

...October 26th through 30th is Winter Weather Awareness Week in Maine...
...EXTREME COLD, HYPOTHERMIA, FROSTBITE, AND WIND CHILL...

Cold air, strong winds, and cold wind chill temperatures are common in Northern New England during winter. However, if you are not prepared, these cold conditions can lead to hypothermia, frostbite, and possibly death. To understand the dangers and warning signs associated with the cold, let's examine how the human body regulates its temperature.

...HYPOTHERMIA...

The human body loses heat during the winter due to the conduction and convection of heat from the skin to nearby air, due to evaporation of moisture from the skin surface, and due to normal respiration. To compensate for this heat loss, the body burns energy to produce heat to keep the body temperature at a relatively constant level. However, if a body loses heat faster than it can produce heat, the body temperature will cool to below normal levels, a medical condition known as hypothermia.

HYPOTHERMIA will gradually worsen unless the overall rate of heat loss can be stopped. The warning signs for hypothermia may start with shivering and shaking and may end in death. Initially, as the body temperature starts to drop, shivering begins. At the same time, the brain begins to reduce the amount of blood that is circulated to the extremities of the body in order to conserve heat for the vital organs near the body's central core. If the central core of the body continues to cool, uncontrollable shaking, memory loss, disorientation, incoherence, slurred speech, drowsiness, and apparent exhaustion may develop. These are all signs of a very serious situation. If the body core temperature drops below 95 degrees Fahrenheit, just 4 degrees below normal, immediate care is needed, as the person will likely become irrational. Once the body core temperature drops below 90 degrees, the person loses muscle control, and outside help is the person's only hope for survival. If that help is not available, heart and/or respiratory failure and death will eventually follow as the core temperature continues to drop.

If a person is suffering from hypothermia, it's critically important that the person be warmed properly. If warmed improperly, death may result. In a hypothermic person, cold blood is concentrated in the extremities. If these extremities are warmed too quickly, this cold blood will be released into the body's central core, possibly lowering the central core temperature to a fatal level. Use the following steps to raise the core temperature of a hypothermic person.

Get the person into dry clothing if their clothes are wet.

Put on additional clothing to warm the person's head and trunk, such as a hat and vest .

Wrap the person in a warm blanket and be sure their head and neck are covered. Do not cover their extremities.

Give them warm liquids to drink, but no alcohol, drugs, or coffee.

Seek medical attention, if necessary.

Remember, temperatures do not have to be below freezing for hypothermia to develop. The combination of temperature, wind, and exposure to the elements can be deadly. Hypothermia can develop in elderly people in a cool room with few, if any, warning signs.

...FROSTBITE...

FROSTBITE is a condition in which the body tissue actually freezes. Frostbite is often associated with hypothermia. In a hypothermic person, the brain greatly reduces the amount of blood that is circulated to the extremities of the body and they begin to cool. This increases the chances that the tissue at the end of the extremity may actually freeze. The most susceptible areas for frostbite include the fingers, toes, nose, and ear lobes.

...WIND CHILL TEMPERATURE...

Cold air and high winds contribute the possibility that a person may develop hypothermia or frostbite. To help measure the cooling effects of wind and cold air on the human body, a value known as the wind chill temperature was developed. While inanimate objects are not affected by wind chill, warm blooded animals, including humans, are susceptible to the cooling affects from the wind.

To alert people to the dangers associated with the combination of wind and cold temperatures, the National Weather Service issues Wind Chill Warnings and Wind Chill Advisories. The following values are used for all of northern and eastern Maine.

WIND CHILL WARNINGS - issued for wind chill temperatures of -35 degrees or colder

WIND CHILL ADVISORIES - issued for wind chill temperatures between -20 and -34 degrees

Extremely cold temperatures, even without wind, also increase the threat of frostbite, especially if you are outside over an extended period of time. Be sure to dress appropriately for any outside activities on cold days.

PREPAREDNESS TIP FOR THE DAY:

During very cold and windy days, wear layered clothing. Each layer of clothing traps a small amount of air that helps insulate the body from the outside cold and wind. The top layers will cut down on the penetration of the wind, allowing the lower layers to trap heat, thus lowering the amount of heat that the wind can carry away from the body.

QUESTION OF THE DAY:

Does the wind chill temperature affect my car or car battery?
Will my car be harder to start when the wind chill temperature is cold.

ANSWER: No to both questions. Your car and your car's battery are affected only by the actual temperature. Wind chill temperatures are a measure of the rate of heat loss from the human body. For a car left overnight, the temperature of the car is approximately the same as the surrounding air, so there would be no additional heat loss due to wind, hence no wind chill. In general, morning temperatures are coldest on nights with little or no wind. Therefore, your car battery is more likely to fail on a night with little or no wind than a windy night.