

How to stay warm while cross country skiing

1. Importance of a warm core
 - a. If core cools, heat is pulled away from extremities and risks of cold weather injuries goes up.
2. Manage your moisture from sweat, precipitation, snow dropping from trees and snow plastered on you from falling.
 - a. Layering is key to managing moisture.
 - i. NO COTTON
 - ii. Base layers bottom and top—transfer sweat away from skin and provide insulation. Synthetic or wool.
 - iii. Mid—Provide insulation, warm when wet, transfer moisture. Synthetic, wool, down. For example fleece pullover, vest, wool sweater, light synthetic jacket such as Nano puff. Softshell or cross country ski pants.
 - iv. Insulating— puffy jacket or thicker fleece for longer stops or emergency.
 - v. Outer shell, top and bottom
 1. Waterproof, breathable. Pit zips in a jacket or side zips on pants can help with ventilation/sweat management.
 2. Water repellent, such as soft shell, is ok if no snow or rain expected or if it is snowing and temps are well below freezing.
 3. Non-breathable raingear will not work and cause you to get very wet from sweat.
 - b. Start out cooler than you think!
 - c. Don't delay removing layers as you heat up from exertion. Ask leaders for a stop to remove layers. Avoid getting sweaty.
 - d. Extra gloves or mittens – hands sweat too, and get wet when snowing or raining, so add liners or change them mid-day.
3. Manage heat loss from wind, cold air, snow
 - a. Head—hats and hoods
 - b. Neck—zip neck base layer, neck gaiter/buff (no scarf-can get tangled)
 - c. Hands—extra gloves/mittens, hand warmers. Waterproof/windproof outer shell.
 - d. Feet—insulated boots that are not too tight (too many socks=cold feet). Toe warmers can help. May need to change socks midday.
 - e. Shell to block wind. Torso and, if needed, legs.
 - f. Keep rest breaks short and efficient.
4. Stay hydrated
 - a. Water with electrolytes (raises freeze temp of the water). 1 - 2 liters, depending on how long you are skiing. Inside your pack to keep from freezing.
 - b. Thermos of hot drink (no alcohol) is nice.
 - c. Bladder is ok if hose insulated or you keep hose inside jacket—blow into hose to clear water after drinking to prevent freezing
5. Eat often
 - a. Every half hour at least

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- b. Body burns more calories in the cold
- c. Eating creates body heat
- d. Pre-prepped, bite size and easy to eat with gloves on and won't freeze. In waist belt pouch or pockets.
- e. High calorie and fat such as nuts and seeds, chocolate covered nuts, chocolate covered pretzels, sesame sticks.