



Civil Air Patrol – USAF Auxiliary

La Crosse Composite Squadron

SAFETY NEWS

NOVEMBER 2017



PREVENTING & TREATING HYPOTHERMIA

On 4 November, our Squadron will be holding a Field Training and Communications Exercise. Many of our members will be going into the field for this training. In an effort to prepare for this and other outdoor activities, this issue of Safety News will focus on preventing and treating hypothermia.

WHAT IS HYPOTHERMIA?

Hypothermia is a physical condition that occurs when the body's core temperature falls below a normal 98.6° F to 95° F or cooler. Think of hypothermia as the opposite of heat stroke. Cold water dangerously accelerates the onset and progression of hypothermia since body heat can be lost 25 times faster in cold water than in cold air. Hypothermia affects the body's core – the brain, heart, lungs, and other vital organs. Even a mild case of hypothermia diminishes a victim's physical and mental abilities, thus increasing the risk of accidents. Severe hypothermia may result in unconsciousness and possibly death. About 600 people in the U.S. die of hypothermia each year.

WEAR PROPER CLOTHING

Experienced outdoors enthusiasts know that insulating critical heat loss regions (head and neck, sides of chest, armpits, and groin) delays hypothermia, frostbite, or simple cold discomfort. Layering appropriate fabrics helps keep you dry and preserves body heat.

Here are three rules for dressing for cold weather outdoor activities:

1. No cotton. When wet it is worthless as an insulator and heavy.
2. "Wick, warmth, and weather."

Wear a wicking fabric next to your skin, insulating layers of fleece or wool, then an outer layer made of windproof, watertight materials. Cover your head, neck and hands. Change socks often, especially when wet.

3. No cotton; serious!

Clothing made of modern watertight materials like nylon and Gore-Tex are good for keeping warmth in and cold water out. However, they require carefully selected underclothing since these garments may not have built-in insulation.

The BASE LAYER is worn next to the skin. It helps wick moisture away from the body to the outer layers to evaporate. Some fabrics can also apply compression that will help eliminate lactic acid from muscles. Again, avoid cotton, such as cotton thermal underwear.

Recommendations: Silk, SmartWool, UnderArmor, Polypropylene, Capilene, CoolMax and Polartec. Many of these products come in three weights: light, medium and heavy (expedition).

The INSULATING LAYER is worn over the base layer. It is designed to retain body heat by trapping heat in the air spaces in the fabric.

Recommendations: Wool, fleece and down are excellent. Keep in mind that when wet and over time, down compresses and loses its insulating abilities. To revitalize down that has compacted, place the garment in the clothes dryer on low heat with a clean tennis ball and run for a 20 minute cycle.

Hypothermia Symptom and Treatment Chart

Symptoms

Treatment

Mild Case: Body temperature is 97 - 93° F

- Shivering
- Cold hands and feet
- Still alert and able to help self
- Numbness in limbs, loss of dexterity, clumsiness
- Pain from cold
- Prevent further heat loss.
- Allow body to re-warm itself.
- Warm, sweet drinks - no alcohol.
- Apply gentle heat source.
- Help victim exercise.
- Keep victim warm for several hours, with head and neck covered.

Moderate Case: Body temperature is 93 – 90° F

- Shivering may decrease or stop
- Same as above, EXCEPT:
- Limit exercise.
- Offer warm, sweet liquids only if victim is fully conscious, begins to re-warm, and is able to swallow – no alcohol.

Severe Case: Body temperature is 90 – 82° F

- Shivering decreases or stops
- Confusion, abnormal behavior, i.e., loss of reasoning and recall
- Clumsiness
- Slurred speech
- Denies problem, may resist help
- Semiconscious or unconscious
- Muscular rigidity increases
- Obtain medical advice/help as soon as possible.
- Avoid jarring victim - rough handling may cause cardiac arrest or ventricular fibrillation of heart.
- No food or drink - no alcohol.
- Ignore pleas of "Leave me alone." Victim is in serious trouble.
- Treat as for shock – lie down and elevate feet.
- Apply external mild heat to head, neck, chest, and groin - keep temperature from dropping, while avoiding too rapid a temperature rise.
- Transport to hospital.

Critical Case: Body temperature is less than 82°F

- Unconscious, may appear dead
- Little or no apparent breathing
- Pulse slow and weak, or no pulse found
- Skin cold, may be bluish-gray color
- Pupils may be dilated
- Rigid body
- Assume patient is revivable; don't give up.
- Handle with extreme care.
- Tilt the head back to open the airway – look, listen and feel for breathing and pulse for one to two minutes.
- If there is breathing or pulse no matter how faint or slow, do not give CPR, but keep a close watch for changes in vital signs.
- If no breathing or pulse is detected for one to two minutes, begin CPR immediately. Medical help is imperative – hospitalization is needed.
- Stabilize temperature with external heat sources..

Stay Safe!

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*Source: Minnesota Sea Grant at seagr@d.umn.edu