

# HIKER-NOTE: Signs, symptoms and treatment of hypothermia

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Hypothermia is a cold injury caused by a lowering of the core body temperature to a level where normal function is impaired. It can affect the muscles as well as the brain. Hypothermic patients need to be warmed back up to normal temperature, which is often difficult to do in the backcountry. To prevent hypothermia, be prepared for cold conditions that you may encounter. When traveling in a cold environment, pay attention to fellow hikers and watch for signs of the onset of hypothermia.

Some signs of mild hypothermia include impaired ability to perform complex tasks, apathy, confused thinking, sluggish movements, stumbling and fine motor shivering. As hypothermia worsens, other symptoms include uncontrollable violent shivering and loss of gross motor skills and energy. In a case of severe hypothermia, shivering stops, pulse and respiratory rates decrease until they are almost or entirely undetectable, and the patient is often in a stupor or completely unresponsive. If you notice any of these signs and symptoms in yourself or one of your companions, immediately stop what you are doing and begin treatment.

Patients with mild hypothermia can be treated in the field fairly easily. First, change the patient's environment: get them into warm, dry clothing and allow them to shiver in a sheltered, insulated environment. Dress them in wind- and water-proof layers if necessary. Feed the patient foods with calories that can be quickly absorbed, like sugary foods or juices. Warm, sweet, non-alcoholic beverages are also helpful in raising core temperature. Insulate the patient from the ground using something like a ground pad or extra clothing, and be sure to add insulation to the head, neck, feet and hands. Exercise is the best way to raise the metabolism and body temperature, so encourage the patient to do mild exercises like push-ups, sit-ups and running in place.

For severely hypothermic patients, treatment is a little different. It is unrealistic to try to warm the patient in the field, so evacuation is the best option. This type of patient must be handled very carefully during evacuation, because their pulse and respiratory rates are dangerously low. For this same reason, do not attempt to perform CPR. However, it may be advisable to perform rescue breathing on the patient for ten minutes prior to moving them. Place the patient, dressed in dry clothing, in a hypothermia wrap composed of a sleeping bag, insulating ground layer and impermeable layer such as a tarp or ground cloth. Get the patient to a hospital immediately.

Hypothermia can be a scary condition, but it is easily prevented, no matter what environment you may be traveling in. Armed with the information in this Hiker-Note, and with adequate planning and preparation, you can safely enjoy the outdoors any time of the year.

*Reference: Tarter, Shana et al. Wilderness Medicine Handbook, 10<sup>th</sup> ed. Wilderness Medicine Institute of NOLS: 2007.*

*Hiker-Note contributed by Lindsay Ward, ORC staff member.*