

Outdoor Safety

Hypothermia

Applicability

This presentation has been prepared for those who will, or may be exposed to cold temperatures. This includes individuals who could fall into cold bodies of water.



Core Body Temperature

The human body works to maintain a core body temperature of about 98.6°F ($\pm 1.8^{\circ}\text{F}$). A person will die once their core body temperature decreases to about 77°F .

Some factors affecting a persons heat loss include:

- Environmental temperature (air/water)
- Metabolic heat generated
- Air velocity
- Clothing

Protective Mechanism

Shivering is a way the body generates more heat when the core body temperature begins to drop. Shivering signals the start of hypothermia.

Shivering begins when the core body temperature is about 93° F.



Signs & Symptoms of Hypothermia

- Incoherent & disoriented
- Shivering
- Intense feeling of cold
- Loss of coordination
- Drowsiness
- Falling blood pressure
- Irregular heartbeat
- Core body temperature is below normal
- Unresponsive (when core body temperature is about 80° F)

Key



Medical Attention & First Aid

Any person who cannot be warmed at the onset of symptoms must receive medical attention immediately.

First-Aid

- Warm the person as rapidly as possible in a gentle manner;
- Treat them as if they had shock, laying them down and elevating their head and feet.
- Note: CPR may be needed.

Seek medical attention ASAP if you suspect someone is suffering from hypothermia!

Cold Water

If you are working on a boat or performing another task where you face a similar hazard (falling into a cold body of water) you need to be wearing a life jacket. Falling into cold water presents a very real and immediate threat to your life – remember hypothermia causes loss of muscle coordination, disorientation, and incoherence. To exacerbate the problem you are likely to also experience the torso effect when falling in (gasp reflex), thus inhaling cold water.



Cold Water

What should you do if you fall into cold water and can't get out?

Signal for help and assume the H.E.L.P (heat escape lessening posture) position, which is:

- **Float with your face up (proper life jacket helps);**
- **Fold your arms across your chest; and**
- **Hold knees together and bend your knees.**

Remember – you should never work alone if you could be a victim of hypothermia! And, layers of clothing that could hold the heat in are good. (Wear a life jacket!)

Cold Water

Don't leave your boat and try to swim for shore unless it is your last resort. Remember hypothermia can set in very quickly in the water, which will cause you to become disoriented and lose your coordination. Chances are you won't make it (Note: wearing a hooded wetsuit increases your chances of success whether you stay with your boat or have to swim for shore).



Protection

The following measures can be taken to protect against hypothermia:

- Wear the proper clothing
- Stay properly hydrated & replenish electrolytes if sweating
- Never work alone if you risk being a victim of hypothermia
- Train all those present to recognize signs and symptoms of hypothermia (remember the victim will not be in a state of mind to recognize they have hypothermia).
- Establish work rest cycles that help individuals maintain their normal core body temperature.
- Provide heated air.
- Select and use the proper medication (if applicable)

Clothing

The amount of clothing and its insulating characteristics have a dominant effect on the extent of exposure to cold. The amount and type of clothing worn needs to keep you warm, but should not make you sweat.



If there is a risk of dying from hypothermia from falling into cold water then you should consider wearing a hooded wet suit (your life is worth \$500).

-End-

