

British Spearfishing Association Safety booklet



Introduction

Spearfishing is one of the most rewarding ways to interact with the marine environment. It combines skill, patience, physical ability, and a deep respect for the sea. Across the United Kingdom, thousands of divers enjoy the sport responsibly every year, harvesting sustainable seafood and building strong communities around a shared passion.

However, spearfishing is also a form of breath-hold diving and, like all water sports, carries inherent risks. Many incidents in freediving and spearfishing occur not because of equipment failure, but because of a lack of awareness or preparation.

This safety guide has been produced to help divers better understand the risks associated with spearfishing and how they can be reduced through proper planning, training, and safe diving practices. The advice contained in this booklet reflects the shared experience of spearfishers and freediving masters across the United Kingdom.

It is not intended to replace formal training, but rather to support it by encouraging safe habits in the water and a culture of looking after one another.

Where possible, we recommend joining a club, completing a recognised course, and diving regularly with experienced buddies.

Whether you are new to spearfishing or have many years of experience, we encourage you to take the time to read and share the information contained in this guide.

Dive safely, respect the sea, and look after your fellow divers.

Before Dive Planning

Before heading out to dive, you should research the location carefully.

Satellite imagery, such as that available through Google Maps, can be extremely useful for identifying potential dive sites and examining reef structures in shallow areas.

When planning a dive you should consider:

- Entry and exit points
- Tidal movement and slack water times
- Rip and other Potential currents
- Weather conditions
- Local hazards

Proper planning significantly reduces the risks associated with diving in unfamiliar locations.

You should always notify someone where you will be diving and roughly what time you expect to return. It is surprisingly easy to lose track of time and accidentally stay out longer than planned. To avoid worrying friends or family, make sure they understand this can happen.

We recommend taking a phone in a waterproof case attached to the top of your float so you can contact someone if you expect to be late.

Finding Visibility

Weather should always be taken into consideration. With time and experience you will learn how different winds, tides and swells affect your chosen venue.

Clear waters are generally caused by, Calm dry weather, Low swell, & Offshore winds.

Ideally your chosen dive spot will have experienced light or offshore winds for several days and low swell.

Weather apps can help you decide where conditions are best. The visual and detailed features of the Windy app make it particularly popular among spearfishers.

Wherever possible, seek advice from local divers. Your local club chat group can be extremely helpful.

Buddying up

When diving in the UK's often murky waters, we recommend using the **one-up, one-down method**. This means that when one diver is underwater, the other remains on the surface watching and waiting for their partner to return.

When the diver surfaces and eye contact is made, a clear thumbs-up signal should be given to confirm that everything is okay. Once the diver has recovered on the surface, the other diver can then prepare to begin their dive.

It is important to maintain enough distance from each other to remain safely out of range of spearguns, while still staying close enough to communicate and observe one another effectively.

We understand diving with a buddy is not always possible, or necessary for some types of fishing. In other situations, an eye can be kept on a spearfisher from the shore or boat

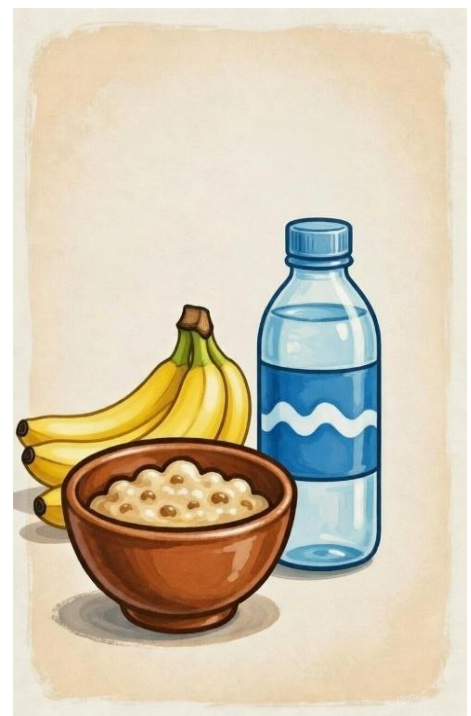
Food

Spearfishing is a physically demanding sport, and your body will use a lot of energy.

We recommend eating some time before diving, but eating too much can reduce your ability to hold your breath comfortably. We recommend a small meal such as oats, a banana, or other foods rich in slow-release carbohydrates. These provide steady energy which is ideal for spending several hours in the water.

It is also worth noting that dairy products can cause swelling of the Eustachian tubes in some people, which can make equalising more difficult, that could then lead to ear damage.

It is advisable to take a snack with you, either on your float or left in the car for when you return.



Hydration

Maintaining proper hydration is extremely important for safe diving. The body loses a considerable amount of water during spearfishing through physical exertion.

Even in cold water, divers can become dehydrated without realising it.

Being well hydrated helps reduce the likelihood of muscle cramps, headaches, fatigue, and other complications that may affect you.

Hydration should begin well before entering the water. Drinking water the evening before a dive and continuing to drink fluids on the day of the dive helps ensure the body is properly prepared. Many divers carry a water bottle attached to their float so that they can drink during longer sessions.

Alcohol before diving should never be mixed. Divers should avoid entering the water for at least twenty-four hours after consuming alcohol.

Alcohol causes dehydration, which forces the body to work harder during physical activity. It can also make equalisation more difficult by drying the Eustachian tubes. In addition to these physical effects, alcohol impairs judgement and slows reaction times, both of which can be extremely dangerous when diving.

For this reason, alcoholic drinks are best saved to be enjoyed with your dive buddies after the days dive.



Equipment

Having the right equipment is vital for safe spearfishing in UK waters. While some setups may vary depending on location, the items described here are considered the minimum required to dive safely.

Fins

Spearfishing fins are typically around 90cm in length and can be made from plastic, fibreglass, or carbon fibre. Carbon fins are the most efficient and place less strain on the body, although they are also the most expensive. Well-fitted fins allow the diver to move efficiently, conserve energy, and maintain stability in the water.

If you may experience leg cramps, pull the end of the fin to stretch out the leg muscles.

Wetsuit

A well-fitting wetsuit is essential for UK diving. It keeps the body warm and allows you to remain in the water for longer periods.

The most suitable type for UK spearfishing is a 5 or 7mm two-piece open-cell neoprene suit with an integrated hood. A 7mm jacket with 5mm trousers is a popular setup.

Open-cell suits require lubricant to put them on. A small amount of shower gel or baby wash mixed with water is a common and cost-effective solution.

Surfing wetsuits are not ideal for spearfishing because they are closed-cell suits designed primarily for movement, allowing water to flush through the suit, which can quickly make you cold.

If you become cold your muscles cramp up easier and you'll lose the ability to hold your breath well, if your buddy starts to show signs of being cold, by shivering or sustained blue lips, it's time to leave the water before hypothermia sets in.

Dive Knife

Every diver should carry a sharp, well-maintained low profile dive knife.

This is one of the most important pieces of safety equipment and may be used to cut fishing lines, nets, ropes, or other entanglements. A knife may also be used to dispatch fish quickly and humanely.

The knife is typically worn on the inside of the thigh for easy access by both hands. Many divers carry a secondary knife on their arm or weight vest as a backup.

Make sure the knives you choose are thin/low profile to reduce the risk of snagging

Weight Belt

Weight belts are typically made from silicone or elastic rubber and hold lead weights that allow the diver to descend comfortably. Weights are usually 1 kg blocks distributed evenly along the belt.

They are **not** designed to make you sink on the surface and must always be quick-release so they can be dropped instantly with one hand.

In an emergency, the weight belt should be dropped immediately and forgotten about. Never dive back down to retrieve a lost belt — lead and rubber can be replaced.

Proper weighting can be tested on the surface. When breathing out normally through your snorkel in an upright position, you should sink only until the water reaches approximately halfway up your mask. This ensures that if you get into difficulty, you should float.

Weight Harness / Vest

The combination of a weight belt with an optional harness or vest can help distribute weight across the diver's body, reducing strain on the lower back and improving overall control. When using a vest, approximately seventy-five percent of the total weight should remain on the belt, with the remaining twenty-five percent in the vest. Both systems must be quick release for safety.

Gloves & socks

Gloves and neoprene socks provide protection from sharp rocks, and cold water. Glove thickness in the UK typically ranges, but three millimetres is common, although some divers use cut-resistant gloves in summer. Socks vary from 1.5 to five millimetres depending on the season and your foot pockets. Socks wear out quickly if walked on bare ground. To extend their life, wear Crocs or put them on at the water's edge.

Dive Watch

A dive watch is useful for tracking time, depth of dives, and surface recovery intervals. Surface recovery time is critical, and divers should spend **at least two times the previous dive time** recovering at the surface between dives. As dives become deeper and longer, surface recovery periods should increase accordingly.

Repeated dives without adequate recovery time significantly increase the risk of shallow water blackout (SWB).

Speargun

Spearguns come in two main types: rubber-powered and pneumatic. Gun length should be chosen according to visibility and the type of hunting. In clearer water, such as in Cornwall or Scotland, longer guns around 90cm are often used, while shorter guns of 75cm are preferred in areas with lower visibility, such as parts of Wales or Dorset.

A speargun should never be loaded out of the water, left loaded out of the water, and should never be attached to the diver. Even if a safety catch is present, a speargun should never be considered safe while loaded. Old rubbers, or other protective sheaths should always cover spear tips when not in use, and divers should only aim at targets they are certain are fish.

Mask and Snorkel

Masks and snorkels must be comfortable and effective. A mask should seal securely against the face and feature tempered glass lenses. Proper fit can be tested by placing the mask on the face without straps and inhaling gently through the nose; the mask should adhere to the face without hand support. An ill-fitting mask will distract your attention which may detract you thinking safely. Standard snorkels without valves are recommended to reduce noise that may spook fish.

Surface Marker Buoy (Float)

A float is essential for safety.

You should never dive without one.

Floats should be brightly coloured and display a blue-and-white diver-down flag to alert other water users. Floats provide a platform for resting, carrying catches, and transporting water and other items. Divers should always remain within twenty-five metres of their float, which should be connected to the divers drop weight or gun via a floating line. Many divers also attach a small compass to the float for navigation in foggy conditions. Fish stringers may be used to secure caught fish to the float; these should never be attached to the weight belt or worn in a way that risks snagging.



Key Diving Safety Rules

- Dive with a buddy whenever possible and use a “one up, one down” system.
- Spend at least x2 the previous dive time on the surface.
- Don't tie anything directly to yourself
- Never point a speargun at anyone or load it out of the water.
- Always check tide and weather forecast before diving.
- Always dive with a float and avoid areas with heavy boat traffic
- Always look up when surfacing
- Check your gear and your buddy's gear before entering the water
- Do not dive with a cold or illness
- Equalise early and often, we would recommend learning Frenzel equalization.
- Never push beyond your limits and look in to doing a course.

No fish, depth, or dive time is worth your life.

Shallow Water Blackout (SWB)

Shallow Water Blackout, is one of the most serious risks associated with breath-hold diving. It occurs when the body becomes critically low on oxygen during or immediately after a dive. When this happens, the brain can no longer maintain consciousness and the diver may suddenly black out.

Unlike many other diving hazards, a diver approaching a blackout may not always recognise the warning signs. In some cases, the diver may feel completely normal right up until the moment consciousness is lost. For this reason, understanding the causes and prevention of SWB is essential for all spearfishers.

A shallow water blackout most commonly occurs during the final stage of a dive, particularly in the last few metres before reaching the surface. As a diver ascends, the surrounding water pressure decreases rapidly. This pressure change reduces the amount of oxygen available in the bloodstream. If the diver has already used most of their oxygen supply during the dive, this drop can be enough to cause a sudden loss of consciousness.

Blackouts may occur underwater, at the surface, or even up to thirty seconds after surfacing. In some situations, a diver may briefly lose consciousness and recover

quickly without realising that it has happened. This is one of the reasons why attentive buddy supervision is so important.

Signs of Hypoxia

Before a full blackout occurs, the body may sometimes display warning signs of low oxygen levels. These signs are collectively referred to as hypoxia symptoms.

One of the most common signs is a temporary loss of motor control known among freedivers as a “Samba”. During a Samba, the diver may experience shaking, twitching, or involuntary movements. Subtle signs can include trembling hands, twitching eyelids, difficulty maintaining coordination. Unintentionally or appear confused and disoriented.

A Samba typically occurs at the surface following a dive or breath hold. Although the diver may remain conscious, they are at risk of progressing into a full blackout if proper recovery breathing is not performed.

If a diver experiences any signs of hypoxia, they should immediately stop diving for the day and allow the body time to recover.

Causes of Shallow Water Blackout

Several factors can increase the likelihood of shallow water blackout. One of the most significant is hyperventilation. Hyperventilation occurs when a diver takes rapid or excessive breaths before diving in an attempt to extend their breath-hold time. Although this may make the diver feel as though they have more air available, it suppresses the body’s natural urge to breathe without increasing oxygen levels significantly. As a result, the diver may stay underwater longer than their oxygen supply safely allows.

Poor diving technique can also increase oxygen consumption. Excessive movement, rapid swimming, or chasing fish beyond a comfortable range forces the body to work harder and consume oxygen more quickly.

Cold water, fatigue, dehydration, and illness can further increase physical stress and accelerate oxygen depletion. Insufficient recovery time between dives is another major risk factor. Without adequate time at the surface to replenish oxygen levels, repeated dives gradually reduce the body’s available reserves.

All of these factors can combine to create conditions where a diver unknowingly approaches the limits of their oxygen supply.

Preventing Shallow Water Blackout

Although SWB is a serious risk, it can often be avoided by following good diving practices and maintaining a disciplined approach to breath-hold diving.

Breathing before a dive should be calm and relaxed. Divers should avoid rapid breathing or any attempt to artificially extend breath-hold time through hyperventilation. A relaxed breathing pattern followed by a single full inhalation before submerging is generally the safest approach.

Divers should also progress gradually during a dive session. Early dives should be shallow and relaxed, allowing the body to adjust and the Mammalian Dive Reflex to activate. As the session continues, depth and dive duration can increase slowly within comfortable limits.

Maintaining warmth and hydration is also important. Cold muscles and dehydration increase physical strain and oxygen consumption. Proper weighting helps ensure that divers are neutrally buoyant at their working depth, allowing them to conserve energy rather than constantly swimming to maintain position.

During ascent, divers should slow their kick rate in the final metres before reaching the surface. The buoyancy of the wetsuit will naturally assist with the final part of the ascent. Conserving leg movement during this stage reduces oxygen demand at a critical moment.

Adequate recovery time between dives is essential. As a general guideline, divers should spend at least two minutes resting and breathing calmly at the surface between dives. As dive depth and duration increase, surface recovery periods should increase as well.

Above all, divers should never push beyond their comfort level and should dive with a buddy where they can who is actively observing their recovery after each dive.

Responding to a Shallow Water Blackout

Although rare, it is important that all divers understand how to respond if a buddy experiences a blackout.

If a diver loses consciousness underwater, the priority is to bring them safely to the surface while protecting their airway. The rescuer should support the diver's chin to keep the mouth closed and prevent water from entering the airway. At the same time, the diver's mask should be kept in place to protect the nose and help maintain airway positioning.

The rescuer should position their second hand behind the diver's head and use their arm for support while ascending to the surface. If the diver is wearing a weight belt, it should be released immediately to reduce the effort required to bring them up.

Once at the surface, the diver's airway must be kept clear and their face held above the water. The rescuer should remove the diver's mask and attempt to stimulate breathing by blowing gently across the face while calling the diver's name and tapping their cheeks. This stimulation often triggers the body's natural breathing reflex.

If the diver does not begin breathing normally, rescue breaths may be required. In some cases a laryngospasm may cause the diver's jaw to clamp shut. When this occurs, rescue breaths can be delivered through the nose.

The diver should then be transported to shore or to a boat as quickly as possible. If breathing does not resume, cardiopulmonary resuscitation should begin immediately, and emergency services must be contacted. In the United Kingdom this can be done by dialling 999 or 112 and asking for the Coastguard.

During resuscitation it may be necessary to cut open the front of the wetsuit to allow the chest to expand freely.

Although witnessing a blackout can be frightening, many divers recover quickly when appropriate rescue procedures are followed promptly.



Dedication

This booklet is dedicated to Andrew Scott.

It has been produced with the support and shared knowledge of experienced spearfishers and freediving instructors from across the United Kingdom who have contributed their time and expertise to improving safety within the sport.

Dive safe, enjoy your time in the water and Fish well.

The BSA Committee 2026

