Protecting Children and Youths in Water Recreation

Safety Guidelines for Service Providers
Text or parts of the text may be copied, provided that reference is made to the authors, the title of the publication and publisher.


The findings and views expressed are those of the authors and do not necessarily reflect the views of the partner organisations.

© March 2008
External report 344

European Child Safety Alliance
EuroSafe
P.O. Box 75169
1070 AD Amsterdam
The Netherlands
Tel: + 31 20 511 4513
Fax: +31 20 511 4510
Email: secretariat@childsafetyeurope.org
www.childsafetyeurope.org

Design by Joanna Haines
Foreword by Meglena Kuneva  
European Commissioner for Consumers

Protecting Children and Youths in Water Recreation: Safety Guidelines for Service Providers

It is estimated that each year 50,000 Europeans in the EU 27 are injured whilst taking part in water sports or boating activities. Drowning is the second leading cause of death in young people, from infancy to 18 years of age.

As part of my mission to inform, protect and empower consumers, I am pleased to lend my support to these guidelines, which are the direct and practical result of our recent work in the area of water service safety.

These water safety guidelines, developed by the European Child Safety Alliance under the umbrella of a broader project called “Safety of Services for Children’s Water-Related Sport, Tourism and Leisure Activities in the EU”, are of major importance. Developed in collaboration with professional water recreation associations and injury prevention organisations across Europe, they provide informative data on injuries and hazards, and outline specific safety recommendations for many common water sports and waterside settings, in order to encourage safe water activities for children aged 0-18 years.

This initiative is consistent with the European Commission’s overall approach to injury prevention as set out in the 2006 Communication on Actions for a Safer Europe [COM (2006) 328 final of 23.6.2006].

I hope that these guidelines will help those working in the water recreation industry – whether as a hotel manager, a rental provider or a tour operator – to fulfil their responsibilities in terms of injury prevention and safety promotion, and that our recommendations will allow them to implement good safety practices that will help to save children’s lives.
# Table of contents

## Introduction 1

## Water safety fact sheets 1

- Tourism and water-related injuries 2
- Alcohol and water recreation 7

## Protecting your business and your customers 8

- Responsibilities of service providers in the EU 8
- The importance of risk assessment 9
- Criteria for assessment of safe services 10

## Guidelines for specific activities and settings 11

### Swim sports
- Snorkeling 11
- SCUBA diving 13

### Boating sports
- Canoeing and kayaking 16
- Sailing 19
- Personal Watercraft 21
- Motorboats 23
- Tow sports (water-skiing, tow inflatables) 25

### Wind sports
- Kite surfing 27
- Windsurfing 30

### Water settings
- Safety by the waterside 32
- Swimming pools on holiday properties 34
- Waterslides 36

## Further resources 38

## European Child Safety Alliance country partners 41

## References 46

## Acknowledgements 47
Introduction

Nearly 70% of European tourists spend their holidays at a waterside location, mostly within other European countries, and 25% of EU tourists travel with children. This represents a significant opportunity for water recreation activities and services. However, tourists have a higher rate of injury and death than the standard population, especially when engaging in unfamiliar leisure activities or settings.

Drowning is the second leading cause of injury death to children from infancy to 18 years of age. Water recreation locations have proven to be one of the most common settings for a wide variety of other types of injuries as well. However, most often these injuries are caused not by faulty equipment or unduly dangerous conditions, but rather by inappropriate behaviour of the users. It would be possible to help prevent these injuries by establishing clear expectations and safety guidelines for the recreation activity or service provided. Most injuries are preventable. By using common sense and an understanding of how injuries are caused, prevention measures can be put in place to reduce injuries.

This guideline “Protecting children and youths in water recreation” and its recommendations are aimed at people working in the water recreation industry, whether as a hotel manager, a rental provider, or a tour leader. The intent is to provide information on hazards and injury risks that are specific to children, and to provide tips and tools to minimise those risks. Implementing good safety practices can save lives, improve business image, and raise profile and reputation to customers.

Scope and Limitations

These guidelines were developed by combining available data, literature, and professional expertise in the area of water recreation. The activities presented were selected based on a combination of their frequency in tourist settings, their real and perceived injury risks, as well as the likelihood of participation by children. The recommendations in this guide are not an exhaustive list of all safety requirements and regulations, rather, they intend to pinpoint aspects of child injury risks which are often overlooked in standard operating plans and safety schemes.

Further information on the standards for your recreation specialty is available through various professional associations (see further resources section), and your local and national laws must be followed.
### Tourism and Injuries

- Drowning is the second leading cause of injury death to children in Europe.\(^1\)
- Nearly 70% of Europeans spend their holidays by the waterside, mostly visiting other European countries, and 25% of these tourists are travelling with children under 18 years of age.\(^2\)
- Tourists are 10 times more likely to die as the result of an injury than from an infectious disease. Injuries cause 23% of tourist deaths compared to only 2% caused by infectious diseases.\(^3\)
- Tourists are more likely to be injured than local residents as they are more likely to participate in unusual sports and activities, and are unfamiliar with the environment.\(^3,4\)
- The accident rate to UK citizens traveling abroad, for example, has doubled in the past 4 years, with falls and water sports being the most common causes.\(^5\)
- In the coastal region of Portugal, a study revealed that 72% of the children admitted to hospital for a submersion incident in a swimming pool were foreigners.\(^6\)
- It is estimated that each year 50,000 Europeans in the EU 27 are injured whilst taking part in water sports or boating activities.\(^7\)

### Personal Watercraft (PWCs: jet skis, wave runners)

- PWC users are injured 8.5 times more often than those operating other motorised watercraft.\(^8\)
- Studies show that children are often injured when using PWC. In a three year American study, 22% of injured PWC drivers and 38% of injured passengers were less than 15 years of age.\(^9\)
- Most crash victims have less than 20 hours experience operating a PWC,\(^10\) and studies indicate that nearly 24% of injury events involved users with less than 1 hour experience.\(^11\)
- PWCs are the only recreational water craft for which blunt trauma is the leading cause of death rather than drowning.\(^12\)

### Boats

- Worldwide, more than 355,000 people are injured annually in recreational boating accidents, and more than 40% of the injuries require medical treatment beyond simple first aid.\(^11,13\)
- Worldwide, recreational boating results in the greatest number of transport fatalities after highway accidents, even exceeding aviation accidents.\(^14\)
- In Finland, where overall drowning rates are the highest amongst the EU countries, 30 – 40% of all accidental drownings occur in water traffic accidents.\(^15\)
- It is estimated that 85% of boating deaths are preventable if a personal flotation device (PFD) is worn.\(^16\)
- In 2004, approximately 70% of all reported fatalities in the United States occurred on boats where the operator had not received boating safety instruction.\(^17\)
Tourism and water-related injuries fact sheet con’t...

Propeller Injuries

- 18% of open motorboat fatalities are caused by propeller injuries.\(^\text{18}\)

- Statistics show that between 36 – 43% of motorboat propeller injury victims are below 20 years of age. \(^\text{8,17,19}\)

- Approximately 75% of teenage motor propeller strike victims are male. \(^\text{20}\)

- Motor propeller strikes are the leading cause of serious injury to water-skiers, swimmers and waterskiers are the most common victims of motor propeller strikes. \(^\text{19}\)

Water Sports

- Canoe capsize fatalities are just as likely to happen in calm water as in rough water, therefore it is important to always wear a personal flotation device. \(^\text{21}\)

- Towable inflatables such as water rings and bananas can not be steered by the children riding on them nor by the person steering the boat, therefore it is important to be extremely cautious. \(^\text{22}\)

- In one survey of windsurf injuries in America and the Dominican Republic, 64% of acute injuries to windsurfers were caused by being struck be the boom itself. \(^\text{23}\)

- In a German based study, 56% of kitesurfing injuries are caused by the surfer being unable to release the kite from the harness. Practice using release mechanisms is a critical part of training. \(^\text{24}\)

- The two most common causes of sailing fatalities are being struck by the boom and falling overboard. \(^\text{25}\)

Scuba Diving

- Children and youth may not have the emotional or analytical maturity to handle underwater emergencies, and a panicked child is at risk for making fatal mistakes such as ascending too quickly out of fear. Do not expose a child to SCUBA diving until you are certain he or she is ready. \(^\text{26}\)

- Children under 12 years are more likely to suffer “ear squeeze” because they have more difficulty equalizing ear pressure on descent. Therefore is special attention to ear clearing techniques a critical part of training. \(^\text{26}\)

- The risk of hypothermia for small children begins at 25 degrees Celsius due to their smaller frames. Therefore is it recommended that dives with children be kept short, because their bodies will cool faster than an adult. \(^\text{26,27}\)
Recreational (head-first) diving and spinal injury

- Recreational diving causes 10% of all swimming pool injuries to children 14 years of age and under.\textsuperscript{28}

- Recreational diving accounts for more than 70% of all spinal cord sports/recreation injuries.\textsuperscript{28}

- In Portugal, 40% of head hits and collision injuries are caused by head-first diving into shallow seas, pools, and rivers.\textsuperscript{29}

- A study of teen diving injuries showed that 44% of severe spinal injuries took place on a first visit to a pool, and 28% happened on the first dive into the pool, and that there were no depth markers at 87% of the pools. \textsuperscript{30}

Lifeguards

- Swimming in designated areas with a lifeguard on location greatly improves the positive outcome of a near drowning. Water accidents ending in drowning are most avoidable with a lifeguard present.\textsuperscript{31}

- The presence of lifeguards deters risky behaviour and prevents dangerous events in the same way police presence deters crime.\textsuperscript{31, 32}

- For every water rescue lifeguards make, it is estimated they take approximately 49 preventative actions, not including the non-water related first aid actions also performed.\textsuperscript{32}

Personal Flotation Devices (PFDs) and water safety

- In a study of all US boating-related fatalities, 86% of victims who died were not wearing a PFD, and the 14% who died despite use of a PFD did so as a result of other factors such as hypothermia.\textsuperscript{16}

- Adolescents and teens are the least likely to wear a personal flotation device while boating, yet they are among the most likely to be injured and drowned.\textsuperscript{33}

- Belt pack (inflatable) life vests are NOT recommended for children.\textsuperscript{34}
Open Water injuries and drownings

- Whereas babies and toddlers are more likely to drown in a pool or near home, adolescents and teens are more likely to drown in open water, especially when drinking alcohol.  
  
- A child who has a known sting allergy (such as a bee) has a higher risk of marine sting allergies as well. Therefore it is recommended to have an Epi-kit available.  
  
- Hidden dangers such as underwater rocks and vegetation, hydro-engineering projects, and strong undercurrents contribute to the risks in open water.  
  
- Open wells and reservoirs are often left unprotected, especially in rural areas. Yet, as evidenced in Portugal for example, these sites are common settings for drownings of children 0 - 9 years of age. 
  
- Canoe and kayak fatalities occur just as frequently in calm water as they do in rough water.  

Pool injuries and drownings

- Every year there are approximately 236,000 injuries in swimming pools within the European Union. Most of the injuries are to children and teens.  
  
- In the United Kingdom for example, more children died in pools abroad while on vacation than at home in the United Kingdom, and more than half of those who drowned could in fact swim. 
  
- In Portugal, an average of 28 children drown every year. Although Portugal has over 150 kilometres of coastal waters, 83% of the child drownings occur in unprotected swimming pools, both private and hotel.  
  
- Approximately 18% of swimming pool accidents in Europe occur on or around waterslides, and 15% by jumping from the pool edge.  
  
- 24% of waterslide injuries are caused by riders colliding with each other.  

Protecting Children and Youths in Water Recreation
Safety Guidelines for Service Providers

European Child Safety Alliance
References

Alcohol and water recreation fact sheet

- Alcohol is involved in 30 – 50% of all adolescent and adult drownings.1,2

- Alcohol was involved in one-third of US boating fatalities in 2004.2

- In Finland between 1987 - 1995, more than 63% of accidental boating and personal watercraft fatalities were associated with alcohol use.3

- Alcohol consumption by a parent or guardian may cause a lapse of supervision that contributes to child drowning.4

- In a New York state study of boating fatalities, boaters with a blood alcohol level of just 100 mg/dl (.01) or greater had a 16 times greater risk of drowning than those with no alcohol.5

- The risk of death for both operators and passengers is increased significantly with increased blood alcohol level. Therefore, alcohol and boating prevention efforts should target not only operators, but passengers as well, many of whom die when they fall intoxicated overboard when the boat is not moving.6

- Alcohol and drug use are proven risk factors in personal watercraft operation.7

- A study of teenage diving victims with severe spinal injuries also showed that alcohol was a factor in 49% of the cases.8

- In a study of open water diving injuries, risk factors included diving from a pier or dock, lack of familiarity with water and use of alcohol.9

- Experimental studies on diving while drinking show that divers with a blood alcohol count of 40 mg/dl dive significantly deeper, to a level risking spinal cord injury, although they themselves notice no difference in the depth.10


reviewed by Eurocare
Responsibilities of service providers in the EU

In most cases, water recreation injuries are due to risky or careless behavior rather than faulty equipment. Whether you are renting personal watercraft to tourists, or holiday apartments with a pool, or teaching children to snorkel, managing risk is part of the job and increasingly, it is becoming part of the law. You can take proactive steps to prevent injuries by doing a risk assessment, by providing risk factor and safety training for staff, and by developing both normal and emergency operational plans to ensure things run smoothly.

Most Europeans travel to other countries within Europe for their holidays, and the broadening of the EU has led them to expect the same service standards that they might see at home. That expectation, combined with the trend towards increased regulation of risky activities, is leading to increased standardisation of tourism services. In fact, the European Commission has targeted tourism services as one of the highest priority areas for improving safety of services, and the number of children and youth who participate in tourism activities was a key factor in that decision.

What does safety of services mean in this context? It means providing services that follow accepted safety practices and standards in order to minimize the risks of an activity and protect the physical health of your customers. This could mean, for example, how you care for the equipment and products you use. However, it goes even further; in the case of a serious accident, liability could possibly be an issue:

- for not providing enough risk information to consumers,
- for not providing age-appropriate supplies and age-appropriate safety measures,
- for not enforcing your own rules.

EU directives already exist for many water recreation products and activities and many new directives are being developed, including operation of large waterslides, leisure flotation devices, and the design and operation of swimming pools. Within the water recreation industry itself, more sport organisations and associations are taking pro-active steps by promoting guidelines and protocols on good practices. Such resources are helpful for shaping your operational standards to support a safe and enjoyable recreation experience. We recommend you contact national and international organisations and associations for advice specific to your sport or activity. Contact information for many such organisations can be found under the section “Further resources.”
The importance of risk assessment

Along waterfronts all over Europe, various recreational users are competing for limited space. This means that accidents or reckless, imposing behaviour could cause an activity to be banned from an area. Therefore, to keep in good standing with your local community, it is important to take precautions that are suited to your location.

A good place to start is with a risk assessment of your area and services. Approaching local waterfront management with a completed risk assessment shows that you are taking a positive approach to safety and being sensitive to the existing local water culture.

Kite surfing in the UK provides a good example of how risk assessments can be proactively utilised. Kite surfing is proving popular in UK waters, but concerns about the safety of bystanders caused a rash of bans on kite surfing in many public areas. However, local kite surf organisations such as the International Kiteboarding Organisation turned the tide by performing risk assessments of water areas. The assessments persuaded local councils to grant kitesurfers special zoning along the coasts again. The sport continues to grow there with a respected safety record.

No activity is without risk, and sometimes the allure of the sport is in the risk itself. However, if you have taken into account all of the following considerations, you will be in a position to offer customers both good fun and safe service.

Factors to consider in risk assessment

When it comes to injury prevention, there are 5 important steps in a risk assessment of an existing business:

- Review the accidents and injuries that have taken place at the venue and examine the causes of risks
- Assess the physical location and identify the hazards and factors that increase exposure to risks
- Be aware of likely foreseeable behavior of participants in the activity.
- Ensure that all equipment meets minimum safety specifications
- Look for solutions that will reduce the exposure to the hazards and therefore reduce the risk for accidents and injuries to occur.

Be sure you have investigated local, national and EU legal requirements for your activity and that all your licenses and insurances are up to date. Also be sure to provide appropriate safety signage, and zoning markers such as buoys or ropes where appropriate.

On the following page is a list of the six criteria that the European Union has identified as components of safe services. Use the questions below each criteria statement on the following page to help shape a risk assessment. These questions are especially targeted to issues that specifically affect children and youth.

For further information on risk assessments and management of beaches, refer to “Safety on European Beaches: Operational Guidelines” by the International Lifesaving Federation of Europe (ILSE).

## Criteria for assessment of safe services

### 1. The safety of the premises, structures and equipment used for providing the service
- Do I need to consider space restrictions, in addition to time and noise restrictions?
- Are there obstacles that increase the risk of collision or that obstruct sight?
- What considerations must I make for other users who will be sharing the waterfront space?
- Do I have enough age-appropriate equipment, and for what ages/sizes? Will children need additional safety gear?

### 2. The qualifications of the service provider
- Are there industry guidelines available for staff training and services?
- Have staff members received detailed information about the risk factors and safety measures?
- Are staff members informed about special risks to children and youths together with any additional precautions they must take for them?
- Do staff members have cardio-pulmonary resuscitation training, and/or lifesaving training from an accredited organisation such as ILSE?

### 3. The availability and quality of the information on the safety aspects of the service provided to the user/consumer of the service
- What kind of safety material/training must I make available to my customers? Must this be conveyed in written and verbal format? What about clients that do not speak the language?
- Do I have age appropriate safety information and training available?

### 4. The way in which the service is carried out by the service provider
- Have I implemented normal and emergency operating plans and practiced them with staff?
- Do I have constant access to weather and water condition information? Have I incorporated this information into my operating procedures?
- Will extra staff be needed for activities with children? What is an appropriate ratio of staff/client to provide services to children or youth?

### 5. The general abilities and behavior of the consumer
- At what age is a child or youth strong and mature enough to engage in my activity safely?

### 6. The availability of emergency procedures and equipment to reduce damage in case of accidents
- What information do I need from customers to ensure safety? Will I need proof of skill/age or written parental approval?
- At what age can my activity be carried out alone, versus with an accompanying adult?
- Do parents need to remain on site to personally supervise children/youth?
- What levels of rescue and emergency medical services are available? What are the time frames?
- Can an ambulance or rescue boat access both on-shore and in-water areas?
- Do I have enough staff and equipment present for normal and emergency operations? What training and maintaining of skills is required?
- Have I anticipated that children have different requirements for emergency services and care?
Snorkeling provides an excellent window into the underwater world for all ages, and is a great introductory water activity for children. However, it must not be forgotten that anytime a person enters the water, they are having a wilderness experience, at the mercy of the elements of nature. Therefore, it is important to do a little extra preparation and training for all who are entering the water, especially children.

Snorkeling along coral reefs is a wonderful learning experience, but risks are posed by the wave currents present in shallow coral reefs, as well as the dangers of stings and bites from marine life. Live coral often contain bacteria that can quickly infect small wounds, especially in a warm water environment. The most interesting sea life is often to be seen close to the rocks and reefs that provide their habitat. Common snorkeling injuries include minor lacerations from coral, marine life stings, and bruises and lacerations due to wave currents pushing snorkelers against rocks and coral. The risk of sunburn is also high, and should not be underestimated.

Why snorkeling can be risky for children

Children may need more practice than adults in co-coordinating swimming movements. Breathing through a snorkel tube takes practice, especially when learning how to clear the water from tube and keep the mask clear at the same time. In open water, practising these techniques while surrounded by marine life and while trying to keep flippers away from rocks, coral and plant life can overwhelm inexperienced snorkelers quickly. Therefore, snorkelers should first learn to use equipment in a pool, and then practice in safe shallows before venturing away from the beach.

Snorkelers should be taught the techniques of: mask clearing, how to clear a snorkel tube, and how to avoid striking against rocks and reefs by kicking backwards with their flippers while on their backs. Younger children may not have the lung capacity to blow a snorkel clear with breath, in which case teach them to raise their heads up and drain water by removing the mouthpiece as an emergency alternative. Teach young children how to defog their masks with a dab of spit and water.

Recommendations for snorkeling services for children

- All children venturing into open water must wear a personal flotation device (PFD).
- Children should be taught to use basic hand signals, including “okay”, “no”, “follow me”, “this way”, “help me”, “danger”, “come up,” “go down” and something wrong.”
- Children must be instructed not to reach out or touch any plant or marine life, including coral, nor to approach holes and crevices (which are usually populated). Use the phrase “Look, don’t touch, only take photos.”
- Beginners should only snorkel in enclosed, calmer waters in safe designated areas away from watercraft traffic.
The ‘A’ flag (Alpha flag) should be flown when snorkelers are diving from a boat to warn other water users to stay clear.

Children must have previous experience swimming and treading water in open water.

All child snorkelers should be assigned an adult snorkel buddy who is not a beginner.

In cool waters, a wetsuit should be worn, and even in warmer waters a wet suit is recommended to help minimise abrasion injuries. Children will feel colder far sooner than adults, so plan trips that take that into account.

In warm climates a ‘T’ shirt should be worn to guard against sunburn.

Any breeze over 15 knots can cause water turbulence which can decrease water visibility. Snorkeling should not take place in sea conditions above a force 4 wind speed or where the wave height is above 1 metre.

All snorkelers should be warned about when to expect tide changes and how that might affect the areas they will be visiting.

Areas of fast moving water should be avoided and dive guides must steer clear of any area where rip currents are present or likely to occur.

A child who has any known sting allergies (i.e. bee) has a higher likelihood of marine sting allergies as well.

What safety factors to look for in choosing and maintaining equipment for your operation

Check that the snorkel has not been damaged and that the mouthpiece has no rips. Masks must have tempered glass, and straps and flippers showing signs of wear should be replaced. Wet suits and snorkels should be cleaned and disinfected with a non-allergenic cleanser between users. Masks should be washed with fresh water and a disinfectant cleanser after usage and stored out of the sun in a cool dry place.

Staff Preparedness

- Always have at least two staff members present – one to speak with clients and handle training, and the other to monitor snorkelers and assist in entry and exit activity.
- Be sure all staff members are trained in CPR and first aid.
- In addition to a first aid kit, the office and tour leaders should have an anaphylactic shock kit or EpiPen on hand to counteract a sting allergy. Only emergency personnel or staff with the appropriate level of medical training should perform this treatment.
- Snorkel excursions with young children require extra staffing or adult supervision. Children may need extra assistance entering and exiting the water.
- If you will be leading a tour, have a safety plan in place. Large groups with children should be accompanied by a safety boat and should not roam far from shore or in choppy waters.
- When leading a snorkel boat excursion, do not forget to fly the “A” (alpha flag) to indicate your presence to boaters.
- Staff should regularly check water and wind conditions; children will be less able than adults to deal with bad conditions.
- All staff members should be able to clearly communicate risks and safety rules to clients. A language barrier could pose a problem should an accident occur, both in terms of immediate medical care and liability for having failed to properly communicate the rules.

reviewed by the British Sub Aqua Club and European Lifeguard Academy
SCUBA divers get to enjoy a unique perspective, and children can learn a lot from being exposed to the mysteries of the underwater world. However, SCUBA diving also requires the use of sophisticated equipment and techniques and small errors can be fatal. Whether children should be given such immense responsibility is questionable. Therefore, it is recommended that children and teens be introduced to SCUBA slowly and with great consideration for their emotional aptitude to handle emergency situations.

The number of SCUBA organisations actively pursuing younger participants has risen dramatically in the last few years. Due to the different risks posed to children and youth divers, it is critical that any organisation providing training or tours to youth divers be very well informed about the increased likelihood children have for injuries, including hypothermia and ear squeeze.

The most important factor in youth SCUBA diving is whether a child is truly emotionally and analytically ready to handle the risks of an underwater environment. Even experienced adult divers are prone to panic or behave irrationally in an emergency.

Children and youth risk suffering from barotraumata, or “ear squeeze.” A study of a diving school in Belgium found that 12% of children performing swimming pool trainings suffered from Eustachian tube dysfunction, and there were several cases of membrane perforation as well. A rigorous program of ear clearing training was successful in preventing further ear injuries.

The most important factor in youth SCUBA diving is whether a child is truly emotionally and analytically ready to handle the risks of an underwater environment.

Another overlooked risk to children and youth is their vulnerability to hypothermia, which can become serious very quickly in an underwater situation. Children’s bodies cool much more quickly than adult bodies, especially slender children. Surprisingly, hypothermia can occur in warm water as well, the risk beginning at 25 degrees Celsius.

Be aware that due to lung immaturity, no child under 8 years of age should receive any SCUBA training, and many national organisations support a starting limit of 12 years of age, and then only after snorkel training has been practiced.
Why SCUBA diving can be risky for children and youth

While careful water temperature and dive depth control, rigorous ear clearing technique, thorough training and proper equipment can help youth divers prepare for a real dive, most significant is whether a child is truly ready to enter an underwater environment and handle high-risk scenarios without panicking and without the benefit of verbal contact. Most diving accidents are caused by the diver panicking and ascending too quickly, which causes decompression sickness, or “the bends.”

The Divers Alert Network found that 24 out of 1248 diving fatalities were youth divers between 10 to 17 years of age, comprising 1.9% of all scuba fatalities, and each of those deaths was listed as accidental and preventable. In most cases, the cause of death was an air embolism, caused by a too rapid ascent. Rapid ascents are most often caused by a diver panicking and ascending despite the danger which they have been made aware of in training. Many of those adolescents had little training and experience and were performing high risk dives such as deep, cave, or wreck entry dives. It is not recommended that even SCUBA certified youth be taken on high risk dives. Unseasoned SCUBA divers are already at high risk simply within training programs, without adding on other complicating factors.

Recommendations for training youth SCUBA divers

- SCUBA trainers working with children should be specially trained for teaching children, and be made aware of the increased risks.
- Children under the age of 8 should never perform diving training due to lung immaturity. Many organisations recommend a minimum age of 12 to begin first stage training.
- Children should be a minimum weight of 45 kilograms and a minimum height of 150 centimetres before beginning training.
- Children should be strong swimmers and have already mastered snorkel techniques.
- Pool training should precede open water training.
- Open water dives should only take place in still, warm clear water with limited depth and easy access.
- Dives should last no longer than 10 minutes in 12 degree water, and no longer than 25 minutes in warm water.
- Children should be able to jump from and board the dive boat themselves and carry their own equipment.
- Children may not serve as dive buddies to each other, their dive buddy must be an experienced adult.
- Teach children not to ascend faster than their air bubbles.
- Medical consensus advises that divers of all ages should avoid altitude changes of 500 metres above sea level for 12 hours after a single dive, and for 18 hours after multiple or decompression dives.
What safety factors to look for in choosing and maintaining equipment

Due to the clear risks entailed in SCUBA diving, the equipment is more widely regulated than most sports equipment. Diving organisations must follow the standards mandated for diving services outlined in EU standards EN 14467, EN 14413, and EN 14153, as well as compressed air standards detailed under EN 12021.

Regularly analysing air quality and keeping a log of air analysis records are important elements of safe services. Records should include operating time of the compressor, and times/dates of filter replacement.

Diving organisations training divers or providing equipment in cold water environments must also take care to control the balance of water vapour concentration due to the increased risk that ice could cause a blockage in the breathing apparatus.

Disqualifying medical conditions for SCUBA diving

Any form of asthma and various cardiac conditions
- Epilepsy
- Insulin dependent diabetes
- Muscular dystrophies
- Sickle cell anemia
- Any animal sting allergy
- Hyperactivity

Youth who take any of the following categories of medications should not dive:
- Anti-depressants
- Antihistamines and decongestants
- Insulin
- Anti-convulsants
- Narcotics and anti-psychotics
- Central nervous system stimulants and anorectics.

Staff Preparedness

- Be sure that all staff members are trained in CPR and first aid for adults and children.
- Dives with children will require extra staffing in order to ensure that every diver has an adult buddy.
- All diving boats should be equipped with safety equipment, a reliable communications system, and the appropriate safety flags and signals.
- Always leave a dive plan with your local rescue services, and fly the “Divers Alert” Alpha flag to ensure boaters are aware of the presence of divers.
- Have oxygen available for multiple victims.
- Be sure that you have an emergency evacuation plan that will transport victims of decompression illness to a hyperbaric chamber as quickly as possible.
- Be prepared for more than one victim, especially when caregivers are diving with children who they are unlikely to abandon underwater in an emergency.

reviewed by Divers Alert Network Europe
Canoeing and Kayaking are two of the most popular boating activities. These paddle sports are easily accessible, appeal to nature enthusiasts and people seeking a physically demanding water experience, and can be done in settings as varied as small canals and open lakes.

Many people assume that canoeing is as simple as hopping in a canoe and setting off. However, paddling skills and an understanding of how to manage weight and boat balance are critical. Canoeists must be prepared to recover themselves in the water, fetch out necessary items, and regain control of the canoe and re-enter it from the water. When children are also present, they will certainly need extra assistance. An emergency capsize plan that takes this factor into account should be developed and practiced.

The sport of recreational kayaking is a booming business. In a calm Class 1 or 2 water setting, such as a calm “flat-water” river or lake, this sport can be a relaxing and healthy pastime. In stronger waters, this sport becomes an adventure sport, full of risk and action. However, even calm water kayaking (recreational) has its hazards, such as the risk of capsize and hypothermia, collision injuries with unseen rocks, or the very common paddle injury.

Canoeing in calm waters can provide children with a unique close up view of a marine ecosystem. However, children are also likely to find it harder to sit still for long periods, especially if they are too young to paddle. Children also might have a more difficult time controlling their bladders, but urination should never be done off the side of the canoe because of the increased risk of a capsize, so plan extra stops into the trip route. Young children may lack the maturity or hardiness to swim back to the canoe in the event of a capsize, or to upright or bail out a canoe, and adult passengers will have to assist them in what might be a hectic and frightening event.

Kayakers are likely to suffer shoulder and wrist injuries, and shoulder dislocations mid-trip are frequent.

Why canoeing and kayaking can be risky for children and youth

Canoeing in calm waters can provide children with a unique close up view of a marine ecosystem. However, children are also likely to find it harder to sit still for long periods, especially if they are too young to paddle. Children also might have a more difficult time controlling their bladders, but urination should never be done off the side of the canoe because of the increased risk of a capsize, so plan extra stops into the trip route. Young children may lack the maturity or hardiness to swim back to the canoe in the event of a capsize, or to upright or bail out a canoe, and adult passengers will have to assist them in what might be a hectic and frightening event.

Kayakers are likely to suffer shoulder and wrist injuries, and shoulder dislocations mid-trip are frequent.

Why canoeing and kayaking can be risky for children and youth

Canoeing in calm waters can provide children with a unique close up view of a marine ecosystem. However, children are also likely to find it harder to sit still for long periods, especially if they are too young to paddle. Children also might have a more difficult time controlling their bladders, but urination should never be done off the side of the canoe because of the increased risk of a capsize, so plan extra stops into the trip route. Young children may lack the maturity or hardiness to swim back to the canoe in the event of a capsize, or to upright or bail out a canoe, and adult passengers will have to assist them in what might be a hectic and frightening event.

Kayakers are likely to suffer shoulder and wrist injuries, and shoulder dislocations mid-trip are frequent.

Why canoeing and kayaking can be risky for children and youth

Canoeing in calm waters can provide children with a unique close up view of a marine ecosystem. However, children are also likely to find it harder to sit still for long periods, especially if they are too young to paddle. Children also might have a more difficult time controlling their bladders, but urination should never be done off the side of the canoe because of the increased risk of a capsize, so plan extra stops into the trip route. Young children may lack the maturity or hardiness to swim back to the canoe in the event of a capsize, or to upright or bail out a canoe, and adult passengers will have to assist them in what might be a hectic and frightening event.

Kayakers are likely to suffer shoulder and wrist injuries, and shoulder dislocations mid-trip are frequent.

Why canoeing and kayaking can be risky for children and youth

Canoeing in calm waters can provide children with a unique close up view of a marine ecosystem. However, children are also likely to find it harder to sit still for long periods, especially if they are too young to paddle. Children also might have a more difficult time controlling their bladders, but urination should never be done off the side of the canoe because of the increased risk of a capsize, so plan extra stops into the trip route. Young children may lack the maturity or hardiness to swim back to the canoe in the event of a capsize, or to upright or bail out a canoe, and adult passengers will have to assist them in what might be a hectic and frightening event.

Kayakers are likely to suffer shoulder and wrist injuries, and shoulder dislocations mid-trip are frequent.

Why canoeing and kayaking can be risky for children and youth

Canoeing in calm waters can provide children with a unique close up view of a marine ecosystem. However, children are also likely to find it harder to sit still for long periods, especially if they are too young to paddle. Children also might have a more difficult time controlling their bladders, but urination should never be done off the side of the canoe because of the increased risk of a capsize, so plan extra stops into the trip route. Young children may lack the maturity or hardiness to swim back to the canoe in the event of a capsize, or to upright or bail out a canoe, and adult passengers will have to assist them in what might be a hectic and frightening event.

Kayakers are likely to suffer shoulder and wrist injuries, and shoulder dislocations mid-trip are frequent.

Why canoeing and kayaking can be risky for children and youth

Canoeing in calm waters can provide children with a unique close up view of a marine ecosystem. However, children are also likely to find it harder to sit still for long periods, especially if they are too young to paddle. Children also might have a more difficult time controlling their bladders, but urination should never be done off the side of the canoe because of the increased risk of a capsize, so plan extra stops into the trip route. Young children may lack the maturity or hardiness to swim back to the canoe in the event of a capsize, or to upright or bail out a canoe, and adult passengers will have to assist them in what might be a hectic and frightening event.

Kayakers are likely to suffer shoulder and wrist injuries, and shoulder dislocations mid-trip are frequent.

Why canoeing and kayaking can be risky for children and youth

Canoeing in calm waters can provide children with a unique close up view of a marine ecosystem. However, children are also likely to find it harder to sit still for long periods, especially if they are too young to paddle. Children also might have a more difficult time controlling their bladders, but urination should never be done off the side of the canoe because of the increased risk of a capsize, so plan extra stops into the trip route. Young children may lack the maturity or hardiness to swim back to the canoe in the event of a capsize, or to upright or bail out a canoe, and adult passengers will have to assist them in what might be a hectic and frightening event.

Kayakers are likely to suffer shoulder and wrist injuries, and shoulder dislocations mid-trip are frequent.

Why canoeing and kayaking can be risky for children and youth

Canoeing in calm waters can provide children with a unique close up view of a marine ecosystem. However, children are also likely to find it harder to sit still for long periods, especially if they are too young to paddle. Children also might have a more difficult time controlling their bladders, but urination should never be done off the side of the canoe because of the increased risk of a capsize, so plan extra stops into the trip route. Young children may lack the maturity or hardiness to swim back to the canoe in the event of a capsize, or to upright or bail out a canoe, and adult passengers will have to assist them in what might be a hectic and frightening event.

Kayakers are likely to suffer shoulder and wrist injuries, and shoulder dislocations mid-trip are frequent.

Why canoeing and kayaking can be risky for children and youth

Canoeing in calm waters can provide children with a unique close up view of a marine ecosystem. However, children are also likely to find it harder to sit still for long periods, especially if they are too young to paddle. Children also might have a more difficult time controlling their bladders, but urination should never be done off the side of the canoe because of the increased risk of a capsize, so plan extra stops into the trip route. Young children may lack the maturity or hardiness to swim back to the canoe in the event of a capsize, or to upright or bail out a canoe, and adult passengers will have to assist them in what might be a hectic and frightening event.
Beginners should practice capsize scenarios before they practice canoeing. The most important instruction is: “never leave the boat!” After a capsize, the boat should be turned upright and held until help comes. Or, hold the boat by one arm (under the armpit) and use the other arm to swim to the closest bank.

Never fasten a child into a boat with a lifeline, it can cause drowning should the boat capsize or take on water.

Kayakers are seated right in the water, leaving them directly vulnerable to injuries from water spray and temperature or collision with objects. Children will suffer from cold and hypothermia much more quickly than adults, so be sure that they are adequately dressed and have a change of clothes available should they become wet.

Additionally, growing children will not have the strength to perform many of the assist- or self-rescue techniques that are key to kayaking and therefore cannot serve as full kayaking partners. To master the rolls needed to upright a capsized sit-in canoe takes strength, good nerves, and years of practice. These skills will be beyond all young children and can only be attained through repeated instruction once the body has developed enough strength.

Recommendations for canoe and kayak equipment rental and operation

- Children less than 45 kilograms should not ride in a tandem kayak; they should ride in a triple cockpit kayak with 2 full weight passengers.
- Use of a personal flotation device (PFD) should be required at all times for all participants.
- Children who will be sitting on the canoe floor need an appropriate cushion to protect them from the typically cool and damp canoe bottom, and to maximise comfort so they do not become uncomfortable and fussy.
- Young children can be provided with a mini paddle so that they can be active participants, even if their paddle strokes are not productive. Children paddling should also wear gloves to prevent blisters. Children should never use paddles too large for them.
- Children should be taught how to sit safely, never to lean their shoulders out over the boat rim, never to reach for an object in the water, and to ask for assistance should they wish to change position.
- Never tie a child or his PFD to a canoe or kayak, this can cause drowning.
- Do not tie too many objects or toys to the canoe, the lines can cause entanglement and drowning.
- Do not tie paddles to a kayak in white water, nor when children are present.
- Before venturing out, children and passengers should practice holding onto a capsized canoe or kayak in the water in order to improve their emergency reaction.
- Pair experienced adults with children.
- Tours with many children should have an accompanying rescue boat.

What safety factors to look for in choosing and maintaining equipment for your operation

The hull design of canoes which may be ridden in by children and novices should provide extra stability, and should be large enough for at least 2 adults to accompany minor passengers. In very calm waters, rafted (joined) canoes provide extra stability and can help mixed skill groups make progress more easily. However, once rafted canoes take on water or hit choppy conditions, they are more likely to submerge than individual
Canoes should have floating capacity even if they fill with water after a capsize. This is a standard required of the boat producer but it should be tested by the user. Try to submerge the boat by filling it with water. The boats should remain floating enough to serve as a buoyancy aid for capsized passengers. If it fails the test, then extra buoyancy should be put inside the boat in fixed form.

Deckliners on kayaks will help passengers grasp a capsized kayak. Sit on top (SOT) kayaks, which have a closed hull rather than a spray skirt, are a good alternative for growing children and novice adults. They are far easier to re-enter after a capsize and do not require bailing first. Additionally, they can be intentionally exited for a quick dip or bathroom break.

### Staff Preparedness

- Always have at least 2 staff members present – one to speak with clients and handle training, and the other to assist in entry and exit activity.
- Check all weather forecasts so you do not send clients out in deteriorating conditions.
- Be sure that your staff members are trained in CPR and first aid.
- Equipment to have on hand in a canoe includes binoculars, a VHF radio, whistles, first aid kit, an extra paddle, emergency oxygen supply, and flares.
- A kayak will require all the above items plus a throw rope and a knife to cut ropes.
- All items should be stored in waterproof float containers, or in the provided compartments of a kayak.
- If you will be leading a tour, have a safety plan in place. Large groups of children should be accompanied by a safety boat and should not roam far from shore or out in choppy conditions.
- All staff members should be able to clearly communicate the risks and safety rules to clients. A language barrier could pose a problem should an accident occur, both in terms of immediate medical care and liability for having failed to properly communicate the rules.
- Staff should very regularly check reliable sources regarding wind and water conditions.
Sailing can be a quiet leisurely way to spend a day, or a fast paced, high action adventure; and sometimes both in one day should the weather turn quickly. Sailing provides a great opportunity for children to practice co-operation and teamwork in an exciting setting, but their presence also requires captains to run an especially tight ship. Teaching children safe sailing from day one and setting a good example every time is key to turning kids into sailors.

Why sailing can be risky for children and youth

There are many danger spots on a sail boat, and it takes experience to know how to avoid them. The two primary causes of sailing fatalities are being swept overboard while not wearing a PFD and being struck in the head by the boom when it swings. Young children have longer reaction times than adults and can not process a call out to “duck” as quickly, so special precautions will have to be taken every time the boom is swung. Falls into open hatches and slips on deck are also common hazards for children. Most sailing injuries occur to the hands and to the head. Severe finger and hand injuries are often caused by improper use of the winches and cleats.

Before embarking, all crew and passengers should discuss rules and safety guidelines, including who will take on what tasks should a person go overboard or in the event of a capsize. Children should be addressed directly regarding safe and unsafe areas of the boat, where and when they should remain seated, what roles and tasks they can perform, and what the biggest hazards are.

Keeping children busy on a boat will help keep them safe. Young children can practice knots on extra rope or be put on the lookout for buoys, ships, or land. Older children can be taught how to man the VHF radio, read navigational charts, wash the decks or hold the boat on course. It is also important that safety precautions apply to a docked boat as well; accidents are just as likely to occur then, especially if adults take a more casual approach when docked.

Recommendations for sailing with children

- Use of a personal flotation device should be required for children and youth regardless of swimming skills. It is also recommended that adults wear a PFD.

Recent Cases in Europe include:

120 children capsized into the sea off the coast of Ireland during a summer regatta when a blast of strong winds caused over 90 vessels to capsize. 14 children and one adult were sent to the hospital for hypothermia, but speedy rescue efforts and strict adherence to PFD usage prevented major injuries and fatalities.

Four Swedish children were injured, one very seriously, when left onboard a sail boat which caught fire during refueling.

A 17 year old boy fell overboard while sailing on a Dutch lake with friends and his body was never recovered.

A French toddler nearly drowned in Portugal when he fell overboard into the sea without a PFD. His parents rescued him and he was sent to the hospital.
Children old enough to assist with the ropes should initially be trained and supervised in order to prevent entanglement or burns and abrasions to hands and fingers.

When sailing with children, have at least 3 adults on board, 2 to man the boat and 1 to perform a rescue if needed.

*Young children should not move about freely on a sailboat in motion.*

Children must be instructed to never jump off the boat for a swim when docked due to the danger of objects beneath the surface.

Children must have previous experience swimming and treading water in open water.

All children and passengers should be aware of the location of the propeller and the danger it presents.

Adults should follow the rules themselves to set a good example.

Adults should not drink alcohol before or while boating.

---

**What safety factors to look for in choosing and maintaining equipment**

High toe rails will help keep children and objects on board, and safety netting is recommended if young children will be on board. Low grab rails are helpful, and the use of short harnesses and life lines can come in handy, although young children should still never be left unsupervised.

---

**Staff Preparedness**

- Be sure that your staff members are trained in CPR and first aid.
- Children will need individual assistance exiting and boarding the boat.
- When leading a tour that includes several children and youth, try to assign an adult buddy to each child and have an extra staff member on hand.
- Besides the normal safety provisions onboard any boat, a boat carrying children should have extra first aid basics and child dosage medications for illnesses such as motion sickness, vomiting and fevers.
- All staff members should be able to clearly communicate the risks and safety rules to clients. A language barrier could pose a problem should an accident occur, both in terms of immediate medical care, and liability for having failed to properly communicate the rules.
- Staff should very regularly check reliable sources regarding wind and water conditions.
Personal watercraft (PWC), also known by brand names jet skis, skidoos, or wave runners, have the bad boy reputation of the waterways, but riders love the thrills they can provide. As their popularity rises, so do calls for safer zoning rules, mandatory operator licenses, stricter law enforcement, as well as regulation for noise and emissions reduction.

PWC are fast and powerful machines that require very different steering skills than other types of boats. Primarily due to risky behavior and inexperience, PWC operators are injured 8.5 times more often than those operating other motorised watercraft.

Children and youth are especially high risk users. Collisions with docks, boats, and other PWC account for the majority of the injuries. Due to the high number of collisions, PWC are the only watercraft for which blunt trauma is the leading cause of death rather than drowning. The relative accessibility of PWCs encourages inexperienced users to just “give it a whirl” casually, so it is left to the rental providers to be sure clients handle the equipment with care.

Why PWC can be risky for children and youth

Because PWCs have no brakes, cannot be steered when the throttle is off, and must be sped up in order to turn, a great deal of high-speed decision making and complex co-ordination is required.

PWC design offers no protection to riders, and most accidents to youth are known to be caused by reckless or inappropriate operation. Youth and inexperience contribute significantly to more severe accidents and injuries.

Recommendations for PWC rental and operation

- A minimum age of 18 for operators and 16 for passengers should be required, and proof of age supplied.
- Previous boater education and presentation of a boating license is highly recommended and should be mandatory.
- Record the names, home address and local contact information for each passenger.
● First time customers should be given training by your staff on the proper operational techniques of a PWC, and a short test run should be made with your direct supervision.

● Customers who claim to be experienced should be briefed on safety guidelines and local rules, and should perform a short test run to prove their ability before embarking without further supervision.

● Use of a personal flotation device (PFD) and helmets should be required at all times by all riders.

● No wake jumping should be allowed due to the increased risk of collisions and water impact injuries.

● No person who has consumed alcohol should be permitted on a PWC as operator or passenger.

● All riders should wear protective gear such as a half wetsuit. Do not allow passengers to ride with hanging items such as baggy clothes, long PFD straps, and loose long hair.

● Never apply the throttle when someone is behind the PWC as water exiting the nozzle can cause serious injury.

● PWC should only be operated in daylight hours.

● A waiver should be signed and the customer and passengers’ personal information provided in case of an accident.

Be aware that most PWC accidents occur to PWC renters with less than 20 hours experience, about 24% of which occur within their first hour of use.

What safety factors to look for in choosing PWCs for your operation

The personal watercrafts of today are heavier and therefore more stable than older models. This prevents them from becoming air-borne as easily (a high risk factor).

New models are also required to have a kill-switch tied to a lanyard (a cord to the kill-switch which is worn on the wrist or PFD), which will allow an operator thrown from a PWC to turn off the engine.

New models meant for rental operations provide a remote control kill-switch so you can control your crafts from a distance should an emergency occur, or should an operator be behaving recklessly. This is helpful but will not necessarily prevent an accident. Cutting the engine will result in loss of steering ability, and the PWC will continue moving until the momentum slows or an impact stops it.

Staff Preparedness

● Always have at least 2 staff members present – one to speak with clients and handle training, and the other to monitor PWC activity on the water.

● Be sure that your staff members are trained in CPR and first aid.

● Equipment to have on hand include binoculars for monitoring your clients, a telephone line, and 2 PWC set aside with rescue boards for transporting injured victims. Due to the frequency of tandem riding and to the frequency of collisions, it is likely that a PWC accident will result in more than one victim.

● All staff should carry or have immediate access to the remote control engine kill-switch, as should any nearby lifeguards or rescue patrol.

● One of your staff members should always be scanning the water.

● All staff members should be able to clearly communicate the risks and safety rules to clients. A language barrier could pose a problem should an accident occur, both in terms of immediate medical care and liability for having failed to properly communicate the rules.

reviewed by Royal Society for the Prevention of Accidents
Motorboating is an extremely popular activity throughout Europe, where over 3.6 million motorboats are registered. However, recreational boating is risky, especially when mixed with tourists, alcohol and inexperience. Most fatal boating accidents take place on smaller motorboats (less than 16 feet in length). Alcohol is estimated to be involved in one third of all boating fatalities. In Finland, a study showed that alcohol was involved in more than 63% of boating deaths.

Why motorboats can be risky for children and youth

While most young children wear PFDs on motorboats, very few older children are willing to, which is especially alarming because they represent a high risk group for drowning. Additionally, teenagers may be inclined to drink alcohol while boating, which will greatly increase the chance of an accident. Studies show that intoxicated passengers carry nearly as high a risk of injury as intoxicated boat operators, whether the boat is moving or not!

One of the greatest risks to children on motorboats is the propeller. Statistics show that nearly half of propeller injury victims are children. Children are likely to want to swim near the boat, or may be hurt while water-tubing behind the boat, or perhaps are more likely to fall overboard and be struck. Boats can be fitted with a pop-guard which will help protect against propeller strikes.

Most motorboat accidents are not caused by faulty equipment, but rather by careless behavior, alcohol, poor supervision, or lack of preparation for handling a small emergency such as a storm or a fall overboard.

Recommendations for boating with children

- Only people with previous boating education should be permitted to rent a boat.
- Nobody who has been drinking should be allowed to operate or ride in the motorboat.
All passengers must wear a personal flotation device.

Show all passengers the location of the propeller.

Always stop the engine and put the boat in gear before any passenger swims.

Keep a wide berth from swimmers and be alert for diver flags and zoning buoys.

Small children may be most safely seated on the floor of the boat.

Child passengers should be told beforehand how to safely enter and exit the boat, about the rules for swimming, where to sit safely, and the location of the propeller.

Instruct parents to never fasten a child to a motorboat, this could prove fatal in a capsise.

Have renters leave a plan on where they will be boating, and when they expect to return. This will aid in a search should they not return.

In case of a fall overboard, boat operators should be instructed to turn the bow of the boat toward the swimmer and immediately cut the engine to avoid propeller strikes.

If the boaters will be engaging in tow sports such as water-skiing, be sure that there will be at least 2 adults onboard, one to drive the boat, the other to monitor the tow line and the skier (see the section on tow sports for more information).

What safety factors to look for in choosing equipment for your operation

Most significant is to consider what your client base really needs. Most renters of motorboats simply want to boat freely about in the water, and will not be seeking the strongest engine or the fastest racing boat. In fact, it may be a significant safety advantage to not provide such boats! When renting to groups and families, be sure the boat is not especially prone to capsize, that the boat design allows for easy entry and exit from the water should renters wish to swim while boating, that the entry and exit points will not bring people too close in contact to the propeller, and that there are secure areas for children to be seated.

 Approximately 70% of all fatal accidents occur on motorboats where the operator has not received boating safety instruction.

Staff preparedness

All staff should be trained in CPR and first aid.

Always have at least 2 staff members present – one to speak with customers and handle training, another to monitor the water.

A life saving vehicle should be at hand.

Motorboats should be equipped with a quick stop (a cord which attaches to the steering wheel and the driver’s wrist, and which will stop the engine should the driver go overboard).

All motorboats should be supplied with the following: an oar, a fire extinguisher, and a first aid kit, and if space allows, an anchor.

All staff members should be able to clearly communicate the risks and safety rules to clients. A language barrier could pose a problem should an accident occur, both in terms of immediate medical care and liability for having failed to properly communicate the rules.
Tow sports include a range of diverse activities that require different skill levels. Surprisingly, tow sports that require the least amount of skill, such as water tubing and banana boating can actually be more dangerous due to the lack of control riders have.

Water skiing, which includes wakeboarding, barefooting, trick skiing and other similar forms, requires responsible co-operation between several people: a boat driver, a spotter, and the skier or rider. Many elements are at play in safety: the skier, other nearby water users, safe handling of the tow boat and tow rope, and safety of other passengers who may be aboard the boat.

Why tow sports can be risky for children and youth

Water skiing is an exciting pastime that families can enjoy together. Yet poor technique and lower body weight can contribute to a higher incidence of water skiing injuries to children. The most common accident scenarios include falls into water, collisions with other skiers or objects, being struck by a boat propeller, or becoming entangled in tow lines. Common injuries include rectal, vaginal, and tympanic membrane (eardrum) injuries.

Inflatablest pose a particular risk precisely because no skill is required, which (a) leads caregivers to falsely think young children can ride safely despite inexperience, and (b) prevents the riders from being able to practice any self-protective measures. Many injuries are caused by tow boat drivers misjudging distances, causing the inflatable and its riders to swing uncontrollably into boats, piers, and other objects. Multiple rider inflatables also pose a risk because the riders strike against each other when the inflatable jumps or turns, which can cause serious head injuries.

Recommendations for water ski equipment rental and operation

Skiers/Riders

- All skiers and riders must be able to swim well.
- All skiers and riders must understand and be able to use the common hand signals.
- Use of a personal flotation device (PFD) should be required for children and youth at all times.
- Beginners should only ski in enclosed, calmer waters without other users nearby.
- In cool waters, a wetsuit should be worn, and even in warmer waters a half body suit is recommended to help minimise abrasion injuries.

Recent Cases in Europe include:

A wakeboarder drowned suddenly off the coast of Wales when he fell from his board.
Girls should be advised to always wear at least a half suit to prevent injury through water entry.

Renters should have previous adequate training which they can demonstrate by answering questions regarding techniques and rules.

Water recreation helmets and grip gloves are recommended for children and youth.

Inflatable riders (banana boats, water tubes) should wear helmets and PFDs at all times.

Inflatable riders should never attempt to grab the tow rope.

Tow boat drivers

- Tow boat drivers must be experienced boaters who observe boating rules and rights of way and have training in towing.
- Drivers should team with a spotter, a boat passenger whose duty is to at all times monitor the skier, the tow rope, and the area for dangers.

Motor propeller strikes are the leading cause of serious injury to water-skiers.

- The driver should not allow other passengers to sit on the sides of the boat.
- Water should be a minimum of 1 metre deep, and the skier should never be released in shallow waters.
- Drivers should observe more conservative speed limits when towing children, not in excess of 30 kilometres an hour.
- Drivers towing inflatables should maintain conservative speeds to take slow wide turns.
- Drivers should never attempt to let an inflatable wake jump or to “whip” the riders with sharp turns.

What safety factors to look for in choosing and maintaining equipment for your operation

Equipment (including boat, tow rope, skis, bindings and medical and communications equipment) should be checked daily. Tow lines should be washed down with clean water daily to prevent wear from sea or lake water elements. Wet suits should be cleaned and disinfected with a non-allergenic cleanser between users.

Staff preparedness

- Always have at least 2 staff member present – one to speak with clients and handle training, and the other to assist in launch and landing activity and to monitor the water at all the times.
- Be sure that your staff members are trained in CPR and first aid.
- Have a rescue boat or PWC available so that skiers and riders in danger can be reached quickly if no water rescue service is in the immediate vicinity.
- Be sure all staff members, whether on shore or in water, can communicate with each other via VHF radios or a similar device.
- All staff members should be able to clearly communicate the risks and safety rules to clients. A language barrier could pose a problem should an accident occur, both in terms of immediate medical care and liability for having failed to properly communicate the rules.
- Staff should very regularly check reliable sources regarding wind and surf conditions.

reviewed by British Water Ski Federation
Kite surfing, also known as kite boarding, is a relatively new thrill-seeker’s sport and is classified as an extreme sport. Like many water recreation hobbyists, kite surfers are trying to carve out their own spot on the water, to help minimise risks.

Kite surfing requires good technique and balance, but additionally requires maturity and foresight to be able to anticipate changes in wind and sea conditions, to judge distances accurately, and to be able to handle the equipment and fully understand the use of emergency release systems. It is essential that anyone who wishes to kite surf first take lessons with a qualified instructor from a recognised organisation such as the International Kiteboarding Organisation.

While kite surfing is not recommended for children or youth under 18 years of age, age requirements at this time vary from country to country, and youth can begin supervised, structured training that will help them develop into independent kitesurfers later.

It is important that you provide a large, safe launch and landing area and provide first-hand assistance. Collisions with rocks, boats, and structures along the shore account for a majority of injuries. Further risks also include injuries to bystanders, boaters and swimmers who cross into the path of a kite or the tow lines. Therefore it is extremely important that kite surfers have space enough to surf without obstacles.

Studies show that a majority of rescue situations are caused when the surfer loses control of the kite, yet can not release the kite from the harness. This emphasizes the importance of comfortable and easy to use release buttons, as well as practice using them.

Ligament injuries and fractures to the feet and ankles are the most common injuries, followed by head injuries, and chest and knee injuries.

Why kite surfing can be risky for children and youth

Younger riders may not have enough experience to predict changing wind conditions. Tourists and non-local residents will especially have more difficulty “reading” the signs from the sky and the water. They may also not possess the judgment to handle an emergency situation properly. It is important that rental providers take whatever precautions they can beforehand to create a safe environment.

Recent Cases in Europe include:

In Portugal, a 6 year old was dragged into the sea when he crossed into a kite surfer’s lines, and was rescued by his mother.

In the Netherlands, a 12 year old girl was sent to the hospital when a kite surfer landed on top of her while she was sunbathing.

A 17 year old British youth suffered severe head injuries when he struck a wall by the seafront while kite surfing in an unzoned area.
Recommendations for kite surf rental and operation

- If you cannot walk backwards on the shore when the kite is flying, the wind is too strong.
- A minimum age of 18 is recommended.
- Surfers should have previous adequate training which they can demonstrate by answering questions regarding techniques and rules and also by a practical supervised demonstration.
- Record the names, home address and local contact information for each surfer.
- First time surfers should be given training from an approved program such as those available from International Kiteboarding Organisation. Rentals should only be made available to those with the experience equivalent to an IKO level 2.
- Use of a personal flotation device (PFD) should be required.
- No person who has consumed alcohol should be permitted to kite surf.
- All kite surfers should wear a helmet. It is also recommended riders carry a line cutting knife in order to free themselves if they become entangled in the lines.

Kitesurfers should be instructed in the following:

- Never launch or ride within 60 metres upwind of bystanders or objects.
- Avoid offshore and onshore winds.
- Never wait for a squall to develop to land the kite, land at first sight of wind trouble or bad weather.

Be aware that most kite surfing injuries occur during launching and landing, and are more likely to occur on land than in the water.

- Practice emergency scenarios to improve critical reaction time in an emergency. Surfers should become very familiar with the quick release harness and other emergency safety features.
- If a kite lands in water, be cautious to avoid entanglement in the ropes.
- Be cautious with a landed or tangled kite, they can relaunch unexpectedly.

What safety factors to look for in choosing equipment for your operation

Because this sport is still so new, modifications to the technology are being made regularly. Quick release mechanisms are standard on new kites and when deployed correctly will reduce the power in the kite significantly, thereby reducing risks to kitesurfers and those nearby. Choose kite sizes to suit a range of wind conditions and a range of body and weight types.
Equipment and launch site:
- Kites should be available in various sizes in order to accommodate differing wind conditions and skills. Injuries often occur because a kite is too big and becomes too difficult to control as the wind patterns change.
- Tow lines should be equal in length and not frayed or knotted.
- If you do not have adequate space for shore launches, consider whether water launches are possible, maintaining the minimum distance of 60 metres from swimmers and objects such as docks.
- All release mechanisms should be tested for reliability.
- Kites should be carefully inspected for tears and weak spots, and stored carefully and away from sunlight between uses.

Staff Preparedness
- Always have at least 2 staff members present – one to speak with clients and handle training, and the other to assist in launch and landing activity.
- Be sure that your staff members are trained in CPR and first aid.
- Staff should take care to inspect the equipment before and after each use.
- Be sure that bystanders keep clear of the boundaries of the kite surfing area.
- Have a rescue boat or PWC available so that surfers in danger on the water can be reached quickly if no water rescue service is in the immediate vicinity.
- Have bincolars for staff to monitor clients, as well as a loud horn and a warning light to signal changes in wind and water conditions.
- Staff should very regularly check reliable sources regarding wind and surf conditions in order to signal changes to surfers.
- All staff members should be able to clearly communicate the risks and safety rules to clients. A language barrier could pose a problem should an accident occur; both in terms of immediate medical care, and in terms of liability for having failed to properly communicate the rules.
Windsurfing is one of the more widely practiced water recreational activities because it can be done in small quiet lakes as well as in rough open water.

With proper training and safety precautions, windsurfing is relatively safe, but the unpredictable nature of environmental conditions (wind and water) plus the high speeds that even beginners can attain can quickly cause a loss of control and serious injuries through collisions or falls.

There are many new windsurfing training organisations gearing programs to children. While it is recommended that children participate in courses, it also increases the responsibility of providers to train young surfers appropriately. Children may not understand changing surf conditions or emergency situations as quickly as adults.

Many windsurfing injuries are caused by the impact of jumps and falls. Muscle and tendon sprains are very common, especially in the foot/ankle or shoulder areas. While sprains themselves are not that serious, they can cause a windsurfer too much pain to handle the equipment with the necessary strength, which can lead to a more serious problem such as a collision or inability to return to shore.

Recent Cases in Europe include:
A female windsurfer in Italy was hospitalised with head injuries and leg lacerations after colliding with a motorboat and its propeller.
A German tourist was injured windsurfing in England when he struck a waterside tree.

Why windsurfing can be risky for children and youth
Windsurfing is fairly easy to do as a beginner, but also easy to do poorly. Proper positioning and posture are an important part of preventing injuries, but it takes a lot of practice and sore muscles to get that right, leaving children vulnerable to sprains and exhaustion. Young people surfing in busy waters with boaters and swimmers may find it difficult to negotiate steering and safety rules at the same time, especially under high speeds. Young children may be disadvantaged by not having an understanding of the wind and water currents.

It is expected within the sport of windsurfing that the surfer will spend a lot of time immersed, often re-boarding and launching again in the water. A child must be a very strong swimmer in order to handle that. Additionally, training of children should emphasise the skills of re-boarding and re-launching the mast and sail alone. Balance and stamina are key to this sport. Children may have difficulty realizing they are too tired or cold to continue, so it is important that an adult maintain close verbal and visual contact to check on the child while on the water.

Recommendations for windsurf rental and operation
- All surfers must understand and observe boating rules and rights of way.
- Use of a buoyancy aid (as opposed to a full PFD) is recommended for children, youth and beginners.
- Beginners should only surf in enclosed, calmer waters.
- In cool waters, a wetsuit should be worn, and even in warmer waters a half body suit is recommended to help prevent against abrasions to the skin from the equipment.
Surfers wishing to rent equipment should have previous adequate training which they can demonstrate by answering questions regarding techniques and rules.

First time renters should be given training by your staff on the proper operational techniques of the equipment, and a short test launch should be made with your direct supervision.

Youth and novice surfers should wear protective gear such as windsurfing boots and gloves and a water recreation helmet.

Record the names, home address and local contact information for each surfer in case of an emergency.

Surfers should be instructed in the following:

- Follow boating right of way rules.
- Understand local safety signage and flags, and accepted safety symbols and cues to use for communication.
- Check twice in every direction for people or objects before gibing (turning quickly).
- Never abandon the board in an emergency. You will swim and float better when holding the board, and will be easier to find.

Come back to shore as soon as you begin to tire or feel too hot or cold.

Listen for signals regarding changing conditions. Avoid offshore and onshore winds. Cross shore winds are best.

Should the winds become too strong, roll up the sail and signal for help.

Respect speed limits. Stay within safety boundaries and avoid swimmers.

What safety factors to look for in choosing equipment for your operation

Older windsurf models were often 3 metres in length and quite heavy, too heavy for most children to handle. However, newer models are shorter and wider, which provides more stability, and smaller size sails geared toward children are being made. Be sure to not send children out with a sail that is too big or heavy for them.

Additionally, have light buoyancy aids on hand in a variety of children’s sizes. Stronger personal flotation devices are not recommended for windsurfers because they can interfere with a surfer’s ability to duck out from under the sail should they fall in the water. Children can, however, use a harness system. If footstraps are used, they should be fitted with a release mechanism to prevent injuries or entrapment in a fall. Have water recreational helmets, footwear and gloves in children’s sizes as well.

Staff Preparedness

- Always have at least 2 staff members present – one to speak with clients and handle training, and the other to assist in launch and landing activity.
- Staff should take care to inspect the equipment before and after each use.
- Be sure that your staff members are trained in CPR and first aid.
- Keep binoculars on hand for monitoring clients, as well as a loud horn and warning light to signal changes in wind and water conditions. Check conditions regularly.
- Have a rescue boat or PWC on hand so that surfers in danger can be reached quickly if no water rescue service is available in the immediate vicinity.
- All staff members should be able to clearly communicate the risks and safety rules to clients. A language barrier could pose a problem should an accident occur; both in terms of immediate medical care, and in terms of liability for having failed to properly communicate the rules.
Waterside settings are popular venues for any number of sport and leisure activities, such as walking, fishing, picnicking, and kite flying. If you will be responsible for the safety of children near water, be sure to get a thorough overview of the area in advance to determine the potential for hazards. Keep in mind that a different season, day, or hour can present different risks depending on weather and water levels. Take into account that even if swimming is not a planned part of the day, it is possible that someone will intentionally or accidentally end up in the water. Even if an immersion does not lead to a serious injury, a cold, wet child could make the continuation of a waterside adventure difficult.

Why waterside activities can be risky for children and youth

63% of children above age 4 drown in open water, compared to 26% of children 1 to 4 years of age. How you plan for the activity will depend on the ages of the children involved. Very young children will require a higher ratio of caregivers, because they cannot be expected to understand the risks, and they can drown in just centimetres of water in a matter of seconds. Whether by waterside or roadside, it is always a good rule to be sure that caregivers stay between the hazard and the children.

Older children and teens might be tempted to break the rules and go for a swim or venture into risky areas. So instead of laying down laws without explanation, explain to them what might make the water setting dangerous, for instance, large rocks hidden under the surface, or a very fast undercurrent. They will be more likely to modify their behavior if they understand the rationale behind the rules.

Many injuries related to water do not actually occur in water, but near it. Falls due to slippery or wet surfaces are among the most common waterside injuries. Common injuries to children by open water include cuts to hand and feet due to debris, shells or broken glass. While these injuries may not always be serious in themselves, even a sprained ankle or cut foot can make it difficult for a child to continue with a group activity. In addition, waterside activities often take place in nature, where assistance or transport may be difficult to arrange.

Recommendations for leading waterside activities for children and youth

- Be sure you know the ages of the participating children so you can plan age-appropriate activities.
- Check water and weather conditions and when...
possible phone a local authority the day before the trip to ask for further details on conditions.

- Have a back up plan should water or weather conditions make your activity too risky.

- Be sure you have enough caregivers to handle an emergency, such as a children falling in the water.

- Provide participants with a list of what gear they may need to bring (i.e. rain boots, sun-block, a personal flotation device).

- Be sure there is an emergency blanket in your first aid kit. Children are much more prone to hypothermia than adults when exposed to cold water.

- Check the ground for debris and glass before allowing children to go barefoot.

- When possible, attend waterside sites which have lifeguards on duty, and settle your group near the lifeguard stands.

---

**Staff preparedness**

- Be sure all staff members are trained in CPR and first aid.
- Post appropriate safety signage and guidelines by the entry and around the site to indicate potential hazards.
- Tour group leaders and caregivers should position themselves between children and the water.
- Regularly check the area for new hazards, such as eroded or water covered walking paths.
- Site managers can consider modifications to hazards, such as handrails along stairs, or barriers around risky areas for falls.
- Forbid the use of glass bottles to prevent injuries caused by broken glass, and provide an adequate number of rubbish bins.
- All staff members should be able to clearly communicate the risks and safety rules to clients. A language barrier could pose a problem should an accident occur, both in terms of immediate medical care and liability for having failed to properly communicate the rules.

---

**Most toddler drowning victims are not engaged in swimming when the**

---

**Protecting Children and Youths in Water Recreation**

**Safety Guidelines for Service Providers**

---

**European Child Safety Alliance**

33
Swimming pools pose the greatest risk of death and injury to children in a home or holiday setting. In Greece, famous for its countless beaches, almost all drownings of young children occur in swimming pools. Similarly, in Algarve Portugal, a tourist region with over 150 kilometres of coastline, 83% of child drownings over the last 7 years have occurred in swimming pools. As well, more British children drown on holiday abroad than in Britain itself, most of them in swimming pools.

However, research shows that swimming pool drownings are preventable. The two most important factors in swimming pool drowning prevention are supervision and four-sided isolation fencing. The following information targets swimming pools in private holiday residences and apartments, although many of the same measures are applicable to other large pool settings. For more information on hotel pools specifically, please see the following page.

**Swimming pools for children and youth**

Swimming pools present different dangers to children of different ages. Toddlers and very young children are at risk of falling into the pool and drowning, which usually happens in a brief lapse of supervision. Therefore, four-sided fencing is critical in blocking access to the water.

Some drownings occur when children get caught under a pool cover, where they can not be seen nor free themselves. A firm cover as opposed to a soft cover is recommended to prevent this. Pool alarms too are inadequate as a stand alone preventative measure. Alarms, which must be reset after every swim, are more likely to be incorrectly and inconsistently used, especially by tourists who might not understand the alarm system or who might not know what water level is needed for the alarm to be effective. Furthermore, most alarms have a “re-activating time” of at least 10 minutes between swims when they can not be activated until the water settles again, which leaves a frequent gap in protection. This underlines the importance of proper fencing and constant supervision for protecting young children.

Older children are at risk for head-first diving injuries. Recreational diving injuries cause 10% of all swimming injuries to children 14 years of age and younger. Recreational diving injuries also account for over 70% of all spinal cord sports/recreation injuries and occur most frequently in private pools to boys 11 - 15 years of age. A study of teenage diving victims with spinal cord injuries (causing paralysis) shows that 87% took place in swimming pools, that depth indicators were not present in 75% of the pools, and that there were...
no warning signs at 87% of the pools. In particular, pools in which there is a gradual incline have a dangerous transition area where 95% of spinal injury accidents occur. It is important that pools be adequately marked for safe diving depths.

Recommendations for residential/private swimming pool safety

- The best protection is a four-sided isolation fence with a self-closing, self-latching gate. Isolation fencing means that the pool is surrounded on all sides (rather than one side being connected to the house). The gate should be regularly checked and all guests instructed to double check its proper closure.

- Depth markers should be used poolside to indicate safe diving and wading depths. Diving in water less than 1.2 metres deep should be expressly forbidden, a safer depth for recreation divers is 1.8 metres.

- A spa or whirlpool should be covered at all times when not in use, with a fitted firm cover. Be sure the spa drain has been secured against entrapment risk (hair, small hands).

- If you will not be providing personal flotation devices, instruct guests with young children to bring them themselves.

- A telephone should be kept poolside for emergencies, and to prevent caregivers from dashing inside to take a call, leaving children unsupervised.

It is estimated that there are nearly 650 swimming pool accidents per day in the European Union.

- If you are using a pool cover or pool alarm, guests will require specific instruction and rehearsal on how to use these measures consistently and correctly.

- Instruct guests to never reduce supervision of their children regardless of the precautions that are in place.

If your pool has a waterslide, please see the section on waterslide safety.

A note on hotel pool safety

Recent trends in hotel pool design accentuate aesthetic and fun features (such as underwater jets and hidden benches) at the cost of safety. These pools are often unfenced, can not be fitted with a cover, lack depth markers, and unfortunately even lack the presence of a lifeguard.

Many families seek out vacation spots that cater to the needs of children, and a resort can appeal to potential customers by featuring a lifeguarded pool as a benefit. A European standard for swimming pool safety in design and management is currently being drafted under CEN/TC 136, and is expected to be adopted by 2009.

In the meantime, it is strongly recommended that hotel managers adhere to proven safety measures. The following measures should be implemented at any family-oriented hotel pool:

- A lifeguard on duty
- Depth markers for safe diving and wading depths
- A fenced, separate shallow wading pool suitable for families with babies and toddlers
- Secure, enclosed vents to prevent entrapment
- Standard signage with symbols for safety rules and hazards
- Availability of children’s PFDs for loan or rent
- Barriers which isolate the pool area from housing areas

reviewed by Commission de la Securite Consommateurs
In Sweden, it has been shown that waterslides cause 16% of all injuries in public pools. It is estimated that throughout Europe, 18% of all injuries at swimming pools take place on the waterslide. Smart design, clear user rules, and supervision can significantly lower the risks. Be aware that 24% of these injuries involve collisions with other riders. Therefore, simply preventing two people from being on the slide simultaneously will reduce the injury rates considerably.

For the purpose of these guidelines, waterslides which can be defined as large scale amusement park features are excluded.

**Why waterslides can be risky for children and youth**

Older children, particularly teenage boys, are much more likely to be injured on waterslides than younger children. This may be due to a combination of heavier weight and more risk-taking behavior. Even though teens 15 – 19 years of age made up 13% of all users, they sustained 33% of the injuries. Interestingly, children who are just 10% heavier (or more) than their ideal bodyweight are also much more likely to be injured. Therefore, have your staff provide these high risk users with extra supervision. One study in Sweden found that 55% of injured children were using the waterslide even though they did not know how to swim. This is why it is necessary to have a lifeguard monitoring the splash area at all times.

Collisions are most often associated with concussions and cut wounds, and high speed water entry is known to cause vaginal injuries and occasionally spinal fractures.

**Recent Cases in Europe include:**

In a case that went to Germany’s supreme court, a tour operator was found liable for the death of an 11 year old child killed at a resort in Greece when his arm got trapped in a suction pipe on the waterslide. Because the tour operator had failed to provide reasonable security and to check the construction permit, he was liable under the European Package Tours Directive, ((/)/314/EEC on package travel, package holidays and package tours). This directive determines among other things rules on information that must be given to consumers.

A 5 year old child in the Netherlands was hospitalised with a severe concussion after falling off the stairs of a waterslide.

It is difficult to prevent an accident from occurring once a child is on the waterslide, especially because they are unreachable and sometimes out of sight in an enclosed tunnel. So prevention must take place through entry and exit control, good design and supervision. Youth and inexperience contribute significantly to more severe accidents and injuries.
Recommendations for waterslide operation

- For smaller slides, children should queue in an orderly fashion prior to mounting the ladders. Larger slides that require queueing on the steps should have direct supervision of the steps.

- To prevent collisions, there should be no tandem riding and no double occupancy. Small children should not be permitted to ride on the lap of a parent or caregiver; this has proven to increase injury risk.

- Many larger slides effectively use traffic lights and barriers to control entry and prevent double riding.

- The waterslide should be directly supervised by at least one lifeguard at all times, allowing for a view of the slide entrance and the water entry area. Larger slides will require supervision at both ends and the supervisors should be able to communicate with each other.

- To avoid collisions, children should be told to clear the water entry area quickly, and not to play there.

- Children should not slide head first due to the increased risk of head and spinal injury.

- Inflatable water toys should not be used on waterslides.

- Young children who can not swim should not use the slide unless a caregiver is waiting in the splash area, for small children will be unable to reach the pool edge if the water is too deep for them to stand. Be sure that children who can not swim have a secure way to reach the edge.

What safety factors to look for in choosing a waterslide

New EU standards for both waterslide design and operation are currently under review. Safety standards for waterslides over 2 metres in height are already covered under EN 13451. The operation of waterslides in public baths is covered under public swimming pool management guidelines in most European countries. However, adhering to the following considerations will help ensure your waterslide is suitable to your swimming environment.

- When choosing a waterslide for your pool, you must consider the space available, the pool depth, and the characteristics of your frequent users.

- Keep in mind that a waterslide will likely increase your staffing needs.

- Consider what kind of supervision and maintenance you and your staff can reasonably handle.

- All slides will need to be supervised during use, plus will need to be checked daily for weaknesses, protrusions, gaps, and obstructions.

- Those with suction pumps and vents will need closer regular inspection and likely more frequent repair.

- Larger waterslides with suction pipes and vents must be adequately protected with grates and regularly inspected because vents and suction pipes are a great risk to riders.

Staff Preparedness

- All lifeguards or slide supervisors should be trained in CPR and first aid.

- If lifeguards and supervisors do not have visual and aural contact with each other, walkie-talkies or a similar device should be used.

- A telephone should be nearby for calling emergency services.

- Have a plan in place for closing a waterslide down immediately, including how to safely bring a queue of children down the ladder.

It is estimated that throughout Europe, 18% of all injuries at swimming pools take place on the waterslide.

Reviewed by Swedish Rescue Services Agency
Further resources

Further reading on safety and management of swimming pools and open water settings

International Lifesaving Federation of Europe (ILSE): European basic guidance for safety in swimming pools. (2005)


Water recreation associations and organisations

SCUBA diving and snorkeling

Divers Alert Network Europe
Address: PO Box DAN 64026 Roseto (TE) Italy
Tel: +39 (085) 893 03 33
Fax: +39 (085) 893 0050
Website: www.daneurope.org
Email: mail@daneurope.org

The British Sub Aqua Club
Address: Telford’s Quay, South Peir Road, Ellesmere Port, Cheshire England CH65 4FL
Tel: +44 151 350 6200
Website: www.bsac.org
Email: info@bsac.org

Canoe and kayak

International Canoe Federation
Address: Maison du Sport International Avenue de Rhodanie 54, C2 CH - 1007 Lausanne, Switzerland
Tel: +41 21 612 02 90
Website: www.canoeicf.com

European Canoe Association
Address: Dalmatinski 12, HR-10000 Zagreb Croatia
Tel: +385 1484 8645
Website: www.canoe-europe.org
Email: email@canoe-europe.org

Sailing

EUROSAF
European Sailing Federation
Address: 274 Bolton Road West Ramsbottom, Bury, Lancashire BLO 9PX United Kingdom
Website: www.eurosaf.org
Email: john.friend@eurosaf.org

Royal Romania Yacht Club
Address: 46 Lascar Catargui Blvd Bucharest, Sector 1
Tel: + 40 21 312 56 14
Website: www.ycrr.ro
Email: info@ycrr.ro
Kite surfing

**International Kiteboarding Organisation**
Address: Apartado 197
Cabarete Sosua Puerto Plata
57600 Dominic Republic
Website: www.ikointl.com
EU contact: International Kiteboarding Organisation - United Kingdom
Email: IKOuk@IKOintl.com

Windsurfing

**International Windsurfing Association**
Address: Mengham Cottage, Mengham Lane
Hayling Island Hampshire
PO11 9JX, United Kingdom
Tel: +44 (0) 2392 468831
Website: www.internationalwindsurfing.com
Email: iwaoffice@internationalwindsurfing.com

Motorboats and Personal Watercraft

**European Boating Association**
Address: RYA House
Ensign Way, Hamble
Southampton SO31 4YA
Tel: +44 (0) 23 8060 4100
Website: www.eba.eu.com
Email: eba@rya.org.uk

Tow sports

**International Waterski Federation**
Address: Post Box 564
6314 Unteraeggeri Switzerland
Tel: +41 41 75 20095
Fax: +41 41 75 20099
Website: www.iwsf.com
Email: iwsf@iwsf.com

**British Water Ski Federation**
Address: The Tower, Thorpe Road
Chertsey, Surrey KT16 8PH
Tel: + 44 (0) 1932 570885
Website: www.bwsf.co.uk
E-mail: gary@bwsf.co.uk

Protecting Children and Youths in Water Recreation
Safety Guidelines for Service Providers

European Child Safety Alliance
Water safety and tourism organisations

European Federation of Campingsite Organisations and Holiday Park Associations (EFCO&HPA)
Address: Pullman Court, Great Western Road Gloucester GL1 3ND United Kingdom
Tel: +44 (0) 1452 526911
Website: www.efcohpa.eu
Email: efco@bhhpa.org.uk

EFCO HPA is the representing body of the camping and caravanning industry at the European level. Membership is made up of national organisations from 22 member countries.

European Lifeguard Academy
Contact person: Stathis Avramadis
Address: El Venizelou 125A Kastella, Piraeus 18533 Greece
Tel.: + 30 210 4123323
E-mail: elagreece@gmail.com

ELA is a charity whose aim is to promote water safety through teaching swimming, lifesaving, lifeguarding, first aid, and performing research and book publication. In affiliation with and providing certification from Royal Lifesaving Society UK, and NU CO training.

International Lifesaving Federation of Europe (ILSE)
Address: Holunderweg 5 D 21365 Adendorf, Germany
Tel. 49 (0)4131 18 88 00
Fax. 49 (0)4131 18 88 40
Website: www.ilseurope.org
E-mail: secretariat@ilseurope.org

ILSE is the European branch of ILS, the world’s non-profit association of aquatic lifesavers and aquatic lifesaving organisations. ILSE, an umbrella organisation representing water safety federations throughout Europe, aims to reduce death and injury in, on or around the water.

Irish Water Safety
Address: The Long Walk Galway
Tel: + 353 91 564400
Fax: + 353 91 564700
Website: www.iws.ie
Email: info@iws.ie

IWS the national statutory and voluntary body established to promote water safety in Ireland.

Martime and Coast Guard Authority
Address: Spring Place, 105 Commercial Road Southampton, Hampshire S015 1EG United Kingdom
Tel: +44 (0) 23 80329
Website: www.mcga.gov.uk
Email: infoline@mcga.gov.uk

MCA is responsible for co-ordinating search and rescue at sea in the UK, ensuring that ships meet UK and international safety rules, and preventing accidents on the coast and at sea. “Seasmart” is MCA’s public water safety program for children and youth.

Swedish Lifesaving Services
Address: Spangelvägen 47 168 75 Bromma
Tel: + 08 654 1830
Fax: 08 651 8110
Website: www.sls.a.se
Email: anders@sls.a.se

SLS has promoted water safety for over 100 years through research and the teaching of swimming and rescue skills within Sweden and in international programmes.
<table>
<thead>
<tr>
<th>Country</th>
<th>Organization</th>
<th>Contact Person</th>
<th>Address</th>
<th>Telephone</th>
<th>Fax</th>
<th>E-mail</th>
<th>Website</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>Grosse schützen Kleine/ Safe Kids Austria</td>
<td>Mrs. G. Brandmayr</td>
<td>Auenbruggerplatz 34, 8036 Graz</td>
<td>+43 316 385 3764</td>
<td>+43 316 385 3693</td>
<td><a href="mailto:gudula.brandmayr@klinikum-graz.at">gudula.brandmayr@klinikum-graz.at</a></td>
<td><a href="http://www.grosse-schuetzen-kleine.at">www.grosse-schuetzen-kleine.at</a></td>
</tr>
<tr>
<td></td>
<td>Kuratorium fuer Verkehrssicherheit</td>
<td>Ms. U. Loewe</td>
<td>Schleiergasse 18, A-1100 Vienna</td>
<td>+43 5 77 077 1342</td>
<td>+43 5 77 077 1399</td>
<td><a href="mailto:ursula.loewe@kfv.at">ursula.loewe@kfv.at</a></td>
<td><a href="http://www.kfv.at">www.kfv.at</a></td>
</tr>
<tr>
<td>Belgium</td>
<td>Child and Family (Kind en Gezin)</td>
<td>Dr. E. van Kerschaver</td>
<td>Hallepoortlaan 27, 1060 Brussels</td>
<td>+32 2 533 12 19</td>
<td>+32 2 534 13 82</td>
<td><a href="mailto:Erwin.van.kerschaver@kindengezin.be">Erwin.van.kerschaver@kindengezin.be</a></td>
<td><a href="http://www.kindengezin.be">www.kindengezin.be</a></td>
</tr>
<tr>
<td></td>
<td>OIVO-CRIOC</td>
<td>Mrs. C. Renard</td>
<td>Paapsemiaan 20 3rd floor B-1070 Anderlecht</td>
<td>+32 2 547 06 82</td>
<td>+32 2 547 06 01</td>
<td><a href="mailto:Carine.renard@ovio-crioc.org">Carine.renard@ovio-crioc.org</a></td>
<td><a href="http://www.crioc.be">www.crioc.be</a></td>
</tr>
<tr>
<td>Czech</td>
<td>Charles University</td>
<td>Dr. V. Benesová</td>
<td>Charles University, Vúvalu 84, 150 06 Prague-Motol</td>
<td>+420 22 443 5943</td>
<td>+420 22 443 5941</td>
<td><a href="mailto:veronika.benesova@ifmotol.cuni.cz">veronika.benesova@ifmotol.cuni.cz</a></td>
<td><a href="http://www.cuni.cz">www.cuni.cz</a></td>
</tr>
<tr>
<td>Republic</td>
<td>National Institute of Public Health</td>
<td>Mrs. H. Møller</td>
<td>Svanemollevej 25, DK-2100 Copenhagen</td>
<td>+45 3920 7777</td>
<td>+45 3927 3095</td>
<td><a href="mailto:ham@si-folkesundhed.dk">ham@si-folkesundhed.dk</a></td>
<td><a href="http://www.niph.dk">www.niph.dk</a></td>
</tr>
<tr>
<td>Denmark</td>
<td>Consumer Protection Board of Estonia</td>
<td>Dr. H. Aruniit</td>
<td>Kiriku 4, 15071 Tallinn</td>
<td>+372 6201 700</td>
<td>+372 6201 701</td>
<td><a href="mailto:helle.aruniit@consumer.ee">helle.aruniit@consumer.ee</a></td>
<td><a href="http://www.consumer.ee">www.consumer.ee</a></td>
</tr>
<tr>
<td>Cyprus</td>
<td>Ministry of Health, Department of Medical</td>
<td>Dr. O. Kalakouta</td>
<td>Markou Drakou 10, Pallouriotissa, 1449 Nicosia</td>
<td>+357 22400222</td>
<td>+357 22400223</td>
<td><a href="mailto:ykalak@spidernet.com.cy">ykalak@spidernet.com.cy</a></td>
<td><a href="http://www.health.gov.mt">www.health.gov.mt</a></td>
</tr>
<tr>
<td></td>
<td>and Public Health Services</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

European Child Safety Alliance Country Partners

Protecting Children and Yous in Water Recreation Safety Guidelines for Service Providers
FINLAND
The National Public Health Institute
Contact person: Mrs. J. Markkula
Address: Mannerheimintie 166
FIN-00300 Helsinki
Tel: +358 4744 8605
Fax: +358 4744 8661
E-mail: jaana.markkula@ktl.fi
Website: www.ktl.fi

FRANCE
Min. de l' Économie, des Finances en de l' Industrie
Commission de la Sécurité des Consommateurs
Contact person: Mrs. F. Weill
Address: Cité Martignac, 111 Rue de Grenelle
75353 Paris 07 SP
Tel: +33 1 4319 5653
Fax: +33 1 4319 5700
E-mail: florence.weill@csc.finances.gouv.fr
Website: www.securiteconso.org

Institut National de Prevention et d’Education pour la Sante
Contact person: Mrs. D. Girard
Address: 42, Bd de la Libération
92303 Saint Denis Cedex
Tel: + 33 1 41 33 22 35
Fax: 33 1 49 33 23 90
E-mail: delphine.girard@inpes.sante.fr
Website: www.inpes.sante.fr

GERMANY
Bundesarbeitsgemeinschaft Mehr Sicherheit für Kinder e.V. (Safe Kids Germany)
Contact person: Dr. S. Märzheuser
Address: Heilsbachstrasse 13
Bonn 53123
Tel: +49 228 289808 56
Fax: +49 228 289808 60
E-mail: stefanie.maerzheuser@web.de
Website: www.kindersicherheit.de

GREAT BRITAIN (UK)
RoSPA, Royal Society for the Prevention of Accidents
Contact person: Mrs. J. Cave
Address: Edgbaston Park,353 Bristol Road,
Birmingham B5 7ST
Tel: +44 121 248 2129
Fax: +44 121 248 2001
E-mail: jcave@rospa.com
Website: www.rospa.org.uk

Child Accident Prevention Trust
Contact person: Mr. M. Hayes
Address: Cloister Court 22 – 26 Farringdon Lane
EC1R3AJ London
Tel: + 44 20 7608 7364
Fax: 44 20 7608 3674
E-mail: mhayes@capt.org.uk
Website: www.capt.org.uk
GREECE

Center for Research and Prevention of Injuries
Medical School, University of Athens
Contact person: Dr. A. Terzidis
Address: Mikras Asias Street, Goudi 75, 115 27 Athens
Tel: +30 210 746 2187
Fax: +30 210 777 2105
E-mail: epetrid@med.uoa.gr
Website: www.cc.uoa.gr/socmed/hygien/cerepri

HUNGARY

National Institute of Child Health
Contact person: Dr. G. Pall
Address: Dioszegi ut 64 Hongarije H 1119 Budapest
Tel: +36 1365 1540/131
Fax: +36 1209 3337
E-mail: gabipall@ogyei.hu
Website: www.ogyei.hu

ICELAND

Department of Child Safety
Contact person: Mrs. H. Storgaard
Address: Baronsstig 47, 101 Reykjavik
Tel: 354 552 4450
Fax: 354 585 1300
E-mail: herdis@arvekni.is
Website: www.arvekni.is

IRELAND

Population Health: Children and Young People’s Team HSE
Contact person: Mr. S. Denyer
Address: 3rd Floor Bridgewater House Rockwood Parade, Sligo
Tel: + 353 71 91 47754
Fax: + 353 71 91 38335
E-mail: sean.denyer@mailb.hse.ie
Website: www.hse.ie

ISRAEL

Hebrew University-Hadassah, Hadassah School
Public Health & Community Medicine
Department of Social Medicine
Mother/Child Health Unit
Contact person: Dr. R. Gofin
Address: PO Box 12272, 91120 Jerusalem
Tel: +972 2 677 7502
Fax: +972 2 643 1086
E-mail: gofin@cc.huji.ac.il

Beterem/Safe Kids Israel
Contact person: Mrs. L. Endy Findling
Address: PO Box 7050 49170 Petach Tikva
Tel: + 972 3 926 3110
E-mail: liri@berterem.org
Website: www.beterem.org

ITALY

Ministeria della Salute (Ministry of Health)
Contact person: Dr. G. Salamina
Address: Via della Civiltà Romana 7 00144 Roma
Tel: +39 06 59941
E-mail: g.salamina@sanita.it
Website: www.ministerosalute.it
MALTA

Ministry of Health
Office of the Director General (Health)
Contat person: Dr. K. Vincenti, Dr. R. Pace Asciak
Palazzo Castellania
15 Merchants Street
MT-CMR 02 Valletta
Tel: + 356 22 99 24 22
Fax: + 356 21 25 02 31
E-mail: karen.vincenti@gov.mt
Website: www.health.gov.mt

NORTH IRELAND

RoSPA, Royal Society for the Prevention of Accidents
Contact person: Mrs. H. Holland
Nella House, Dargan Crescent, Belfast
BT3 9JP
Tel: +44 28 9050 1160
Fax: +44 28 9050 1164
Email: HHolland@rospa.com
Website: www.rospa.co.uk

NETHERLANDS

Consumer Safety Institute
Contact person: Mrs. I. Buuron
Address: Postbus 75169,
1070 AD Amsterdam
Tel: +31 20 5114 545
Fax: +31 20 5114 510
E-mail: ibuuron@consafe.nl
Website: www.veiligheid.nl

NORWAY

Norwegian Safety Forum
Contact person: Dr. J. Lund
Address: PO Box 2473 Solli, 0202 Oslo
Tel: +47 22 23 44 22
Fax: +47 23 28 43 11
Email: johan.lund@fnh.no
Website: www.skafor.org

POLAND

Jagiellonian University, Medical college
Contact person: Dr. M. Malinowska-Cieslik
Address: Institute of Public Health
UL. Grzegorzecka 20
31-531 Krakow
Tel: +48 12 422 13 92
Fax: +48 12 421 74 47
Email: mxciesli@cyf-kr.edu.pl

PORTUGAL

APSI (Portuguese Association for Child Safety and Injury Control)
Contact person: Mrs. S. Nascimento
Address: Vila Berta 7-r/c Esq.,
1170-400 Lisbon
Tel: +351 21 887 01 61
Fax.: +351 21 888 16 00
E-mail: snascimento@apsi.org.pt
Website: www.apsi.org.pt

SCOTLAND

NHS Health Scotland
Contact person: Mrs. H. Ryann
Address: Woodburn House, Canaan Lane
EH10 4SG Edinburgh
Tel: + 44 131 536 5564
E-mail: helen.ryann@health.scot.nhs.uk
Website: www.show.scot.nhs.uk

RoSPA, Royal Society for the Prevention of Accidents
Contact person: Mrs. E. Lumsden
Address: Livingstone House 43 Discovery Terrace
Heriot-watt University Research Park
EH14 4AP Edinburgh
Tel: +44 131 449 9379
Fax: + 44 131 449 9380
E-mail: elumsden@rospa.com
Website: www.rospa.com
European Child Safety Alliance Country partners  con’t...

SPAIN

Spanish Pediatric Association
Hospital Universario 12 de Octubre
Contact person: Dr. J. Parise
Address: Avda. De Cordoba s/n
28041 Madrid
Tel: + 34 91 859 2441
Fax: + 34 91 390 8375
E-mail: jjparise@yahoo.com

Ministerio de Sanidad y Consumo
Contact person: Dr. V. Lizarbe Alonso
Address: Paseo del Prado 18-20
28071 Madrid
Tel: +34 91 596 4167/8
Fax: +34 91 596 4195
E-mail: vlizarbe@msc.es
Website: www.msc.es

SWEDEN

Swedish Consumer Agency (Konsumentverket)
Contact person: Mrs. L. Strindberg
Address: S-11887 Stockholm
Tel: +46 8 429 0571
Fax: +46 8 429 8900
E-mail: lotten.strindberg@konsumentverket.se
Website: www.konsumentverket.se

Swedish Rescue Services
Contact person: Mr. R. Svanegard
Address: Norra Klaragatan 18
65180 Karlstad
Tel: + 46 54 13 52 57
Fax: + 46 54 13 56 00
Email: r.svanegard@srv.se
Website: www.srv.se

SWITZERLAND

Swiss Council for Accident Prevention (BFU)
Contact person: Dr. U. Ewert
Laupenstrasse 11
CH-3001 Bern
Tel: + 41 31 390 22 06
Fax: + 41 31 390 22 30
E-mail: u.ewert@bfu.ch
Website: www.bfu.ch

WALES

Cardiff University Wales
Department of Child Health Academic Centre
Contact person: Dr. J. Sibert
Address: University Hospital of Wales
Health Park CF144XN Cardiff
Tel: +44 29 2071 6932
Fax: +44 29 2035 0140
E-mail: sibert@cf.ac.uk
Website: www.cf.ac.uk

Protecting Children and Youths in Water Recreation
Safety Guidelines for Service Providers
The following official reports and publications on European tourism and safety of services were used in the creation of this document. For a complete list of resources used, please contact the European Child Safety Alliance.


This guide was written and produced Natalie Norman and Joanne Vincenten of the European Child Safety Alliance, Eurosafe. A number of individuals helped in a variety of ways to complete this publication by providing editorial review and technical information for specific injury issues. We would like to thank Morag MacKay for her many contributions, Joanna Haines for her design work, Inge Ronde for her administrative support, and the Alliance country partners for reviewing the guide and contributing many national examples.

We would like to thank the following individuals from injury prevention and water organisations for lending their expertise to review the first draft in entirety and for allotting time for telephone consultations: Stathis Avramadis of the European Lifeguard Academy, Klaus Wilkens and Peter Sieman of the International Lifesaving Federation Europe; David Foster of Royal Society for the Prevention of Accidents; and Peter Braun of the Maritime and Coast Guard Authority, UK.

We would also like to thank the following individuals for contributing their expertise and editorial to review and discuss specific sections: Den Bannister, European Federation of Campsite Organisations and Holiday Park Associations; Robert Chantry-Price and John Mason, Intertek RAM Ltd.; Steve Davison, International Kiteboarding Organisation UK; Odile Finkelstein, Commission de la Securite des Consommateurs; John Friend, European Sailing Federation; Peter Gallagher, Irish Windsurfing Association; Martin Hammond, The British Sub Aqua Club; Peter Koren, The Norwegian Safety Forum; Nadine Mayer, Deutsche Motorboot Verband B-W; Segolene Paquet, International Canoe Federation; Ruth Ruiz, Eurocare; Roger Sweeney, Irish Water Safety; and Anders Wernesten, Swedish Rescue Services.
Protecting **Children** and **Youths** in **Water Recreation**

**Safety Guidelines for Service Providers**

These guidelines aim to encourage safe participation of children 0 to 18 years of age in water recreation activities throughout Europe. “Protecting children and youth in water recreation” is targeted to service providers such as water sport trainers and equipment hirers, pool and beach managers, tourism property owners, and caregivers.

Developed with input from expert organisations in the European water recreation, water safety and tourism industries, the guidelines present facts on recreational injuries and drownings in Europe and lay out concrete and simple measures which service providers can implement to protect their business and young customers.

 Included is a risk assessment plan which was developed especially for water recreation service providers by applying the European Commission’s criteria for safe services specifically to water-related hazards to children. The guidelines also contain informative fact sheets on water recreation injuries and drownings in Europe, and on the roles of alcohol and tourism to such injuries.

Specific risks and recommendations for snorkeling, SCUBA diving, canoeing, kayaking, sailing, motorboating, personal watercraft, tow sports, kite surfing, windsurfing, as well as waterside, swimming pool and waterslide safety are outlined in detail.

No activity is without risk, and sometimes risk is part of the fun, but by implementing the simple measures provided in these guidelines, you can protect your business, improve your profile to customers, and provide them with the fun they are seeking.