alcoholic beverages. Do not try to give beverages to an unconscious person.
- ?? After body temperature has increased, keep the person dry and wrapped in a warm blanket, including the head and neck.
- ?? Get medical attention as soon as possible.

A person with severe hypothermia may be unconscious and may not seem to have a pulse or to be breathing. Even if the person appears dead, CPR should be started. In some cases hypothermic victims who appear dead can be successfully resuscitated.

For further information contact Chatham-Kent Public Health Services at 352-7270.