

Dressing for the Outdoors In a Cold or Wet Climate

1. Clothes are a person's primary shelter
 - a. Provide thermal insulation
 - b. Protect from the elements such as wind and wetness
2. Selecting the proper outdoor clothing
 - a. Insulation
 - i. Clothing insulates by trapping air close to the body
 1. Calm air does not conduct heat
 2. Water is an efficient heat conductor
 - ii. Insulation values vary with the type of material and the presence of water
 1. Wool
 - a. Proven insulator, very effective even when wet
 - b. Absorbs up to a third of its weight in its fiber core through the process of sorption
 - c. Exothermic – gives off heat during sorption
 - d. The surface of wool fibers is hydrophobic – feels dry even when wet
 2. Polypropylene, polyesters, and other synthetics
 - a. Generally hydrophobic, although some are designed to wick water away from the body
 - b. Dry fast
 - c. Heavy fabrics such as pile and fleece provide good insulation
 3. Cotton
 - a. Fair insulator when completely dry
 - b. Rapidly absorbs and holds on to water
 - c. Provides no insulation when wet
 - d. Dries slowly
 4. Silk
 - a. Slow to absorb moisture
 - b. Absorbs up to 30 percent of its weight before feeling wet
 - c. Excellent insulator
 5. Feathers and down
 - a. Excellent insulators when dry
 - b. Lose insulating qualities quickly when wet
 - c. Difficult to dry once wet
 6. Animal fur
 - a. Excellent insulator when dry
 - b. Naturally water resistant due to natural oils
 - c. Becomes less water resistant over time due to loss of natural oils
 - d. Loses insulating qualities when wet
 - b. Protection from the elements: wind, wetness, temperature, and sun
 - i. Wind and wetness most rapidly accelerate loss of body heat
 1. Wind-proofing increases efficiency of insulators by keeping wind and cool air from body
 2. Waterproofing increases efficiency of insulators and maintains the insulating qualities of clothing that would be destroyed by wetness

ii. Non-Breathable Materials

1. Rubber, fabric coated with oils or wax, plastics or other synthetic materials
2. Prevent body moisture from escaping, producing clothing wet from perspiration

iii. Breathable Materials

1. Modern fabrics such as GorTex® with “one-way” pores allow body moisture to escape while keeping rain from penetrating the garment
2. Lose effectiveness when body oils and dirt clog pores



3. Dressing in layers

- a. Multiple-layers trap more air than single garments
- b. Easy to adjust clothing to temperature changes
- c. Helps prevent a buildup of moisture within clothing
- d. Basic clothing layers
 - i. Inner layer – underwear, long underwear, socks liners, glove liners
 1. Purpose – wick moisture away from skin and provide some insulation
 2. Materials – wool, polypropylene and other synthetics, silk
 - ii. Middle layer – shirts, pants, sweaters, socks
 1. Purpose – provide insulation and absorb or transmit water wicked from the inner layer
 2. Materials – wool, polypropylene and other synthetics
 - iii. Insulation layer – heavy sweaters, vests, jackets, hats, gloves
 1. Purpose – provide insulation, fabric thickness traps air
 2. Materials – wool, down, polypropylene and other synthetic fleece or pile
 - iv. Shell layer – wind shell, jacket, raingear, insulated or flotation coveralls
 1. Purpose – to protect from wind and weather.
 2. Materials – Gore-Tex® or other breathable water barriers, rubberized fabrics, nylon, wool, neoprene