

Winter Camping and Hypothermia

WINTER CAMPING

By Hiker

This is what I pass out to my Scouts about a month before our winter Camporee. That gives us a couple of meetings or more to discuss cold weather survival skills, and a chance to inform parents of the dangers of cold weather camping when one is not fully prepared.

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PLANNING FOR WINTER CAMPING

Most of this information can be found in the *Boy Scout Handbook*. If you are going to be doing many outdoor activities, this book is an invaluable source of know-how and advice.

"One has to lie deep in the snow to learn how warm and protective it is. A den in the snow confines the body heat like a blanket or overcoat. It is a snug place, no matter how hard the wind may howl. One who holes up in the snow understands better the mysteries of the woods in the winter. He knows why the severe weather grouse squirm their way under soft snow and be quiet. He understands why deer bury themselves in drifts, laying a half-day or more with just their heads sticking out. He learns something of the comfort of the bear in hibernation."

William O. Douglas, 1950

MISCONCEPTIONS ABOUT WINTER CAMPING

Myth #1: Leather-hiking boots will keep your feet warm. -- FALSE

The snug fit of most leather-hiking boots can limit the circulation of blood in the foot, especially with thick socks on. Overboots cut generously enough to hold your foot and shoe are much more effective. The cloth stitching in leather boots can also wick moisture into the shoe. Nothing is worse than wet feet in cold winter.

Myth #2: Waterproof clothing is ideal for cold weather camping. -- FALSE

To keep warm in the cold, your clothing must allow body moisture to escape. Moisture that is trapped too close to the body can wick heat away through evaporation. It is better to layer your clothing on in cold weather. Wool, GorTex, and polypropylene garments work nice in the cold. Always wear insulated underwear.

Myth #3: Winter camping does not require much preparation. -- FALSE

Arctic conditions exist when the wind is blowing and the temperature drops below 20 degrees F. There are only seven states in the U.S. that do not experience arctic weather. Illinois is not one of them. It is very important to prepare, and even over prepare. I have never heard anyone complain about being too warm or having too many dry clothes on a winter campout.

Myth #4: Mental attitude has little to do with winter camping. -- FALSE

A positive mental attitude is the most important ingredient in the success of cold weather camping trips. The demands of winter will drain your energy and you will have to rely on yourself to keep your spirits high.

Myth #5: In cold weather, tasks can be done just as quickly as in warm weather. -- FALSE

Every effort in cold weather takes longer to complete. Be sure to bring some winter patience with you when you camp in the cold. :-)

CONSERVING BODY HEAT - THE PRIME OBJECTIVE

There are three ways to lose body heat. Keeping them in mind will help you be much more aware of what you are or could be doing to keep your body warm.

RADIATION - The emission of body heat, especially from the skin areas exposed to the elements. A good set of gloves, hat, and scarf can help best in keeping bare skin to a minimum.

CONDUCTION - The absorption of cold by the body when sitting or laying on cold ground, or handling cold objects such as metal cooking utensils and metal canteens. This is why a decent sleeping pad is required for cold weather camping. The same goes for wearing gloves. A campstool is necessary on a winter camping trip. Try not to sit on the ground.

CONVECTION - The loss of body heat due to wind blowing across unprotected body parts. This situation can also be reduced by keeping bare skin covered with hats, scarves, and gloves. It is important to keep exposure to a minimum, **ESPECIALLY** in a windy situation. Convection heat loss can reduce body heat the fastest. Wet clothing will accelerate this process, making staying dry even more important.

OTHER CONCERNS

Tent Placement.

Whenever possible, place your tent in a location that will catch the sunrise in the morning. This will aid in melting off any ice and evaporating any frost or dew that may have formed during the night. This will also warm your tent as you awaken in the morning. Cold air sinks. Try to place your campsite on slightly higher ground than the rest of your surroundings. Try to choose a protected site if it is snowing or the wind is blowing.

Water Consumption In Cold Weather.

Dehydration can seriously impair the body's ability to produce heat. Drink fluids as often as possible during the day and keep a water bottle or canteen with you at night.

Cooking In Cold Weather.

Cooking in cold weather will take about twice as long as normal. Always use a lid on any pots that you are cooking in. This will help hold in the heat and decrease the overall heating time. Make sure you start hot cleaning water before you start cooking. The pots and utensils must still be cleaned. Try to keep your menu to good one-pot meals. Things like stews, chili, and hot beans stick to your ribs, lessen the cleaning time, and provide good sources of energy and fuel for your internal furnace. A good high-calorie snack before bedtime will also keep you warm all night. Stay away from an overabundance of sugar. Cheese is a good high-calorie bedtime snack.

Sleeping Tip #1.

Do not sleep with your mouth and nose in your sleeping bag. The moisture of your breath will condense in the bag, and cause it to become wet and ineffective as an insulator.

Buddy System.

Buddies can help each other pack for a trek, look after one another in the woods, and watch for symptoms of frostbite, hypothermia, and exhaustion.

Checklist.

Make a checklist of everything you need before you start to pack. Then check each item off as you pack it. This way you will not forget anything.

Keeping Warm

Keeping warm is the most important part of cold weather camping. Use the C-O-L-D method to assure staying warm.

C - Clean

Since insulation is only effective when heat is trapped by dead air spaces, keep your insulating layers clean and fluffy. Dirt, grime, and perspiration can mat down those air spaces and reduce the warmth of a garment.

O - Overheating

Avoid overheating by adjusting the layers of your clothing to meet the outside temperature and the exertions of your activities. Excessive sweating can dampen your garments and cause chilling later on.

L - Loose Layers

A steady flow of warm blood is essential to keep all parts of your body heated. Wear several loosely fitting layers of clothing and footwear that will allow maximum insulation without impeding your circulation.

D - Dry

Damp clothing and skin can cause your body to cool quickly, possibly leading to frostbite and hypothermia. Keep dry by avoiding cotton clothes that absorb moisture. Always brush away snow that is on your clothes before you enter a heated area. Keep the clothing around your neck loosened so that body heat and moisture can escape instead of soaking several layers of clothing.

Footwear.

As with other clothing, the layer system is also the answer for foot wear. Start with a pair of silk, nylon, or thin wool socks next to your skin. Then layer on several pairs of heavier wool socks. When and if your feet become damp, change into another pair of dry socks at the first opportunity. Rubber overboots will protect the feet from water and will allow more comfortable shoes to be worn within.

Mittens and Gloves.

Mittens allow your fingers to be in direct contact with each other. They will keep your hands warmer than regular gloves that cover each finger. Select mittens that are filled with foam insulation, or pull on wool gloves and cover them with a nylon overmitt. Long cuffs will keep wind and snow from getting in.

Headgear.

The stocking hat is the warmest thing you can cover your head with in cold weather. Get one that is large enough to pull down over your ears. In addition, ski masks are great in the winter and can help in keeping your neck and face warm as well. Noses and ears can be very easily frostbitten, so a scarf can be an invaluable item to have.

Parka and/or Overcoat.

Your coat or parka is the most important piece of your winter clothing. It needs to be large enough to fit over extra clothing without cutting off blood flow, and allowing ventilation to keep moisture away from your body. A large permanently attached hood will prevent heat loss around your head and neck.

Sleepwear.

Never should you sleep in the same clothes that you have worn all day. They are damp and will cause you to chill. This could cause frostbite and hypothermia. It is advised that you bring a thick pair of sweats and thermal underwear to sleep in. Keep the thermals and sweats for sleeping in only. Do not wear them during the day; this will keep them the driest. Also, be sure to have a couple of layers of wool or heavy thick cotton socks on as well. Always sleep with a stocking hat on your head. Your sleeping bag needs to be a winter rated bag. Typically rated down to 15 degrees and stuffed with 5 pounds of HoloFil, Fiberfil, or other polyester ticking. It is also a very good idea to have some kind of sleeping mat to use in the winter. The mat can be a \$90 Thermal Rest or a piece of high-density rubber foam at least one inch thick. In cold weather camping you never want to sleep on an air mattress or off the ground in a cot. The air under you will cool you off in no time and this would create a threatening situation. If you do not have a sleeping mat, bring a spare wool or natural fiber blanket to use as a ground pad under your sleeping bag. The sleeping mat is worth its weight in gold. Straw or the equivalent can also be used for ground insulation.

Have fun!

Every year, tens of thousands of boys will go winter camping. Although the threat of danger is always present in a winter camp, planning and knowledge can overcome this. It is very important that the Scouts come prepared. If a Scout feels that at this time winter camping is not for him, then he should not go. There is always next year and the year after and so on. Make sure you are ready, and most of all, SAFE.

Winter Cooking

Preparation

Make up a "**cleanup kit**" including scouring pads, detergent, sponge, dish pan or large pot and bring food that requires a minimum of **cleanup**.

Gather a "**kitchen kit**" including potholders or leather gloves, measuring cup, aluminum foil, Plastic bags, napkins and paper towels, and matches in a waterproof container.

Review your menus and pack a "**spice kit**" of spices used in the preparation of the recipes as well as standard salt, pepper, cinnamon, chili pepper, sugar etc.

Cooking utensils for basic food preparation include a paring knife, large knife, measuring spoons, tongs, slotted spoon, pancake turner, ladle, can and bottle openers make up a "**chef kit**."

Metal or plastic **thermal cups** and plastic bowls rather than metal plates will keep food warmer.

Plan food that requires **minimum preparation** at the campsite. Do most of your preparation at home. Foil dinners, precooked casseroles packaged in boilable plastic bags, canned meats that can be heated on an open fire.

Nutrition

You will need **extra calories** particularly in the form of fats like butter, cheese and peanut butter, because of the extra energy expended to keep your body warm.

Drink lots of **extra liquids** and add foods to your menu like soups and stews, which help replace fluids, lost from sweat and expelled breath. Winter air is very dry and you can easily become dehydrated without realizing it.

Plan for **hot food** rather than sandwiches. Plenty of **hot liquids** like cocoa and soup can help warm you when your body temperature has been lowered through cold and damp clothing.

Include high-energy **snacks** like nuts, raisins, candy bars, fruit leather, and jerky to carry with you during the day and nibble, as you get hungry.

COLD WEATHER MENU PLANNER

breakfast	lunch	supper
drinks cocoa/coffee Russian tea beef or chicken bouillon hot lemonade/Tang	drinks cocoa/milk (keep from freezing) lemonade/orange juice	drinks cocoa/coffee/ Russian tea/ beef or chicken bouillon/ hot lemonade/Tang
cereals instant oatmeal/ instant cream of wheat/ cocoa wheat/cream of rice/malt o meal	soups/stews instant tomato/vegetable instant chicken/beef instant lunch noodles chili stew Ramen noodles	hot stuff boil in bag meals: spaghetti, macaroni and cheese, taco meat, tuna/ham noodle hot dish, Chow mien
hot stuff toaster hashed browns/toaster French toast cheese/sausage muffins Precooked bacon/sausage/ Canadian bacon/cheese in pitas	sandwiches grilled cheese/ham in foil peanut butter on pitas hoagies in foil hot dogs and buns sliced cheese and crackers honey on English muffin hot tuna and cheese pitas	more hot stuff beans and franks, hamburger and rice hot dish, foil meals: hamburger, carrots, potatoes, ham, pineapple, potatoes fish sticks, potato patties pizza burgers canned ham and baked potatoes
extras stewed fruit raisins/prunes/apricots brown sugar butter hot rolls/muffins	extras raisins chips trail mix beef jerky fruit leather peanuts granola bars	extras French bread in foil instant mashed potatoes hot rolls or muffins pita or tortilla w/butter cheese bread
snacks hot dogs and buns individual. fruit pies smores baked apples popcorn banana bread grilled cheese sandwich fruit leather pizza rolls soup and crackers		tips bring hard candy for hiking snack wrap milk cartons in newspaper add butter to soup for energy preslice all meats and cheese never bring fresh fruit

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 will have to spend the night in the woods. Could you survive? If you have 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. Do not be fooled by sunshine. Mountain weather can change in minutes.

Remember the C.O.L.D. rule: 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 have 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. In addition, 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 10 minutes or longer.

If you become lost and cannot 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. However, 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 do not 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, Washington. 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.)