

SCOUTS-L

**COLD WEATHER
CAMPING**

&

KLONDIKE DERBYS

Date: Tue, 31 Oct 1995 21:14:00 MST

From: "Chris Haggerty, Sierra Vista, Arizona" CHAGGERTY@BPA.ARIZONA.EDU

Subject: Winter Camping

Below is a list of items I picked up from a winter camp awareness program done by the O-A in San Francisco. This list is about 15 years old, please keet that in mind (newer material are available). I have added some comments at the end and have used this with our scouts when we go camping in the mountains in the Winter. Hope this helps!

RULES AND INSTRUCTIONS FOR KEEPING WARM IN THE SACK

1. REMEMBER: The sleeping bag doesn't heat you, you heat it. So use this rule, "Thickness is warmth", to keep this heat. If you're cold, add some more insulations (blankets, clothes, more newspaper).
2. DO NOT SLEEP IN BOTTOM OF BAG: Your breath contains water. If you close your bag with your head inside, then this water sticks to the bag. Wear a hat to keep your head warm.
3. CHANGE CLOTHES: NEVER sleep in wet clothes. Even perspiration will chill you at night.
4. EAT A CANDY BAR: This increases your metabolism (moves your blood faster) and it helps keep you warm.
5. GO TO THE BATHROOM BEFORE BED: This saves you a middle of the night trip in the cold.
6. DO NOT DRY "WET" CLOTHES IN BAG: Moisture will travel from wet clothes to sleeping bag.
7. PUT TOMORROW'S CLOTHES UNDER BAG: This heats up clothes for tomorrow's cold morning and also provides more insulation.
8. FLUFF UP YOUR BAG: Always fluff up bag before using to create the thickness important in keeping warm.
9. MOST IMPORTANT, KEEP IT DRY: Keep all your sleeping gear dry and follow these rules, and winter camp should prove to be a rewarding experience.

IMPORTANT STUFF TO KEEP IN MIND

1. Clothing does not make you warm; it is your body processes that keep you warm. Clothing merely provides the insulation to preserve your warmth.
2. Layered thickness is warmth.
3. Keep your torso warm so that it can send heat to the extremities.
4. Avoid sweating by ventilation.

5. Keep rain and wind out of your insulation.
6. Use your head. Keep it covered when you're cold; remove cap as you warm up to avoid sweating.
7. Strain one muscle against another to maintain metabolism.
8. Wool clothing is best but needs wind protection, synthetics are next best. Down is OK as long as it stays dry, cotton is a poor choice.
9. If your feet are cold, put a hat on.
10. Remember the word "COLD" - Keep your clothing Clean. avoid Overheating wear clothing Loose and Keep it Dry

RECOMMENDED CLOTHING FOR TWO DAY WINTER CAMP

In addition or in substitution to what you would normally bring to camp, bring:

2 shirts (wool,best, or flannel)
 2 pairs wool or synthetic pants
 (Strongly recommend against cotton pants like jeans. They absorb moisture like a sponge).
 fishnet, thermal or polypropaline underwear
 boots (WATERPROOFED)
 2 pairs of heavy socks (wool recommended)
 2 pairs lighter socks (polypropaline is best)
 Windbreaker (as is or part of heavier jacket)
 balaclavia or stocking cap (wool is best)
 parka or heavy jacket
 mittens, (WOOL, gloves not recommended except as extra pair)
 extra shoes

It is always best to stay dry when camping in the snow, but you can expect to get wet and should be prepared. Boots or other shoes which are not waterproof will normally start getting the feet wet and cold after less than 15 minutes in the snow (depending on temperature, the colder it is, the longer the feet stay dry). Low top shoes will not keep the snow out of the shoes. Gaiters can be made from plastic bags and a strong tape like duck tape. Do not cover the bottom of you shoes with plastic, doing so will cause you to lose almost all of your traction (and you will fall down!).

Unless your parents are planning to buy some of the items on this list anyway, do not run out and start spending lots of money on cloths and equipment. If all your pants are jeans, for example, bring three or four pairs and change frequently. If you are in

doubt or have questions, call one of the troop leaders for advice.

Date: Wed, 1 Nov 1995 09:48:09 -0600
From: "Dr. Steven C. Myers" <r1scm@VM1.CC.UAKRON.EDU>
Subject: Re: keeping warm

Gerry Owen asked about the cold and how to keep warm while winter camping. In addition Rob Morley said

>I have heard this works, but I have never tried it. Fill a canteen with hot
>water, wrap it in a towel, and put it into the bottom of the bag. It should
>act as a hot water bottle. (Just make sure it doesn't leak <g>)

By all means, change the socks before bed, but don't try the water bottle effect!!! The water will cool down very rapidly and will not be effective. Besides, an old adage is if you can feel the heat, you're not insulated well enough. True winter campers avoid those warming fires. All they do is make you sweat which later freezes. So how do you keep warm?

First get a copy of the Fieldbook and a copy of the Venture pamphlet called "Snow Camping." Also, see the feature in Woods Wisdom which is really good. They will give you plenty of pointers.

I favor wool and polypro clothing and plenty of layers. I often do not wear the top or "heavy coat" layer at all. Start with an under layer of polypro (socks, pants, and shirt). The next layer is a regular pair of pants and shirt (flannel or wool) and heavy weight wool socks. Make sure there is room (air) in the boots -- it's the air that insulates. Make sure to get waterproof but breathable boots. If my feet get wet my whole day is ruined. Over this layer I use fleese, heavy weight pants and a mid weight sweater. They are lighter and warmer than wool and will hold warmth when wet. The next layer is waterproof snow pants and a midweight jacket with a waterproof layer (light rain jacket) over it. Many times one or more layers aren't worn. I have always hauled along, but never used, a heavy parka which will fit over my outfit above.

The single best investment I ever made outside of wool socks was my capelene (sp?) underwear. It is worth its weight in gold. Nah, the best investment was my goretex vasque boots.

At night, I sleep in clean dry cloths (capelene-polypro with fleese or wool on top. I always include a wool hat since you can lose an incredible amount of heat through your head. Sometimes I wear a hooded sweatshirt with hood up before applying the wool cap. The hood keeps the draft off the

back of the neck. Out troop has hooded sweatshirts for just this purpose.

Use a good quality mummy bag and draw the hood around your head. For your cold feet, make sure the socks are clean and dry and roomy. Tight clothing just won't keep you as warm. Also try someind of foot bag in the bottom of your mummy bag. I have actually put my gloves over my toes when the cold challenges.

Maybe this is not "right," but i keep a supply of chocolate nearby. At my age, I notice that the old furnace gives out about 4 am in the morning. That is when I wake up, cold, and put on more clothes and eat my chocolate. I can usually get back to sleep pretty fast.

Finally, don't underestimate the insulating quality of a good ground pad. The flat closed cell foam pads are ok (opencell just act as sponges getting everything soaked), riderests are better, but thermarests are the best. You should have 3 times (in insulating value) under you that you have on top of you. Make sure you never come in direct contact with the icy floor. Stay on the pad.

For you and your Scouts, this is the time to emphasize that "A Scout is Clean." Add "a Scout is Dry" and you have the formula. Do not allow the scouts to clown around too much, the sweat is a threat and they can loose valuable energy. When my troop first went camping in the snow, I learned a lot. We called the camp off early and I se about learning how to make them successful.

Remember if you want to stay warm, think COLD

C = stay Clean

O = avoid Overheating

L = dress in Layers (I recommend a top waterproof one)

D = stay Dry.

Have a great time. When you survive a weekend of bitter cold, properly trained, your troop will gain some real braging rights. A line on our recruiting brochure reads

"Have you ever slept on ice and stayed warm?" Yeah, we push our advantages!

Steve Myers

Scoutmaster Troop One Akron OH

Date: Wed, 1 Nov 1995 09:48:57 -0600

From: "Dr. Steven C. Myers" <r1scm@VM1.CC.UAKRON.EDU>

Subject: Re: keeping warm & the stupid game)

I just read Matt's message and I have a couple of points to make to his fine post.

>We do a deep freeze every year and we have not had any problem with this as
>long as we follow the following guidelines:

... deleted...

- > Layers This means not only your clothing but also your
- > sleeping gear. We use a full size bag on a pad.
- > Inside that bag we use a second insulite pad on
- > which we place a 3/4 bag. In this bag we have a
- > wool blanket. We also alternate the zipper to
- > reduce drafts. Outside bag zipper on one side
- > and the inside bag zipper on the other.

Matt, I for one am way too big for this to work. I cannot get into some sleeping bags, so for the gratationally challenged, this does not work.

...text deleted...

- > Consumables Water is a must. Drink lots of it.

This is so so so important. I can't believe I forgot it. Well I was concentrating on clothes, but drinking plenty of water is essential.

Aslo, this reminds me to put in a plug for you to train your scouts in the signs and dangers of HYPOTHERMIA. You can lose a scout this way! We teach our scouts to play the stupid game with their buddy. We are deadly serious about buddies in the winter, and no one in a patrol may proceed when one member is cold until the stupid game has been played. Now this game has few rules and the scouts love to see who is being stupid. You can just imagine. However, the game recognizes that an early sign of hypothermia is the lack of sufficient oxygenated blood to the brain. A Scout with hypothermia will behave studidly. When we see that, we act. The game begins with someone saying to another "Are you being stupid or what?" If the answer is no (and the questioner is satisfied, the game is over. If not, then its first aid to the rescue. A few winters back, Mike Thomas was very cold and shivering. Well who wasn't -- it was cold! Mike failed the game when he refused to admit that zippin up his coat would keep him warmer. He was really actimd stupid. He was in real trouble. Since it was a District Klondike I took him to the warming cabin and set him in front of the fire. (He also did not thing that going to the warming cabin would help him get warm.)

So play the stupid game. Have fun with the questions and answers, but when you get the scout who can't seem to come up with the right answers, seek hel

immediately.

Steve Myers
I used to be a Bear

Date: Wed, 1 Nov 1995 13:23:30 -0500
From: Stern Dixon <SDixon@AOL.COM>
Subject: Re: keeping warm

A couple of tips on keeping warm.

Always use an ensolite or closed cell pad (very firm) on the ground itself. It offers more insulation than open cell foam (the spongy stuff) and it doesn't absorb moisture either from your body or the ground.

Always take off all your clothes, not just your socks. Your cotton tshirts, et al, will absorb body moisture even if you've been in them for a couple of hours.

Wear head gear to sleep in. A knit cap (not cotton) will keep your head warm and prevent lots of heat loss.

Wrap your feet in your down jacket or vest if the bottom of your bag is nippy.

Use a bag liner of a light polypro. pile fabric. Campmor et. al. sell these for about \$30.

Eat something with a lot of fat before going to bed.

A tip I heard once, but haven't tried: drink warm concentrated jello before going to bed. it will keep you from having to get up in the night to pee. I won't get into the reasons this works. Use your imagination.

Final tip: Pay no attention to the comfort rating on your bag. I figure a -5 bag will keep me warm to about 15 degrees if I do all the other things.

Date: Wed, 1 Nov 1995 13:08:52 -0500
From: "Paul H. Brown" <phbrown@CAPACCESS.ORG>
Subject: Re: keeping warm

Don't wear the same clothes to bed that you wore that day: too much perspiration in them. And don't wear jeans for any purpose. A sweat

suit makes a good winter pajama set. Wear a hat to bed. If wool makes you itch, wear something else. Make sure you don't try to sleep dehydrated: you'll sleep colder.

YiS,

Paul H. Brown, UC, GW District, National Capital Area Council
phbrown@capaccess.org

Date: Wed, 1 Nov 1995 07:24:39 -0600
From: "Greg L. Gough" <ggough@MAIL.ORION.ORG>
Subject: Re: keeping warm

Here are a few tips on staying warm in your sleeping bag.

1. About an hour before bed eat something calorie dense, peanuts etc. This gives you slow burning fuel for the night.
2. Drink a cup of hot cocoa. Any cold liquid you consume your body has to warm.
3. Change all your clothes before entering your sleeping bag. I wear minimum of polypropylene long underwear and liner socks with a wool blend over.
4. Wear a full face mask. You still lose most of your heat through your head. The new polypropylene ones are comfy and warm.
5. Don't sleep with your head covered with your bag. This introduces moisture into your bag.
6. Use a thermarest or comparable sleeping pad or two foam pads and or place leaves or straw under your tent.
7. If you wake up cold, put on your rain suit or cover yourself with one of those emergency blankets (foil coated plastic) or tear open a trash bag and place it on top of you. all form a vapor barrier and will keep you warm but you will have to change your clothes when getting up (they will be moist)
8. Preheat your bag with those Hot Hands hand warmers. I don't sleep with them, too hot! But I do start them in the morning and put them in my boots :)

I love to cold weather camp. Have been out in 3 degree weather and the above tips have made me comfortable. I welcome any other tips that I might use.

Greg Gough

SM Troop 201, Ozark, MO. I used to be an Owl but I will always be an Eagle!

Date: Wed, 1 Nov 1995 09:20:55 -0500

From: Internet-Go Ahead <goahead@EF.COM>
Subject: keeping warm

First of all let me explain my qualifications: When I was in the U.S. Army I went to Arctic Warfare School, This was not to only to teach about combat in the Arctic but to teach Extreme Cold weather survival skills. I have been to Okpik(which was the Maine High Adventure Base Winter Camp) several times and can honestly say that I know a fair amount about cold weather camping. so here goes

- 1 go to the bathroom before you get into bed
 - 2 make sure you have plenty of insulation below you 1-2 inches
 - 3 leave the back flap of your tent open about 4 inches. this will allow the moisture from your breath to escape out of the tent and not collect on the sides
 - 4 eat something high in calories before you go to bed. Your stomach is your furnace and will generate heat while you sleep.
 - 5 in extreme cold weather you CANNOT rely upon external heat sources for warmth.
They will only warm the side facing the heat source and subsequently cause sweating.
 - 6 layering this is most important while you are active
 - 7 drink water
 - 8 you are better off getting into your sleeping bag in your boxers or naked than putting on sweats.They are just like the name implies they absorb your body moisture and trap it next to your skin making you cold. the best type of under wear for winter camping is Silk. it is a very good insulator
 - 9 DO NOT wear the same clothes to bed that you had on all day this is important for socks also
 - 10 put you clothes for the next day under your head or at the bottom of your bag
 - 11 wear a ski hat to bed REMEMBER 70% of body heat is lost through the top of your head
 - 12 DO NOT breathe into your sleeping bag this may warm it for a short time but the moisture in your breath will be worse later in the night
 - 13 put your propane tanks at the bottom of your sleeping bag or use WHITE FUEL
 - 14 Get the Venture Crew hand book on Winter Camping and read it
 - 15 Obtain the Army Field Manual on Cold weather Operations. I don't remember the exact title or the FM number but you can find it at the library or on line some where
- I you have any more Questions you can Call me at 800-242-4686 ext 1913 or ask for Vince Silvia

SCOUTS OUT!

Vince Silvia
goahead@ef.com

Date: Thu, 2 Nov 1995 09:16:11 -0600
From: August Treubig <atreubi@ENTERGY.COM>
Subject: Re: keeping warm

One thing that I haven't seen anyone else talk about is powdering your feet with powder to keep them dry. The powder absorbs the moisture.. for a while anyway..

YiS

August

Date: Wed, 8 Nov 1995 09:36:12 EST
From: Peter Farnham <pfarnham@ASBMB.FASEB.ORG>
Subject: Re: surviving cold, a situation

Jim,

Regarding your hypothetical situation, first, check him out. Make sure he changed his clothing before going to bed--the clothes should be completely dry. Have him put on a wool sweater, socks, etc. Put a stocking cap on his head. Make sure the sleeping bag is dry, and that he's got insulation--extra clothes, thermal pads, etc.--underneath his bag. Check the rating of the bag (of course, you should have done this before leaving the parking lot on the way to the trip). If it's a summer-rated bag, get a blanket or two around him.

I would closely monitor the situation, and if in twenty minutes or so the young man's teeth had not stopped chattering, then I would go to phase two. Get him into the car if available, and turn on the heater. If you're backpacking and a car isn't reasonably close by, then get a fire going and get some hot soup into him. Keep the kid wrapped up in as many warm clothes as you can find. If necessary, get into the bag with him yourself (of course, wake up your second adult and have him join you by the fire).

In any case, DO NOT go back to bed until you are sure the young man is okay.

I'm taking my boys, including a bunch of new scouts, camping in mid-December to Catoctin Mountain Park, near Thurmont, MD. It gets real cold up there, particularly when the wind gets blowing. We're going to work on cold-weather camping skills for the several troop meetings prior to going, and I will make sure my boys are prepared for the cold. I've been told that the new scouts are usually not a problem--but their parents are, showing up for trips woefully unprepared. With this in mind, I will bring along a whole duffel bag full of wool sweaters and stocking caps, as well as extra blankets. I also plan to send a note home to all the boys ahead of time explaining the dangers of cold and what they should bring with them by way of clothing.

YiS,

Pete Farnham
SM, Troop 113
GW District, NCAC
Alexandria, VA
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I also want to thank this list for the many fine suggestions on dealing with the cold on a camping trip. Most of them are pretty common sensical, but it has helped to have them all collected in one place.

Date: Tue, 7 Nov 1995 16:09:01 -0500
From: Jim Holman <jrholman@POSTBOX.ACS.OHIO-STATE.EDU>
Subject: surviving cold, a situation

This is a followup to the keeping warm thread.

Let's say you have the following situation. Cold weather, teens. Everyone goes to bed and a couple of hours later, you wake up and find a kid trying to rebuild the fire. He says he is 'freezing to death', he's shivering and his teeth are chattering. You convince him to go back into his sleeping bag to try to get warm. He complains he's still cold, but you tell him just to wait a while and he'll warm back up. You go back to bed. Now, what are the dangers here? If you go off to sleep, and he DOESN'T warm up, is he likely to die from hypothermia? How can you tell the difference between someone who just gets cold and someone in danger without staying up all night yourself? Can a person go to sleep and not realize they are getting so cold

they are in a dangerous situation? I'm not concerned about daytime when you can keep an eye on everyone, but nighttime concerns me.

Jim Holman (216)-263-3772
Head, Computing and Statistical Services, OARDC
holman.2@osu.edu

Date: Thu, 9 Nov 1995 16:53:09 -0600
From: Marc Solomon <msolomon@TEK1.TEKNIQ.COM>
Subject: Re: physiological question

At 12:26 PM 11/9/95 -0600, golden cliff wrote:
>The reason you want to empty your bladder at night is because a full
>bladder will rob your body of heat. It is similar to the hot water
>bottle. A water water bottle will give you warmth until it cools, after
>that it takes heat from you. A full bladder requires you to heat excess
>fluid in your body. An empty bladder does not.

Correct.

>Empty your bladder before turning in. If you have to go in the middle of
>the night, go. Don't hold out until morning or you will become cold.

Always a good idea for a number of reasons.

>I don't go for the little chamber bottles in the tent. A quick visit
>outside isn't that bad. I've always found it to be well worth the effort.

I disagree with you here. During my OKPIK training, one instructor went to great lengths to explain how, after taking the steps to leave your tent to urinate, you will not have the body heat left to rewarm your sleeping bag. First, you open your sleeping bag losing all the warmth you stored in your sleeping bag and much of the warmth you stored within whatever clothes you wore to sleep. You then put on cold clothes, socks, and boots and lose more body heat warming up these articles of clothing. Then you open your tent to get out losing any warmth you had stored within the tent. Then after walking a short distance, you open up the newly warmed clothes to allow you to urinate, losing a bit more body heat in the process. Then you expel a few pints of warm fluid from your body, once more losing a great amount of stored body heat. After finishing all this, you trudge back to your tent, open it up once more (your tent mate will love you by now ;)), losing more stored heat from the tent (if any remained from the previous opening), take

of the clothes you just warmed up, and get into your now cold sleeping bag. If the temperature when you started this trek was freezing or below, the chances of your body generating enough heat for the second time in a few hours (remember you had to warm your bag when you first went to sleep) is ridiculously small. After a short time, you will probably realize this, get dressed for a second time and go start a fire.

I cannot tell you the number of times I have been wakened by the noise of one or more Scouters huddled around a fire at three thirty in the morning. It seems to happen more to the Scouters because after dinner they sit around swilling down coffee until it is time for bed. The Scouts on the other hand might have one or two hot cocoa's in the evening and with their higher (usually) level of activity there body uses the fluid to replace fluid lost during the day.

By the way, this same instructor suggested using two heavy duty gallon zip locks for these emergencies. Fill one. Seal it. Place it in the other. Seal that one. Place it in your sleeping bag as a hot "water" bottle. With my immense bulk, I doubt the seals would hold if I rolled over. My solution is still stop drinking a few hours before going to sleep and to expel any remaining fluid before retiring.

Yours in Scouting,

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+-----+-----+
| Marc W. Solomon      | Unit Commissioner  |
| msolomon@tek1.tekniq.com | Sycamore District  |
| marcsol@aol.com     | Blackhawk Council, IL |
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I use to be a wise old owl . . . Now I am just old

Date: Mon, 13 Nov 1995 13:13:28 -0800
From: Derry Hamilton <D.Hamilton@SMS.ED.AC.UK>
Organization: Edinburgh University
Subject: Re: surviving cold, a situation

This is a late posting that is sent using a dicey mailer since my normal one is having a mid life crisis and can never remember my email address. Though it should be rectified soon
The scout in question is quite clearly not hypothermic, though he may be potentially hypothermic. If you look up your first aid manual the

cause is low core temperature (as measured by a thermometer in the mouth or similar). This leads to lagging behind (if walking), mood swings, unpredictability, possibly violent behaviour etc. It is when the shivering response stops that the person becomes hypothermic. If he is still shivering then some high calorie food is a good idea but if he is truly hypothermic then putting him in a bag will be your best option whilst you are calling the ambulance. True hypothermia cannot be treated on camp and requires medical attention. It is rare for somebody with hypothermia to be able to diagnose it for themselves, one of the symptoms is that you stop caring. Since the scout came to you shivering then he is safe for the moment.

What you should do is check his clothing (Even if he is in a decent bag if the weather is that cold then he should be wearing a jersey, warm P.J.s and bed socks. These must be bone dry. Next his bedding, is the sleeping bag OK, is he using it properly, does he have a roll mat or blankets beneath it, once again is it dry? Next check the tent, is it brailed down properly, is the ground sheet covering the sod cloths, is there anything touching the fly sheet?

If these are all correct and if he really is very cold then an idea that works is to get everyone together who is awake and wants from the whole troop, which shouldn't be too many if it is late and put on

a dixie of soup that will be drunk. If necessary have a quiet sing along by a small fire or in a tent, making sure that everyone is well wrapped up whilst singing and drinking. When all is done get everyone to bed and ensure that all the patrols are safely done up then get to bed.

I have it on reliable advice that cold cannot kill you when you are asleep, you wake well up before it happens. As I said above, if the scout really is hypothermic then it is not a situation that can be dealt with in camp. The standard treatment is to mostly immerse (so they can still

breath safely) the victim in water at 40 degrees Celsius (my sums tell me that this is about 104 degrees Fahrenheit) until they begin to sweat. At this point the core temperature is in the safe zone, then take them out rapidly, dry them and put them in a warm bed. The British mountain rescue use a synthetic bag with fibres similar to the foil in a space blanket when they are uplifting a hypothermia victim and this is often warm enough to reverse hypothermia on its own (with a healthy person in it too) in case they have to weather out a storm.

We had a thread about first aid training a few days ago. This serves

to reiterate the necessity for good wild country first aid ability.

YiS

Derry Hamilton

Junior leader

1st North Berwick

Scotland

Date: Mon, 13 Nov 1995 11:38:31 -0500

From: Robert Sheneman <rsheneman@PPPL.GOV>

Subject: Staying Warm & VB Clothing-Longish

Following the thread of cold weather clothing and staying warm, Paul Brown and I have been conversing off-list about this topic. He was particularly interested in vapor-barrier type clothing and my suggestion that he experiment with different ideas before using them on a trip. At Paul's suggestion, I'll share my \$0.02 with the list. I've added some background info. [in brackets] to help folks follow the conversation. This is by no means the definitive word on vapor barrier clothing, keeping warm, etc. I'd certainly like to hear what others have to say.

***** Extracted Text *****

I'm sure you've got a pretty good handle on winter camping, but my experience comes from a number of years with backcountry skiing, ski mountaineering, snow&ice climbing and other cold weather activities (my hands and feet are still a little sensitive after a brush with frostbite).

I think what you're trying to achieve with plastic bags is the vapor barrier effect. This is where a thin vapor-proof layer is placed near the skin and insulative clothing is worn on top. The theory is that a) much water and heat is lost through evaporation, and b) by reducing the evaporation you reduce the heat loss. It works very very well in really cold situations. The key, in my experience is to get the vapor barrier close to the skin. I've used a thin polyolefin or polypropylene sock inside the vapor barrier and then wear heavy wool socks outside. Be careful of wrinkles in the bag as this can cause blisters. I'd experiment a few times when out for the day before banking on anything too much for a winter camping trip, and always carry spare dry socks.

Also, much of the heat loss from your feet is through the sole of boots that are too light (nothing different than your sleeping bag situation). Finally, be very careful not to make to boots too tight, you need all the circulation you can get down there when the mercury plunges.

BTW, I think a vapor barrier system also works very well for sleeping in extremely cold weather.

***** Follow-up Message *****

I've tested various clothing options when shoveling snow, walking the dog, sledding with the kids, or otherwise close to home in a cold setting. Day trips are also good time to try something new. This enables me to fine-tune the layering without risking myself on a backcountry trip with unfamiliar gear. Your proposed approach sounds okay to me [...as an experiment I might try a latex glove on one hand under my mittens and a plastic bag on one foot under my sox and see if I notice a difference...]. I've not used latex gloves myself, so can't really tell you from direct experience. The use of thin liner socks helps to avoid the feeling that your feet are swimming in sweat.

I think my vapor barrier socks came from Campmor or maybe REI. They're very thin neoprene rubber with a fairly comfortable fleece lining. They fit snugly so I don't have to worry about blisters. Again, I caution against trying to cram extra socks (even VB type) into boots that are too tight. My winter boots have a felt liner (I always carry spares so they can be changed out when wet). Ski boots, etc. are sized to fit over the appropriate socks. My cold weather clothing system consists of synthetic long underwear (weight varies w/ expected activity level, temps, etc.), fleece or pile mid layers (vest, jacket, and pants, all w/ vent zippers), and Gore-Tex top layer (wind/water protection). I've moved to the synthetics because of their performance to weight ratio. They also dry quicker (NOT NEAR THE FIRE!) and keep you warm even if wet. Rather than VB gloves, I usually wear thin thermax or polypro gloves, then either wool or fleece mittens, and some sort of outer shell mitten (Gore-Tex or similar). This gives flexibility in the layering and dexterity as required (try working a camera or surveying instrument with big mitts on). I recognize that this type of outfit is pricey, but I think you can assemble a similar outfit without spending a fortune. It's really a matter of what your needs and budget are

The sleeping bag liner is thin coated nylon. It's made by North Face and fits inside my mummy bag (700 fill goose down with a Gore-Tex outer layer). The theory here is to protect the down insulation from vapor on both the inside and outside and to allow any moisture that does get in to evaporate through the Gore-Tex (driven by the temp. differential). Needless to say, this arrangement is not on the cheap, nor is it appropriate for everyone (probably overkill for most folks, but vital in a snow cave or high-altitude bivouac). It is really warm and about as lightweight as I

could make it for the temps encountered. I wear thermax long undies and a good thermax hat to sleep in. If it's really cold I'll include the fleece pants and vest, but the danger is that they become too wet to wear the next day. I take the gloves in with me too, but most other clothing will go under the bag. I use both a ThermaRest and a thin closed cell pad beneath my bag if its really cold (also more comfortable on tired bones). We also keep smaller pieces of closed cell foam to sit on, put the stove on, etc.

To tell the truth, I also have a synthetic fill bag which gets a good bit of use, because the system described above is too warm for some trips (even in "winter"). I've tried a number of different systems and found the VB liner best in really cold weather (single digits and below), and a good synthetic fill bag better in moderately cold temps. I don't really have a good explanation for this, but I suspect it's because I end up feeling too "clammy" in the VB liner when it's warmer. No good idea why.

I tend to agree with much of what was posted about staying warm (especially NOT sending a kid back to bed without determining the situation and getting him stabilized first), taking a leak just before bed, and having water/snack readily available. I often store water bottles inside my bag (double ziplocked), because when you've got to melt snow and fuel is scarce, you don't want to waste any. I use white gas exclusively during backcountry trips, especially in cold weather, and only have a propane stove for "car camping." I think one of the biggest dangers with sending the kid back to bed is turning him off from winter trips all together. As a young scout I spent some very cold miserable nights feeling sorry for myself before getting it together with the help of a great ASM. He showed interest in me, and that made a big difference in my entire scouting experience.

BTW, I like Jim Sleezer's post about educating the parents (and boys) at a fall meeting so they can be better prepared for cold-weather trips. We used to do those kinds of pre-trip demos and give handouts for many kinds of trips (backpacking, caving, canoeing, ski touring, rock climbing, etc.), a practice that I took with me when president of my college Outing Club. I think it's all part of Being Prepared.

Let me know if I can share more...sorry about the length, but I hope it helps some.

Date: Thu, 18 Jan 1996 13:17:28 CDT
From: Todd Norman Tingblad <tingbltn@uwec.edu>
Subject: This Just In...

NEWS ADVISORY: For Immediate Release...

NEWS DESK: With extremely low temperatures expected throughout the weekend in the upper Midwest, this may be excellent information to include with weather reports, cold weather news stories, outdoors reports, or general news...

Contact: Rob Schultz, Snow Base Director, 612-224-1891, ext. 139. Evenings: 612-430-4979

January 18, 1996

Clothing and Dress Tips For Sub-Zero Temperatures

Here are a few tips for parents on how to protect children from sub-zero temperatures. Remember, children often do not understand the dangers associated with windchills and extremely cold temperatures. Watch them closely to make sure that they are dressed properly when going outside.

First, there are many things to look for when choosing a jacket or parka for cold weather. It's important that cuffs do not contain elastic that closes tightly around the wrists or waist. Especially under heavy clothing, elastic may slow blood flow and cause a greater susceptibility to frostbite or frozen fingers.

Metal zippers can actually transfer the cold into the inner liner of a jacket. In addition to the danger of metal zippers freezing to fingers, they sometimes freeze shut as body moisture escapes and ices up the jacket shell.

Jackets with hoods are especially important in sub-zero temperatures. Hoods not only help to retain heat from the head, but also protect the neck. Hoods with drawstrings that close around the face reduce wind that may enter the upper portion of the jacket.

Cotton clothing retains moisture from body perspiration and may feel cold on the skin. Clothing made of wool, polypropylene and other materials that wick moisture away from the body is recommended for maximum warmth. Good long underwear, made of fabrics such as polypropylene or capilene, is critical. Don't leave home without it. Cotton long underwear, which is the type most often to be found in department stores, will retain moisture and create serious problems after being worn for several hours.

Mittens keep hands and fingers much warmer in cold temperatures. Gloves separate the fingers which often stunts natural warming. For extended periods of time in the cold, pop disposable hand warmers inside mittens for maximum warmth.

Earrings, necklaces and other metal jewelry will quickly chill the skin. Metal earrings promote frostbite on the ears and can cause serious injury. If you must wear jewelry, take it off before you go outside and let it warm up before putting it back on.

In extreme temperatures, always wear boots. Most tennis shoes are lightweight and have no heating or warmth values. Within minutes of going outside in tennis shoes during sub-zero temperatures, feet will chill and may cause rapid cooling of the lower body. Boots also protect feet from wind, blowing snow and unexpected snow accumulation.

Although often considered "unstylish", stocking hats are the best head gear for cold temperatures. Caps, cowboy hats, head bands or ear muffs just don't cut it in cold temperatures. Stocking hats may mess up your hair, but they'll keep you warm and save the skin and ears from frostbite or freezing.

Wearing several layers of clothing will help you to keep warm and regulate your body heat more easily. If you are outside performing exercise or vigorous tasks (like skiing or snowshoeing) and you feel too hot, take off a layer before you begin to sweat. Remember, sweating cools the body and can quickly get you in trouble in the outdoors when it's cold.

If you are outside for extended periods of time, it's often better to wear suspenders rather than a belt. The body naturally acts as a chimney and heat moves upward. Belts prevent heat from traveling upward through loose clothing, and thus, may not be an ideal choice for holding loose fitting clothing in place.

And finally, when you do go indoors, take off excess clothing quickly so that you do not begin to sweat. You may also feel warmer because warm air often does not penetrate a cold jacket quickly.

Attention News Media: This information is provided to the community by the Indianhead Council, Boy Scouts of America, as a public service announcement in helping to protect children. The Indianhead Council operates Snow Base,

the largest Boy Scout winter camp in the United States in which Scouts are taught survival skills for sub-zero winter camping environments. This winter, over 1,300 Scouts from Minnesota, Wisconsin, Iowa and Illinois will camp outdoors at Snow Base: living in snow shelters and sub-zero weather conditions. Excellent public interest stories can be generated, as well as interviews with our staff who are experts in winter camping and survival. Please contact Snow Base Director Rob Schultz to schedule interview opportunities, obtain press release information, or to arrange a visit to the camp. 612-224-1891, ext. 139 Evening telephone: 612-430-4979 E-Mail: robs@tcm.mn.org

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Even with the very cold temps and windchills for this weekend, Snowbase will be in full operation.

Jan. 5, 6, 7 Temps from 10oF to -25oF Windchill -none-

Jan. 12, 13, 14 Temps from 45oF to 20oF Windchill 10oF to 0oF

Jan. 19, 20, 21 Temps from 0oF to -25oF Windchill -45oF to -75oF

YiS,

Todd Tingblad -- tingbltn@uwec.edu

Date: Mon, 8 Jan 1996 21:24:02 -0500
From: "George R. Davis" <GRDRV@AOL.COM>
Subject: Re: KLONDIKE DERBY EVENTS

We are trying something new this year (for us). We will have our "traditional" course for the Webelos and younger scouts, with individual stations for first aid, fire building, etc., and will use pre-built Klondike Derby Sleds. There is also a designated required equipment list.

We are also going to have a "Challenge Course" for the older scouts. The scouts are being told to come prepared for a 4 hour backcountry winter orienteering meet, during which they will have to solve one or more problems using scout skills. The only required equipment is a stamp pad (we are using

alphabet rubber stamps for the orienteering checkpoints), lunch (their choice but it must be appropriate for the conditions), and a fuel or hobo stove if they intend to heat anything (there are fire restrictions in the county park where we are holding the event). The remainder of their equipment is up to them - but they have to carry it. The first stop will be inspection - make sure everyone is properly clothed and that they have suitable equipment in addition to the above minimums. This will be scored, and they will have to justify anything else they are bringing, or why they aren't bringing something the staff thinks is necessary. With assistance of the Park Ranger, we have gotten some orienteering maps of the park which were developed by the local orienteering club. The scouts will be given a course to follow.

At a designated point in the course, each patrol will be interrupted to join in a search activity - a scenario with a bus accident has been drawn up. Each patrol will be given a second map with their designated search area shown - and they have to get to it, search and then provide first aid to the victim. This assumes that they know where they are, and how to get to the search area. The search "victim" will be a dummy (stuffed pants, shirt and bag head) provided by the patrols - 1 per patrol. After the searchers have found their dummy, a live victim will be substituted - (we are recruiting Webelos-age sisters of scouts) who will be marginally conscious and able to respond to diagnosing questions. Obviously, hypothermia will be involved, as well as sufficient other injuries that the scouts would not be moving the victim any great distance. This will require shelter building, getting heated liquids for all, and sending a party back to the Ranger station for help. The return trip for those sent to get help will find the original route blocked, so that they have to find an alternate return route. The idea is to make the scouts have to think, work together and put what they know to use. We are hoping to use this to get some of the older scouts more active in these district events.

After the completion of the above activity, there will be a Klondike Challenge Sled Race. Instead of using the typical sled, each patrol will have a basic platform - douled up 2x4's that are curved in front for runners, with a plywood deck and 4 dowels glued into the platform/2x4's on each side - dowels extend 8" above the deck. They also have poles and rope. At the starting signal, the team lashes the poles together and to the sled base, load on their dummy, and proceed around the race course. Sleds may be pulled, pushed, carried or some combination of the above. There will be a few small obstacles on the course. Sleds may be "repaired" up to the midway point of the course. Score will be a combination of time and judging of the sleds at the finish line. It may pay to spend a little more time on the lashings to get the points at the judging. (We got this sled idea from a

neighboring council). The patrol has to work together.

Some of our "traditional" stations also require teamwork - shelter building, some of the first aid problems, cooking lunch (this is a judged and timed event). Last year we had the scouts tie a large rope to a tree with a clove hitch. They weren't allowed to stand within 5 feet of the tree while doing so. We got some very inventive solutions to the problem.

I don't know how well the Challenge Course will work - our derby isn't until 2/3, but I'll post a follow-up afterwards. Hope this helps.

Date: Mon, 8 Jan 1996 21:24:02 -0500
From: "George R. Davis" <GRDRV@AOL.COM>
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To: Multiple recipients of list SCOUTS-L <SCOUTS-L@TCUBVM.IS.TCU.EDU>

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Date: Mon, 1 Apr 1996 18:47:23 -0700
From: Amick Robert <amick@SPOT.COLORADO.EDU>
Subject: Re: Hypothermia and medical-legal aspects of first aid/consent

Rex brings up an interesting point about field care for hypothermia. A later post expresses concern about "good samaritan laws," and the legal* ramifications for rendering care. Perhaps the following will clarify

some of the concerns. (*-Please note that I am not an attorney and the following information is not to be construed as legal advice. It is primarily information which I have gathered as an EMT and Red Cross Emergency response Instructor over about 25 years, and working on National Scout Jamboree Medical Centers and many high adventure Scout/Explorer trips and events. The information discussed here was derived in consultation with physician/attorneys and other knowledgeable individuals.)

If you need specific legal advice on these matters it is recommended that you consult with your local council risk manager/attorney or other qualified professional.

First, as a Scout leader, by virtue of assuming the role of a person entrusted to care for youth on Scouting activities, you also assume a "duty to act." That is, if a Scout is ill or injured, you are legally responsible for providing emergency medical care (i.e., first aid) for that the best of your training and ability, and to ensure that the Scout is promptly given more "definitive care" (i.e., notifying emergency medical services, responding an ambulance, and/or hospitalization/emergency room care) if the injury or illness warrant such care.

To fail to provide such care especially if it can be shown that you have been trained in appropriate procedures would legally be considered "abandonment" of the victim and would constitute negligence on your part. You may only relinquish care of the victim to a person with equal or greater qualifications than yours (e.g., an EMT, Paramedic, nurse, or physician) and you must be able to verify that the person is qualified.

As far as "permission to treat" goes, any Scout trip must have a parental consent and medical treatment consent/waiver filled out and signed by the Scout's parent or legal guardian. This gives the leader blanket permission to treat or arrange for treatment of emergent AND non-emergent medical/trauma problems while the Scout is under the care of the leader. I posted a copy of our permission slip in January, and would be happy to send another copy to anyone interested. As noted in another post, anyone with life threatening illness or injury who is mentally incapable of refusing or consenting to treatment, gives "implied" consent for treatment under the law. This applies to minors (under age 18 in most states) and to adults. It also applies to those who object to any medical treatment on religious grounds, if the injury/illness is immediately life threatening, and/or the individual is under the age of majority (18) or is not an "emancipated minor." (check with your legal/medical advisor in

your area to clarify these issues for your situation).

It is always essential and appropriate to get verbal consent from anyone you treat, even if you have written permission, and as noted this should be done in the presence of a witness. Nonetheless if you have a "standing written consent" from parents, there is no question, and it may save you a lot of time and frustration in an emergency room if you are far away from home.

Hypothermia treatment utilizing heat transfer by body contact in a field setting when other options are not immediately available is uniformly defined in wilderness medical treatment protocols and literature, and considerable evidence has shown this method to have saved lives. It is defined as a "standard of care" for hypothermia which any "reasonable and prudent" person with appropriate knowledge and training would administer given the circumstances and lack of other options.

Certainly, if you are in "civilized" surroundings where sources of external heat such as vehicles, warm water, warmed beverages, etc., are available, and the patient is still capable of ingesting warmed beverages, those are appropriate. The body heat transfer is usually a "last resort" effort for severe hypothermia in remote settings. It has frequently been used in wilderness mountain climbing or other expeditions as a lifesaving measure. Nonetheless, it is always appropriate when other techniques are unavailable or ineffective. So long as the treatment is conducted appropriately (as noted in another post) in the presence of other adults/scouts, and the treatment is obviously necessary, there is little cause for concern. Most of all it may save someone's life.

It is somewhat frightening to realize that many (especially new) Scout leaders, and particularly parents of Scouts are extremely uninformed about the life threatening dangers of hypothermia (and other facets of trauma and illness recognition and treatment), and would tend to err on the side of "avoiding" treatment for fear of legal entanglements. In point of fact, they would place themselves in much greater legal peril by withholding treatment, and subsequently causing the serious injury or death of a Scout.

Good Samaritan laws (for the most part, the language varies from State to State) only protect those individuals who render care voluntarily, without an expectation or "duty to act" as a part of their job or volunteer position. For example, if you are driving down the road and stop at the scene of an accident, voluntarily, to assist, AND if you render care

according to the "standard of care" under which you are trained/experienced without negligent acts or omissions, you are given immunity from litigation should the person you assisted choose to file suit against you.

Although anyone may file a lawsuit against you for nearly any reason, the probability of the suit being successful is negligible if you have acted in "good faith, and in a reasonable and prudent manner" to assist someone to the "best of your training and ability." On the other hand, if you are a Scout leader,(or volunteer firefighter, volunteer ambulance technician, or Scout camp staff member et al, whether you get paid or not), and if you are acting in an "official capacity" at the time, you still have a "duty to act" and (unless your state laws are written differently than most) are NOT protected by "good Samaritan laws."

The good news, however, is that there are virtually NO successful lawsuits against anyone in these categories who provide care appropriately according to the "standard of care" under which they have been trained.

In point of fact, far more successful lawsuits have been filed against those persons who knowingly withheld care of a victim, without a legitimate reason. You are much better off trying to do something you are trained and/or qualified to do to the best of your knowledge and ability. Conversely if you try to do something you are not qualified to do, you may also be at risk, so just maintain your efforts to the "standard of care" that you have been trained in..no more and no less.

The legal system is very understanding of those who make a good faith effort even if unsuccessful.

Conversely it is very unforgiving of those who fail to act without good cause, or of those who act recklessly and negligently.

I would especially say AMEN to the post saying that hypothermia is largely preventable!. It is important to remember that little folks (i.e. young Scouts/children) are far more susceptible to hypothermia than older Scouts or adults. There have been cases in which leaders have dismissed or ignored initial complaints of being "cold" or chilled by Scouts as "whining." In fact, some of those cases resulted in Scouts suffering mild hypothermia, and had action not been quickly taken, could have been tragic. Simple precautions such as not wearing cotton clothing for any reason, and using adequate synthetic underwear and outer garments, as well as proper hydration and nutrition go a long way it

preventing a problem.

Sometimes, it is necessary to just inform a Scout that he needs to "put on his hat" to forestall chilling.. Many times they just miss little things that can save them from a lot of discomfort.

The other factors are just recognizing when wind-chill is serious and taking prompt action to remove the source of heat loss. Most Scouters know, if you become hypothermic yourself, your brain tends not to function very well, and you make bad decisions, which may be tragic. Someone who is still in control needs to take control and remove the person or group from any further exposure, and to reverse the effects of the wind chill.

Finally, I would strongly encourage anyone who is in a Scout leadership position, as well as the Scouts themselves, to take a Red Cross or equivalent training class in first aid and CPR. If you can get an experienced instructor, (i.e. someone who has actually worked in the emergency medical services field as an EMT, Paramedic, Rescue squad, firefighter, outdoor guide, etc., and has first hand experience, your class will be greatly enhanced). The Red Cross has a new class called "emergency response" and "CPR for the Professional Rescuer" which is designed for volunteer and professional "first responders." It is extremely well designed, and well suited to Scout leaders and older Scouts.

I currently teach this class to Explorers in my high adventure and emergency management posts, and to Venture crews and Scout leaders in my district. They find the training extremely useful, and sufficiently thorough that they often assist in teaching future classes. A few have also become instructors when they turn 17 and are quite good at teaching their fellow Scouts! Most of all they are much more aware of the dangers of a variety of outdoor risk factors and know not only how to treat them, but more importantly how to avoid them in the first place!

Good Scouting!

Bob Amick, EMT-B, Exploring Training Chair, Longs Peak Council, Boulder, CO

From <@pucc.PRINCETON.EDU:owner-scouts-1@TCUBVM.IS.TCU.EDU> Sat Nov 9 22:37:54 1996

Return-Path: <@pucc.PRINCETON.EDU:owner-scouts-1@TCUBVM.IS.TCU.EDU>

beneath your sleeping bag under your butt with the soles sticking out. Put one on each side of you. There should be enough heat escaping there to keep the frost out, plus the placement will help keep you from rolling off your mat.

Keep gloves, socks, and any of tomorrow's clothes as will comfortably fit inside the sleeping bag. Any other clothes, jacket, sweater, whatever doesn't fit, should be put under the bag. It's much more comfortable to dress in pre-heated clothes and the added insulation doesn't hurt.

Keep at least one water bottle in the sleeping bag, if it will fit and not leak. If you can't, put it under your bag at the knees. All other water bottles that don't fit under your knees could be put in some of your extra wool socks. Also, heat the water up at night before you go to bed and put the filled bottles in your sleeping bag as you fulfill your nightly duties. Then when you get to bed, your bag will actually be warm.

Don't forget the nightly duties. A full bladder requires more heat than an empty one, plus getting up at 2:00 AM in sub-zero weather is absolutely no fun.

Carry and store water bottles upside down. Ice forms on the top of bodies of water first, so this helps keep ice from forming around the mouth. If you're not carrying a water bottle, stick it in a spare sock or shove it in a snow bank, upside down, of course. Snow will insulate better than nothing.

If you've got a self-inflating mattress don't roll it up with the valves closed. A frozen mattress valve is real hard to open.

When standing around eating, cooking, or whatever, stand on your mattress pad. When sitting, sit on your pad.

Keep active as much as possible. If you feel your feet freezing up, start getting the shakes, or if you see anybody else showing initial signs of hypothermia - go for a long, brisk walk/jog. Take the whole

troop with you, because they may be feeling the same way, but are too
=93cool=94 (there's that pun again) to show it. Keep going until the s=
igns
go away.

Go for a night hike or play an active game just before you crawl in the
bag. After you get in the bag, take a mouthful of water and eat
something fatty like cookies. This gets the furnace started and helps
keep it going throughout the night.

The standard 3-tub method of doing the dishes just doesn't work in the
extreme cold. Heat up some water and pour this in individual bowls to
melt the leftover bit and pieces of food. Soak your utensils in this.
Then use a paper towel or even a snowball to scrub. Any cloth dishrag
will freeze.

Bring extra everything. Stoves and lanterns will fail. Water bottles
will freeze and crack. Things, like boys just behave differently in the
cold.

Everyone on the trip should know the signs and treatment of
hypothermia!!!

No cotton!!!!

From <@pucc.PRINCETON.EDU:owner-scouts-l@TCUBVM.IS.TCU.EDU> Sat Nov 9
22:43:04 1996

Return-Path: <@pucc.PRINCETON.EDU:owner-scouts-l@TCUBVM.IS.TCU.EDU>

Received: from pucc.PRINCETON.EDU (smtpd@pucc.Princeton.EDU [128.112.129.99]) by
cap1.CapAccess.org (8.6.12/8.6.10) with SMTP id WAA00486; Sat, 9 Nov 1996 22:43:04 -0500

Received: from PUCC.PRINCETON.EDU by pucc.PRINCETON.EDU (IBM VM SMTP V2R2)
with BSMTP id 8680; Sat, 09 Nov 96 22:39:09 EST

Received: from TCUBVM.IS.TCU.EDU (NJE origin MAILER@TCUBVM) by
PUCC.PRINCETON.EDU (LMail V1.2a/1.8a) with BSMTP id 4200; Sat, 9 Nov 1996 22:38:58
-0500

Received: from TCUBVM.IS.TCU.EDU (NJE origin LISTSERV@TCUBVM) by
TCUBVM.IS.TCU.EDU (LMail V1.2a/1.8a) with BSMTP id 8042; Sat,
9 Nov 1996 20:39:45 -0600

Received: from TCUBVM.IS.TCU.EDU by TCUBVM.IS.TCU.EDU (LISTSERV release 1.8b)
with NJE id 3449 for SCOUTS-L@TCUBVM.IS.TCU.EDU; Sat, 9 Nov 1996
20:39:05 -0600

Received: from TCUBVM (NJE origin SMTP@TCUBVM) by TCUBVM.IS.TCU.EDU (LMail
V1.2a/1.8a) with BSMTP id 3448; Fri, 8 Nov 1996 14:19:19 -0600

hood,
mummy construction. Another thing that helps out is to get a longer bag than necessary. That way you could stuff things that you'd like to keep warm during the night.

I personally use a layered technique, mostly because I don't have the space and money for three different bags. My inside layer is my poly top and bottom with generously thick socks (I get cold feet at night), then I get in a vapor barrier made by wrapping a space blanket around myself. Then I slip into an acrylic blanket bag my wife sewed up. I wear a wool hat and my bag is a +20F-rated down bag. The major problem with this is the time it takes to finally get in position. Without exaggeration, I believe that I squirm around for 10 - 15 minutes. Then again, all that activity generates heat, so maybe this is a good thing. This season I might try one of those emergency mylar bags instead of the space blanket. I could buy a vapor barrier liner, but they cost too much.

Another problem was that my system didn't work so well at -5F. I was cold during the night. Not enough to keep me awake all night, but it was very uncomfortable. I think a thicker acrylic or wool blanket might do the trick.

Mattress pad:

This is almost as important as the bag. The self-inflating or closed-cell foam type work pretty well. Stay away from any of those inflatable type, more suitable as floats in the pool. These allow air to move around under you and could actually help cool you off.

I recommend two pads when sleeping on the snow. More is warmer.

Tents:

Don't know much here because I haven't used one in the winter, yet. I've been told that the fiberglass poles have a tendency to crack, so you might want to stick to aluminum.

We've used quinzees (a type of snow-dome), dugloos (dig a hole and sleep under the stars), snow-kitchens, and scout-camp lean-tos. Out of all of these, I think the lean-tos are the coldest. We strung tarps around the bunks to cut down on drafts and the amount of air needing to be heated. Whatever you try, bring as many tarps as you can. Those blue, PVC, things work pretty well in extreme cold.

Mess kit:

I use a plastic cereal bowl from the local Name-Your-Favorite-Mart. Get something thick, as extreme cold could cause it to crack. I don't like the metal mess kits because they seem to allow the food to cool too quickly.

Also, keep it light colored. Chances are, you'll be eating at least one meal, probably supper, in the dark, and a dark plate/bowl makes food disappear.

An insulated coffee mug, with lid, works great. Avoid those metal cups.

They transfer too much heat from the hot chocolate directly to the lips.

Stoves:

Propane and butane have problems in the cold. They start losing pressure below freezing and it's pretty much gone by the time you get to

0F. We stick with the white gas stoves during winter time.

Lights:

Lanterns should also be white gas. I've seen batteries die out at extreme

cold, too. Candles always work. Flashlights should be kept on your person even during the day, because of the battery problem.

From <@pucc.PRINCETON.EDU:owner-scouts-1@TCUBVM.IS.TCU.EDU> Sat Nov 9 22:46:35 1996

Return-Path: <@pucc.PRINCETON.EDU:owner-scouts-1@TCUBVM.IS.TCU.EDU>

Received: from server1.capaccess.org (server1.CapAccess.org [207.91.115.5]) by cap1.CapAccess.org (8.6.12/8.6.10) with ESMTP id WAA01218; Sat, 9 Nov 1996 22:46:35 -0500

Received: from pucc.PRINCETON.EDU (smtpb@pucc.Princeton.EDU [128.112.129.99]) by server1.capaccess.org (8.6.12/8.6.12) with SMTP id WAA81338; Sat, 9 Nov 1996 22:40:12 -0500

Received: from PUCC.PRINCETON.EDU by pucc.PRINCETON.EDU (IBM VM SMTP V2R2) with BSMTP id 0248; Sat, 09 Nov 96 22:42:42 EST

Received: from TCUBVM.IS.TCU.EDU (NJE origin MAILER@TCUBVM) by PUCC.PRINCETON.EDU (LMail V1.2a/1.8a) with BSMTP id 4262; Sat, 9 Nov 1996 22:42:41 -0500

Received: from TCUBVM.IS.TCU.EDU (NJE origin LISTSERV@TCUBVM) by TCUBVM.IS.TCU.EDU (LMail V1.2a/1.8a) with BSMTP id 8081; Sat, 9 Nov 1996 20:40:45 -0600

Received: from TCUBVM.IS.TCU.EDU by TCUBVM.IS.TCU.EDU (LISTSERV release 1.8b) with NJE id 3443 for SCOUTS-L@TCUBVM.IS.TCU.EDU; Sat, 9 Nov 1996 20:40:01 -0600

Received: from TCUBVM (NJE origin SMTP@TCUBVM) by TCUBVM.IS.TCU.EDU (LMail V1.2a/1.8a) with BSMTP id 3442; Fri, 8 Nov 1996 14:18:06 -0600

Received: from reg.seresc.k12.nh.us by tcubvm.is.tcu.edu (IBM VM SMTP V2R2) with TCP; Fri, 08 Nov 96 14:18:03 CST

Received: from godbout.tiac.net (p15.ts4.lowel.MA.tiac.com [207.60.164.112]) by reg.seresc.k12.nh.us (8.7.5/8.6.11) with SMTP id PAA21204 for <SCOUTS-L@TCUBVM.IS.TCU.EDU>; Fri, 8 Nov 1996 15:20:56 -0500

X-Mailer: Mozilla 3.0 (Win95; I)

MIME-Version: 1.0

References: <1.5.4.16.19961104070247.214f8b76@mail.HiWAAY.net>

Content-Type: text/plain; charset=iso-8859-1

Content-Transfer-Encoding: quoted-printable

Message-ID: <3283950D.11BF@reg.seresc.k12.nh.us>

Date: Fri, 8 Nov 1996 15:16:13 -0500

Reply-To: mgodbout@reg.seresc.k12.nh.us

Sender: SCOUTS-L - Youth Groups Discussion List
<SCOUTS-L@TCUBVM.IS.TCU.EDU>

From: Marc Godbout <mgodbout@reg.seresc.k12.nh.us>

Subject: Re: Cold Weather Camping

To: Multiple recipients of list SCOUTS-L <SCOUTS-L@TCUBVM.IS.TCU.EDU>

Status: RO

X-Status:

Ron Boyd wrote:

>

> Hello Scouters!

- >
- > Last year several members of this list posted some excellent ways to pack,
- > clothe,
- > and camp in cold weather. Maybe some of them will chime in again this year.
- > It is that time of year again. We had our first frost of the year down here
- > in Alabama this weekend.
- >
- > YiS,
- >
- > Ron Boyd, ASM
- > Decatur, AL

Recently there was a post on the list looking for cold-weather camping ideas. The following is pretty long and will not apply to everybody, but maybe there will be a few pieces someone can use. At worst, I'm sorry for cluttering up your mail box. Also, I had to break it up into 3 sections so that the listserver could take it.

Up here in NH, 3 - 4 months of the year are spent in a winter environment. As I like to camp it was either learn a few tricks to make it easier or just read about camping during those months. I'm also a Scoutmaster and what follows is pretty much what I try to teach the boys.

FWIW - The coldest I've camped in is -5F and I've done outside activities as low as -15F.

Winter camping is a lot of fun, but it presents some subtle dangers. I consider it a high adventure activity, but it's different from rock climbing, where you experience a relatively short-term thrill. Winter camping, if not prepared, is dangerous even when sleeping. But for many boys it's a fun challenge, and a "cool" (pardon the pun) thing to do. My son has actually said that he couldn't wait for summer to be over so that he could go on Winter Trek, Daniel Webster Council's high adventure program.

undershirts found at dept. stores are almost always 100% or 50% cotton. Go to the sports dept. and look for the poly. Most man-made fibers and wool will wick moisture away from the skin. Even when wet, they will still keep a pretty good amount of insulation.

A good replacement for the wool sweater might be a Polarguard or similar fleece top. I don't own any of this, mainly because I've got the sweater already, but those who do swear by it. It has the added advantage of being lighter weight, something to consider when backpacking.

Hands:

I try and make sure the boys get mittens with long cuffs. These keep hands much warmer than gloves. You can tell them that the fingers help keep each other warm or the Mr. Wizard explanation that there is much less surface area to radiate heat. Either way, mittens are the way to go.

The cuffs should extend past the wrist. Snowmobile mittens work very well.

I've got a pair of "glomitts" which I find fantastic. These are a pair of finger-less wool gloves with the finger part of a mitten attached to the back of the knuckles. Normally the mitten is over my fingers, but when it comes time to fiddle with the stove, or even light a match, the mitten part flips up and Velcro's to the back of the glove. When I need my fingers to manipulate something, I like to keep as much hand covered as possible.

Under these (yes, I layer here as well), I wear some thin acrylic knit gloves. You can either buy glove liners at some outdoor store or do as I do; go to the women's section of some discount dept. store like Walmart.

They have these one-size fits all mini-gloves for around a buck. I've got long fingers and these work fine for a fraction of the cost of an "official" glove liner. On top of this I'll wear a pair of waterproof overmitts.

Legs:

The layering and no cotton rule works here as well. I start with my poly long johns, put on some wool pants over that and then thin, wind-breaking, snow-pants over that. Please keep the kids from bringing sweatpants. These almost always cotton and are only warm when inside that nice, cozy cabin. Wool pants are hard to find cheaply in kid's sizes, mine are army surplus, so I let the boys substitute poly's topped with the heavier snowpants. Just make sure they're not cotton-filled. I do allow the boys to wear cotton briefs or boxers. This is too personal a choice. wear them and it doesn't seem to be a problem.

Feet:

Do I really of to repeat "no cotton" here? I didn't think so. For comfort, I wear poly sock liners. Over that would be a vapor barrier. I've used zip-lock bags (a bit constricting in the toes), bread bags, and plastic shopping bags. I might also try those bags that my newspapers come in. They're thin and just the right size. I don't know if they'll hold up, though. The reason for the bag is to keep sweat from being absorbed by the boot's insulation. Overnight, moisture in the boot will freeze if the boot is not kept warm (more on that later). I had one boy just last year who woke up to find his boots frozen solid. He could not get his feet into them. We had to thaw them by the fire (this was a Scout camp) before he could leave his tent. On top of the bag, I put some thick wool socks.

As for boots, your basic dept. store snow boot should do fine, as long as they are bought at least one size too big, in order to fit the socks and

bag.

Fit is very important. Anything too tight will cut off circulation to the toes and be a potential frostbite problem. I like having removable wool felt liners, but any decent, thick insulation should work.

I've used gaiters on top of my boots and like them very much. Gaiters are basically a cordura or maybe leather sleeve which bridges the gap between boots and pants. They do a great job keeping snow out of the boots.

Date: Mon, 3 Feb 1997 15:59:30 -0600
From: "Marc W. Solomon" <m_solomon@ALLI.COM>
Subject: Re: What does COLD stand for?
X-To: Jim McMaster <mcmaster@SWENG.STORTEK.COM>
To: Multiple recipients of list SCOUTS-L <SCOUTS-L@TCUBVM.IS.TCU.EDU>
Status: RO
X-Status:

Overheating.

Or to put it properly:

|
V

Keep C lean
Prevent O verheating
Dress in L ayers
Stay D ry

At 02:25 PM 2/3/97 -0700, Jim McMaster wrote:

>Hi...sorry to ask the list, but I am preparing a presentation for my scouts
>tonight about how to dress warm for winter camping. There is an acronym
>"COLD" I want to include. It goes (I think):

>

>C - clean

>O - ??????

>L - layers?

>D - dry?

>

>I lent my fieldbook to a scout, and cannot find it in the handbook. Could
>someone help me out, please? Private email is fine.

YIS,

Marc Solomon Unit Commissioner
m_solomon@alli.com Sycamore District
mailto:marcsol@aol.com Blackhawk Area Council (IL)