

Staying Warm

It's hard to stay happy when you're too cold, too hot, or too wet. Choosing the right outdoor clothing can keep you comfortable and protect against potential dangers such as hypothermia. Outdoor fun is, after all, meant to be fun.

The essentials of staying warm:

- **Stay dry:** Water conducts heat better than air. The more water held in your clothing, the faster your body heat will be transferred away. As moisture evaporates it also produces cooling, so wet clothing has two ways to steal your body warmth.
- **Block the wind:** Wind increases convective heat loss by carrying your heat away on currents of cool air. Your best wind-proofing strategy is to wear a tightly woven shell garment that deflects wind but allows some moisture transport.
- **Layer to trap heat:** Spaces between the fibres of your clothing trap a layer of warm, still air next to your skin. The amount of air you can trap depends on the number of layers you're wearing, their thickness, and loft. Layering your clothing is probably the single best way to manage heat loss in the outdoors. It allows you to regulate your body temperature to match physical activity, wind, temperature, and moisture.

Clothes Layering

Layers allow you to build a tiny microclimate that surrounds your body and can be adapted to moisture, wind, temperature, and exertion.

Base Layer

The inner-most layer is critical because it's in direct contact with your skin. Base layers (also known as underwear) should transport moisture away from the skin and disperse it to the air or outer layers where it can evaporate. Because water is a good heat conductor, damp garments draw precious heat away from your body. Even in conditions above freezing, this rapid heat loss can cause a dangerous drop in your body's core temperature.

The best base layer materials are synthetics (polypropylene and polyester). These are light and strong, absorb very little water, and are quick to dry. Silk is lovely and cool against the skin when it's hot, but is not an excellent choice for wintery conditions. Seamless or flat-seam garments lie flat and won't press into your skin under a harness or pack. Base layers should fit snugly without being constricting.

Base layers are available in light, medium, and heavy weights. Light layers suit aerobic activity where sweat dispersal is paramount. Midweight underwear provides moisture control and insulation for stop-and-go activities. Heavy layers are best in very cold conditions, or when you're relatively inactive.

Mid-Layer

The mid-layer provides insulation and continues the transportation of moisture from the inner layer. To slow heat loss, this layer must be capable of retaining the warmth generated by your body. Wool and synthetics are well suited to this because the structure of the fibres creates small air spaces that trap molecules of warm air.

Additional features, such as pit zippers and full-length front zippers, allow venting. As with the inner layer, this layer should be snug but not constricting.

Outer Layer

The outer layer protects you from the elements and should allow air to circulate and excess moisture to escape. For dry conditions, a breathable (uncoated) wind shell or a smooth-surfaced soft shell may be all you need. If you expect conditions to be more severe, a waterproof (coated) rain jacket might be adequate. A shell made of a breathable and waterproof fabric, such as Gore-Tex, will protect you from wind and rain, and allow water vapour to escape.

Socks

Blisters and sores can shut down an outdoor activity in very short order. But a well-fitting sock system, tailored to your activity can keep your feet dry and comfortable when you're running over trails, hiking up hills, or approaching rocks.

Good-Fitting Socks Prevent Hot Spots

A good fit for socks is nearly as crucial as it is for shoes. Your socks and shoes are a system that should work well together.

- Socks should not change or modify the fit of your shoes.
- If they're too big they will sag and bunch causing lumps, discomfort, and possibly blister-causing spots.
- If they're too tight they can restrict circulation and toe movement, which can lead to injury.

Selecting Socks, There's Lots and Lots

Choosing the best pair of socks depends on the type of shoes you will be wearing and the weather conditions you may encounter.

Liner socks can be worn alone during high-output activities like trail running. To help prevent blisters, they can also be worn as the inner layer of a layering system. The thin fabric is designed to transport moisture outward to keep your feet cool, dry, and comfortable.

Lightweight socks are intended for use with trail runners, approach shoes, and warm weather day hiking boots. They have medium-density padding in the ball and heel for extra cushioning, a thinner

more breathable upper, and are perfect for layering with liners.

Midweight socks are well-cushioned all-around socks that work well with day hiking boots and backpacking footwear. They are perfect for three-season moderate-output activities and for wearing over liner socks.

Heavyweight socks are designed to provide maximum insulation for cold weather hiking and other winter sports. They feature well-insulated footbeds for increased warmth. Heavyweight socks are extra long to cover more of your lower legs. They can also be paired with liner socks.

Materials such as synthetics or wool wick moisture away from your feet much better than cotton does. Thicker socks with a blend of natural fibres and synthetics provide good moisture wicking and can function like a layered system. Advancements in the sourcing and manufacturing of wool have led to improved performance. Wool has naturally high-tech moisture-wicking and insulating properties, and soft textured wools (such as merino) are ideal for high-performance socks.

Warming Ways

- Eat regularly and keep well-hydrated.
- When you're moving, remove a layer of clothing before you start to sweat. When you stop, add a layer before you start to cool off.
- Wear mittens when possible. Mitts are warmer than gloves because your fingers can share their heat.
- Use thin, polyester liner gloves. Liner gloves don't inhibit your dexterity and provide an extra bit of warmth when you take off heavier gloves or mitts.
- Wear a wool or fleece hat – and a scarf or neck gaiter. Up to 50% of your total heat loss occurs through the head and neck.
- Ensure your boots, gloves, and socks are not too tight. Good blood circulation is essential to keeping hands and feet warm.
- If your fingers feel like blocks of ice, swing your arms in wide circles as fast as possible. After a few minutes enough blood is pushed into your fingertips to warm them.