BOATING CLASSES

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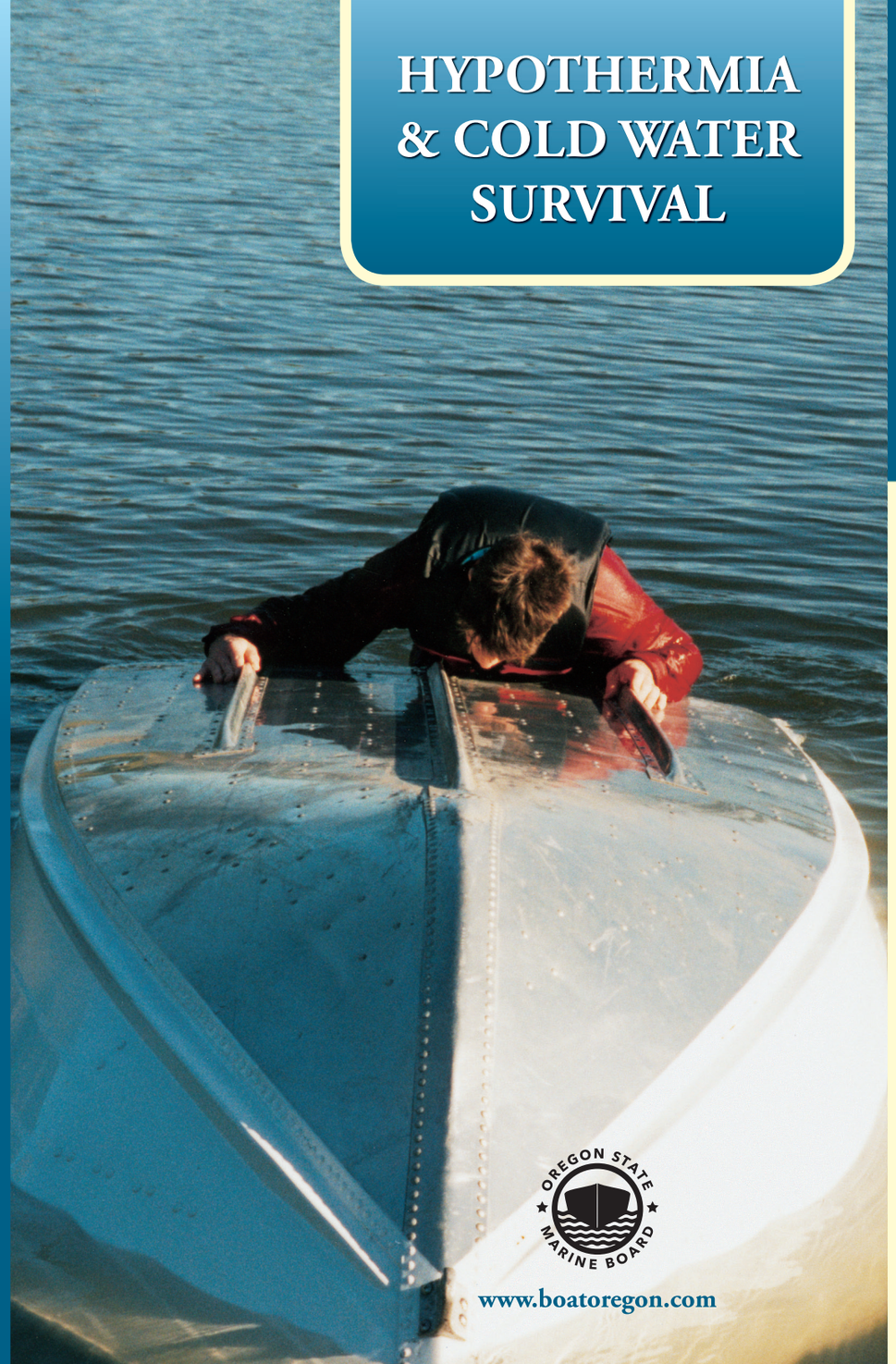
HYPOTHERMIA & COLD WATER SURVIVAL



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Hypothermia is the lowering of the body core temperature. While skin and tissues cool rapidly in cold water, it generally takes 15-20 minutes for the temperature of internal organs to begin to drop. Once your body's core temperature begins to fall, it does so steadily. Unconsciousness can occur when your core temperature drops below 90° F and death usually occurs at approximately 80° F.

WHAT TO DO

If you fall into cold water do not panic. Air trapped in clothing can provide buoyancy as long as you remain still in the water. Do not remove your clothes or shoes because they provide added thermal protection. If you are boating and capsize, try to right your boat and climb back in. If this is not possible climb on top of your boat, getting as far out of the water as possible.

Every effort should be made to slow your body's cooling rate. Techniques that will increase your survival time take into account the following:

- Your body cools faster in cold water than in cold air
- Heat loss is increased through movement

  Most heat is lost through the head and neck area
- Other major areas of heat loss are sides of the chest and groin region

EFFECTS OF IMMERSION

If your plunge is sudden, cold water shock can trigger hyperventilation or a gasp reflex. Cold water immersion can cause immediate problems including disorientation, unconsciousness and occasionally, heart attack. Either reaction can be fatal if your face is under water.

Self-rescue becomes more difficult as your extremities are quickly numbed by the cold. Your hands will have trouble holding on to a life jacket, rescue line or overturned boat. Within 20 minutes, hypothermia sets in.

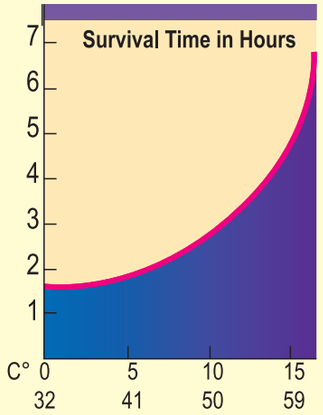
SWIMMING

Swimming in cold water will not keep you warm. Even though you feel warmer because blood rushes to the skin, you actually lose more heat by swimming than by remaining still. Swimming to safety is only recommended if you are absolutely sure of making it.

By choosing to swim you reduce your survival time. A good swimmer is incapacitated by hypothermia after swimming.

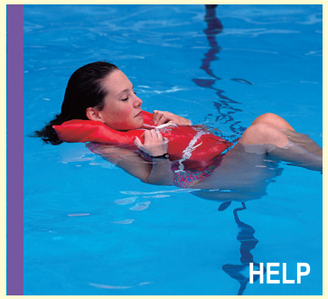
SURVIVAL TIME

The temperature of the water, body size, body fat, the type of clothing you are wearing and your activity in the water all determine survival time. Generally, survival time increases with extra body fat and decreases with smaller body size. Children cool faster than adults because of their smaller body size and lower fat content. As illustrated, an average size individual wearing a standard life jacket and light clothing will have a predicted survival time in 50° F water of 2-1/2 - 3 hours.



"HELP" AND "HUDDLE"

The "Heat Escape Lessening Posture" (HELP) is only possible when wearing a flotation device. Hold the inner side of your arms tightly against the sides of your chest, press your thighs together, cross your feet and raise your knees to your chest. Life jackets with their buoyancy high on the body are best for this technique. Life jackets with evenly distributed buoyancy will cause some instability. If that happens, lower your legs a little but keep them together.



Another strategy that works when several people are in cold water is the "huddle". Heat is preserved by huddling close, chests side by side. Placing children in the center of your huddle will extend their survival time.

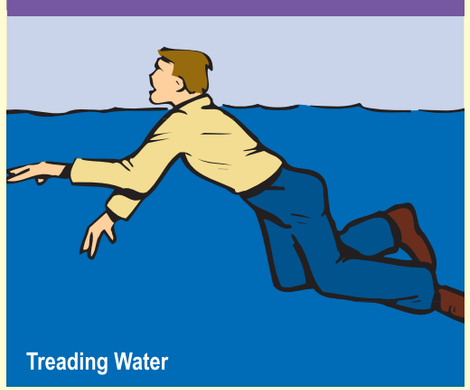
Both of these techniques will reduce your heat loss and increase your survival time by approximately 50 percent.

BE PREPARED

Being prepared for cold water means wearing a life jacket when boating. Trying to put your jacket on while in cold water is very difficult. Equip your life jacket with items that will attract attention. Reflective tape and a flashing light, secured high on your jacket, will make you more visible. Carrying small aerial flares, smoke canisters and a plastic whistle can also be effective in drawing the attention of passing boats or rescue personnel.

Drugs or alcoholic beverages should not be consumed while boating. Intoxicants impair critical life-saving decisions and contrary to popular belief alcohol will not warm a person. In fact, alcohol dilates blood vessels and may increase heat loss.

Having knowledge of survival techniques will give you the confidence that you will need to survive. Maintaining a positive attitude and remaining calm can be the difference between life and death.



WITHOUT A LIFE JACKET

If you do not have on a life jacket then you only have one alternative; treading water. Treading water, the continuous movement of arms and legs to keep your head out of water, has a 34 percent higher cooling rate than holding still in a life jacket.

TREATMENT

Great care should be taken to ensure that the victim avoids physical exertion, trauma and going from a horizontal to vertical position quickly. Jarring the victim might adversely affect the victim's heart.

Situation Predicted Survival Time (Hours) in 50° F Water	Situation Predicted Survival Time (Hours) in 50° F Water
With Flotation	**Without Flotation**
Swimming Slowly..... 2.0	Treading Water..... 2.0
Holding Still..... 2.7	Clothing worn was cotton shirt, pants, socks and running shoes.
HELP 4.0	
Huddle 4.0	
Flotation Jacket 7.0	

MILD HYPOTHERMIA

SYMPTOMS:

- Shivering vigorously
- Lips may be blue
- Talking clearly and sensibly
- Numbness, clumsiness and loss of dexterity
- Pain from cold

FIRST AID:

- Get victim to a dry, sheltered area and remove wet clothing
- Put on dry clothing and apply warm objects
- Give warm, sweet drinks- no alcohol
- Do not rub the surface of the body

SEVERE HYPOTHERMIA

SYMPTOMS:

- Shivering reduced or absent
- Lips appear blue
- Slurred speech, muscular rigidity, appears drunk
- Semiconscious to unconscious
- Loss of reasoning and recall, may resist help

FIRST AID:

- Obtain medical assistance
- Get victim into sleeping bag or blankets, apply warm objects
- Monitor breathing and pulse
- Start artificial respiration or CPR as needed

If a victim is found floating face down or under water, assume the individual is a victim of cold water near-drowning. Blue skin coloration, no detectable breathing, no apparent heartbeat or pulse and fully dilated pupils are typical symptoms. This does not mean the victim is dead. Immediate and continuous CPR may save an individual in this situation. Obtain medical assistance immediately.

If you have trouble differentiating between mild and severe hypothermia, a good rule of thumb is less than 30 minutes in the water, mild hypothermia and more than 30, severe hypothermia.