

# Hiking in Frozen Conditions

*Most long distance hikers are not accustomed to extended exposure to frozen conditions, but even brief periods can be hazardous. Each year there are numerous injuries on the trail directly attributable to cold weather... and most are preventable.*



Often when we start a hike, the weather is agreeable, or at least not life threatening. These conditions can rapidly change when we hike to higher elevations or when cold fronts come through. I am reminded of a recent day hike in Georgia near Springer Mountain. The previous week had been on and off below freezing and there were still small patches of ice on the roads. I didn't think much about it as the forest floor appeared free of snow and the air temperature was in the lower 50's. About a mile into my hike, on the north side of a ridgeline, the trail was suddenly a solid sheet of ice. Not only was there ice, but the trail was also punctuated with rocks just waiting to crack my skull if I should slip. Both the lack of direct sun and the compaction of snow by previous hikers resulted in a 3 inch thick glaze. Luckily, I had packed my micro spikes. After a brief wet stop to put them on, I once again had good footing and a successful hike. These ice-covered trail segments can persist for weeks... long after we think the weather should not support them.

When going on a hike where conditions may support ice and snow, it is best to consider the 5 "F"s, forecast, foot-wear, friends, fitness, and flashlight.

**Forecast:** Before leaving on a journey, you should always check the weather... it is a basic tenant of wilderness hiking. Know what you are getting into and be prepared. On the other hand, once you have been on the trail for several days you may not have access to weather reports. Remember, for every 1,000 feet of elevation gain the ambient temperature decreases by 3 degrees. Everyone wants to carry a light pack, excess gear "just in case," is not a popular consideration. We strongly recommend you err on the side of caution when hiking at altitude or when seasonal weather can go south. Remember: If something happens and you fall, (assuming someone knows you are injured) you can expect **4-6 hours of laying on ice** before a rescue team may reach you.

**Foot-wear:** Normal tread on boots and trail runners are next to useless on ice and snow. You need to carry and use micro-spikes! The brand is much less important than using them. In addition to proper foot-wear for traction if your feet (toes first) are wet and become cold take the time to change socks and warm up. Trench foot and frostbite are sure ways to spoil a hike.

Frostbite on the foot

One last item you should include is calf high gaiters that will keep snow out of your foot-wear. Regardless of what you carry in your pack, your feet are your foundation while hiking.

Although there is carryover, this pamphlet is not intended to address prevention or care of hypothermia, chilblains, trench foot or frostbite. For more information go to our website:

[www.ALDHA.Org/HASTE](http://www.ALDHA.Org/HASTE).



**Friends:** When there is the potential for frozen conditions, we strongly recommend you not hike alone. A trail buddy can help keep you oriented. Two pair of eyes will increase the probability of staying on trail. Someone is there to help provide shelter and first aid if there is an injury. Finally, frequent buddy checks are critical when

trekking through extreme environments. You may not notice early signs of frostbite on yourself that could be easily recognized by a friend.

**Fitness:** Your physical condition is a significant factor in successfully negotiating a snow and ice covered trail. Fitness not only includes being in shape, but it also includes being hydrated and well fed. Traveling through snow or on ice takes much more energy than on normal trail. When you are fatigued, dehydrated, or starting to become hypothermic, your balance and coordination become diminished, and you are more apt to slip and fall.



**Flashlight:** One of the most common omissions during winter and early spring hikes is remembering to carry **two**, that is right, **two** light sources. Between December 21<sup>st</sup> (the shortest day of the year) and early spring you are at the greatest risk for freezing temperatures on the Appalachian Trail. The 10-15 miles you thought could be done now requires hiking in the dark. Without light, the risk of falls and injury go up exponentially. Remember to keep your light source near

the body as cold temperatures shorten battery life

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