

# CHOOSE IT WEAR IT



Lifeboats

AN RNLI GUIDE TO LIFEJACKETS  
AND BUOYANCY AIDS





Useless  
unless worn

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Lifeboats

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Lifeboats

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# THE IMPORTANCE OF WEARING YOUR LIFEJACKET

## Why wear one?

On average 153 people drown in the coastal waters around the UK every year (WAID data). Fatalities occur in a wide range of water-based and waterside activities.

Research has proved wearing a lifejacket can increase your chances of survival by up to four times when immersed in cold water. \*

Whatever your activity, wearing a well-fitted, and suitable lifejacket or buoyancy aid, could save your life.

Source\* Professor Mike Tipton 2012.

### Sailors and slow motorboats



If you fall over the side and are not attached to your boat, you can rapidly become separated from the vessel. This will greatly increase the difficulty of rescue, especially at night, and so decrease your chances of survival.

Staying on, or with your boat, is always going to be the best option. At the very least, make a policy of clipping on to suitable points around the boat at night-time, when alone on deck, and in rough conditions. Ensure you have a harness line with a hook at both ends. Clipping on is particularly important on sailing boats where the motion and angle of heel can be unpredictable.

### Motorboats and fast vessels

Clipping on is advised on motorboats when leaving the cockpit to perform a task on deck such as anchoring. Clipping on is *not* advised on fast motorboats or fast sailing boats when travelling at speed. This would prevent being dragged along should you fall overboard.

### Irish legislation

Under Irish legislation, an appropriate lifejacket or buoyancy aid must be carried for everyone onboard all vessels. If the craft is under 7m, personal flotation devices must be worn at all times on an open vessel or on deck on a vessel with accommodation. Anyone under the age of 16 must wear a personal flotation device at all times on an open boat or on deck if the vessel has accommodation, irrespective of the size of the vessel.



## Cold water shock

**Cold water shock is the uncontrollable reaction of the body when it is first submerged in cold water (15°C or lower). In initial submersion the body will experience a gasp reflex, which is a rapid intake of air, followed by a fourfold increase in breathing and associated increases in heart rate and blood pressure making some people susceptible to heart attacks. These symptoms will last for 3–5 minutes during which even the fittest person is unable to swim or to focus on breathing; so wearing a life-jacket with the correct buoyancy is vital to survival.**

During the initial stages of cold water shock, try to stay calm and let your lifejacket keep you afloat. The clothing you are wearing, the fitting and features of your lifejacket and the amount of energy you expend will all be critical factors to survival from this point onwards.

Without a lifejacket even the most competent swimmer will suffer from 'swim failure' after around 30 minutes of swimming in cold water. If you are wearing a well-fitting lifejacket with crotch straps, there is no need to swim and you can concentrate on keeping warm, conserving energy and making yourself visible.

In a group, form a huddle by using one hand to hold on to the person next to you while the other is protecting your airway. If you are on your own, cross your ankles, put your knees together and bring your arms around your body and float in the Heat Escape Lessening Position. (HELP pictured below).



Help position



Gasp reflex



With crotch straps



Huddle position



Without crotch straps

# CHOOSING YOUR LIFEJACKET

## Lifejacket standards

There are four European standards for lifejackets and buoyancy aids, which must carry the CE mark (EN393–399). Those standards have been recently replaced by the International Standards Organisation standard (ISO) known as ISO 12402.

## Buoyancy aid – level 50



Buoyancy aids at level 50 are recommended for use by swimmers in sheltered waters or watersports where help is close at hand. They do not have sufficient buoyancy to protect a person who is unable to help themselves and are not designed to turn a person from a face-down position in the water.



## Lifejacket – level 100



The level 100 lifejacket is recommended for use in sheltered and calm waters. It may not have sufficient buoyancy to protect a person who is unable to help themselves and may not roll an unconscious person on to their back.





## Lifejacket – level 150

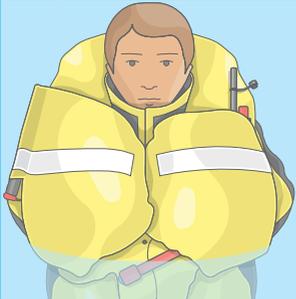


**The level 150 lifejacket is for general use on coastal and offshore waters where a high standard of performance is required.**

It should turn an unconscious person on to their back and requires no subsequent action by the wearer to keep their face out of the water. Its performance may be affected if the user is wearing heavy and/or waterproof clothing.



## Lifejacket – level 275



The level 275 lifejacket is recommended for offshore use, primarily for extreme conditions and for those wearing heavy protective clothing that may adversely affect the self-righting capacity of lesser lifejackets. As with the level 150, this lifejacket is designed to ensure that the wearer is floating in the correct position with their mouth and nose clear of the surface of the water.



## A good fit

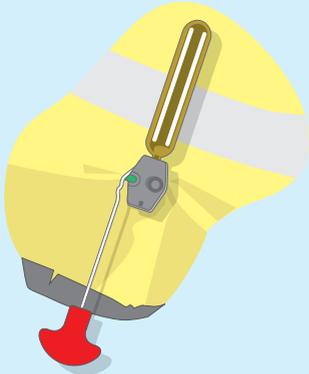
**Take time to find a style of lifejacket that is comfortable to wear and suits you. The best lifejacket is the one you will wear.**

When in the shop, try on a few different options and think about wearing it doing your watersport. Is it a good fit? Is it comfortable? Do you like it? Picking the right one for you may take time, but it will be time and money well spent. If you are buying online, think about finding a way to try on the style of your choice first; do you have friends or family with the same jacket?

# AUTOMATIC OR MANUAL?

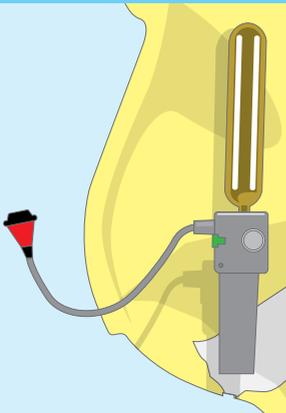
There are three inflation methods of CO<sub>2</sub> only lifejackets. Choose a system which best suits your activity.

## Manual



Manually inflated lifejackets are operated by pulling a cord which pushes a firing pin into the CO<sub>2</sub> bottle which inflates the lifejacket. Manual activation prevents the possibility of false activation due to a damp automatic mechanism or, the concern of an automatic lifejacket inflating if the wearer is hit by a large wave. Of course, manual activation will not work if you are unconscious, or suffering from the effects of cold water shock.

## Automatic – water activated



Water activated automatic firing heads have a small pellet or bobbin which holds back a powerful spring. When the pellet/bobbin contacts water it dissolves very rapidly, releasing the spring which pushes the firing pin into the gas bottle. Due to the effects of cold water shock, most people will choose a lifejacket that will inflate automatically if they enter the water.



## Automatic – pressure activated



Hydrostatic (Hammar) lifejackets work the same way as an automatic lifejacket, with a dissolving pellet; but the pellet is protected by a case that only lets water in once it is a few centimetres under water. It won't fire unless fully submerged.

Choose this type of lifejacket if you take part in an activity where you are regularly soaked by waves or excessive spray.

CO<sub>2</sub> bottles in hydrostatic lifejackets are less likely to suffer from corrosion.

Automatic lifejackets always have a means to manually activate the CO<sub>2</sub> bottle as well as a mouth piece to allow oral inflation.

The primary means of inflating a lifejacket should always be the pull cord. Always aim to inflate your lifejacket before entering the water.

Newer lifejackets will have indicators to show if gas bottles are empty or automatic firing systems have been triggered.

# CHOOSING YOUR BUOYANCY AID

## What suits your activity – lifejacket or buoyancy aid?

Choose a buoyancy aid if you are a competent swimmer, taking part in an activity where you expect to end up in the water and preferably wearing clothing that will already provide you with some extra buoyancy such as a wetsuit or a dry suit. Buoyancy aids are vital when learning a new watersport.

A buoyancy aid has integral foam buoyancy. But it is not designed to turn a person the right way up, and so would not support an unconscious person in the water.



### Kayaking and canoeing

Buoyancy aids for kayaking are cut away around the shoulders and the arms; they need to be comfortable to paddle in all day and to swim in. They should have a belt or a drawstring to pull them tight around the chest. Choose a brightly coloured one that can be easily spotted.

### Touring, sea kayaking and sit on top kayaks

Choose completely cut away arms to allow for comfortable paddling over long periods, and multiple pockets to store safety, navigation and fishing equipment.

### Whitewater

These have more buoyancy to keep you afloat in fast-flowing water and so are bulkier. The fronts are often cut high to allow the wearer to lean forward easily. Your jacket must secure tightly to ensure it will not be ripped off by water pressure, must have at least one pocket for rescue equipment and have a 'clean' snag-free exterior.



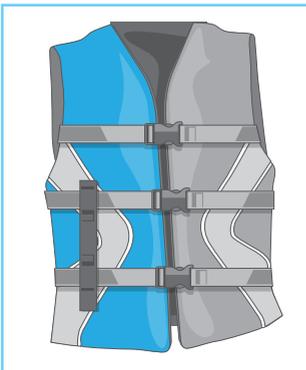
## Dinghy sailing

Dinghy sailing buoyancy aids tend to be slimmer to allow freedom of movement around the boat. They are high cut to allow bending and room to wear a trapeze harness. Choose a jacket that has few pockets and belts to keep a 'clean' exterior that will not catch on rigging. Carry a knife to avoid entrapment in the event of a capsized.



## Angling

There is a diverse range of lifejackets specifically designed for anglers, from fishing vests with integral gas inflation to slim-line fly fishing horseshoe jackets. Choose a jacket that best suits your type of angling. If you are wading, high-cut jackets are better. If you cast a lot, something less bulky. Flotation suits and vests will protect from the cold and can offer buoyancy in addition to your lifejacket. However, they are not designed to turn an unconscious person up in the water, so are not recommended as a primary aid.



## Other watersports

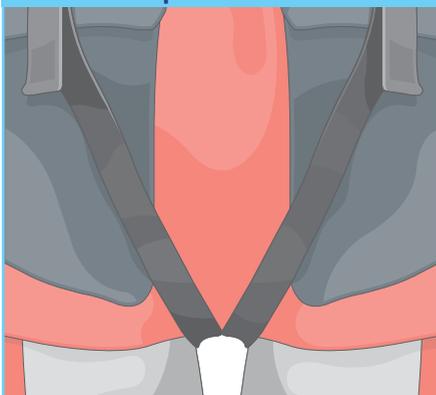
Buoyancy aids do not have to be sport-specific; just comfortable, the right level of buoyancy and the right size for you. If choosing a dual-function jacket, such as a water-skiing jacket or a flotation jacket, then double check the item has a minimum of level 50 buoyancy.

An impact vest for water-skiing

# LIFEJACKET FEATURES

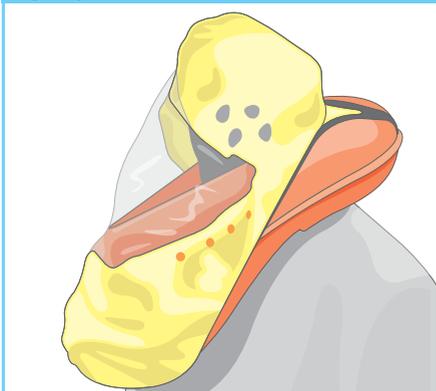
There are several features on a lifejacket that can greatly enhance your chances of survival should you end up in the water. Though not all these features come as standard with every jacket, they can be easily retro-fitted. Make sure you are aware what your lifejacket comes with when choosing one to buy.

## Crotch straps



Whether you have one or two crotch straps, by fitting these and wearing them it will stop the lifejacket rising up over your head should you fall in the water.

## Spray hood

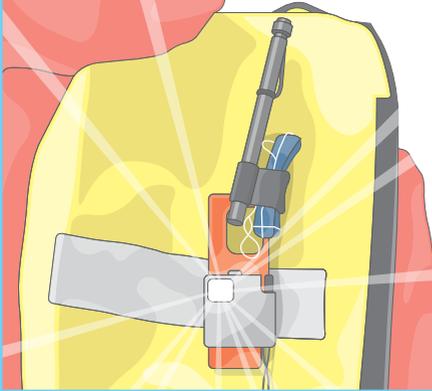


Even with a level 150 lifejacket you may be subjected to waves in your face. A spray hood will keep wind-blown spray and breaking waves away from your airways making it easier to breathe and reducing the risk of drowning. The spray hood will also help to reduce heat loss from your head and make you a lot more visible in the water. A good spray hood will have air vents at the side.



# Lifeboats

## Light



A fixed or flashing light attached to your lifejacket makes you much easier to find at night or times of poor visibility. Lights can be easily retro fitted if your jacket does not already come with one.

## Whistle



A whistle comes as standard on a lifejacket but not on a buoyancy aid. The attachment of a whistle even on a non SOLAS-approved flotation device will increase your chances of being detected while floating on the surface. It is a low cost addition to your personal safety kit.

# FITTING YOUR LIFEJACKET

Once you have a lifejacket that suits you, it is vital that you fit it correctly. Crotch straps must be secured and all other straps correctly adjusted. Unless the lifejacket belt is securely fastened to the wearer, the lifejacket will simply float up above the shoulders when in the water. Buckles need to be easy-to-use and effective to ensure that the belt does not work slack. There are several methods to tighten different lifejackets so take the time to become familiar with the one you are wearing. Try fitting it properly in the shop, before you buy.

## Side fastening



Adjust either while wearing or before you fit.

## Pull to fit



The straps are 'rocked' forwards and backwards to obtain a tighter fit.



## Fit



**Good fit**



**Bad fit**

Once your lifejacket is tightened, test the fit by placing your fist underneath the buckle. If there is a gap between your fist and your clothing then the lifejacket is a little loose. If your fist will not fit then you may wish to loosen your jacket for comfort.

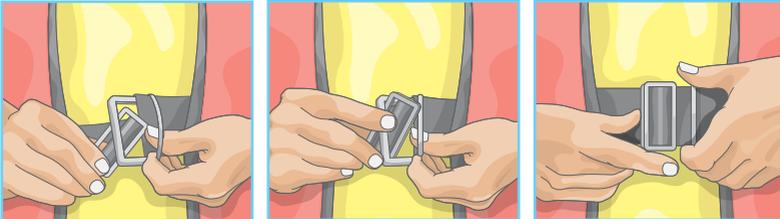
Newer designs of lifejackets do not require as much room beneath the chest strap. Always check manufacturer's guidelines with regards to fitting.

**Before buying a lifejacket, try it on in the shop. Make sure you find it comfortable, easy to fasten and easy to adjust. Everyone is different so pick the right style for you.**

# FASTENING YOUR LIFEJACKET

Fitting your lifejacket may seem a simple task for many people, but these items can still challenge the most experienced. Here we look at donning your lifejacket and the different methods of securing it.

## Buckles



1

2

3

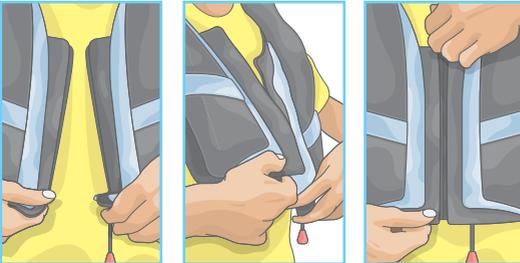


1



2

## Zips



1

2

3



## Crotch straps



**Crotch strap too loose**



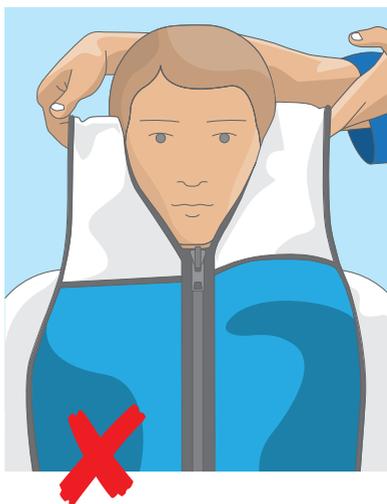
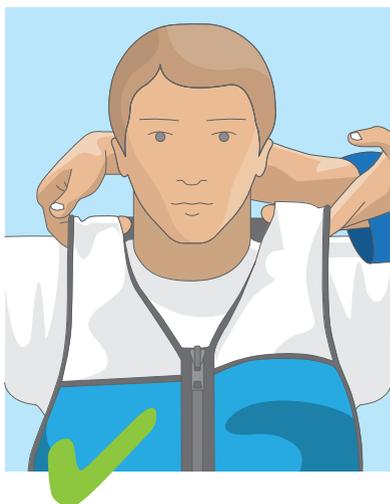
**Crotch strap correct**

Crotch straps should be done up and not hanging to prevent snagging. Well-adjusted crotch straps will be as short as possible while still allowing comfortable movement. You should be able to reach your crotch straps to be able to tighten them easily in the water.

In the event of entering the water crotch straps need to be tightened fully to stop the lifejacket from riding up. Make sure you can reach the ends of your straps easily to ensure you can pull them tight if necessary.

# FITTING AND MAINTAINING YOUR BUOYANCY AID

## Fitting



A good way to tell if a buoyancy aid is the right size is to fit and adjust the jacket then lift from the shoulders. It should not be possible to move the jacket. If it slides up, try a smaller size or tighter fit.

## Maintaining your buoyancy aid

Regularly check the foam in your buoyancy aid for visible signs of deterioration. Over time the foam will become compressed and so lose buoyancy. When this happens it is time to replace the jacket.

Levels of buoyancy can be checked by measuring the jacket's displacement in water. Refer to ISO 12402 standards to find the correct weight to test your jacket.

Visually check webbing, stitching, zips and buckles for signs of damage or wear.

# LIFEJACKETS FOR CHILDREN

Children's lifejackets may rely on foam, air and foam, or CO<sub>2</sub> only to provide buoyancy.

Air and foam and air-only lifejackets meet the requirements of a level 150 lifejacket and are suitable for offshore use. Normally, foam lifejackets provide level 100 buoyancy and are suitable for inshore use.

Air and foam lifejackets provide level 100 buoyancy, when deflated, and can be taken up to level 150 when inflated. These lifejackets are usually bulkier, but they provide inherent buoyancy and may also help to keep the child warm and provide a degree of protection in the case of a fall.

CO<sub>2</sub> lifejackets tend to be smaller, lighter and more comfortable to wear. But this type of lifejacket does not provide any buoyancy when not inflated, so if you chose a manually inflating air lifejacket you must assess whether your child would be able to activate the lifejacket if they fell into the water.

## Air and foam



Pros	Cons
Can be used both inshore and offshore	Must remember to orally inflate tube when going offshore
Less bulky than foam only jackets	

## Foam only



Pros	Cons
Warm and provides protection from falls	Bulky
Gives immediate buoyancy if the child falls in	

## CO<sub>2</sub> only



Pros	Cons
Smaller, lighter, more comfortable to wear	Provides no buoyancy when not inflated
	Child must be able to activate the manual override, even when frightened or suffering from cold water shock.



## Features

Children's lifejackets are supplied with a whistle to attract attention, and crotch straps as standard that **must** be worn at all times to prevent the jacket slipping off in the water or during rescue.

Additionally, many children's lifejackets are available with a built-in safety harness with a D-ring attachment at the rear of the jacket. This is particularly suitable for younger children who can be attached to a suitable adult either onboard, or at the water's edge. For older children, on a sailing yacht, the child may be harnessed to the vessel, but children should never be harnessed to a vessel travelling at high speed as there is a risk of being dragged underwater if the child falls overboard.



D-ring safety harness fitting

## Size and fitting

All children's lifejackets state a maximum weight and chest size which must not be exceeded. However, it is equally important not to purchase a jacket which is too large as this may result in the child slipping out of the jacket or the jacket may float high in the water leaving the child's mouth and nose submerged. Refer to page 18 for fitting instructions.

# MAINTAINING YOUR LIFEJACKET

Lifejackets do not last forever, so regularly inspect yours for wear and tear. Whatever type of lifejacket you use it will need basic maintenance to keep it working properly. The RNLI recommends you regularly inspect your own lifejacket, according to the manufacturer's instructions and in conjunction with an annual service.

Remember the safest lifejacket is the one that is worn.

## Monthly checks

### Visual



Check the webbing and the stitching that holds the webbing together. Lifejackets with a coloured thread, which strongly contrasts with the webbing makes it much easier to spot worn stitching. Also check zips, buckles and other fastenings.

### Gas bottle



Screw-in CO<sub>2</sub> bottles in lifejackets can work themselves loose and should be checked for tightness every month.

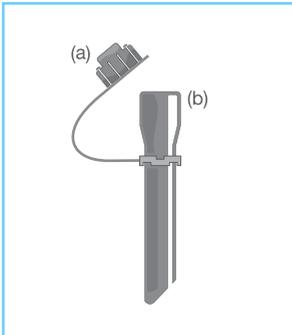
Always carry re-arming kits for each type of lifejacket you have onboard. If a lifejacket is accidentally inflated, you will be able to get it ready for use again straight away.



Check the CO<sub>2</sub> bottle for corrosion. A heavily corroded bottle should be replaced. Also check any areas of material that were in contact with a rough cylinder – the fabric may have been damaged.



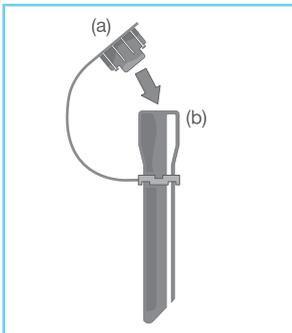
## Oral inflate



Regularly inflate the lifejacket orally. Leave it inflated for 24 hours in a dry environment to ensure there are no leaks or damage. Repack the lifejacket according to the manufacturer's folding instructions.

The lifejacket **must** be deflated by reversing the cap (a) on the oral inflation tube and inserting it into the end of the tube (b), hold the cap in the end of the tube during the deflation process. **Never use anything other than the cap to deflate the lifejacket.** Once the lifejacket has been deflated

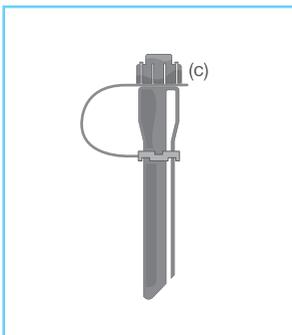
replace the cap over the end of the oral inflation tube (c). This will prevent dust or particles entering the valve. Using any other method of deflating the lifejacket can result in damage to the oral tube valve, preventing the lifejacket from holding air, which will not be discovered until the lifejacket is used during drills or in a real emergency.



### Annual service

Every 12 months it is highly recommended that you return your lifejackets to the manufacturer or a qualified service agent for a full service.

Wear and contamination from salt spray, sand and dirt will all contribute to decreasing the life expectancy of your lifejacket. **If you look after your lifejacket, it will look after you.**



### RNLI lifejacket clinics

The RNLI runs free lifejacket clinics where our trained volunteers will inspect your lifejacket and show you how to carry out your own checks.

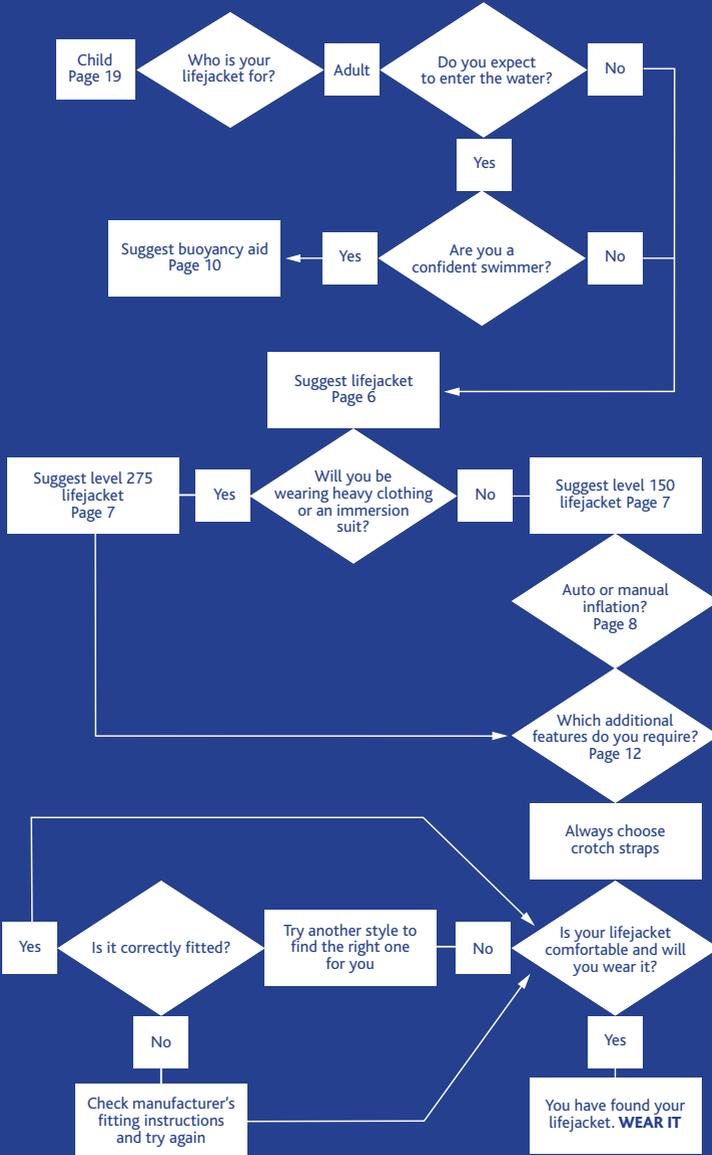
To find out about a clinic near you or to book a clinic for your club or group email [coastal\\_safety@rnli.org.uk](mailto:coastal_safety@rnli.org.uk)

# CHOOSE YOUR LIFEJACKET

Start here



Lifeboats



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Charity number CHY 2678 in the Republic of Ireland

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