

Cold Weather Camping Tips

The most important thing that anyone brings with them on a winter camp out, or any camp out, can't be bought in any store or made at home. It is **a positive mental attitude**. All the equipment in the world can't make you have a rewarding camping experience without it.

- **Stay hydrated.** It's easy to get dehydrated in the winter. You aren't visibly sweating, so you don't think to drink water, but since the air is so dry, you lose a LOT of water through breathing.

DRESSING

- Remember **C O L D**:
 - Clean** - dirty clothes lose their loft and get you cold.
 - Overheat** - never get sweaty, strip off layers to stay warm but not too hot.
 - Layers** - Dress in synthetic layers for easy temperature control.
 - Dry** - wet clothes (and sleeping bags) also lose their insulation.
- **AVOID COTTON!** Cotton holds onto moisture, keeping it close to the skin, and thereby losing all insulation value. Perspiration which would normally drip off the body is absorbed by the cotton keeping it close to the skin, further cooling the body. This could easily mean the difference between comfort and hypothermia.
- **Remember the 3 W's of LAYERING** – Wicking: inside layer, Warmth: middle layer(s), Wind/Water: outer layer. Wicking should be a polypropylene material as undershirt, long underwear and also sock liner. Warmth layer(s) should be fleece or wool. The Wind/Water layer should be Gore-Tex or at least 60/40 nylon.
- Bring 2 changes of socks per day.
- **Keep your hands, feet and head warm.** Your body will always protect the core, so if your hands and feet are warm, your core will also likely be warm. If your hands or feet are cold, put on more layers, (and put on a hat)! Wear glove liners inside gloves and mittens (mittens are warmer). Wear synthetic socks (moisture-wicking) with wool or wool-blend socks over them. Hats that cover your head, neck and face (except for nose and eyes) – know as a balaclava - are great for really cold days.

SLEEPING

- **Eat a high-energy snack before bed**, and then brush your teeth. The extra fuel will help your body stay warm.
- **Dress right while sleeping.** Change into clean, dry clothes before bed. Your body makes moisture and your clothes hold it in - by changing into dry clothes you will stay warmer and it will help keep the inside of your sleeping bag dry. You will also be starting the day with warm clothes. Put other clothes that you will wear the next day in or under your sleeping bag. The same method of layering can be used for sleeping as for your daytime clothing. Who ever suggested that you should sleep in your underwear, probably never went winter camping. As long as your clothes are not wet, you can wear anything in your sleeping bag as you normally would outside. Just remember not to make it too tight in your bag which defeats the purpose of the layers. Wear 2 pair of socks, one synthetic, one wool.
- **Wear a warm hat to bed**, even if you have a mummy bag.
- **Use a Sleeping Pad.** The ground is cold and you will lose body heat if you are in contact with the ground. You should have 3 times more (in insulating value) under you than you have on top. Make sure you never come in direct contact with the ground. Stay on a foam pad or closed-cell self-inflating pad. If it is very cold, use more than one insulating layer below you. Self-inflating closed-cell pads are best and are now available in all camping departments and outdoor stores. You can also use blankets, piles of newspaper, or a piece of carpet to help insulate underneath you. **Do not use a blow-up air mattress.** Air mattresses only increase the amount of air that you need to heat up.

- **Sleeping Bags:** Use a sleeping bag that is appropriate for the conditions. *Two sleeping bags, one inside the other will work to lower the rating of both bags. You can also use a sleeping bag liner, which is easier to clean than your sleeping bag. There are silk and fleece liners that go inside the sleeping bag. They will lower your sleeping bag's rating by up to 10 degrees. Or buy an inexpensive fleece throw or blanket and wrap yourself in it inside the sleeping bag. These options are generally more comfortable than the nylon interior of the bag, however, they can become twisted as you turn in your sleep.*
- **Use a mummy sleeping bag.** *Mummy bags have less wasted space to heat, so are much warmer (you'll get used to it). Most cold weather bags are designed to trap heat. The proper way to do this is to pull the drawstrings until the sleeping bag is around your face, not around your neck. Don't burrow in - keep your mouth and nose outside the bag. Moisture from your breath collecting in your bag is a quick way to get real cold. Keep the inside of the bag dry.*
- **Keep the feet of your sleeping bag warm:** *Put a trash bag over the bottom half of your sleeping bag to help hold in the heat. A zipped up coat pulled over the foot of a sleeping bag makes an extra layer of insulation.*
- **Hand Warmers:** *Put a hand warmer into each of your boots after you take them off. Your boots will dry out during the night and be warm when you put them on. Put a hand warmer in a sock and put it in the foot of the sleeping bag before you go to bed.*
- **Inside the tent:** *Bring a piece of cardboard to stand on when changing clothes. This will keep any snow on your clothes off your sleeping bag, and help keep your feet warmer than standing on the cold ground. A space blanket or silver lined tarp on the floor of the tent or under your sleeping bag will reflect your heat back to you.*
- **Go to the washroom before you go to bed.** *Having to go in the middle of the night when it is 5 degrees out chills your entire body. Drink all day, but stop one hour before bed.*
- **Tent:** *Leave the tent flaps/zippers vented a bit, it cuts down on interior frost.*
- **Air out** your sleeping bag when weather permits. *Perspiration & condensation in the tent will reduce the bag's insulating properties.*

MISCELLANEOUS

- **Foods** *high in fat, complex carbohydrates, and protein release their energy slowly, keeping you warmer. Sugar and starch burn too quickly to keep you warm hour after hour. Good foods to eat would be Beef, poultry, fish, eggs, corn, beans, whole-wheat bread, peanut butter, macaroni and cheese, vegetables and fruits, butter, nuts, cheese, salami, and bacon. Some of these would make excellent snacks for the campout. **Avoid sweets.***
- **Exercise** *before bedding down to increase body heat. This will help to warm your bag quicker, and fire up your internal furnace. **Be careful not to start perspiring though.***
- **Meals:** *Try to always eat hot (simple) meals. Prepare as much at home as possible. Fill coffee/cooking pots with water before bed. It's hard to pour frozen water. Shelter the cooking area from the wind. Have extra food that does not need to be cooked – but keep it in the trailer.*
- **Keep** *a pot of hot water available for cocoa or cup-a-soup.*
- **Have a good knowledge** *of the signs of Frostbite & Hypothermia and how to treat it.*

Winter Camping - Clothing Science

The essence of staying warm in the winter is minimization of heat loss. In terms of clothing, this is achieved by adding insulation to the body through 1) having proper clothing material, and 2) effective use of them.

Do you know your winter clothing material options?

1. **Wool** – the 3-dimensional wavy crimp nature of its fibers enables it to trap air very effectively. As much as 60-80% of a thick wool cloth can be air. Wool can also absorb a fair amount of moisture without imparting a feeling of ‘dampness’ because the water “disappears” into the fiber spaces. Even with moisture in the fabric wool still traps dead air space and still insulates you. Wool is relatively inexpensive. Once camping in the Berkshires, I did not anticipate the big drop in temperature at night. I dashed to a nearby Walmart and picked up a couple of wool blankets for \$12 each.

2. **Pile or Fleece** - is a synthetic material that has a similar insulative capacity as wool but it will not hold water like wool, so it dries more quickly. The fabric comes in variety of weight/thickness, thereby offering different amounts of insulation. The disadvantage of pile is that it has very poor wind resistance and hence a wind shell on top is almost always needed.

3. **Hydrophobic fabrics** (e.g. **Polypropylene**) – What’s special about hydro-phobic fabrics is that it moves the water vapor away from the source (the body). Polypropylene layers are extremely effective worn directly against the skin as a way of keeping the skin from being wet and reducing heat loss (when moisture evaporates from your skin).

4. **Vapor Barrier Systems** – even when you are not active, the body perspires. That perspiration continually evaporates into the air (causing heat loss) unless the air humidity is 70% or higher. The idea of an impervious vapor barrier is to trap the water vapor near the skin. Eventually the humidity level rises to the point where the body senses a high humidity level and shuts off the perspiration. This in turn cuts down evaporative heat loss.

5. **Polarguard, Hollofil, Quallofil and others** – you find these in heavy outer garments like parkas. It’s built with lots of dead air space. Hollofil, for example, has four “holes” running through the fiber for maximum insulation. Their advantages are that they do not absorb water and dry fairly quickly.

6. **"Superthin" fibers – e.g. Thinsulate, Primaloft, Microloft** - the principal behind these fibers is that by making the fiber thinner you can increase the amount of dead air space. Thinsulate is made in sheets and therefore tends to be used primarily for outer layers, pants or parkas. It’s a good choice when bulk matters, the garment usually sports label such as ultra-light, thin, Golite. Another advantage to this synthetic material is that they don’t absorb moisture.

7. **Down** - feathers provide excellent dead air space for very little weight. But it absorbs water. And that can be a major problem in the winter. Once the feathers get wet they tend to clump, and lose trapped air space. Most down jackets have a waterproof outer layer to prevent this problem. When considering a down jacket, check out the quality of the feathers used (measured in fill power, the higher the better) and look for sewn-in baffles to prevent the down from shifting and creating cold spots.

What about Cotton?

Cotton is useless in winter time. It wicks water, but unlike polypropylene, cotton absorbs this moisture which then occupies previous dead air space. Not to mention when it gets wet. Have you tried to dry cotton outdoor in the winter? It turns into a stiff sheet of frozen fabric.

Today's sophisticated outdoor wear uses a combination of down, fleece, Thinsulate and other fabrics to give you the warmth and comfort you need.

So now you got all these great winter clothing insulation. How to use them effectively? One word: Layering. This allows you to adjust to the varying temperatures throughout the day as well as your varying activity levels, both of which significantly affect your body temperature and the insulation you need.