Dressing to Stay Warm

In winter conditions, dressing correctly can do more than keep you comfortable-it can keep you alive. Dress in layers, so you can add or remove articles of clothing to regulate your temperature. Layering allows you to remove clothing as you work and get warmer. You will also need to be careful not to get your clothing wet, either by sweating or by snow melting and soaking into the fabric. Remember: Dry is warm. And be sure to include layers that **wick** (absorb moisture), block the **wind**, and keep you **warm**.

Wick-Your innermost (base) layer should be made of material that wicks, or draws, moisture away from your body.

Wind-Your outermost layer should block the wind.

Warm-Your middle Iayer or layers should trap the heat that your body generates. Avoid cotton, especially in your base layer, because it will trap moisture and make you feel colder.

Clothing – NO COTTON!

Base layer

- Long underwear—non-cotton—top and bottom
- Sock liners to go under heavy socks (synthetic or silk, moisture wicking)
- Something warm to sleep in (non-cotton – light fleece is good)

Mid layer

- Wool, fleece, or synthetic long-sleeved shirt
- Fleece, wool, or synthetic sweater or pullover
- Wool, synthetic or blend pants (official Scout synthetic switchback pants are appropriate)
- Heavy socks—wool, smart wool, synthetic; moisture wicking. Bring 1 or 2 extra pairs.

Outer layer

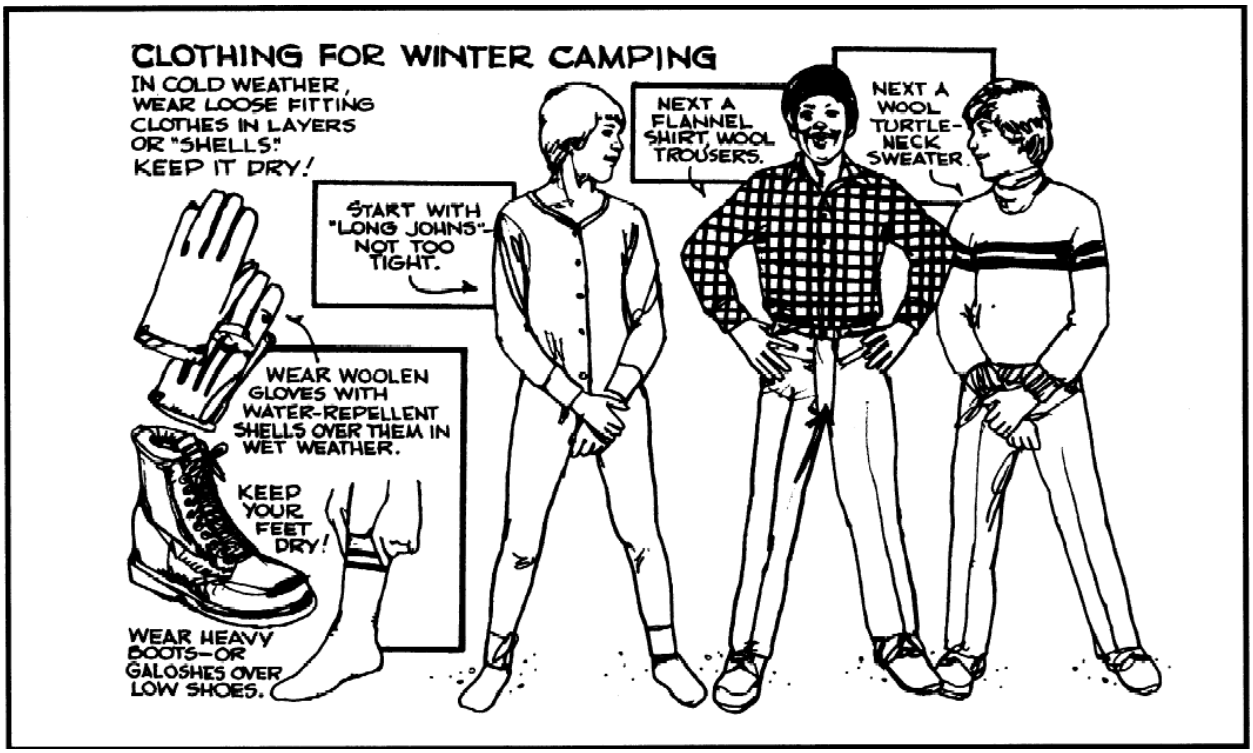
- WARM winter jacket (waterproof); best if it has a hood for wind protection.
- Hat that covers your ears (plus a spare in case it gets wet). Wool or fleece; no Troop hats!
- Gloves or mittens (waterproof), plus 1 or 2 spare pairs. (Gloves inside mittens are warmest).
- Ski or snow pants (waterproof)
- WARM snow boots (waterproof and insulated) that you can hike in.

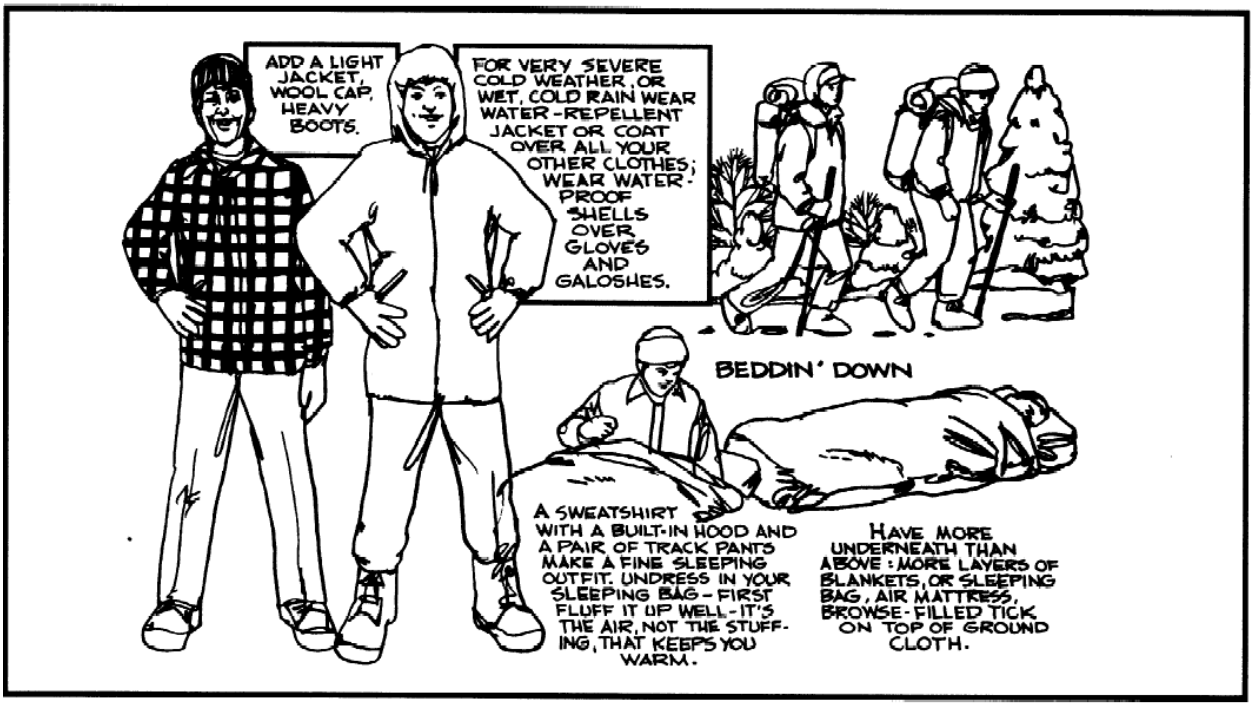
Optional:

- Face mask/scarf/neck warmer (wool, fleece)
- Glove liners
- Extra boots optional if they fit in your backpack

Don't Bring:

- **Cotton clothes, sneakers or jeans!**


CLOTHING FOR WINTER CAMPING
IN COLD WEATHER, WEAR LOOSE FITTING CLOTHES IN LAYERS OR "SHELLS." KEEP IT DRY!
START WITH "LONG JOHNS"— NOT TOO TIGHT.
NEXT A FLANNEL SHIRT, WOOL TROUSERS.
NEXT A WOOL TURTLE-NECK SWEATER.
WEAR WOOLEN GLOVES WITH WATER-REPELLENT SHELLS OVER THEM IN WET WEATHER.
KEEP YOUR FEET DRY!
WEAR HEAVY BOOTS—OR GALOSHES OVER LOW SHOES.


ADD A LIGHT JACKET, WOOL CAP, HEAVY BOOTS.
FOR VERY SEVERE COLD WEATHER, OR WET, COLD RAIN WEAR WATER-REPELLENT JACKET OR COAT OVER ALL YOUR OTHER CLOTHES; WEAR WATER-PROOF SHELLS OVER GLOVES AND GALOSHES.
BEDDIN' DOWN
A SWEATSHIRT WITH A BUILT-IN HOOD AND A PAIR OF TRACK PANTS MAKE A FINE SLEEPING OUTFIT. UNDRESS IN YOUR SLEEPING BAG — FIRST FLUFF IT UP WELL — IT'S THE AIR, NOT THE STUFFING, THAT KEEPS YOU WARM.
HAVE MORE UNDERNEATH THAN ABOVE: MORE LAYERS OF BLANKETS, OR SLEEPING BAG, AIR MATTRESS, BROWSE-FILLED TICK ON TOP OF GROUND CLOTH.

Layering Basics

Layering your clothing is a tried-and-true way to maximize your comfort in the outdoors. The beauty of this simple concept is that it allows you to make quick adjustments based on your activity level and changes in the weather.

Each layer has a function. The base layer (against your skin) manages moisture; the insulating layer protects you from the cold; the shell layer (outer layer) shields you from wind and rain. You simply add or subtract layers as needed.

Your Base Layer: Moisture Management
This is your next-to-skin layer. It helps regulate your body temperature by moving perspiration away from your skin.

Keeping dry helps you maintain a cool body temperature in the summer and avoid hypothermia in the winter. If you've ever worn a cotton T-shirt under your raincoat while you hiked, you probably remember feeling wet and clammy, even though you weren't getting wet from the rain itself. Cotton is a fabric that retains perspiration and can leave you chilled.

For outdoor comfort, your base layer should be made of merino wool (popularized by brands such as SmartWool, Ibex and Icebreaker), synthetic fabrics (polyesters such as Under Armour, Polartec Power Dry® or Patagonia Capilene®) or, for less-active uses, silk. Rather than absorbing moisture, these fabrics transport (or "wick") perspiration away from your skin, dispersing it on the outer surface where it can evaporate. The result: You stay drier even when you sweat, and your shirt dries faster afterwards.

Examples: A base layer can be anything from briefs to long underwear sets (tops and bottoms) to tights and T-shirts. It can be designed to fit snugly or loosely. For cool conditions, thermal underwear is available in light-, mid- and expedition-weights. Choose the weight that best matches your activity and the temperature.

Your Middle Layer: Insulation
The insulating layer helps you retain heat by trapping air close to your body.

Natural fibers such as wool and goose down are excellent insulators. Merino wool sweaters and shirts offer soft, reliable warmth and keep on insulating even when wet. For very cold and dry conditions, goose down is best. It offers an unbeatable warmth-to-weight ratio and is highly compressible. Down's main drawback is that it must be kept dry to maintain its insulating ability. A new innovation—water-resistant down—promises to change this.

Classic fleece such as Polartec® 100, 200 or Thermal Pro polyester and other synthetics such as Thinsulate® provide warmth for a variety of conditions. They're lightweight, breathable and insulate even when wet. They also dry faster and have a higher warmth-to-weight ratio than even wool. Classic fleece's main drawbacks are wind permeability and bulk (it's less compressible than other fabrics).

Like thermal underwear, fleece tops are available in 3 weights:
- Lightweight for aerobic activity or mild climates.
- Midweight for moderate activity or climates.
- Expedition-weight for low activity or cold climates.

Examples: For high-energy activities such as cross-country skiing, cycling or running, choose lightweight fleece (Polartec 100 or Power Dry) to avoid overheating. For cold conditions, try thicker fleece such as Polartec 200 or 300.

Wind fleece such as Polartec WindPro® polyester or Gore WindStopper® adds a high level of wind resistance to fleece. How? It uses a hidden membrane that does not affect breathability.

Your Shell Layer: Weather Protection

The shell or outer layer protects you from wind, rain or snow. Shells range from pricey mountaineering jackets to simple windproof jackets. Most allow at least some perspiration to escape; virtually all are treated with a durable water repellent (DWR) finish to make water bead up and roll off the fabric.

An outer shell is an important piece in bad weather, because if wind and water are allowed to penetrate to your inner layers, you begin to feel cold. Furthermore, without proper ventilation, perspiration can't evaporate but instead condenses on the inside of your shell.

Fit is another consideration. Your shell layer should be roomy enough to fit easily over other layers and not restrict your movement.

Shells can be lumped into the following categories:

Waterproof/breathable shells: The most functional (and expensive) choices, these are best for wet, cool conditions and alpine activities. Shells using laminated membranes such as Gore-Tex and eVent offer top performance; those using fabric coatings are a more economical alternative. Shells are categorized by REI as either rainwear, which emphasizes low weight and packability, or mountaineering wear, which is more abrasion-resistant and has additional features.

Water-resistant/breathable shells: These are best for light precipitation and high activity levels. Less expensive than waterproof/breathable shells, they're usually made of tightly woven fabrics (such as mini-ripstop nylon) to block wind and light rain.

Soft shells: These emphasize breathability. Most feature stretch fabric or fabric panels for added comfort during aerobic activities. Many offer both shell and insulative properties, so they in effect combine 2 layers into 1. Soft shells include cold- and mild-weather options.

Waterproof/non-breathable shells: These economical shells are ideal for rainy days with light activity (e.g., fishing, sports viewing). They are typically made of a sturdy, polyurethane-coated nylon which is water- and windproof.

Insulated shells: Some outer shells have a layer of insulation built in—such as fleece—making them convenient for cold, wet conditions, but not as versatile for layering in fluctuating temperatures.