

Backcountry.com Newsletter Articles: Winter Camping 101 by Adam Riser

You already know the excuse. “It’s too cold.” You’ve definitely heard it and probably said it yourself. What if winter camping could be warmer than you ever thought? This solution to cold-weather discomfort has more to do with your clothing and sleeping systems than it has to do with the weather. To fight the cold you have to know how your body loses heat in the first place. Evaporative heat loss occurs as you sweat and when your wet clothes dry. Convective heat loss happens when cold air moves across your bare skin. Radiant heat loss is the result of your body’s heat escaping into the sky. And Conductive heat loss occurs when your body touches something colder than it is. Armed with this information, take a close look at what you use in the snow and see where you can improve things. The right layers, sleeping bag, pad, and tent (and a few simple tricks) help combat these four types of cooling and turn a previously miserable trip into a great time away from the urban sprawl. Read below for a short breakdown of the standard winter-camping gear and how to get the most out of each item.



Layers: (*evaporative, convective, radiant, conductive*): First of all, go with all synthetic layers for any multi-day trip. Merino wool provides incredible comfort in both summer and winter, but the slow drying time generally puts it out of the running for overnight trips. A **synthetic T-shirt**, **midweight long-sleeve base layer**, and midweight **fleece** layer create a system that handles a wide range of temperatures and activities. Top it off with a hardshell or softshell jacket depending on your preference and the conditions you expect to encounter. As a general rule, softshells provide better performance in cold, dry conditions and highly aerobic activities while hardshells tend to fend better in really wet conditions but lack a softshell's breathability.

Puffy Jacket: (*evaporative, convective, radiant*): Throwing a **down** or **synthetic jacket** into the equation adds an immense amount of comfort on those seriously cold days. Wear a puffy jacket over the top of all your layers and your shell whenever you stop moving to combat the temperature drop when your body stops generating heat. This jacket also helps dry your base layers by pulling moisture away from your skin. While **down jackets** weigh very little and make a good choice for shorter trips, **synthetic jackets** work better on long trips with a good chance of getting soaked. Keep in mind that the moisture comes from your layers as well as from the outside, so your puffy jacket gets attacked from both sides.

Sleeping Bag: (*evaporative, radiant*): Like the puffy jacket, your **sleeping bag** choice requires a decision between down and synthetic insulation. This has been debated for years, so I'll be brief. **Down** insulation weighs less, lasts longer, compresses smaller, and costs more. **Synthetic** dries quicker, provides better insulation when wet, and costs less. Whichever you choose, you should be diligent about keeping your sleeping bag dry. Waterproof **stuff sacks** go a long way toward getting this done. You should also consider whether you sleep warm or cold and take that into consideration when buying your bag. As a general rule, you want a sleeping bag rated for the coldest temperature you expect to encounter, but keep in mind that different brands and different designs run warm or cold. Talk to friends and ask the community to get the lowdown on the best choices.

Sleeping Pad: (*conductive*): Your **sleeping pad** provides the best resistance to conductive heat loss during the night by putting a layer between you and the cold ground. Simply put, your summer pad isn't going to get the job done. Inflatable pads tend to be far more popular than foam pads for their comfort, and many of these include extra insulation for winter use. If you do go with an inflatable pad, make sure you don't accidentally poke a hole in it or you'll be in for a seriously cold night. In really cold places like Alaskan base camps, many use two pads for extra insulation. To save weight you can use a 3/4-length pad and put your pack under your feet at night. Either way, make sure you're completely separated from the ground.

Tent: (*convective*): For winter camping you want the warmth and weather protection of a **four-season tent** (which is really a one-season tent... winter). These tents can be completely sealed off from snow and wind, so you stay nice and dry inside. Four-season tents tend to have stout pole systems that easily support heavy snow loading and gale-force winds that you encounter during a nasty winter storm. Learn how to stake out your tent with all the guylines to keep it from becoming a kite in raging winds. Double wall tents tend to provide extra warmth, less condensation, and more comfort for extended stays, but the new single-wall tents have been gaining massive popularity among weight-conscious backpackers and climbers.

Kitchen Tent: In the summer you just set up the kitchen on a flat piece of ground or maybe on a handy rock near camp. Winter requires a different approach. Pitch a floorless tent over the snow and dig out the ground to standing height to create a comfortable, weather-protected place for three daily meals. Don't be afraid to go to town with the shovel and build a table, shelves, seats, or anything else that makes your storm-bound time more comfortable and keeps your gear well organized. While all this may be overkill for an overnight trip, it makes a huge difference when you plan to stay in the same place for a few days in a row.

Stove: As a general rule, **liquid-fuel (white gas) stoves** tend to work better in the winter because **butane stoves** lose performance in colder weather. You can make butane work, but it requires a lot more attention to your cooking system and a few tricks that tend to void your stove's warranty. White gas works equally well in sub-zero temperatures as it does in the middle of the summer, so you can count on it in any conditions. This becomes an important consideration when you think about that fact that you'll be melting snow to get most of your drinking water and make your meals a couple times a day. No stove means no water or food, which means going home early. Plan for about eight-ounces of fuel, per person, per day for trips where you'll have to melt snow for all your water. It's also worth thinking of what you'll set your stove on since you

can't just flop it in the snow. A shovel blade works well for weight-conscious people, and you also have the choice between several specifically designed stove stands.

Tips:

- Want to save some sleeping bag weight? Go with an under-rated (not warm enough) bag and wear all your layers when you go to bed at night. In addition to saving you several ounces or even pounds, this system also has the added advantage of letting you wake up already dressed in the morning.
- You're in your bag and wearing everything you have, but you're still cold. Boil a **bottle** of water and put it between your legs against your femoral artery. This warms your blood directly and quickly increases body temperature.
- Have to go to the bathroom? Don't hold it. Your body uses a lot of energy to keep all that warm inside you. It's much better to just get rid of it and use your energy for more important stuff.
- Bring two (and only two) pairs of **socks** on your trip. Yes, even if it's a week long. When you turn in for the night, change into a dry set and put the wet set against your chest under all your layers where they can dry overnight.
- It takes a lot of calories to keep your body warm. Winter trips make bad times to go on a diet. Fat, calories, carbs... **eat** all you want and you'll probably lose weight anyway. Skimp on any of it and you're likely to have a hard time staying warm no matter how many layers you wear.
- Two pairs of **gloves** should be considered minimum. Gloves take a long time to dry, and cold hands make you miserable in a hurry. You should also learn how to do everything shy of tying your boot laces while still wearing your gloves so you don't unnecessarily expose your bare fingers to frigid winter temps.