Cold Water Immersion

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making boating better

Most of us have dived into cold water or gone swimming when it literally takes our breath away.
Some people may have fallen overboard after losing their footing or maybe missed a handhold when forgetting the Golden Rule: "One hand for the boat, one hand for you".

THE FACTS:

In Tasmania, sea temperatures range from 8°C in winter to 18°C in summer

- Inland waters are colder, ranging from 2°C to 17°C
- The risk of drowning increases nearly five times if the water temperature is below 15°C
- Studies show up to 60% of fatalities due to cold water immersion occur in the first 15 minutes before the body core temperature cools to hypothermic levels
- Cold water carries heat away from the body 25 times more quickly than air with the same temperature.

Sea Temp °C	T-shirt & Shorts		Light Wetsuit and Life Jacket	
	Functional Time	Survival Time	Functional Time	Survival Time
0°C	1.1 hours	2.3 hours	1.8 hours	3.6 hours
4°C	1.4 hours	2.9 hours	2.7 hours	4.8 hours
8°C	2.0 hours	3.9 hours	4.3 hours	7.2 hours
12°C	3.5 hours	6.1 hours	8.1 hours	12.2 hours
16°C	7.6 hours	11.6 hours	16.8 hours	23.5 hours

The above table is based on a 40 year old male of medium height and build, in light sea condtions. Note that the figures will reduce in heavier conditions and if the person is fatigued.

Always wear a life jacket and dress appropriately for the conditions

THREE PHASES OF COLD WATER IMMERSION
1:10:1 PRINCIPLE

1 MINUTE: COLD SHOCK RESPONSE

The body's response to cold water is to increase breathing to a rapid rate, which can cause you to inhale water. A sudden shock of cold water immersion can also cause a heart attack in some people.

10 MINUTES: COLD INCAPACITATION

After 10 minutes, cold water can cause swim failure, which is due to blood vessels in your arms and legs constricting, which makes it difficult to keep your muscles moving properly. This then makes it difficult to wave for help or grab a throw ring, which can quickly lead to drowning.
WEARING A LIFE JACKET GREATLY REDUCES THE POSSIBILITY OF DROWNING FROM SWIM FAILURE

1 HOUR: HYPOTHERMIA

When the body drops below 35°C (normal is approximately 36.5°C), hypothermia occurs, which results in uncontrolled shivering and mental confusion.
If body temperature continues to drop, unconsciousness will occur, followed by death.

SURVIVAL WILL DEPEND ON WEARING APPROPRIATE PROTECTIVE CLOTHING AND FLOTATION