

# Winter Safety

## Introduction

The four environmental conditions that cause cold-related stress are low temperatures, cool high wind, dampness and cold water. Wind chill, a combination of temperature and velocity, is a crucial factor to evaluate when going outside. A dangerous situation of rapid heat loss may arise for an individual exposed to high winds and cold temperatures.

During a winter storm people can be trapped at home, without utilities or other services. Motorists can be marooned in their cars. Walking or driving can be extremely dangerous.

Older adults often create less body heat due to lower metabolism and decreased levels of physical activity. People who are exposed to low temperatures and strong winds tire easily, experience rapid cooling of exposed skin, and become more sensitive to hypothermia.

### Risk Factors for Cold-Related Stress

Wearing inadequate or wet clothing.

Taking certain drugs or medications such as alcohol, nicotine, caffeine and medications that inhibit the body's response to the cold or impair judgment.

Having a cold or certain diseases such as diabetes, heart, vascular and thyroid problems may make a person more susceptible to the winter elements.

Being a male.

Being exhausted or immobilized, especially due to injury or entrapment.

Aging— the elderly are more vulnerable.

## Winter Hazards— Hypothermia and Frostbite

Frostbite: skin tissue actually freezes, causing ice crystals to form between cells and draws water from them, leading to cellular dehydration— seek medical assistance.

Hypothermia: occurs when the body core temperature drops below normal. It can be generated indoors as well as outdoors. In temperatures as high as 40°F. An individual can become hypothermic if chilled by rain, sweat or submersion in water.

Victims of hypothermia are most often the elderly with inadequate food, clothing or heating. Infants sleeping in cold bedrooms and people who remain outdoors for long periods such as homeless, bikers and hunters are often victims.

## Wind Chill— A Crucial Factor When Outside

### Keep Warm— Protect Yourself.

Wear at least three layers of clothing:

- 1)an inner layer of cotton or synthetic weave to allow ventilation,
- 2)a middle layer of lightweight wool or synthetic fabric to absorb sweat and retain insulation in a damp environment,
- 3)an outer layer of water repellent, tighter woven material that breaks the wind and allows some ventilation.

Wear mittens instead of gloves.

Wear a hat— a tremendous amount of body heat escapes through the head.

Footwear should be insulated to protect against cold and dampness.

Keep yourself and your clothing dry. Keep a change of clothing available, if possible, in case garments become wet.

Cover your mouth to protect your lungs, avoid taking deep breaths and minimize talking.

Avoid overexertion, such as when shoveling heavy snow or pushing a car. The strain may cause a heart attack.

Walk carefully. Slips and falls occur often on snow and ice.

### **Plan Safe Winter Travel**

Winterize your car— avoid being stranded in cold weather.

Take your cell phone. Call for help if necessary.

Keep a windshield scraper and small broom in your car to remove ice and snow.

Assemble a disaster kit for each car your family uses: shovel, scraper, flashlight, battery powered radio, water, snacks, extra hat and mittens, blanket, road salt and sand, booster cables, emergency flares and fluorescent distress flag, thermos of warm liquid to drink.

Keep car's gas tank full for emergency use and to keep fuel line from freezing.

Plan long trips carefully— listen to radio for latest road conditions and weather re-

ports. Travel during daylight and with at least one more person.

Let someone know your destination, route and expected arrival time.

### **Home Heating**

Use of wood stoves, fireplaces and space heaters can be dangerous.

Do not burn paper in fireplace.

Never leave fire unattended.

Keep dry chemical fire extinguisher near room being heated.

Kerosene heater— provide adequate ventilation.

Don't use heater with damaged electrical cord.

Have working smoke and carbon monoxide (CO) detectors on each level of home.

Keep area around heating unit clear of flammable/combustible items such as furniture, drapes and upholstery.

Cover exposed outside pipes with foam pipe insulation.

Put freeze caps on all outside faucets.

Allow inside pipes to drip to help prevent pipes from bursting.

Some references cited:

OSHA fact sheet 98-55.

NYSUT, *The Retiree Organizer*, Feb. 2004

Weber State University, *Public Safety News*, Winter 2004.

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