



Tips for keeping warm:

- •C stay <u>C</u>lean
- •O avoid Overheating
- L wear clothes loose and in Layers
- •D keep <u>D</u>ry

–Moisture reduces insulation. To keep warm, keep dry!







CLOTHING 1

•Wear several layers of lighter clothing instead of one heavy layer.

- •Wear loose fitting clothing, to optimize insulation.
- •you can better regulate the amount of insulation.

•If you get warm you can take layers off and add some more clothing layers if you get cold.

•Keep yourself dry, both from the weather and perspiration.

•DO NOT USE COTTON! It loses most of its insulation properties when wet •Manmade fibers such as 'Wick-Away' or 'Under Armor' brands keep most of their insulation when wet. They are also light weight and wind-blocking.







CLOTHING 2

•Wear a pair of manmade fiber sock liners and a pair of wool socks to increase insulation and take the perspiration way from your feet.

•Pull trouser legs over top of shoes to keep out snow or rain

- •Wear mittens instead of fingered gloves when you do not need independent use of your fingers. This will allow the fingers to help keep each other warm.
- •Use a pair of socks to cover hands if mittens get wet.
- Wear a stocking cap or other warm hat that covers the ears and neck.
 Most heat loss is through the head. Wearing a warm hat warms the rest of your body, too.

•Wear a scarf to reduce heat loss around the neck.

•In an emergency use your neckerchief to cover your ears.





CLOTHING 3

- •If you need a fire to keep you warm you are not dressed properly.
- •If the heat can get to your body, so can the cold.
- •Paper is a good insulator. Wrap it around your body under clothes to add insulation

Remember your rain gear is water proof and will not allow perspiration to exit.
During rainy weather change your clothing several times a day

•Athletic shoes and nylon hiking boots do not provide enough insulation.

•Wear water-proofed leather hiking boots, rubber overshoes or rubberized boots.

•Remember, rubberized boots do not allow for ventilation so you will need to change your socks several times a day.

•Also you may want to get some felt inserts for insulation.





- A 3 to 4 pound synthetic sleeping bag will take care of most of your needs.
- A mummy style bag is warmer than a rectangular, as there is less space for your body to heat. most mummy bags have a hood to help protect your head.
- If you only have a rectangular sleeping bag, bring an extra blanket to pack around your shoulders in the opening to keep air from getting in.
- Do not sleep with your head under the covers. Doing so will increase the humidity in the bag that will reduce the insulation properties of the bag and increase dampness.
- Remember to air out your sleeping bag and tent, when weather permits.
 Perspiration and breath condense in the tent at night and the water will reduce insulating properties of your bag.







- Wear a loose fitting hooded fleece to sleep in. Keep your head covered.
- A bag liner made from an old blanket, will greatly enhance the bags warmth.
- Insulate yourself from the ground as much as possible to avoid cold spots at the shoulders and hips.
- Use a sleeping pad of closed cell foam instead of an air mattress.
- A good rule of thumb is that you want 2 to 3 times the insulation below you as you have over you.
- Use a ground cloth to keep ground moisture from your bag. Your body will warm up frozen ground to a point were moisture can become important.
- Space blankets, if used as a ground cloth, will not reflect the body heat. Instead it will conduct the cold from the ground to your body.





BEDDING DOWN 3

- Cold air will be above and below you if you sleep on a cot.
- Put a hand warmer (in a sock) at the foot of your sleeping bag.
- Fill a canteen with hot water (not boiling) and place at foot of bag to keep warm. Be careful with plastic canteens.
- Exercise before bedding down to increase body heat. This will help to warm your bag quicker. Be careful not to start perspiring.
- Put on dry clothing before entering the sleeping bag.
- Socks are always sweaty! Put on fresh dry socks when you go to bed!!
- Sleep with tomorrows clothes inside your bag for additional insulation
- Keeping your clothes inside your bag keeps them warm before dressing.





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- If at night you get cold, let the adult leadership know so action can be taken before injury from cold weather health problems occur. In other words it's better to be kidded about forgetting your sleeping bag than risking hypothermia.
- Organization and proper preparation is very important in cold weather camping. Good meals, proper shelter and comfortable sleeping arrangements make for an enjoyable outing.
- Drink 2 quarts of fluids per day besides what you drink at meals.
- Learn to recognize and treat cold weather health problems. These include frostbite, hypothermia, dehydration, chilblains, trench foot, snow blindness and carbon monoxide poisoning.





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- Use the buddy system to check each other for cold weather health problems. Notify the adult leadership if symptoms do occur.
- If you feel cold gather some wood or do some other type of work.
 Working will help warm you.
- Do NOT Eat Ice or Snow! It can reduce your body temp and it is not pure.
- No open flames (candles, matches, etc.) inside the tents. Wiggling your toes inside your boots will help keep feet warm. If your feet get cold put on a stocking cap (on your head).
- Use only solid fuel hand warmers.
- Keep off ice on streams, lakes and ponds.







- It takes longer to cook food in cold weather, so plan accordingly. Before going to bed pour enough water for breakfast into a pot. It is easier to heat the pot than a plastic water can.
- Keep your matches in a metal match safe as plastic can freeze and break if dropped.
- Gather twice as much fuel as you think you'll need for fires.
- Carry tinder from home. It may be hard to find in snow or wet conditions.
- Gather your wood and tinder for the morning fire in the evening so that you will be able to start the fire quickly in the morning.
- Space blankets make good wind shields only. The metallic properties remove the insulation properties in cold weather and become cold conductors.





- Carry extra plastic bags in cold weather. They can be used as personal wind shields and ponchos by slitting a hole in the top for your head to go through.
- Plastic shopping bags can be used as boot liners to keep feet dry.
- Stuff newspaper into shoes to dry them quickly
- Carry extra matches because the more you need a fire to warm up the less likely you will be able to start one easily.
- Flashlight batteries are effected by cold. You can revive a dead battery by warming it up near (not in) the fire.
- You may want to take a bottle of propane into your tent with you at night. This will keep it warmer and make it easier to light your stove for breakfast.
- Fuel type heaters in your tent can cause carbon monoxide poisoning & death



CLOTHING LAYERS 1

- Long, thermal underwear. polypropylene
- Shirt or inner layer (long sleeve & short sleeve depending on need)
- Fleece, light jacket, windproof / waterproof shell
- Wind AND rain gear (pants and coat)
- Inner pants wool, wool blend, polypropylene
- Wicking inner socks polypropylene (under armor, wick-away, etc.)
- Insulating socks wool or wool blend
- Footwear, waterproof boots with boot liners and insulated insoles
- Head coverings
- Gloves and mittens







Under Layer/Underwear

• The innermost layer must wick perspiration from the skin and transport it to an adjacent, outer layer. For this to occur, the wicking layer must be very thin and in direct contact with the skin. Look for underwear tops and bottoms, face masks, liner socks, and liner gloves made from polypropylene, Capilene, Coolmax, Dryskin, Powerdry, Thermastat, and Thermax.

Insulating Layer

The middle, insulating layer traps air and restricts its circulation. This layer keeps you warm. Remember, several thin garments are warmer and more flexible than a single thick layer. It also makes it easier to regulate temperature if you get too warm by being able to remove some layers.





Outer Layer / Shell

- The outer shell layer protects you from the wind, rain, and snow. For the upper body, a parka with a hood as well as wrist and waist closures is best. Pants with waist and ankle closures work well to protect the lower body.
- Both of these garments should be sufficiently oversized so they'll fit over all of the insulating layers when they're worn at once in extremely cold weather.
- Breathable, windproof shell garments are often constructed of Ripstop, Supplex, Taslan, Versatech, etc. Waterproof and breathable shells are typically made from Gore-Tex, Avalite, Entrant, Extreme, Hely-Tech, Ultrex, etc.

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Hat...A MUST!!!

Always carry a hat! You can lose 50 to 70 % of your body heat through an uncovered head.







- Keep out of the wind if you can. A rain fly for a tent can be pitched to serve as a wind break. The wind chill factor can be considerable.
- Bring extra WATER. 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. Drink lots of water!
- Bring food that doesn't need to be heated or cooked. Granola bars, etc.
- Keep hot water available for cocoa, etc. these warm from the inside.
- Always eat hot meals (breakfast, lunch, & dinner.) Dutch ovens keep the food hot longer. Keep it simple. Prep all meals at home
- Shelter the cooking area from wind (walls of tarps, etc.)
- Fill coffee/cook pots with water before bed. It's hard to pour frozen water, but easy to thaw it if it's already in the pot.





FIRST AID – HYPOTHERMIA

SYMPTOMS:

- Loss of ability to reason.
- Shivering.
- Slowing, drowsiness, fatigue.
- Stumbling.
 - Thickness of speech.
- Amnesia.
- Irrationality, poor judgment.
- Hallucinations.
- Cyanosis (blueness of skin).
- Dilation of pupils of eyes.
- Decreased heart and respiration rate.
 - Stupor.





FIRST AID – HYPOTHERMIA

TREATMENT:

- Shelter the victim from wind and weather.
- Insulate the victim from the ground.
- Change wet clothing.
- Put on windproof, waterproof gear.
- Increase exercise, if possible.
- Put in a pre-warmed sleeping bag.
- Give hot drinks, followed by candy or other high-sugar foods.
- Apply external heat; hot stones, hot canteens.
- Huddle for body heat from others.
- Place victim in a tub of 105° F water. Never above 110° F.



FIRST AID – HYPOTHERMIA

PREVENTION:

- Keep rested, maintain good nutrition.
- Consume plenty of high-energy food.
- Use proper clothing.
- Make camp early if tired, injured or lost.
- Get plenty of exercise. Don't sit around much.
- Appoint an experienced person to watch the group for signs.
- Take immediate corrective action for any signs.







QUESTIONS?

John Weather Camping