

MR. McAULIFF'S
GUIDE TO STAYING
WARM
WHEN THE WEATHER
IS NOT



Guarenteed to keep you warm even below zero!

Introduction

This guide is full of helpful hints and guidelines to encourage you to be able to ski, camp, snowboard or whatever you like to do in the snow or cold weather. Mr. McAuliff is one man who loves to ski and sit out in the snow, take it from him- the expert, the author (the guy to go to with your freezing problems). So if you want to be happy when you are out in the cold, this is the guide for you.

During my years of camping, skiing and playing in the great outdoors I've gotten quite cold. Whenever I did, I didn't have such a great time. Being uncomfortable takes your attention away from the moment and ruins your day. My coldest outing was during a ski trip. We were staying at a farm in Franconia notch, NH and it was 35 degrees below zero. I've been to Canada a few times and never was it this cold. Here is a picture of me, and a few friends to prove the temperature. It was so cold that none of the cars would start. The farmer had an old Willis Jeep he pulled out of the barn and jumped the cars. We drove to the ski area in a four cylinder Nissan, which never warmed up! Even with the cold we skied and had a great time. Follow this guide and you will be comfortable no matter how cold it is.



Understanding where your heat comes from

Basically when you are outdoors you must heat yourself. Your body is good at this and has many systems to keep it a constant temperature. Even shivering is a heat generating system the body uses in emergencies. The most important part of your body as far as temperature goes is your core. That is the part that has all the organs in it. You can have cold hands, feet, and even head but you would get a chill in your body and you'll be shivering in minutes. Your body will sacrifice heat in other parts of your body in order to keep your core warm.

So if your hands and feet are cold, it may not be your gloves or boots. If they are of good quality, look at your core and where your wasting the heat your body's generating. The first place is your head. Not wearing a hat is like leaving the door open. Second is your back and neck. Without some form of gasket around your neck, the big surface area of your core's heat is leaking right up your neck.

Making additional heat

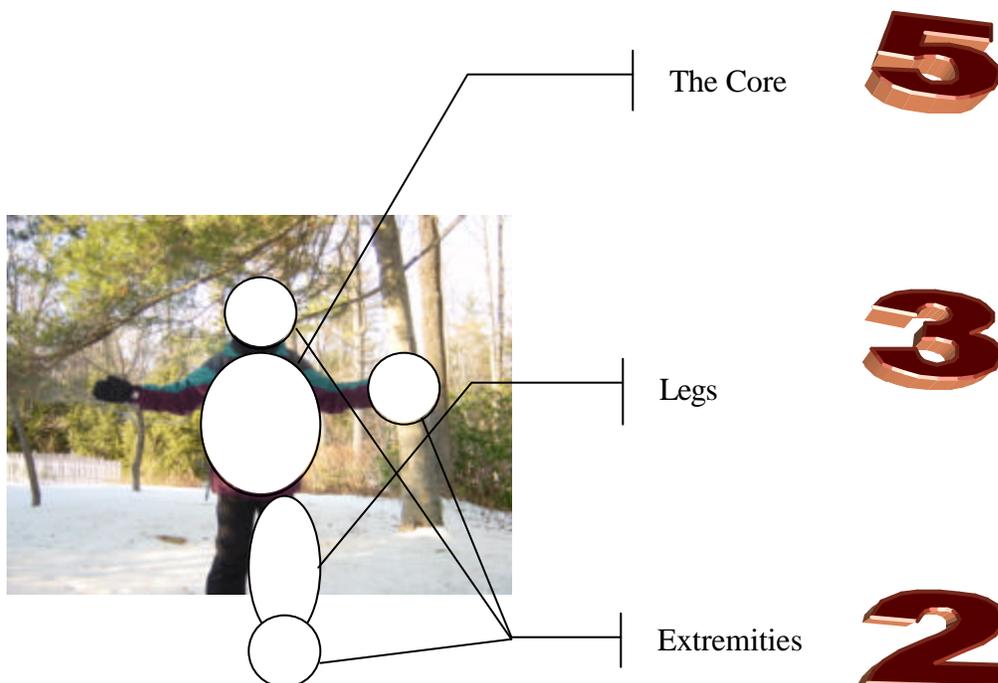
If you're cold, you can make additional heat by being active. Work and play makes you warm, but beware of the side effect. Perspiration could be a killer afterward. Lets look at how moisture affects your temperature. Chemical warmers for hands and toes are good but if you dress properly you shouldn't need them. Beside they are costly and only last 6 - 7 hours.

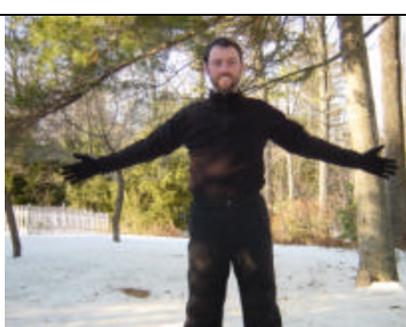
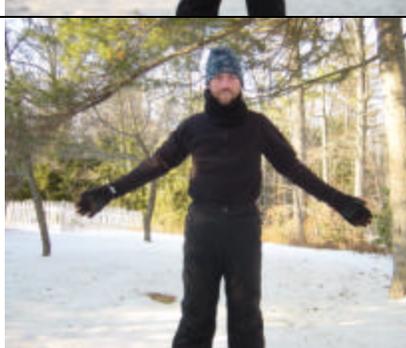
Moisture and insulation

Your clothing is insulation just like the insulation in your walls at home. When they built your house, they installed a moisture barrier to keep the wetness outside. You wear a water resistant shell in the same way, but what about the moisture your body makes when you perspire. Your clothes work well as insulators when dry, but become heat conductors actually taking more heat from your body when they are wet. Try a simple experiment like holding an ice cube in a washcloth. When the cloth is dry you can barely feel the temperature of the ice. After the ice begins to melt and wet the cloth you can feel the actual temperature of the ice; hold it long enough and your hand will get cold. So staying dry is key to staying warm.

But then how do we have fun and play without perspiring? The fact is that you can't stop your body from perspiring. It's how you keep cool, but you can control the moisture by wearing the right fabrics. The way it works is putting a fabric that doesn't hold water like polypropylene or wool next to your skin and one that easily absorbs water like cotton as the next layer. As you sweat the water will get wicked through the first fabric and be stored in the cotton where it has a better chance of drying, instead of stuck to you skin.

The 5 - 3- 2 layer method



Step by step chart	Core	Legs	Extremities
	<p>Layer One</p> <p>Polypropylene Undergarments This layer and fabric type is key as it passes any moisture to the next layer.</p>	<p>Layer One</p> <p>Polypropylene Undergarments This layer and fabric type is key as it passes any moisture to the next layer</p>	<p>Layer One</p> <p>Glove liners or thin one size fits all thin gloves</p>
	<p>Layer Two</p> <p>Cotton T Shirt</p> <p>Cotton is the best fabric here, it absorbs water and dries quickly, short sleeve is fine</p>	<p>Layer Two</p> <p>Fleece Long Johns</p> <p>Fleece is a great insulator and easy to find</p>	
	<p>Layer Three</p> <p>Wool sweater, this is a thin one with a v-neck. Important when you need to cool down. A thick bulky sweater would be limiting, and you can't remove a turtle neck if your hot.</p>		
	<p>Layer Four</p> <p>Fleece top with zipper, the zipper is important for cooling and fleece is the best thing to come by since wool for trapping insulating air.</p>	<p>Layer Three</p> <p>Ive added ski pants here for 3 layers on my legs, you can wear Scout pants, nylon or wool pants, no dungarees, they stay wet for days.</p>	
	<p>Head and Neck</p> <p>A fleece turtle neck warmer and fleece hat do the trick for protecting these heat-leaking areas.</p>		<p>Layer 2</p> <p>Good gloves water resistant yet breathable, Hood in outer shell becomes 2nd head layer when needed or use a synthetic skull cap.</p>

	<p>Layer 5</p> <p>Waterproof outer shell This should be a good hi-tech fabric Gortex is best but expensive, mine has a hood that rolls up into the collar which I have used a top a few windy peaks. Lots of pockets for storing those second and third layers so they don't get lost.</p>	<p>Layer 3</p> <p>Mittens Optional for very cold weather</p>
	<p>Eye and Skin Protection</p> <p>Sunglasses protect your eyes and should be worn during bright days especially around snow and water where reflections are high. They may you look cool too.</p> <p>You also can get a sunburn or windburn so break out a sunscreen/moisturizer and chap stick for your lips.</p>	

Adjusting for temperature

As you heat up, remove layers. For small adjusting remove mittens and outer gloves. For bigger adjustments, open the chimneys, let the heat out, and remove your neck warmer. Open your outer shell and adjust the zipper on your fleece liner. Go slow and do not strip down too fast. Remove pieces after 15 minutes or so, giving time for the temperature change. Be sure your shell has lots of pockets and assign a different item to each, gloves, neck warmer, glasses etc. This will keep them close so you can add them as soon as you start to feel cold. It is important to add items as soon as possible, cold hands will not warm up cold gloves.

This system is for very cold days. You can eliminate a layer or two for warmer days. Check the weather forecast and dress for a few degrees below the low temperature. If you are hiking and cold or get lost and stuck out late throw the extra layer in your day pack so you're prepared.

Footwear

Keeping your feet warm is very important. A pair of wool or synthetic socks with a cotton outer layer is best but be careful not to cramp your foot. Leave your boots snug but not too tight, which will restrict the blood flow and thereby limit heat delivery. Same here with cold feet, they can't warm cold boots so go inside and warm up. Once you feel sharp pain or tingling its time to start thinking about how you are going to get warm. Sticking your boots in a fire is not a wise option; you could damage your boot and worse

burn your flesh by overheating the boot. It is best to sit by the fire and warm your whole body up, let your legs and core heat up your feet slowly.

The signs of frostbite and hypothermia

These are real risks with terrible consequences. Frostbite can result in the loss of fingers and toes and hypothermia can cause death.

Sharp pains followed by numbness is a signal that frostbite is near. Get to a warm area, warm the affected areas slowly no matter how uncomfortable, seek medical attention if there is any discoloration or if numbness continues.

Hypothermia is difficult to detect if you're the one affected so watch each other for dizziness and alertness. If a person seems delirious or distant get them inside or if outdoors put them in a sleeping bag with a warm person, consult your Scout book for more details.

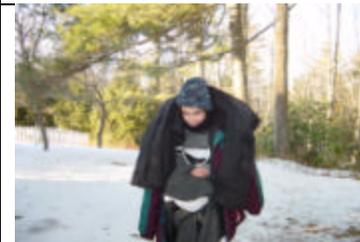
Remember the best protection is to be ready and think ahead here are some ideas:

- *On long winter car trips where there are miles between civilizations throw a wool blanket or two and boots in the car just incase you breakdown or get stuck.*
- *Wear your fleece hat to bed to keep the heat in, close up your sleeping bag so only your face is out of the bag. Never cover your face in the bag, the moisture from your breath will not help, and re-breathing your own air is not healthy, besides you could end up with quite a head ache from lack of oxygen.*
- *Keep hydrated – you breathe out lots of water in the cold (look at the ceiling of your tent on a 20 degree morning, all that frost is from your breath)*
- *Remember there is plenty more to learn so don't stop here!*

This guide is available as download at www.TheSignal.cc The web site of Boy Scout Troop 329 Bayport, New York.

Recommendations and comments should be sent to brianm@bri-tech.com.

Credits



This guide would not be possible with out the help of Kate McAuliff who did the photography, wardrobe and the introduction.