

Winter Survival Tips

Know them before you go on a hike. They could save your life.

You are hiking in the mountains with your troop. Suddenly, the skies darken and a blizzard dumps two feet of snow on your trail. You'll have to spend the night in the woods.

Could you survive?

If you've come prepared and know how to handle yourself, you should have no problem.

Here are some tips that will help:

- * Be prepared for all types of weather. Take enough warm clothing to get you through wet and icy storms.
- * Check weather forecasts before leaving on a hike. Don't be fooled by sunshine. Mountain weather can change in minutes.
- * Remember the C.O.L.D. role: Keep your body and clothes Clean; avoid Overheating; dress in loose Layers of clothing that will trap body heat; and keep clothes Dry.
- * Always take along a wool stocking cap. Eighty percent of the body's heat is lost through the head and neck area.
- * You've heard of frostbite, but how about immersion foot? This occurs when your feet get wet and the skin wrinkles and peels. The pain can keep you from walking.
- * Keep your feet dry by wearing a thin pair of polypropylene socks underneath heavy wool socks. The wool socks will wick moisture away from your feet. The thin socks will help prevent blisters.
- * Make sure you have room to wiggle your toes inside your boots. Boots that are too tight will cut off circulation and hasten frostbite. And always bring extra pairs of socks, even on day hikes.
- * Carry an ample supply of waterproof matches and a candle. A candle is a great fire starter, it will burn for ten minutes or longer.

If you become lost and can not retrace your steps, stay put. Carry a whistle for signaling rescuers. Remember, the universal distress signal: three quick yells or blasts from a whistle.

Drink a lot of water, 8 to 12 glasses a day. But do not eat snow to satisfy your thirst. Eating snow can lower your body's core temperature, triggering deadly hypothermia. Melt ice for drinking water. If you don't have a fire, gather snow or ice in a waterproof container; hold it between layers of clothing until the ice melts.

* Remember the cat. Cattail plants can help you by providing two things—food and warmth. The roots are good to eat. Look for the horn-shaped sprouts growing from the tangle of roots. Peel off the outer covering and eat the white inner part raw or boiled. The rootstocks themselves can be ground and made into flour. The fuzz on the top of the stalk makes a good downy insulation to stuff between two pieces of clothing.

* Finally, never panic. Help yourself by using what you know. Think "shelter" first because staying warm and dry is the key to survival.

(These tips came from the Air Force Survival School of the 3636 Combat Crew Training Wing at Fairchild Air Force Base, Wash. **Before going on a winter hike, review the sections in "The Boy Scout Handbook" and "Field Book" on how to treat frostbite and hypothermia; and how to make snow shelters.**)

Sleeping Out in Winter

By Gene Ruane

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BECAUSE IT'S LIKELY that the temperature will fall to its lowest during hours of darkness winter campers need to pay special attention to sleeping warmly. Smart outdoorspersons develop what some call a "sleeping system."

Such a system includes both equipment and clothing you use when bedding down. Cold weather enthusiasts often will spend more time on refining their sleeping systems than on any other aspect of winter camping.

Adequate insulation, underneath as well as on top, is most important. In fact, insulation underneath can be the more important of the two locations, since the cold ground can conduct heat away from you much faster than the frigid air above.

So you must consider both insulation above and below in planning a winter outing. One night spent shivering in a sleeping bag is likely to destroy your enthusiasm for cold weather camping. Conversely, the snug warmth of a properly-constructed sleeping system will confirm to the camper that he has successfully met the challenge of camping out in winter.

Here are the key factors to consider in any sleeping system:

The sleeping bag. Most Scouts have a sleeping bag but few have one that is adequate for spending a night in subfreezing temperatures. A winter-weight bag costs big bucks, and you don't need it for camping in other than the winter seasons. So consider some cheaper alternatives:

- * Use a bag within a bag. Two lighter-weight sleeping bags may be combined, one inside the other, to achieve or surpass the insulating ability of a winter-weight bag. However, to be effective the outer bag must be big enough to hold the inner bag and the sleeper without compacting the fill of either bag. It is the loft of the fill that traps warm air and provides sleeping comfort. If the loft is squeezed out when the two bags are used together, neither bag will provide much warmth.

- * A sleeping bag liner is a good way to upgrade your system for winter conditions. It is designed specifically to fit inside a sleeping bag, so you avoid the compression problem noted above. A liner is customarily filled with goose down, pile, or other synthetic material to provide maximum insulation with a minimum of bulk. A liner can be fairly expensive, but you can use it alone as a warm-weather bag.

- * Improvise a liner with a blanket. Fold the blanket lengthwise to form an envelope into which you slide feet first. Overlap the edges of the blanket to prevent drafts. Fold the bottom under to avoid bunching as well as drafts. But leave enough room so your feet aren't cramped. Follow the procedure described in the camping chapter of *The Boy Scout Handbook*. Be sure, however, to leave enough room in the bag for you, your sleeping clothes, and the liner, without compressing the fill of your bag.

The sleeping pad The earth acts like a huge heat sponge absorbing warmth from any object that comes in contact with it. While this heat loss is often imperceptible to campers, they attempt to interrupt its flow by placing an insulation barrier between themselves and the soil. Here are some suitable barriers:

- * A closed-cell plastic foam pad at least 3/8-inch thick is ideal for winter camping. Open-cell plastic foam, on the other hand, would have to be at least two inches thick to provide the same amount of

insulation. Also, closed-cell foam won't absorb water the way open-cell foam will, which means you can use the same pad in winter and summer.

* Therm-a-rest Mattress, or one of similar design, is a combination foam pad-air mattress and provides superior protection. The foam prevents contact with the cold ground and also creates small pockets of warm, insulating air. The mattress cover is waterproof and self-inflating. However, the cost of such bedding is high, usually between \$40 and \$70 for a brand name, but sometimes less for a "look-alike" pad.

* Layers of newspaper inside a plastic trash bag act like a sleeping pad. The layers should be thick enough to provide a good barrier between you and the ground. You may want to limit use of this substitute to car camping, however, because carrying enough newspapers would add too much weight for backpacking.

Three more points to note about sleeping pads:

(1) A conventional air mattress is not satisfactory for winter camping. Although it prevents contact with the ground, the air in the mattress will assume the same temperature as the air around it. While you may think of the mattress as filled with "dead air," the space is too large and the insulation too poor to prevent loss of body heat.

(2) Any sleeping pad should be the full length of a camper's body. Three-quarter-length pads are not adequate for winter. Even a small cold spot such as your feet dangling over the end can drain heat from your body. If you don't have a full-length pad, place an extra foam pad, newspapers, or a tarp to extend the pad. For two people sleeping side by side, you may lay two 3/4-length pads lengthwise, then another crosswise at top or bottom for a full-length pad for the two.

(3) A heat-reflecting "space blanket" is O.K. for a ground cloth, but some outdoorspeople do not place much faith in it when used on top of the sleeper. Atop the sleeper it will reflect heat, but it will also create a vapor barrier, causing body moisture to condense on the blanket's underside and drip onto the sleeping bag.

Sleeping clothes. Some camping experts suggest that the best way to sleep warm is to sleep nude. If you've got the perfectly-proportioned bag, this may work. Better is the "layering method," in which you wear sleeping clothes that trap a layer of warm air close to the body.

Sleeping clothes should be clean, dry, and loose fitting. They should not have tight elastic cuffs or waists. A hooded sweatshirt and pants, are good.

Never sleep in the clothes you wore during the day. Body oils and perspiration can clog clothing fibers, reducing their insulating ability. Moisture in your gear, whether from perspiration or otherwise, will have the effect of cooling your body as it evaporates.

Avoid cotton. Synthetic fibers, especially polypropylene, help keep you warm by wicking moisture away from the body. Cotton is inferior in this regard.

If your sleeping bag does not have a wind collar, you may also need an extra layer of clothes or a sleeping hood to protect your shoulders from the cold.

Other reminders:

* Protect your head and neck. You can lose up to 80 percent of your body heat through this area. Even the best winter bag won't keep you warm if your head and neck aren't properly protected. Even when wearing a hooded sweatshirt you should also put on a wool knit cap that can be pulled over your ears, temples, and forehead. A balaclava (pull-down cap with face cutout) or ski mask-cap are even better.

* Provide extra protection for the feet. A loose-fitting pair of clean, wool socks may be a good choice to keep your feet warm. Or wear an extra pair of boot liners or homemade pair of booties from open cell foam, pile, or Polarfleece.

- Use a sleeping system duffel bag. This keeps you from having to leave a warm sleeping bag in the night to retrieve something in your backpack outside your shelter. Keep all your sleeping clothes in a separate stuff sack or duffel bag that can be taken into the shelter at night. In that bag should also be any essentials for the night: any medicines you need, a small bottle of drinking water, small flashlight, lip balm, handkerchief~ reading material, bedtime snack, morning snack, and clean underwear and socks for the next morning.

One additional area deserves some attention: the dreaded winter night-time call of nature. Some veteran campers advocate using a "pee-can" for male campers. This is a wide-mouth plastic bottle with a secure screw cap. (Be sure to mark the bottle with a clear identification.) A stick tied to the bottle that can be both felt in the dark and seen in daylight is also helpful.

Armed with this knowledge and gear, you and the young campers you instruct should enjoy a sound winter night's snooze.

