

HYPOTHERMIA – The Death of the Unprepared

By Al Cornell

What is hypothermia? The realistic answer that must be remembered is that hypothermia is the most dangerous thing the day hiker can encounter in the woods – statically thousands of times more dangerous a threat to life than all the species of wild animals of Arizona combined, including mountain lions, bears and rattlesnakes.

We are all painfully aware of the recent tragic events in the snows of Oregon this past December 2006, with the loss of a father seeking help for his snowbound family and the three mountain climbers lost on Mt Hood.

However, death by hypothermia can and has happened right here in our more temperate red rocks. Case in point is the tragic death of Michael Ijams, a visitor from New Hampshire, who in November, 2003, went hiking seven miles plus up Secret Canyon. He had planned to take “just a day hike” so he chose to leave such items as his warmer clothing, map and cell phone in his car and he did not carry the ability to start a fire. He also failed to tell anyone of his plans, so he was not reported as missing for a number of days. Additionally, he was attempting a day hike, the length and difficulty of which was far too ambitious for the available daylight.

The most dangerous activity for visitors to our red rocks is the day hike, because many day hikers, starting out on a balmy day, are not prepared to spend a cold night in the forest if they were to become lost. They generally lack clothing adequate to keep themselves warm and they usually do not have the ability to start a fire in order to mitigate the deadly effects that will result from this lack of clothing.

Medically, hypothermia is a condition our bodies suffer when the body loses heat to the environment faster than it can produce heat thus causing the body’s core temperature to start to drop. It can be hastened if the body lacks sufficient hydration, has inadequate nutrition and suffers from fatigue.

Why us? Compared to most other mammals of the animal kingdom, we are a rather delicate species when it comes to the climatic environment. We evolved as tropical animals, developing very little natural protection from the cold and possessing a very narrow range of an acceptable body core temperature.

The bottom line is that we need protection against the cold and especially cold that has been exacerbated by wind and precipitation. And, it doesn’t take extremes of cold to kill us, for in the U.S., most deaths by hypothermia occur within a temperature range of +40 to +50 degrees Fahrenheit. This is why death by hypothermia is called the “death of the unprepared.”

What are symptoms of hypothermia? The first thing to note is that the onset of hypothermia can be insidious – it can overtake its victims literally by degrees. It starts with shivering of the body, as the brain notices that a drop in the body core temperature has occurred and is attempting to generate more body heat.

This shivering will then become uncontrollable and possibly violent. The feeling of fatigue, speech that is slow and slurred and evidence of loss of coordination, such as stumbling and lurching while walking will soon follow, as will loss of the fine motor skills of the hands. Confusion and disorientation, such as a distorted sense of time and distance are also common symptoms, and as death approaches, hallucinations will occur, such as the false but overwhelming feeling of warmth.

What should I do for a victim of hypothermia? Hypothermia is a medical emergency. It is the general agreement among practitioners of wilderness medicine that if the victim of moderate to severe hypothermia can be taken to a medical facility within one hour, evacuation is the preferred action, rather than commencing treatment.

If in doubt as to the severity, consider it a serious emergency. (Persons suffering of mild hypothermia are usually coherent and communicative and can be recovered by removing any wet clothing and by wrapping them with a warm covering or extra clothing, allowing their bodies to recover by generating their own heat.)

If evacuation is not an immediate option, then actions must be taken to reverse the drop in body core temperature. Replacing wet clothing, wrapping the victim in warm blankets, a sleeping bag or emergency shelter, placing warm bottles of water at key arteries, such as the carotid arteries alongside the neck, the brachial arteries in the armpits and femoral arteries inside the upper legs and placing another person (a semi-clothed heat donor) in the wrap with the victim are all techniques that promote a universal re-warming of the body.

What should I not do? Certain actions must be avoided. First, jostling or rough movement of a hypothermia victim, whose heart and other vital organs are suffering from low blood temperatures, can cause an irregular heart beat, ending in heart failure. Second, do not warm the victim's extremities in front of a fire, as the warming process must be universal -- must include the entire body.

Warming the hands, for example, can cause an erroneous signal to the brain that the blood in the core has been warmed, allowing increased blood flow of un-warmed blood to the vital organs, again causing an irregular heart beat and possible heart failure. Third, warm liquids -- of limited value in any event -- should not be given to victims who exhibit difficulty speaking or signs of disorientation, as they might aspirate the liquids, causing body spasms which in turn can trigger the irregular heart beat.

How do I protect myself? Protecting ourselves against hypothermia is not difficult. However, taking steps to prevent hypothermia is far easier to accomplish than to bring about the recovery a person who is suffering from it.

Adequate clothing is the key -- the first line of defense. Inuit groups in the arctic are known to go out and conduct their daily activities in temperatures down to a -40 degrees Fahrenheit without suffering from hypothermia. However, even the best plans to be prepared -- including bringing extra clothing -- may fall short on a very cold, wet and windy night, so the methods to mitigate insufficient protection by clothing is to add fire and shelter.

No one should be caught out lost at night in the woods without the ability to start a warming fire. It also serves as an excellent beacon for our search and rescue elements in their attempts to find the lost subjects. Shelter from wind and rain can be a simple 5' x 7' emergency tarp strung between two trees, or as a last resort, a pair of trash bags -- one for the torso and one for the legs -- acting as barriers to the elements.

The best time to prevent hypothermia is when you are preparing to leave the hotel room or home for the hiking adventure, not when you are confronted with the emergency.