

Cold Water Swimming - Medical Exclusions explained

HEART CONDITION – any current or recent heart conditions – Cold Water Immersion (CWI) can have an adverse effect on existing heart conditions. CWI creates a sudden drop in body temperature, resulting in vasoconstriction and an increase in heart rate, blood pressure and cardiovascular strain. The resulting stress may be a risk for people with heart conditions such as angina, arrhythmia, or heart failure, as it may increase the stress / load on the heart and cardiovascular system, to the point of triggering a heart attack or stroke. If a person suffers or has suffered any heart condition, it is important to have them check in with a medical practitioner prior to undertaking any cold water immersion activity.

STROKE – For the same reasons CWI can affect people with heart conditions it can also have an exacerbating impact on stroke victims. This is due to skin blood vessels constricting in response to sudden cooling, an instantaneous and sometimes massive increase in heart rate and blood pressure (sympathetic response / high stress). In vulnerable individuals, this greatly increases the risk of stroke in prone individuals.

EPILEPSY and other associated brain injuries – A sudden drop in temperature such as cold water immersion increases the risk of epileptic seizure. The sudden shift in body temperature can provoke a response that triggers sudden and excessive electrical discharges in the brain. Result, seizures or ‘fits’. Epilepsy is the fourth most common neurological disorder and affects people of any age. It is characterised by unpredictable or untimely seizures (cramping of the brain).

WHILST PREGNANT – The body’s temperature regulation system is less effective during pregnancy, due to a variety of changes in the carrying body. Sudden exposure to cold temperatures can lead to a critical drop in core body temperature (‘hypothermia’) which can cause an array of health risks for the pregnant person. During pregnancy, CWIs also induce a significant stress response and autonomic conflict (Cold Shock vs Dive Response). Any stress can increase the chances a premature birth (pre 37 weeks of pregnancy), low birth weight or other developmental deficits for the unborn child.

HISTAMINE ALLERGY – Similar to **Cold urticaria**. i.e an allergic reactive type skin disorder. Most commonly presented as hives. Common symptoms include reddening of the skin (erythema), hives and itching after exposure of the skin to cold temperatures. There are two forms of this contraindicator (1) essential (acquired), and familial (hereditary). Symptoms of the acquired form may be obvious in 2-5 minutes following exposure, while it may take 24 to 48 hours for symptoms of the familial variant to appear. Symptoms tend to last longer with the familial.

HYPOTHERMIA - Hypothermia is a condition that occurs when the body loses heat faster than it can produce it. This can result in a dangerously low body temperature. Normal body temperature is 37°C. Hypothermia occurs when the body temperature falls below 35°C. As the body temperature drops, the heart, nervous system and other organs no longer function optimally. If left untreated, hypothermia can lead to complete failure of your heart and respiratory system and eventually death. The condition can be caused by exposure to cold weather or immersion in cold water. Primary treatments for hypothermia are methods to gently warm the body back to its normal temperature.

Symptoms

Symptoms of hypothermia in adults include:

- Confusion, memory loss, or slurred speech
- Drop in body temperature below 35°C
- Exhaustion or drowsiness
- Loss of consciousness
- Numb hands or feet
- Shallow breathing
- Shivering
- Bright red, cold skin
- Very low energy level

Treatment

1. Restore warmth slowly

- Move the casualty indoors / undercover (protected warm space).
- Remove any wet clothing and towel dry the casualty.
- Warm the casualty's trunk first (not hands and feet). Warming extremities first can cause shock and may trigger the casualty's body to begin further cooling (thermoregulation).
- Warm the casualty by wrapping them in blankets or putting dry clothing on them.
- Do not immerse the person in warm water. Rapid warming can cause heart arrhythmia.
- If using hot water bottles or chemical hot packs, wrap them in cloth / towel etc. Don't apply them directly to the skin.

2. CPR, if necessary, while warming person

- If the person is not breathing, start CPR immediately as per whatever first aid training you have received. Hypothermia causes respiratory rates to plunge, and a pulse might be difficult to detect.
- Continue CPR until the person begins breathing or emergency help arrives.

3. Give warm fluids

- Give the person a warm drink if conscious but avoid caffeine or alcohol.

4. Keep body temperature up

- As body temperature begins to rise, keep the casualty dry and warm, wrapped in a blanket. Cover the person's head and neck, as well.

5. Follow up

- Maintain treatment until the casualty is handed over to health professionals.