

Float first

Float first lesson plan and activities

Youth and Adults

This resource covers water safety educational content based on the *Float first* survival response. Select the content that is best suited for your group – you may want to check out our other learning resources as well.

Watch the '[How to Float first video](https://dpanz.org.nz/float-first/#video)' with your group during the session.
dpanz.org.nz/float-first/#video

Learning outcomes:

- Understanding cold water shock and describing what happens to the body when falling into cold, deep water. Explaining the 1-10-1 phases of cold water immersion that results in hypothermia
- Discussing the 4 *Float first* steps as a first response to panic and cold water immersion
- Recognising that floating for the first 2 minutes will help them get their breathing back to normal and calm down
- Knowing to signal for help if in difficulty in the water
- Sharing tips on floating and identifying examples of improvised flotation
- Understanding the importance of lifejackets as a lifesaving device and to help slow the onset of hypothermia.

Materials required:

You can show examples of 'improvised flotation' items that can be used to assist flotation in an emergency: A large bottle, a rugby ball, a bucket, chilly bin.

Additional resources may be required depending on the activity you choose.

Introduction

The World Health Organisation has marked the 25 July each year to remember those who have drowned and encourage us to unite and learn together to prevent drowning. Today we are going to learn how to look after yourself in cold water, the phases that lead to hypothermia and the critical survival skill *Float first*.

Cold water immersion:

Let's start by talking about cold water conditions and the water temperatures are in Aotearoa New Zealand.

Ask the group to share what they think are the average temperatures for the following water environments during the winter and summer? What do think is classed as cold water?

River and Lake temperatures (approximately)

Winter: 5°C - 13°C

Summer: 10°C -25°C

With the exception of thermal bodies or water.

Coastal temperatures (approximately)

Winter:

North island, Te Ika-a-Māui: 15°C -17°C

South island, Te Wai Pounamu: 12°C -13°C

Summer:

North island, Te Ika-a-Māui 19°C -22°C

South island, Te Wai Pounamu: 14°C -15°C

Explain the definition of cold water and risk on entry:

Water below 15°C is defined as cold water; however, cold water shock can occur at a range of temperatures and can seriously affect your breathing and movement. At 15°C, a fairly typical coastal water temperature for New Zealand winter, the predicted survival time for hypothermia would be about 4-5 hours. In Tāmaki Makaurau, Auckland the sea temperature will rise up to 22°C during the summer months. However, rivers and lakes are usually colder, even in summer.

1-10-1

1-10-1 is an easy way to remember the first three phases of cold water immersion and the approximate time each phase takes (1 minute – 10 minutes – 1 hour).

1 Minute – Cold water shock

Discuss the impact on the body when falling into cold water. What changes would someone experience when first immersed in cold water? Responses to cover:

- Skin temperature dropping
- Heart rate increasing
- Panic and unable to think clearly
- Blood pressure increasing
- Breathing quickly, losing control of your breathing, gasping for air
- Muscles cool down, affecting movement and swimming ability.

Clarify that these are automatic responses which cannot be controlled - this is the way our body responds to cold water shock. Even the strongest swimmers are not immune.

If a person enters cold water quickly, the sudden cooling of the skin by cold water also causes an involuntary gasp for breath. This may last for about one minute, and they will breathe up to ten times faster than the normal rate. This could lead to dizziness, panic, loss of orientation and inhalation of water, and possibly lead to drowning. The heart rate is also increased making the heart work harder, and blood pressure increases.

10 Minutes – Cold Incapacitation

Over approximately the next 10 minutes effective use of your fingers, arms and legs for any meaningful movement is lost. If a cold victim tries to swim or tread water, their body temperature will decrease faster. Warm blood from the core travels to these cold limbs and the cold blood is returned to the heart. This hastens the decrease of core body temperature. Children, because of their small size and lack of fat, will tend to lose heat faster than adults. Lifejackets are imperative to keep the airway out of the water, and useful to reduce heat loss.

1 Hour – Hypothermia

Unconsciousness due to hypothermia may occur after one hour of being in cold water (below 15°C).

*What is hypothermia? Hypothermia is the condition when a person's core body temperature drops below that required for normal body function. Normally the body functions at a core temperature of 37°C. The temperature of the skin and muscles can vary but these changes stimulate the body's internal systems to maintain equilibrium that is homeostasis. If the body is exposed to cold conditions, it may be unable to replenish the heat loss. This is when the body could show signs of hypothermia.

Knowing how to respond in the first 60-90 seconds can help you to survive those first moments and enable you to take actions to find safety, call for help and keep warm.

Now is a good time to run Activity 1 - Float first or fight the water?

Float first

Watch the '[How to Float first video](#)' to see the different scenarios and learn the 4 steps of this survival response - Float, Breathe, Signal, Survive. dpanz.org.nz/float-first/#video

Float first gives you the best chance of survival if you're in trouble in the water.

Whether you fall in or get caught in a river or coastal rip, knowing how to respond in the first two minutes can make the difference between life and death.

Float first is based on global research and has proven to save lives when used as a survival skill around the world. It can help to prevent drowning whilst the panic or cold water shock passes, allowing time for rescue before hypothermia takes hold.

Floating on your back has helped to save many lives – For example, in the UK, the long-running campaign to promote floating now has many survivors to tell their story. [RNLI survivor stories](#)

How do we float?

- What is the best shape to help us when floating on our back? Whilst the starfish or X shape are the most common, we all float differently. T, I and Y shapes can also be used.

Additional resource: Watch the Drowning Prevention Auckland eLearning video on Floating and lifejackets



- Can everyone float? Anyone can float but some may take a little longer to learn and will benefit from additional flotation. *All people float differently (especially if wearing clothes) and even if the lower body sinks they can still stay afloat and keep their airways out of the water using flotation techniques. This includes making gentle arm movements.*

Encourage them to try next time they are at the pool. Remembering that they should only enter the pool when it is safe to do so and should always swim with a buddy. They can try with milk bottles to start with as well!

How to Float first - Float, Breathe, Signal, Survive

1

Float first

- Lie back with your ears underwater, chin up
- Move your hands to help you float
- It's okay if your feet sink
- Ignore your instinct to swim



If you fall into the water it is important to protect your airways if possible - you should try to keep your mouth and nose closed or covered upon entry to help reduce the chance of cold water shock and gasping water into the lungs.

2

Breathe normally

- Relax
- Slow your breathing to help calm down
- Breathing will get easier



What do you think you should do next? Get everyone thinking about what their options are and record their ideas. Then discuss the best options and why. Cover steps 3 and 4 below.

How to Float first - Float, Breathe, Signal, Survive

3

Signal for help

- Raise your arm
- Shout for help



If you see someone struggling in the water ask a Lifeguard for help or call 111. You should never put yourself at risk by entering the water to rescue them.

4

Survive by swimming or floating

- Swim to safety if you can
- Float when it's not safe to swim
- Hold onto anything that helps you float
- Keep clothes on to stay warmer



What could help us float?

Suggest items that could be used to assist flotation. Why are these items buoyant?

A bottle, ball, chilly bin, bucket and even gumboots can all help.

They all have air in them already or like the bucket, can be used to trap air to assist flotation.

Why might it not be safe to swim?

In a strong a river current or a surf rip.

You are unable to swim the distance due to the length or your ability.

You can also float if you get tired when you are swimming.

Floating in lifejackets

A lifejacket not only helps a person to float but conserves body heat in and out of the water. The bright colours and reflectors also make it easier for rescuers to find people.

Lifejackets should be worn whenever you are in or close to deep water. They are required when in boats under 6m, they are recommended for fishing from the rocks, wharfs and on larger boats.

Once the panic or cold water shock has passed and you have regained control of your breathing, a lifejacket will provide you with the buoyancy to move into the H.E.L.P. position. This position will help to keep you warm if you find yourself in the water. Even if the water does not feel cold immediately, your body will lose heat over time.

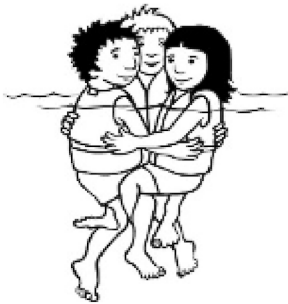
Watch the eLearning video section on Cold Water Survival and focus on the H.E.L.P and Huddle sections.

Questions and discussion

- **What does H.E.L.P. stand for?** Heat Escape Lessening Position
- **Where do we lose a lot of heat?** Head, chest, arm pits and groin
- **What is hypothermia?** A lowering of the core body temperature
- **Why do we have to protect ourselves from it?** It can be fatal and lead to drowning



- **What else is this person doing to keep warm?** Crossing lower legs and drawing them up to the chest. With the head out of the water - note they have turned their back to the waves.



- **What is a good way to keep warm if there is more than one of you?** Linking together in a tight huddle and keeping still will help to keep warmer.
- **How are the group linking together?** Using their arms and legs.
- **Are the group trying to swim?** No, they are staying still and floating together.

Note: When the body is still, the same water is in contact with the skin. The body will gradually warm this water. If you move, new water will come into contact with the body that has not been warmed up and you will feel colder.

Trying it out: Your group may want to try out the H.E.L.P. (whilst sitting) and Huddle (whilst standing) positions in the classroom or outside. Make sure that there is no gap in the middle of their huddle.

How can you slow down heat loss?

- Wearing a lifejacket/PFD will help you stay afloat, keep vital organs warmer, and increase your chances of making it through the initial cold-water shock.
- Wearing a wetsuit or clothing, including a hat and some types of shoes will help to slow the onset of hypothermia.
- As heat loss is quicker in water than in air of the same temperature, it may be best to get as far out of the water as possible, for example on top of an upturned boat or at least with head and chest out of the water (depending on wind chill factor).

Consolidate the learning by running Activity 2 - Open water scenario

Drowning prevention learning and resources

FREE Online Water Safety Modules

We have a free e-learning platform where you and your whānau, colleagues, friends and loved ones can learn more about how to stay safe around water. It covers all ages and many water-based activities. Check out our [eLearning platform](#).

School resources and courses

To learn more about what Drowning Prevention Auckland can do for schools and find teacher resources, visit dpanz.org.nz/education.

Community resources and courses

To discover how our water safety education programmes can help your community stay safe around water, visit dpanz.org.nz/community.

Workplace resources and courses

To discover how our water safety education programmes can help your workplace stay safe around water, visit dpanz.org.nz/workplace-training.

DPA Lifejacket Hubs (Auckland and Waikato)

If anyone needs to borrow a lifejacket they can find their closest [DPA Lifejacket Hub](#). DPA also loan lifejackets to school and community groups.

SPLASH Holiday Programme

Check out our one day [school holiday programme](#) for 8-11 year olds!

Activities

Activity 1 - Fight or Float first?

This short exercise gives the group an idea of the differences between fighting against the water when in shock and using the *Float first* survival response. You can use this activity at the start or end of the session to get them thinking about how their body will respond and the need to *Float first*!

- Divide them into two groups and set a timer for 90 seconds. 2. Tell one of the groups that they will be moving about as much as they can – jumping around and shaking their arms and legs. Tell the other group that they will be staying perfectly still, while breathing deeply and calmly. 3. ...2 ...1 ...go!
- Once the 90 seconds are up, let them see the differences between the two groups – one exhausted, one relaxed.
- Ask the students what they would do if they fell into cold water? Now is time for the big reveal! Explain that their natural response if they fall into cold water will be to thrash about, but then they'll end up like group 1 – exhausted. This will make them much more likely to swallow water. The best chance of survival is to do as little as possible, like group 2. Floating for just 60-90 seconds allows the effects of panic or cold water shock to pass.

The Royal National Lifeboat Institution (UK) developed this fight or float activity and have a great short clip showing the difference between floating and fighting against the cold when in the water: [RNLI Youth Education Resources – Fight Or Float Exercise](#)

Activity 2 - Open water scenario

This activity can be run in groups using role play or discussion.

Part 1:

Three people are fishing in a boat out at sea, no one is wearing a lifejacket, but they are on board the boat. One person is drinking alcohol. The boat is swamped by a huge rogue wave and capsizes. It remains floating upside down in the water. You are too far out to swim to shore.

What would you do?

Come up with a step-by-step plan or role play how the group should respond.

Responses to cover:

- Protect airways when falling into the water (keeping your mouth closed and cover mouth and nose with hand).
- Remember to *Float first*:
- **Float first** on your back to recover from the panic or cold water shock
- **Breathe normally** – Relax and slow your breathing to help you calm down
- **Signal** - Identify any forms of communications or means and signal for help
- **Survive by swimming or floating:**
 - Find additional flotation (such as a bucket, chilly bin or lifejacket from the boat). If found, the lifejacket can be put on
 - Float in H.E.L.P. or form a Huddle as a group to help to keep warm
 - Swim towards the boat (as a group if possible) and climb on top to get out of the water
- Offer reassurance and check in on each other regularly.

Part 2:

The boat then sinks and you are all forced back into the water. The person who was drinking alcohol on the boat is now starting to show signs of hypothermia.

Groups should show/discuss what they would do next to increase their chances of survival as well as preventing hypothermia from setting in. What options are available for you to try to keep the coldest person safe until help comes? If you have selected to role play, select one person to illustrate the symptoms of mild hypothermia.

Responses to cover:

- Don't remove clothing. Clothing provides an extra layer to help protect against heat loss.
- Form a Huddle, keep as still as possible and stay together and await rescue.
- Put cold or vulnerable people into the middle (swap people around as needed). Note, those without a lifejacket or those who have been drinking alcohol get very cold quickly.
- Look for signs of hypothermia.