



# Clothing - Layering Basics

What should I wear when hiking or backpacking?



## Why should you use layers?

Layers keep you warm and dry. They also help your body use energy efficiently. When put into the right systems, a good sequence of layers provides you with weather protection, moves moisture away from your skin, conserves or dissipates heat, and does this all in the least amount of time.

## Base Layer

The layer next to the skin is called the base layer. The job of this layer is to move perspiration away from your skin (aka "wicking"). Wicking base layers are needed to keep your skin dry. This is essential in cool or cold weather because it helps to keep your body from becoming chilled or worse...hypothermic. Damp clothing in the cold can reduce your insulation significantly, so it's important to get sweat away from your skin and away from your clothes. Breathability is of the utmost importance. The base layer should be soft, comfortable, and close fitting to the body. Lighter weights are best for warm conditions and or high output levels. Heavier weights for cool conditions or lower output.

## Middle Layer

The middle layer is your most variable and versatile layer. The middle layer is usually made up of multiple sub-layers. Wearing more than one shirt, sweater, or jacket gives you flexibility. You can add or remove items from the middle layer according to weather and activity. By using multiple articles of clothing at this level, you will stay much warmer than if you used one thick heavy layer for insulation. This is because extra air gets trapped between the layers as well as within them. Buttons, zippers and the like (built into the clothing) allow for ventilation during exertion or the ability to quickly close everything up when the weather worsens. Consider your base layer and your typical body temperature when selecting your middle layer. If you are often cold, choose a mid layer with less air permeability. If your base layer is warm, a lighter mid layer may work best.

## Outer Layer (Shell Layer)

The outer layer (or shell layer) protects you from wind, rain and snow. Most shells allow at least some perspiration to escape, and virtually all of them are treated with a finish to make water bead up and roll off the fabric. Your outer shell is an important piece of clothing in stormy weather, because if wind and water are allowed to penetrate to your inner layers, you can get seriously chilled and run the risk of suffering from the effects of hypothermia.

Shell layers are generally lumped into one of four categories.

### ★ Waterproof/Breathable

This is the most functional choice of shells, and is your best option for full-on squall conditions. The bad news is that this is the most costly option. However, the good news is that higher cost usually brings with it higher quality and better durability.

### ◆ Soft

These emphasize breathability. Most combine light rain and wind protection with light insulation and feature stretch fabric or fabric panels for added comfort during aerobic activities.

### ◆ Water-resistant/Breathable

This type of shell is more suited to drizzly, breezy conditions and high activity levels. More affordable than waterproof/breathable shells, they're typically made of tightly woven nylon or polyester fabrics that block light wind and light rain.

### ◆ Waterproof/Non-Breathable

These are bare-bones shells. They are okay for rainy days with light to no activity (e.g., fishing, spectating). Typically these are made of a coated nylon, which is water- and windproof. If you exert yourself while wearing one, you'll end up saturating your underneath layers with perspiration.

### ★ Merino Wool

This is the gold standard of thermal underwear; however, it is not for those wishing to stay on a low budget. Merino wool is a soft and fine natural product that is very good at wicking sweat from the skin surface and naturally odor resistant.

### ★ Synthetic

Has the advantage of staying warm when damp, and increased durability.

### ◆ Down

Has the greatest warmth-to-weight ratio. Highly efficient, packable and light. Best suited to cool and dry conditions.

### ◆ Hardfleece

Highly air permeable, removing moisture but retaining warmth. Good for high output, cold conditions and moderate precipitation.

### ◆ Fleece

A thermal garment with air permeability, that can be worn as a standalone layer. Fleece offers high comfort, less weather resistance.

### ☠ Cotton

If you enjoy wearing wet clothing and being cold, this is the material for you. Make sure you pre-book your hospital bed or have made prior funeral arrangements. COTTON KILLS!