

Street Medic's Guide to Hypothermia

HYPOTHERMIA = when core body temperature drops

Risk Factors for hypothermia Cool, cold, wet, or windy weather. Improper clothing and equipment. Clothes that are tight and impair circulation. Fatigue. Dehydration. Extremes of age. Immobility. Not eating enough. Alcohol, cigarettes, caffeine. **Not taking hypothermia seriously.** Highest risk = days when the weather changes a lot, when it's cool but not cold, or when people don't anticipate the cold, wet, and/or wind.

Medical conditions that increase risk of hypothermia.

Circulation problems (diabetes or other vascular diseases); endocrine problems, especially hypothyroidism (the endocrine system helps with the body's temperature regulation); hypoglycemia; malnutrition (have less natural insulation); skin problems (can cause increased circulation to the skin which increases heat loss); head trauma (impairs the body's temperature regulation); anyone taking certain psychiatric medications. (talk to a health care professional about these).

To prevent hypothermia

• **Dress appropriately.** Use layers, with the first layer lightweight or midweight synthetic (no cotton next to skin) that allow moisture to evaporate. Next, one or more thin but warm layers. Then one or more thicker warm layers (be aware that fleece soaks up tear gas and pepper spray). Finish with a windproof and waterproof outer shell. A big black garbage bag is a great back-up poncho. Wear a hat, since you can lose more than half your body's heat from your head. Wear mittens rather than gloves. Have extra layers available in case the weather suddenly turns colder or your clothes get wet.

Wear sturdy shoes with warm socks. A bit of cayenne pepper in your shoes (not inside your socks) can warm feet. Caution - too much cayenne or wet cayenne can cause burns.

Avoid sweating – it makes you colder and increases fluid loss. Strip middle and outer layers as necessary to keep yourself from sweating. To prevent hypothermia it is better to be slightly cold and generating heat than excessively warm and sweating.

• **Stay dry.** Cops have sprayed water on protestors, so be prepared. If need to get decontaminated from tear gas or pepper spray cover up with a garbage bag or poncho before your eye flush.

• **Eat.** You need calories to generate body heat. Candied ginger can help you feel warmer if you start to get cold.

• **Keep well hydrated.** Dehydration increases your risk for hypothermia. Urine output is a good measure of your level of hydration – you want lots of urine that is light or clear in color.

The risk of dehydration is the same in cold and hot weather. In hot weather people are more aware that their bodies are sweating because they can see, taste and feel the sweat. In cold weather sweat is less obvious because it evaporates rapidly or is absorbed by layers of heavy clothing. In addition, simply being out in the cold causes you to pee more, losing more fluids. Finally, in cold weather people also don't drink as much, because it is inconvenient or they don't feel thirsty. Many people don't get thirsty until they are already dehydrated.

Consider pre-hydration. This provides a fluid "cushion" and delays the onset of dehydration. Drink 16 oz of fluid the evening before, 16 oz in the morning, and another 16 oz of fluid an hour before exertion. Then drink as much as possible throughout the activity (ideally 8 oz of fluid every 20 minutes

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during heavy activity). Don't drink liquids that contain caffeine, alcohol, or large amounts of sugar (like soda)—these may actually cause you to lose more body fluid. Also avoid very cold drinks because these can cause stomach cramps.

- **Don't drink alcohol.** Alcohol reduces your sensation of cold and reduces your ability to deal with getting warm. There have been many cases of “paradoxical undressing” in which an intoxicated person with hypothermia undresses and suffers from severe cold-related illness. Alcohol also increases the blood flow to your skin increasing your heat loss, and decreases your shivering response, reducing your body's heat production.

- **If you start to get cold take immediate action to get warmer. Don't let things progress to hypothermia.** Stay out of the coldest, windiest and wettest weather. Do not sit on metal, concrete or rocks. Get out of the wind whenever you can.

How to detect hypothermia

The symptoms are pretty vague, so keep aware of the weather conditions and how you feel. Consider having a buddy who you check in with every once in a while.

Mild Hypothermia: Shivering – if shivering can be stopped voluntarily, it is mild hypothermia. Can't do complex motor functions with hands but can still walk and talk. Skin is cool due to vasoconstriction. Hands numb. Moderate confusion – if you cannot count backwards from 100, you may be hypothermic.

Moderate Hypothermia: Shivering not under voluntary control. Loss of fine motor control - particularly in hands - can't zip up coat - due to restricted peripheral blood flow. Poor coordination May have: Dazed consciousness. Slurred speech. Violent shivering. Irrational behaviour - may even undress. Unaware that you are cold. "I don't care attitude." Flat emotions.

Severe Hypothermia: (Don't let it get this far!): Shivering occurs in waves until shivering finally ceases. Irrational. May SEEM normal. Progresses to: Can't walk, curls up into fetal position to conserve heat. Muscle rigidity. Skin is pale. Pupils dilate (become big). Pulse rate decreases. Then breathing rate decreases. Then the person looks dead, but is still alive.

Treatment for mild hypothermia (NOT mod or severe)

- **Get out of the cold and wind.** Go into a restaurant or the lobby of some building. At least find shelter from the wind.
- **Get warm.** Move around, exercise, get your blood warm and flowing. Wrap up in a space blanket (those silver things – better than wool for warming, portable and cheap). Focus on warming the trunk, not extremities. Take a warm shower, use a hairdryer or hot-air hand dryers in public bathrooms, use chemical handwarmers, especially on your neck, chest or groin (where major blood vessels pass – with insulation to prevent burns).
- **Make sure you are dry.** Change out of wet clothes, especially the layer next to you skin.
- **Drink** lots of liquids, especially warm (not hot) drinks.
- **Eat.** Start with simple carbohydrates such as candy, juice and chocolate and work up to more complex foods.
- You should not return to the cold until your energy and fluid reserves have been replenished and you feel back to normal.

Treatment of moderate and severe hypothermia:

- Get the person out of the weather and seek medical attention immediately. Don't try exercise or vigorous rewarming.

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