

Cold Water Shock

What causes cold water shock?

Cold-water shock is the first stage of the sudden and unexpected immersion in water which temperature is of 15 °C or lower and occurs during the first minute of exposure. Cold-water shock likely causes more deaths than hypothermia. Canada's substantially cold waters are especially dangerous when you fall into them unexpectedly.

Body's reaction to cold water shock

The reactions of the body may be muscle spasms and hyperventilation. Other symptoms may be an increase of the pulse and blood pressure. Sudden immersion into cold water may cause cardiac arrest, even for a healthy person. The shock of the cold water can also cause an involuntary gasp reflex that can cause victims to swallow water and drown, even for a good swimmer. **Cold water can paralyze the muscles instantly.**

Important factors for surviving cold water shock

If you are wearing a lifejacket before falling into cold water, it will keep you afloat while you gain control of your breathing and prevent drowning from loss of muscle control. Trying to grab a lifejacket while in the water, let alone putting one on, will be very hard because of the changes your body will be experiencing. People in cold-water shock should try not to panic and try to control their breathing.

Stages of cold water shock

1-10-1 is a simple way to remember the first three phases of cold water immersion and the approximate time each phase takes.

1 Minute - Cold Shock

An initial deep and sudden Gasp followed by hyperventilation that can be as much as 600-1000% greater than normal breathing. You must keep your airway clear or run the risk of drowning. Cold Shock will pass in about 1 minute. During that time concentrate on avoiding panic and getting control of your breathing. Wearing a lifejacket during this phase is critically important to keep you afloat and breathing.

10 Minutes - Cold Incapacitation

Over approximately the next 10 minutes you will lose the effective use of your fingers, arms and legs for any meaningful movement. Concentrate on self rescue initially, and if that isn't possible, prepare to have a way to keep your airway clear to wait for self rescue. Swim failure will occur within these critical minutes and if you are in the water without a lifejacket, drowning will likely occur.

1 Hour - HYPOTHERMIA

Even in ice water it could take approximately 1 hour before becoming unconscious due to Hypothermia. If you understand the aspects of hypothermia, techniques of how to delay it, self rescue and calling for help, your chances of survival and rescue will be dramatically increased.