

## **Hypothermia**

Hypothermia is defined as the fall in core body temperature from its usual temperature of 37°C <35 °C, and is classified into

- 1. mild 33–35 °C**
- 2. moderate 32–35 °C,**
- 3. severe <32 °C**

The main thing to note that you don't have to be in freezing conditions to encounter hypothermia, it can just as well happen in warmer water, and the key is prevention and preparation.

Heat is lost from the body, most readily from the head and neck (about 50%), groin (where there are large blood vessels close to the skin surface) and armpits and sides of the chest (relatively less fat and tissue for insulation) by conduction, convection, radiation and evaporation. The various ways in which your body responds aims to limit the drop in temperature and prevent damage to vital organs such as lungs, heart and brain; most of the changes brought on by hypothermia are reversible, although severe hypothermia can lead to coma and death.

### **What you will experience:**

Blood is diverted away from the body surface to avoid losing heat, and as we get colder, we shiver to try and generate more heat and bring body temperature up. Drinking alcohol and tobacco cause blood vessels to be dilated which increases blood loss from skin, and hypothermia is induced more quickly.

### **Mild Hypothermia:**

Shivering, goose bumps, skin is pale and can look waxy and feel numb at the extremities, fatigue begins, and there is difficulty with complex motor skills, paddling is harder, muscles may feel tense and weak, but judgment capability is still intact and this is the stage at which you should exit the water. Your body's ability to deal with the cold is being seriously tested and at this stage, if exposure to the conditions you are in is prolonged, the situation can only get worse.

### **Moderate Hypothermia:**

Shivering become more violent or can even stop, motor skills become

even more impaired, movements become sluggish and uncoordinated, muscles are stiff, hands and feet become numb, breathing is slower and shallower, judgement at this stage is becoming impaired, drowsiness sets in, behaviour becomes erratic and speech becomes slow and slurred. If you progress to this stage you are in serious trouble as difficulty with coordination means that your ability to even grasp a line someone throws to you will be diminished.

### **Severe Hypothermia:**

This is a medical emergency. Shivering has stopped by this stage as the mechanism uses up more energy and the body is in pure survival mode by this stage, skin is cold, clammy and may appear blue, the heart beat becomes erratic, and if there are any movements at all they will be grossly uncoordinated. Drowsiness progresses to unconsciousness and the person may actually appear dead. Never ever assume a person is dead unless the body has been re-warmed. Always get medical help. You're not dead until you're warm and dead.

### **Treatment of hypothermia:**

Letting the body warm up by more than one degree and hour can be dangerous, so re-warm with caution. Use passive rather than active methods of re-warming.

### **Mild hypothermia:**

Get out of wet kit and replace with warm, dry clothing and blankets  
Give warm sugary drinks, but avoid caffeinated beverages or alcohol  
Recover in a place at room temperature, but there is no need to use heaters / hot water bottles etc and this can even be dangerous

### **Moderate hypothermia:**

As above, don't massage the muscles, and move the patient gently as sudden movements can cause deadly heart rhythms. Apply lukewarm heat packs to armpit, neck, groin.

### **Severe hypothermia:**

This is an extreme medical emergency and the person should be taken to a hospital as soon as possible. Whilst awaiting help, take all wet clothes off, cover with warm dry blankets and place them in the

recovery position if they are unconscious. Skin to skin contact is the safest way of transferring warmth in this situation, and the best way is to get into a sleeping bag / tightly bound blanket with them torso to torso. Don't try and use heaters or any other methods to try and warm them.