

Personal Protective Equipment

Protection Against Drowning

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Is there a difference between a life jacket and a personal flotation device (PFD)?

Yes. While the terms are often used interchangeably, the main difference is the device's ability to turn a person face-up when in water without effort from the person.

As stated by Transport Canada:

"Lifejackets are designed for wear when abandoning the vessel in an emergency situation. They generally provide more buoyancy and give the wearer more freeboard (distance between the mouth and the water) by inclining the person onto their back to keep their face – mouth and nose – further from the water. Lifejackets are designed to help turn and keep the wearer face up even when unconscious. Higher buoyancy lifejackets provide the most support in turbulent waters and extended periods of time. There are no approved lifejackets that provide thermal protection on the market at this time.

Personal Flotation Devices (PFDs) are designed for comfort and constant wear. As a result, most models provide less buoyancy than lifejackets and will not roll wearers face up or incline them onto their backs. The wearer must be able to move arms and legs to avoid rolling forward. When worn, PFDs provide the wearer with a high degree of safety if he or she falls overboard. The buoyancy the device provides makes it easier to stay afloat, and if the water is cold (less than 15 °C), because it gives the body a chance to recover from cold shock – gasping and shallow, rapid breathing that occurs the first few minutes following immersion – and provides protection against the rapid failure in swimming ability that follows. Some PFDs have added thermal protection to delay the onset of hypothermia if in the water for an extended period of time.

What is buoyancy?

Buoyancy is the ability of the device to support you when in the water. Life jackets and PFDs will indicate the capacity they have (the person's recommended weight limit) for that device. Make sure that your device will support you by adding the additional weight of any clothing, boots, or tools that might be worn when working on or above water.

Who approves life jackets and PFDs?

Transport Canada is the regulatory authority that sets out the standards for equipment and operations of commercial vessels. Transport Canada also accepts the use of the Canadian Coast Guard, and Fisheries and Oceans Canada approved life jackets and PFDs.

Are there occupational health and safety laws about protection against drowning?

Yes. In Canada, all fourteen jurisdictions have legislation about protection against drowning. All jurisdictions require the use of a life jacket or PFD when there is the risk of drowning at the same time as other fall protection measures, or when there are no other measures in place which would prevent a fall in the water (e.g., other fall prevention or protections measures are in place such as guardrails, full body harness and life-line, safety net, etc.). In some cases, the legislation may specify the use of a life jacket (device capable of self-righting a person). In other cases, the appropriate number of rescuers and types of lifesaving equipment are outlined, such as the use of rescue boats, hooks, life buoys, signals, alarms, etc.

Several jurisdictions address specific situations such as:

• Workers working or being transported on a boat (Alberta, Manitoba, New Brunswick, Saskatchewan, Northwest Territories, Nunavut, and Yukon)

- Working alone when there is a risk of drowning (British Columbia, Nova Scotia, and New Brunswick)
- Working alone in a boat (Manitoba)
- Working at a workplace "other than a boat" (Alberta, Manitoba)
- When there are insufficient resources to provide a quick and effective rescue (New Brunswick)
- Risk of falling through the ice (Manitoba).
- Working on seine skiffs (fishing operations) (British Columbia)
- Additional measures when there is a risk of drowning after a fall (Prince Edward Island)

Note that Transport Canada also specifies certain types of devices when aboard certain watercraft or when near water. For example <u>Transport Canada</u> specifies types of life jackets or PFDs for different vessels, including what devices are required for Safety of Life at Sea (SOLAS), all other vessels, small vessels, recreational use/personal watercraft, and human powered vessels (including stand-up paddleboards).

What should be considered when selecting a life jacket or PFD?

When choosing a life jacket or PFD, make sure it:

- · is an approved device
- provides the required level of protection (e.g., is ability to self-right a person required?)
- provides the right buoyancy for your weight and the clothing/boots/tools you are likely to be wearing
- is the right size. You can check the size by:
 - Trying on the device while wearing the clothes you would wear when working.
 - Following the manufacturer's instructions for putting on the device and fastening the straps. It should be snug but not too uncomfortable
 - If you cannot buckle the straps, your device is too small
 - Have someone pull the device up from the shoulders. If the device rises above your nose and mouth, it is too large. If it is too large, it could slide off your body when in the water. Try tightening the straps, or selecting a different device
- if you choose an inflatable model, read the manufacturer's instructions and make sure you understand how it works in an emergency. Always wear an auto-inflatable device over your clothing. Do not attach anything that might interfere when the device inflates.

 is an appropriate colour. For example, red, orange and yellow are more visible to rescuers.

When practical, test your device by entering a pool or shallow water under supervision. When the water is waist deep, bend your knees and let the device help you float. It also helps to feel how the device works so you know what will happen in an emergency.

What steps are involved when maintaining a life jacket or PFD?

Always follow the manufacturer's instructions about care and maintenance. General tips include to:

- · Clean using mild soap and water
- · Dry your device in open air, away from sunlight and direct heat
- Store in a dry, well-ventilated, easily accessible place
- Never use strong detergents, gasoline, solvents or dry-cleaning solutions on the device
- Follow all manufacturers' instructions about maintenance and service, especially if your device is an auto-inflatable model
- · Record all inspections and maintenance

What should be inspected before each use?

Check for:

- Hardware that is broken, deformed, or corroded
- Webbing or straps that are ripped, torn, or coming detached from the device
- Any material that is rotten, deteriorated, or comes apart when pulled
- Fabric or coatings that have rips, tears, or open seams
- Buoyant material that has hardened, compressed, waterlogged, oil-soaked, rotted (including fungus or mildew), or is not held securely in place

What does someone who is drowning look like?

In many cases, a person who is drowning may do so "silently" – that is, they are not able to call or wave their arms for help. Be aware when a person is unable to keep their head above water. While each situation may be different, signs may include:

- their head appears low in the water or just under water
- their arms are to the side (lateral) and may be pressing down on the water's surface
- they may be hyperventilating or gasping
- they may have hair in their face (the arm movement is instinctive, and many are not able to wave for help or move hair away from their face)
- they are usually vertical (upright) and may appear to be trying to swim or "climb a ladder" but are not making progress. They may or may not be kicking.

What steps increase safety when working on or near water?

Most importantly, always wear your life jacket or PFD. Do not keep it close by and assume you will be able to find it and put it on in an emergency.

Other safety tips include;

- Night-time visibility of the life jackets and personal flotation devices is increased if
 patches of retro-reflective marking materials are applied on surfaces which are normally
 above the water. White or silver retroreflective material is recommended
- Attach a non-metallic pea-less whistle (in a place that will not interfere with the functioning of an auto-inflating device) so you can call for help
- Have a <u>working alone check-in system</u>, or tell others of your plans, including trip details, location, and estimated return time
- If you have fallen into cold water, try to hug your knees to your chest to stay warm. If others are also in the water, hold each other close to retain body heat. These methods are known as the "heat escape lessening position"
- Do not work on or near water when high winds, storms or lightening are forecasted
- Do not drink alcohol or otherwise be impaired

When using any personal protective equipment, the equipment use should be done as part of a personal protective equipment program. Refer to the OSH Answers document <u>Designing an Effective Personal Protective Equipment (PPE) Program</u> for further information.

When working on or near water, an <u>emergency response plan</u> should be developed. A written emergency plan and procedures may also include the presence of a qualified or trained person who can assist in rescue operations, and availability of other rescue equipment, such as floatation devices, boat, boat hook, and/or signalling device. Rescuers may need to be trained in cardiopulmonary resuscitation (CPR) and first aid.

If a person is rescued from a near drowning, get medical assistance. In some cases, secondary and/or delayed drowning may occur if a small amount of water has entered the lungs.

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