WINTER DRESS – THE KEY TO WARM CLOTHING

The C-O-L-D key to keeping warm applies to the clothing you wear. Here are some of the ways you can use it:

- Keep Clothing CLEAN. Dirt and grease clog the air spaces in the clothing and reduce its insulation value. When cleaning, make sure all soap is rinsed out because soap residue can reduce insulation qualities.
- Avoid OVERHEATING. Select the clothes that you need to stay comfortable, and even slightly cool. It is better to be cool than run the risk of perspiring and reducing the insulation value of your clothing. If you are too warm, loosen closures a few at a time if you are still too warm, remove a layer.
- Wear LAYERS. Layers of clothing should be worn long and loose-fitting. Not only does this allow more freedom of movement, but it lets your blood circulate freely, preventing frostbite. Select clothing that is the correct size, and care for it so that it retains that size. Do not boil fabrics or wash them in water that is too hot. Do not dry fabrics in a hot dryer. The fabrics will shrink and clothes will lose the insulating advantages of a loose fit.
- Stay DRY. It is important to keep clothing dry outside as well as well as inside. Do not get so warm that you start to perspire. Do riot let snow collect on the outside of your clothing. The heat from your body melts it, and some will penetrate even water-repellent fabric, reducing the insulating properties of the fabric.

THE OKPIK CLOTHING SYSTEM

The Inuit refer to all warm clothing as okkortok. The Okpik system is similar to the many-layered clothing the Inuit call the annorak.

- The outer coat is called kolliktark.
- The inner coat is called attagi.
- Trousers are called karklik.
- All undergarments or liners are illupak.
- Boots are kamiks, socks are alerte, and mittens are poaluk.

You need clothing that protects you from the cold and holds your body heat, but that also can be ventilated. The layers should be thin so frost forms between layers, not inside the insulation. Clothes for cold-weather camping should be designed so that the camper can function effectively in any environment. The prime consideration is comfort, not appearance. The clothing is designed to keep campers warm rather than stylish. However, the three principles of insulation, layering, and ventilation used in the Okpik system apply to any cold-weather clothing.

Okpik clothing design incorporates the principles of insulation, layering, and ventilation to make the clothing work for the wearer. Insulation material reduces the amount of body heat lost to the outside. By regulating the amount of insulation, you regulate the amount of heat lost or retained. This flexibility becomes important when environmental conditions or activities change, altering the amount of warmth needed for comfort and safety. One method of insulation is layering. Several layers of medium-weight clothing provide more insulation and flexibility than, one heavy garment. This is true even if the heavy garment is as thick as the

combined layers. The reason is that air is trapped between each clothing layer, as well as in the air pockets between the cloth fibers, as it is warmed by body heat.

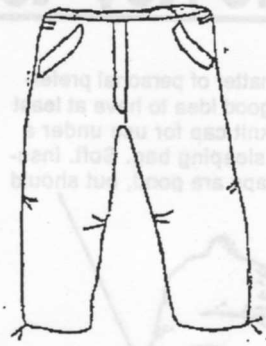
To capitalize on this heat trapping, the layers of clothing are designed differently. Winter underwear is porous, with many air pockets to hold body-warmed air, while the outer garments are made of windproof, water-repellent fabric to keep cold air outside. The layering method allows greater freedom of movement and is easily adjusted for a wide range of conditions. Layers can simply be added or subtracted as needed.

Ventilation helps to maintain a comfortable body temperature. It is important to ventilate before you become overheated, because evaporating perspiration cools the body. Perspiration can also fill the air spaces of your clothing with moisture-laden air, reducing its insulating qualities. Scientists advise, "Allow outside air to cool overheated layers by adjusting openings such as cuffs and front closures. If more cooling is necessary, it may be time to remove a layer".

The illustrations following show outer clothing systems based on layering that works well in most cold-weather camping, whether in wet-cold, dry-cold, or Arctic-like conditions. Layers are important, as they supply the insulation necessary to control the body's warmth. They can also be adequately ventilated to control the buildup of perspiration within the clothing. This clothing system uses layers that fit over one another loosely and without constricting body movement. The outer garments should be water-repellent or, in areas of extreme wetness during cold-wet conditions, both breathable and waterproof. The wind parka pullover (not insulated), insulated parka liner, insulated vest with removable sleeves, hood, trousers, insulated trouser liner, wind pant, and insulated wind pant liner make up the Okpik outer clothing system. They are used withvarious inner layers and footwear, including the mukluk with foam or conventional liners, and upper-body protection. This upper-body protection includes cheek protectors, hat or cap, balaclava, scarf, headover, hand protection with gloves, wristlets, mittens, and protective overmittens. Sleeping attire is discussed under Cold-Weather Sleeping Systems.

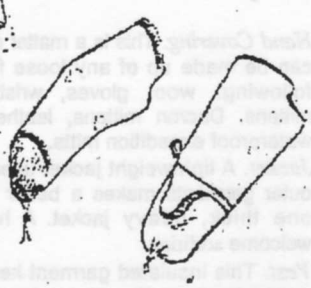
insulated parka liner

Uses for removable sleeves



Wind pant

Wind pant liner

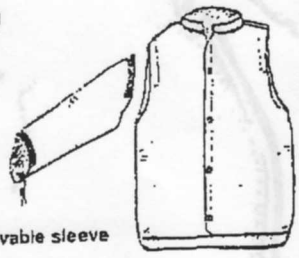


Emergency foot covering

Emergency mitten

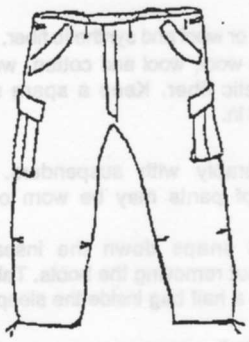
Hood

Wind parka pullover

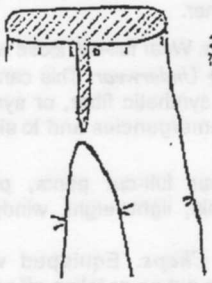


Removable sleeve

Vest



Trousers

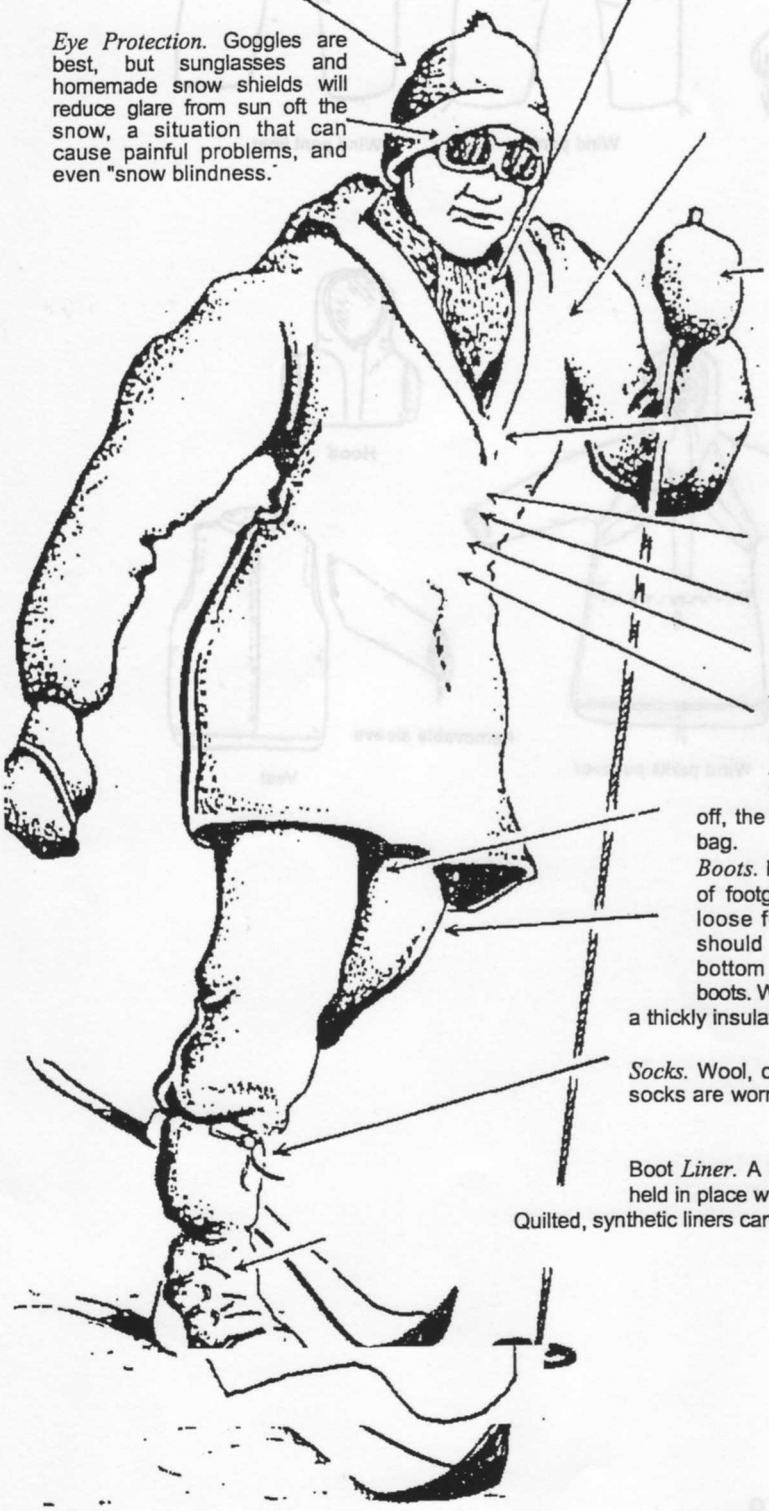


Trouser Liner

Clothing—the Key to Comfort

Headgear. This is a matter of personal preference, but it always a good idea to have at least one stocking cap or knit cap for use under a parka hood or in the sleeping bag. Soft. insulated caps with ear flaps are good, but should be loose fitting.

Eye Protection. Goggles are best, but sunglasses and homemade snow shields will reduce glare from sun oft the snow, a situation that can cause painful problems, and even "snow blindness."



Scarf. Wool or synthetic fiber makes an excellent cold weather protector, but make sure the scarf is plenty long.

Parka. The *amorak* or pullover parka should be windproof, should reach almost to the knees. and be large enough to fit over all the other garments. It should have a hood.

Hand Covering. This is a matter of personal preference that can be made up of any loose fitting combination of the following: wool gloves, wristlets, wool mittens, foam mittens. Dacron mittens, leather overmitts, or wind and waterproof expedition mitts.

Jacket. A lightweight jacket used in combination with other outer garments makes a better "layering" system than one thick, heavy jacket. A hood for extreme cold is a welcome addition.

Vest. This insulated garment keeps the vital organs, heart, and lungs warm. The best style has a flap in back to protect the kidneys. Detachable sleeves convert a vest to an insulated jacket.

Sweater. Wool or wool synthetic sweaters will keep you warmer.

Shirts. Wear full-cut, loose wool or wool and synthetic fiber.

Long Underwear. This can be wool, wool and cotton, wool and synthetic fiber, or synthetic fiber. Keep a spare set for emergencies and to sleep in.

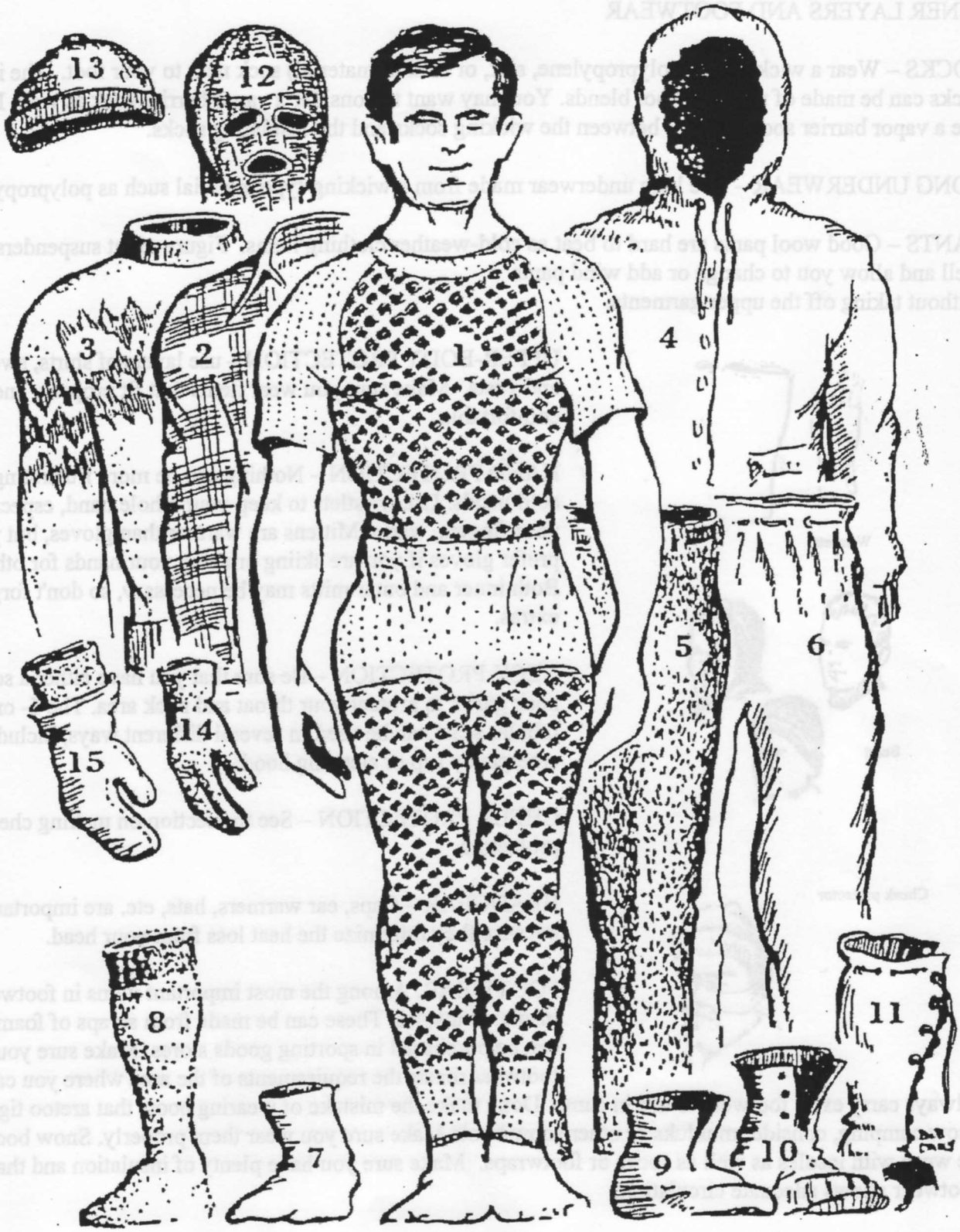
Pants. Wear full-cut pants, preferably with suspenders. In extreme cold, lightweight, windproof pants may be worn over everything.

Insulated Chaps. Equipped with snaps down the inseam, they may be put on or taken off without removing the boots. Taken off, the legs may be zipped together to form a half bag inside the sleeping bag.

Boots. Proper footgear is essential. In the Okpik program we use a variety of footgear; designed for different needs. A boot should fit somewhat loose for warmth, but the adage "cool is comfortable" is true; the feet should not sweat profusely. The boots we use are rubber, rubber bottom pacs, mukluks (high tops), kamicks (low boots), moccasins, and ski boots. We sometimes use a combination of a light boot for travel, and a thickly insulated boot for camp.

Socks. Wool, or wool and synthetic are good. Sometimes synthetic fiber stretch socks are worn next to the skin for added warmth.

Boot *Liner.* A specially cut piece of 1-inch foam can be wrapped around the foot, held in place with a nylon sock, and used with the mukluk in very cold weather. Quilted, synthetic liners can also be used, as well as felt liners.



Types and Amounts of Clothing

1. long underwear; 2. shirt or inner layer; 3. sweater or light jacket; 4. wind or rain gear; 5. inner pants; 6. wind or rain pants; 7. wicker inner socks; 8. insulating socks; 9. boot liners; 10. and 11. footwear; 12. and 13. head coverings; 14. and 15. gloves and mittens

INNER LAYERS AND FOOTWEAR

SOCKS – Wear a wicking (polypropylene, silk, or similar material) sock next to your foot. The insulating socks can be made of wool or wool blends. You may want to consider a vapor barrier sock as well. If you use a vapor barrier sock, place it between the wicking socks and the insulating socks.

LONG UNDERWEAR – Use long underwear made from a wicking-type material such as polypropylene.

PANTS – Good wool pants are hard to beat as cold-weather clothing items. Figure-eight suspenders work well and allow you to change or add wind pants
without taking off the upper garments.

Wristlets

Scarf

Cheek protector

UPPER-BODY PROTECTION – use layers of shirts, sweaters, and vests. Make sure you wear items that fit properly and are comfortable.

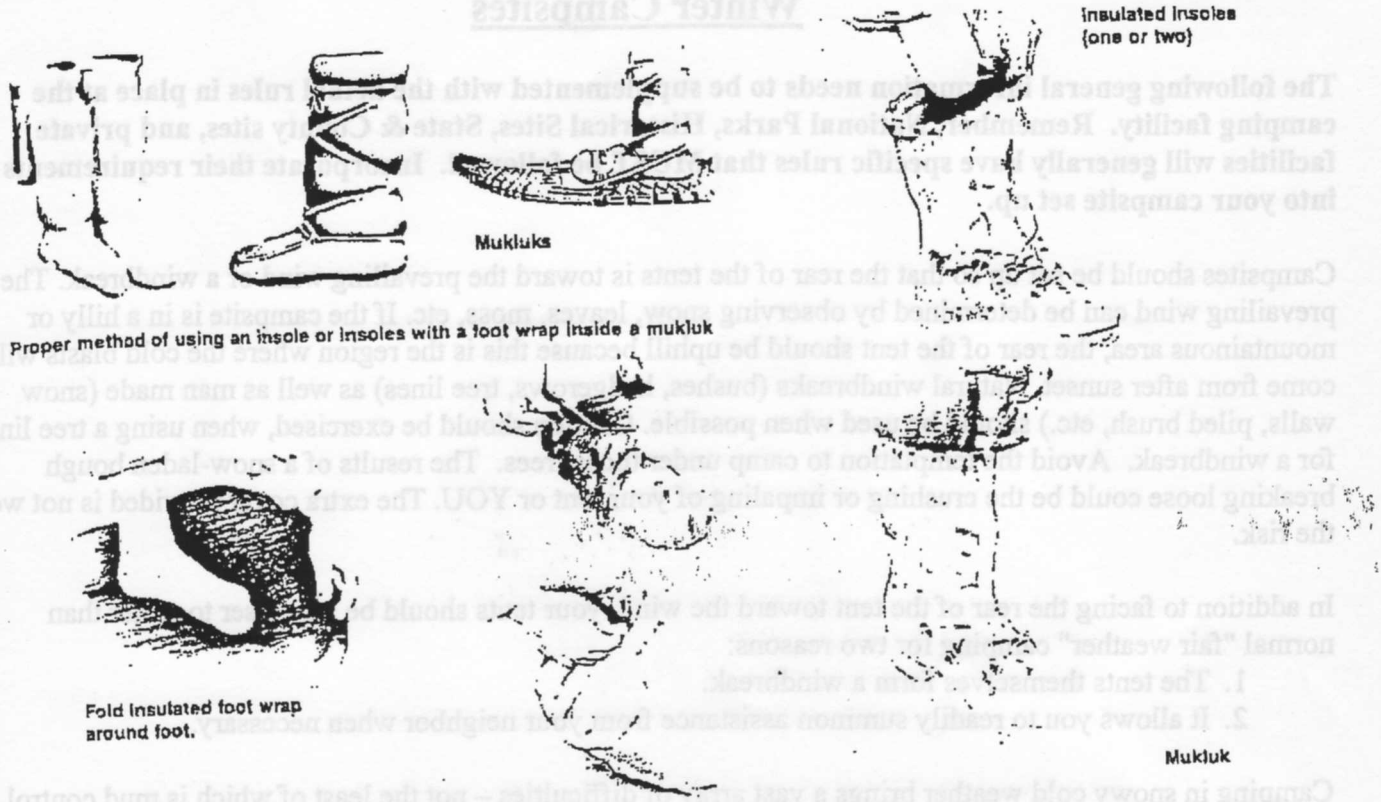
HAND PROTECTION – Nothing can be more frustrating than cold hands. Use wristlets to keep your whole hand, especially your fingers, warm. Mittens are warmer than gloves, but you may prefer gloves if you are skiing or using your hands for other work. Both inner and outer mitts may be necessary, so don't forget extras.

NECK PROTECTION – Be sure that you have either a scarf or neck gaiter to protect your throat and neck area. The 5- or 6-foot tubular scarf can be used in several different ways, including as an emergency cap or sleeping hood.

CHEEK PROTECTION – See the section on making cheek protectors.

HEADGEAR – Caps, ear warmers, hats, etc. are important because they minimize the heat loss from your head.

FOOTWEAR. Among the most important items in footwear are insulated insoles. These can be made from scraps of foam or they can be purchased in sporting goods stores. Make sure your footwear meets the requirements of the area where you camping. Always carry extra footwear to use in camp. Don't make the mistake of wearing boots that aretoo tight. For snow camping, consider mukluks or other snow boots.Make sure you wear them properly. Snow boots must be worn with insoles as well as socks or footwraps. Make sure you have plenty of insulation and that your footwear allows adequate circulation.


Insulated insoles
(one or two)
Mukluks
Proper method of using an insole or insoles with a foot wrap inside a mukluk
Fold insulated foot wrap
around foot.
Mukluk
Use a "slippery" nylon sock over foot wrap
and insert in Mukluk or other cold-weather foot gear

NOTES: