

Cold Weather Survival Guide

"Be Prepared" for Winter Safety - Don't Get Left Out in the C.O.L.D.

(Irving, TX, November 2003) Most people think of fall and winter as a time to sit by the fireplace, watch football, stay indoors, and relax. However, there are tens of thousands of Scouts and other people who enjoy the outdoors by camping, skiing, participating in winter sports, and traveling during the cold-weather months. The Boy Scouts of America would like to remind these individuals that safety doesn't take a holiday.

The most common errors people make during cold-weather activities include not eating the right kinds of foods, not drinking enough water, not having adequate clothing, and being unaware of the signs of frostnip and frostbite.

"One of the best ways to remember what is appropriate to eat when you are spending extended periods of time outside in cold weather is to use good nutrition to 'build the fire within,'" says Dave Bates, experienced outdoorsman and head of the Boy Scouts of America's Camping Service. "Make sure your food consumption includes sugars, which act like a fire starter, carbohydrates and proteins, which act as kindling, and fats that produce the energy needed to keep the fire burning and your body running at peak performance," says Bates. "Stay away from caffeinated drinks such as soda, coffee, and tea; drink plenty of plain water or sports drinks to keep yourself properly hydrated," says Bates.

To avoid these and other similar safety hazards this season, the BSA is sharing its tried-and-true winter safety tips. These commonsense tips can help winter campers, skiers, outdoor enthusiasts, and families who make highway travel plans to "be prepared" for winter hazards.

"'Being prepared' isn't just for Scouts—proper planning is the critical first step for any outdoor outing or excursion," says Bates. "Before embarking on your next cold-weather outing, don't forget to pack a positive attitude, pace yourself, and warm up to these easy-to-remember, but often overlooked, safety tips."

TOP OUTDOOR SAFETY TIPS FOR THE C-O-L-D

Keeping warm is the most important part of cold-weather camping and outdoor activities. Use the C-O-L-D method to stay 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. Stay hydrated by drinking plenty of water, and refrain from drinking caffeinated drinks that act as diuretics.

- 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 footgear that will allow maximum insulation without impeding

your circulation. Having clothing that is bright colored (orange or red) is also a good idea, so hunters and sportsmen can see you in snowy conditions. Always have a hat and wear it.

- D - Dry

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

Prepare for icy temperatures

Select bright thermal clothing that can be layered as the weather changes. When hands and feet begin to chill, it's time to put on a hat. Hats help trap body heat by preventing it from escaping through your head. Wear suitable shoes for walking on frozen ground or ice, and don't forget other essentials like mittens, gloves, and scarves/neck warmers.

Find supplies for campfires

Prior to sundown, find tinder and wood necessary for starting and maintaining a campfire.

Know the area

Thoroughly research the area where you are planning to go, or go with someone who knows the area and may have camped there before. Be mindful of potential avalanche areas or unstable ice.

Travel with a buddy

Groups of four to 10 are an even better idea. Should a problem arise, such as injury or hypothermia, someone can stay with the injured person(s) while others seek help.

Watch for frostnip and hypothermia

Keep an eye on friends and fellow campers. If the areas around the eyes and lips, or the lips themselves, begin to turn grayish white, the person may be experiencing frostnip. Signs of confusion, inaction, and shivering are all progressive signs of hypothermia (overexposure to winter elements). If you get cold, huddle up or sit by the fire. Action and movement will also stimulate blood flow and distribute warmth throughout the body.

Troop 17 Deep-winter Camping

Cold weather camping represents one of the greatest challenges that your son will face in his Scouting career. With the proper planning, this challenge can be easily met. Without proper planning, that challenge could prove to be a serious defeat. The knowledge that your son holds regarding winter camping will be instrumental in his success. However, it is equally important that you be educated as well on the crucial aspects of cold weather camping. This guide is intended to provide your son with a refresher course of the skills of cold weather camping and to provide you with an important introduction to the skills that your son has learned.

We hope that it will be a helpful guide not only for this upcoming activity, but also for future activities that your son will participate in as a Scout in Troop 17. This guide is broken down into

several key areas that include clothing, the layering system, special equipment, bedding down, nutrition, and cold weather first aid. This knowledge paralleled with the important skills your son has been learning over the past several months will prove invaluable in providing a challenging weekend that will be easily overtaken. We hope he will accept this challenge and most important, enjoy it.

Clothing

The clothing that your son brings on a winter camping trip will be the single most important element of maintaining warmth. While the clothing will not directly provide warmth, it rather provides insulation to preserve body heat from activity. Of course, this all sounds rather logical; however it is indeed extremely important. If it is at all possible to single out one important feature of clothing, it would be that no Scout should have a pair of jeans or sweat suit material in his pack. The only exception to this rule is a hooded sweatshirt for sleeping at night. We cannot over emphasize how important this is. Jeans absorb moisture like a sponge and sweatpants hold no wind breaking capabilities. PLEASE LEAVE THEM AT HOME.

Clothing material can primarily be broken down into wool, synthetics, cottons and blends. Each type of material holds its own advantages and disadvantages. Wool although itchy, provides warmth when wet. Synthetics provide waterproof and windproof advantages. Cottons are primarily used in warm weather camping by providing lightweight, cool clothing. Finally, blends represent a mix between cotton or wool or synthetics. The Scout uniform represents an ideal example of blends. Before running through the recommended list of clothing for the weekend, it is important to address several important issues. First perspiration can prove to be a serious side effect of intense winter activity. To avoid this it is important that the first layer of clothing be able to wick moisture away. Polypropylene long underwear is the solution. Commonly referred to as "Wicker's", polys wick moisture away from the body. The second important issue concerns breath-ability. Waterproof materials do a superb job in keeping us dry; however they hold one important drawback. They lack breath-ability. What this means is that they counteract the effects of polys by trapping the moisture that the thermal underwear attempts to wick away. Ultimately, when this occurs it is important to change layers throughout the day to avoid excessive moisture build-up that brings down the body temperature. The following list represents the recommended clothing for a two-day winter camping trip:

2 Shirts (wool or polyester pile)	Turtlenecks	Windbreaker
2 pairs of Wool or polyester pile pants	2 pairs light wool socks	Parka or heavy jacket
2 pair wool heavy socks	Poncho	Extra Boots
Wool Stocking Cap, ear warmer, neck gators	Boots (waterproofed)	
Wool mittens (preferable to gloves)	Poly Long Underwear	

The Layering System

While clothing will provide insulation to maintaining a constant body temperature and steady warmth, it is useless if not worn properly. Layering represents an individual's personal thermostat. As you begin to feel cool, you can put on another layer. As your body begins to sweat, you simply remove a layer. More often than not, this body temperature regulation can be performed thorough the wool cap. The body loses a lot of its heat through the head. A wool

cap helps maintain this heat within your body, warming you rather than your surroundings. Obviously, the layers begin with the polypropylene long underwear and work their way up to the parka. Again, the primary importance of the layer system lies in the body temperature regulation.

Special Winter Camping Equipment

This section is intended primarily to introduce equipment concerns that need to be addressed when camping in extreme cold weather. The first, single most important piece of equipment is fortunately the cheapest. Zip Lock Bags! All underwear, socks and long underwear must be packed in zip-lock bags. All other clothing should be stored in something waterproof. This can range from a garbage bag to stuff sacks. All the wool and polypropylene in the world won't do any good if it is wet from the beginning. Dryness is the key to success. Foam pads are the second most important piece of special equipment. The ground is cold! When you are sleeping it is important to have that added insulation under you to avoid losing body heat to warming the Earth. Mummy sleeping bags provide a great degree of warmth due to the contour and snug fit of the bag to the body. Unfortunately the degree of warmth represents a direct function of price. These bags can range anywhere from price from \$50 for a 35 degree bag to \$300 plus for a zero degree or subzero degree bag. A bag rated to 20° will serve for most trips and warmth can be increased adding a wool blanket or nesting within another bag if very cold weather is expected.

Bedding Down

Sleeping in the winter is in reality no different than camping out in the summer. However, needless to say there are a few important things that require mentioning. The first most important tip is to never wear wet clothes to sleep. Not only will it decrease your body temperature, it will also cause moisture in your sleeping bag that will decrease the insulating properties of the bag. Secondly if you get cold during the night, do not place your head inside the sleeping bag as this will cause moisture from your breath to have the same effect as mentioned above. Wearing a hat while sleeping will produce the same results as sticking your head inside the bag. Thirdly the insulated capabilities of the bag come from warmth being trapped in the dead air space of the synthetic fibers (or bag fill), be sure that the bag is fluffed out as possible to increase the insulating characteristics Give the sleeping bag some time to fluff up after removing it from the stuff sack.

Nutrition

Menu planning and a properly balanced diet become crucial in cold weather camping. Unfortunately, it is sometimes difficult to do. Who wants to cook and clean a full course dinner or grand slam breakfast in zero degree weather? Most important to realize is that you will require a greater calorie intake in cold weather. In addition to increased activity, increasing your metabolism is a good way to increase your warmth. A proper diet should be high in carbohydrates and protein. Many of the menus have already been planned. However, we would recommend sending some snacks along. Rather than sending cookies and chips, replace them with cheese and crackers, granola bars, and trail mixes. Ultimately it is important to have a high calorie diet that is high in protein and carbohydrates.

Cold Weather First Aid

This subject always becomes an important topic that we hope no Scout will ever have to use. However up to date knowledge is of the utmost importance. In addition to basic first-aid skills that many of the Scouts are educated on, cold weather first-aid concerns and safety issues often take precedence on an outing like this. Scouts must learn about cold weather first aid for advancement, however it is important to review the main problems and their solutions associated with cold weather camping.

Dehydration - excessive loss of body water that impairs the ability to reason so the victim may not react properly. Prevention-drink at least 2 quarts of water per day and avoid dehydrating foods (high protein) and fluids (coffee, caffeine). Treatment includes increasing liquid intake and keeping warm. Severe cases require immediate medical attention.

Hypothermia - lowering of the inner core body temperature. Can and usually does happen above freezing. The victim may not recognize the symptoms and may not be able to think clearly enough to react. Injury or death may result. Prevention includes staying dry, good nutrition, consumption of high-energy foods, proper clothing, and increased activity. Treatment includes providing shelter and warmth for the victim from the elements, removal of wet clothing, hot drinks followed by candy or other high sugar foods and increasing body heat through huddling. If hypothermia is suspected medical attention should be contacted as quickly as possible.

Frostbite - tissue injury involving the actual freezing of the skin and underlying tissues. Recovery is slow. Once exposed, the victim will be predisposed toward frostbite in the future. Prevention includes proper clothing, good nutrition, drinking fluids, immediate treatment of minor symptoms and the use of buddy system to check face, nose, and ears of fellow Scouts. Treatment includes warming area through exercise, heat, or warm water (Do Not Rub with Snow).

Snow Blindness - inflammation of the eye caused by exposure to reflected ultraviolet rays when the sun is shining brightly on an expanse of snow. Prevention includes wearing sunglasses when any danger is present. Treatment includes blindfolding the victim, rest, and avoided future exposure. Snow Blindness heals in a few days without any permanent damage.

Conclusion

It is our hope that this cold weather survival guide has been helpful for not only you but also to your son. Please do not throw it away. It will provide a valuable resource for years to come. Review the material; go over your son's pack with him. Be sure that not only does he understand the information contained in this guide, but that you also understand. We are confident that with this information, your son's training and your support and cooperation, this winter camping will prove to be equally enjoyable as any other outing your son has attended. The information on cold weather camping is abundant. If you have any specific questions or are interested in learning more about cold weather camping please do not hesitate to contact us. The Troop is filled with extremely knowledgeable and experienced Scouters that would love to pass this information onto you and your son.

More Cold Weather Tips

If you only have a rectangular sleeping bag, bring an extra wool blanket to pack around your shoulders to keep air from getting in.

Use a ground cloth (or poncho) to keep ground moisture from your bag.

Put a hand warmer (in a sock) in the bottom of your sleeping bag to warm it up before bedding down.

Use the buddy system to check each other for signs of cold weather health problems. Notify the adult leadership if any symptoms occur.

Stay warm and dry. Have Fun!

WINTER BACKPACKING CLOTHING LIST

The **IDEAL** list of clothing for winter activities outdoors provides the best guidelines for a clothing system that will make you most comfortable and help increase your safety. The following list provides acceptable alternatives, which while not ideal will probably get you through normal winter weather. Note that extreme weather in terms of cold, snow or rain may make these items very marginal.

ACCEPTABLE/REQUIRED MINIMUM

- Hat- wool or acrylic, long enough to cover the ears
- Mittens or gloves- wool or acrylic , or nylon ski type gloves or mittens
- Upper body- at least one layer of poly propylene, wool or polyester pile underwear, shirt or sweater AND an insulated polyester or down filled parka, AND a couple of sweatshirts
- Lower body- at least one layer of polypropylene, wool or synthetic pile underwear or pants AND two layers of cotton pants. Insulated nylon ski pants are better than the cotton pants.
- Socks- wool or acrylic
- Boots- leather/nylon or rubber bottom (leather/nylon will not be acceptable if the ground is snow covered)

NOT ACCEPTABLE

- No warm head or hand covering
- Cotton-only layering systems for upper body or legs
- Cotton socks
- Sneakers or similar light shoes

CLOTHING CHECK

We will be having a pack and clothing check at our meeting. For your safety, the above acceptable items are required.

SUGGESTED CLOTHING LIST FOR COLD WEATHER ACTIVITIES

GENERAL GUIDELINES

- Wool and synthetic fabrics (polypropylene, polyester, acrylic, etc.) are MUCH better than cotton for cold and/or wet conditions since they continue to provide insulation even when wet and dry much faster.
- Dress in several thin layers (sweaters and such) rather than one thick layer (coat). Layers help trap extra warm air next to the body and allow removal or addition for changes in activity level and temperature.
- Clothing with full zippers that allows ventilation without removal of the garment is superior to pullover types. (All zippers should have “zipper pulls” to allow easy use of the zipper with cold and mittened hands.)
- Nylon wind shells for the top and pants help prevent wind from blowing through your insulating layers and taking away your body heat.

It is often possible to obtain many of the items on this list from thrift stores, garage sales, army surplus stores, or Dad's closet (always ask permission before you borrow any of Dad's clothes) at very low cost. While the expensive brands like Patagonia, Columbia, etc. purchased new at Ramsey and other places may last longer, you will probably outgrow them first. Ames, K-Mart, Caldor, etc. also carry so-called Glacier or Polar fleece at sale prices under \$20.