HYPOTHERMIA

A Scout is Prepared…

Whether spending time in extremely cold temperatures in winter or cool, damp conditions during the summer, our bodies can be affected by hypothermia. If the conditions are right, you and your Scouts could find yourselves in a situation where hypothermia is a genuine risk. In some colder climates, conditions can even lead to frostbite.

If you learn of the warning signs and take precautions ahead of time, you can reduce the risk of hypothermia and keep yourself and your Scouts safe and enjoying outdoor experiences throughout the year.

In this ***BSA Safety Moment*** we'll learn 1) what hypothermia is, 2) its risk factors, and 3) the care and treatment of the condition.

BOY SCOUTS OF AMERICA®
HEALTH AND SAFETY

BSA SAFETY MOMENT
HYPOTHERMIA

SUMMARY

Hypothermia is an abnormally low body temperature that is dangerous, and potentially fatal if not properly cared for. Hypothermia most often occurs when individuals are exposed to extremely cold temperatures for extended periods of time. However, it can also occur in warmer environments in situations such as wearing wet clothing in windy conditions, becoming chilled from being in the rain for an extended period, or submersion in cold water. Sweating leads to wet clothing, which increases the possibility of becoming chilled. Dressing in layers that are easy to put on or take off will help you to avoid becoming chilled, or becoming too warm and sweating heavily in your clothes. Planning is essential before a trek or outing to make sure you are prepared for possible changes in environmental conditions.

GENERAL INFORMATION

Hypothermia occurs when the body loses heat faster than it can be generated. A person is experiencing hypothermia when the body temperature drops 2 degrees Fahrenheit or more below that individual's normal body temperature. Normal body temperature is usually considered to be 98.6 F (37 degrees Celsius), but many people have a normal body temperature below that level.

Once the body temperature begins to drop, the heart, brain, and other organs start losing the ability to function properly. Left untreated, these vital organs will begin to fail, eventually leading to death. A person experiencing hypothermia often isn't aware of their condition because the onset is gradual and, as hypothermia progresses, they become confused and agitated.

To prevent hypothermia, be aware of your environment and dress accordingly. Cover all exposed skin surface possible to help prevent heat loss. Avoid activities and clothing that will cause you to sweat a lot. The combination of wet clothing and cold temperatures will cause more heat loss. Wear multiple layers and stay dry.

Signs/Symptoms of Hypothermia

- Feeling cold, shivering uncontrollably
- Cool or cold skin on the abdomen, chest, or back
- Presence of the "umbles"
  —Stumbles: loss of control over movement
  —Mumbles: slurred or incoherent speech
  —Fumbles: poor coordination or reaction time
  —Grumbles: change in behavior or attitude
- Fatigue

As hypothermia progresses, the person will exhibit

- Stiff muscles
- No shivering
- Skin that feels ice cold and may appear bluish
- Confusion, agitation, memory loss
- Slow, weak pulse
- Slow, shallow breathing
- Loss of consciousness

What are the risk factors?

- Exhaustion—Lower cold tolerance
- Victims who are very young or old—body's thermoregulation is not at its peak
- Alcohol or drug use—can alter a person's ability to sense a drop in body temperature and keep them from knowing when it's time to get out of the cold or add clothing
- Certain medical conditions—can affect one's ability to regulate body temperature
- Medications—sometimes can affect the ability to regulate body temperature
- Cold, damp weather conditions

Care of Hypothermia

1. Get the victim out of the cold.
2. Remove wet clothing and wrap them up in warm, dry clothes. Add additional layers such as a sleeping bag, blankets, or some form of plastic to hold in body heat.
3. If the victim is conscious and able to swallow, offer warm liquids to drink. DO NOT give alcoholic drinks.
4. Handle them gently. Excessive movements or rough handling can lead to cardiac arrest.
5. Apply warm, dry compresses to the neck, chest, and groin areas. DO NOT apply heat to the arms or legs, as this speeds cold blood back to the heart, lungs, and brain, causing the core temperature to drop even more. This can be fatal.
6. DO NOT apply direct heat as with hot water bottles, a heating pad, or a heating lamp. This extreme heat can cause skin damage, an irregular heart rhythm, or even cardiac arrest.
7. If a person with severe hypothermia who is unconscious seems to not have a pulse or not be breathing, perform CPR. CPR should continue during rewarming. Sometimes, people experiencing hypothermia can be successfully resuscitated.
8. Get emergency care/call 911.

Prevention of Frostbite

- Be aware of the weather conditions you may encounter on your trip.
- Always dress in layers appropriate for the temperature. Make sure that you wear a hat in cold conditions, even while sleeping.
- Limit exposure time when conditions dictate.
- Stay well rested, hydrated, and fed.
- Avoid alcohol.
- Watch for early signs of frostbite in other members of your crew.
- Know your limitations and those of your crew. Don't exceed them.
- Plan your trip based on your entire crew's abilities and preparation, but always have a Plan B just in case.

How does the body lose heat?

- Radiated heat—heat loss through unprotected skin surfaces
- Direct contact—something cold, such as cold water or ground, drawing heat away from the body
- Wind—carries body heat away from the skin surface
- Evaporation—sweat evaporating from the skin's surface, which can cause heat loss

RESOURCES

- *Boy Scout Handbook*—First Aid chapter
- *Wilderness First Aid Emergency Care in Remote Locations* (4th edition), Chapter 15. Jones & Bartlett Learning, 2015.
- Centers for Disease Control and Prevention—Hypothermia: www.cdc.gov/disasters/winter/staysafe/hypothermia.html
- Mayo Clinic—Hypothermia: www.mayoclinic.org/diseases-conditions/hypothermia/symptoms-causes/syc-20352682