HYPOTHERMIA

The colder months are upon us, so be aware of the signs and treatment of Hypothermia.

This brief article is information only. This is not medical advice. I am not a doctor nor do I play one on T.V. Please take a Wilderness First Aid class and do further research on the topic.

What is Hypothermia:

Hypothermia occurs when your body is losing heat faster than you can produce it. Hypothermia is a lowering of the body's core temperature to a point where normal brain and or muscle function is impaired. The condition may be mild, moderate or severe.

Normal Core Temperature:

The most accurate way to measure body temperature is with a rectal thermometer. While some say an oral and rectal thermometer are the same, I find the taste completely different!
A normal rectal body temperature ranges between 97.5º F and 99.6º F.
The human body constantly generates it's own heat via metabolism.
Below 86º F core temperature, the body can no longer regulate temperature within.

In cold weather the body core temperature is most critical because vital organs, especially the brain, rapidly get less efficient when chilled. This is why Hypothermia causes so many deaths in the wilderness. Contributors to Hypothermia are cold air, wind and rain.

Causes of heat loss:

Conduction - Heat transfer from a warmer object to a cooler object when the two objects are in direct contact with each other. Example - Sitting or lying on the cold ground will transfer warmth from you body to the cold ground. Use a pad under your sleeping bag!

Convection - Heat loss due to movement of a fluid or a gas. Example - Warm air next to your body is displaced by cool air in the environment. The biggest factor being wind.

Radiation - Radiative heat loss from the body primarily due to infrared emission. Example - At night, putting on a head cover will keep you warmer than having nothing on your head. You will also be warmer on a cloudy night because clouds reflect some radiant heat back to the earth.

Evaporation - When a liquid changes to a vapor, this change requires heat. Example - Sweat uses your body heat to become a vapor, thus cooling your body - good in summer, bad in winter.

Respiration - Body heat is lost when moist air in our lungs is exchanged with the dryer outside air. Body heat is also lost warming the cold air entering our lungs. Not breathing would be counter-productive so there is not much you can do about this. Breathing through a bandana or other material can be slightly helpful.

Signs of Hypothermia:
Since most of us won't be carrying around a rectal thermometer to randomly check strangers on the trail, here are some signs of Hypothermia.

Mild Hypothermia can include Shivering and the "UMBLES" (see below)
• F*umbles* - Inability to perform complex tasks.
• Gr*umbles* - Confusion, apathy, sluggish thinking.
• M*umbles* - Slurred speech.
• St*umbles* - Altered Gait.

Moderate Hypothermia - Worsening of the "UMBLES" and violent shivering.

Severe Hypothermia - Shivering Stops, decreasing pulse and respirations, muscle rigidity.

Treatment:
For mild to moderate Hypothermia - The patient is still trying to warm up internally. They can talk, eat and shiver..
• Get out of any wet clothes and into something dry.
• Get out of the cold and wind into some kind of shelter (even if it's extra clothing)
• Cover the head and neck.
• Give warm sweet fluids and simple carbohydrates
• If possible, promote mild exercise.
• Insulate the person from the ground, bundle in clothing (sleeping bag), snuggle with warm bodies.
• A hot water bottle or chemical heat packs near the heart and armpits (but not against naked skin)

For Severe Hypothermia - Patient is semi-conscious or unconscious and has stopped shivering.
• If the patient is not breathing - Perform rescue breathing for at least 3 minutes.
• Remove wet clothing and bundle patient in as much dry insulation as possible.
• Insulate the person from the ground.
• Use hot water bottles or chemical heat packs as above
• Do not force food or drink
• Call for help immediately

Self help - if you feel the onset of mild Hypothermia, do the following before "apathy" and "sluggish thinking" take over - Eat some simple carbohydrates and do some exercises then follow the treatment above for mild Hypothermia.

The above information was gathered from several sources, primarily the American Safety & Health Institute's Wilderness First Aid Handbook.