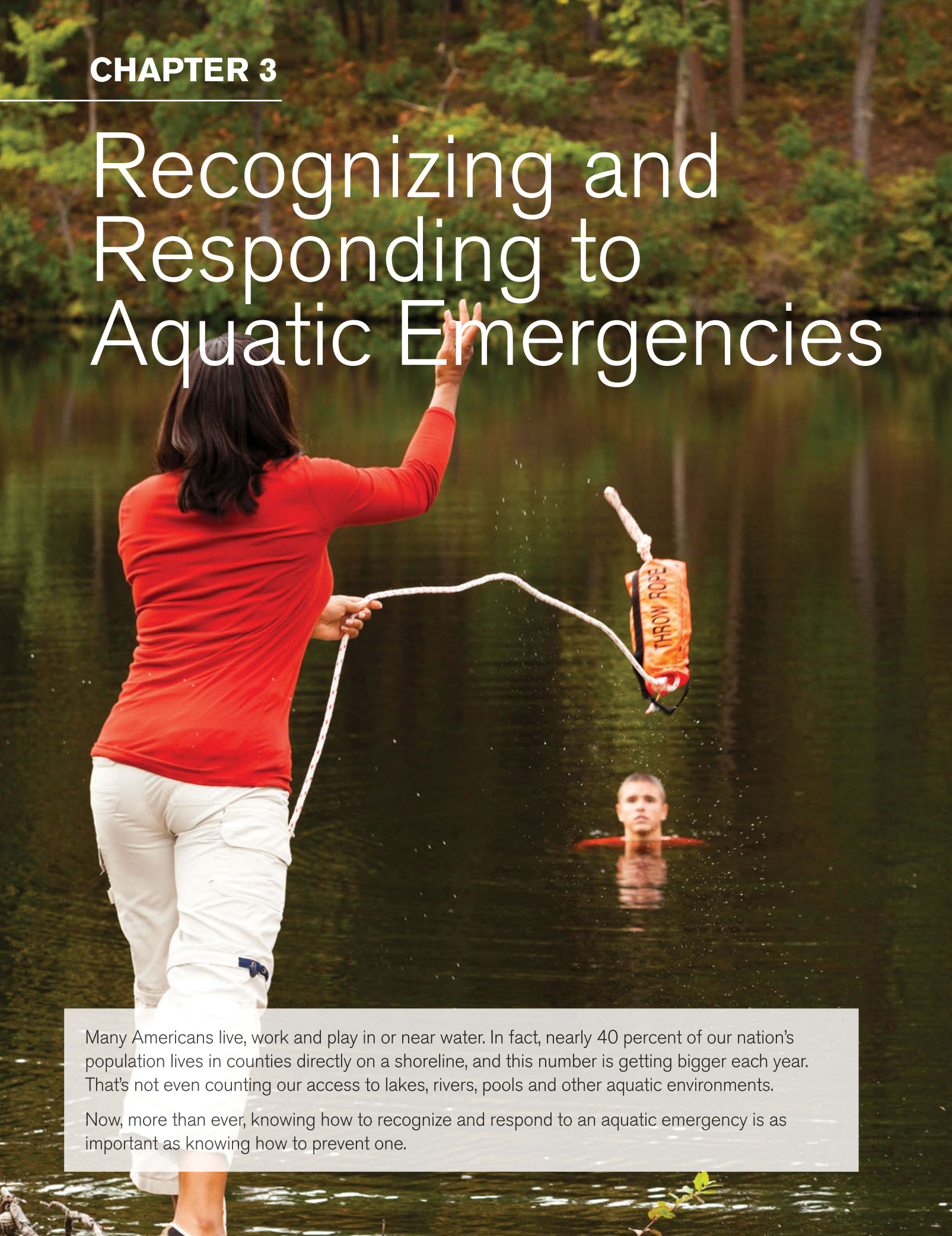
CHAPTER 3

Recognizing and Responding to Aquatic Emergencies



Many Americans live, work and play in or near water. In fact, nearly 40 percent of our nation's population lives in counties directly on a shoreline, and this number is getting bigger each year. That's not even counting our access to lakes, rivers, pools and other aquatic environments.

Now, more than ever, knowing how to recognize and respond to an aquatic emergency is as important as knowing how to prevent one.

Recognizing an Emergency

An emergency can happen to anyone in or around the water, regardless of swimming ability. For example, a strong swimmer can get into trouble in the water because of sudden illness or injury. Or, a nonswimmer playing in shallow water can be knocked down by a wave or pulled into deeper water by a rip current. The key to recognizing an emergency is staying alert and being able to recognize when a person is having trouble in the water.

Staying Alert

Staying alert means using all your senses when observing others in and around the water. For example, you may see a swimmer acting oddly. Or, you may hear a scream or sudden splash. Keep in mind that the signals of an emergency might be what you *do not* see or hear. For instance, it may surprise you to learn that most people who are in trouble in the water cannot or do not call for help. They spend their energy just trying to keep their heads above water to get a breath. Likewise, a person who is experiencing a medical emergency might slip underwater quickly and never resurface.

The more alert you are, the faster you can respond to an emergency and potentially save a life.

Identifying When a Person Needs Help

A person who needs help may be drowning, or he may be swimming but in distress. It is essential to identify what is going on so you can respond appropriately. **Table 3-1** compares and summarizes the typical behaviors and appearances of distressed swimmers, drowning victims who are active and drowning victims who are passive. Early recognition and response greatly increases the chances of survival for a person who is drowning **(Fig. 3-1)**.

Fig. 3-1 Following the steps outlined in *Chain of Drowning Survival* from the American Red Cross can increase a person's chances of surviving a drowning incident.

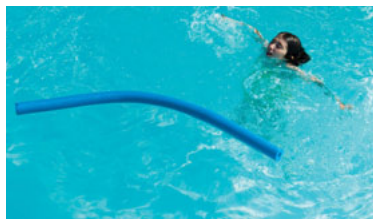
Drowning Victim—Active

A drowning victim who is struggling to remain at the surface of the water has distinctive arm and body positions. These are efforts to try to keep the mouth above the water's surface in order to breathe. This universal behavior is called the *instinctive drowning response*.

A drowning victim who is struggling to remain at the surface of the water cannot call out for help because his efforts are focused on getting a breath **(Fig. 3-2)**. In fact, a drowning in progress is often silent. The person works to maintain a vertical position and keep his

Fig. 3-2 A drowning victim who is struggling to stay at the surface of the water and to breathe has no energy left to call out for help.

Table 3-1 Recognizing When a Person Needs Help

	Distressed Swimmer	Drowning Victim—Active	Drowning Victim—Passive
			
Head position	Above water	Tilted back with face looking up	• Face-up or face-down in the water • Submerged
Appearance	• Trying to support self by holding or clinging to a lane line or safety line • Concerned facial expression	• Struggling to keep or get the head above the surface of the water • Struggling to reach the surface, if underwater • Panicked or wide-eyed facial expression	• Limp or convulsion-like movements • Floating or submerged • Eyes may be closed • If submerged, may look like a shadow
Breathing	Breathing	Struggling to breathe	Not breathing
Arm and leg action	• Floating, sculling or treading water • May wave for help	Arms at sides or in front alternately moving up and pressing down	None
Body position	Horizontal, vertical or diagonal, depending on means of support	Vertical, leaning slightly back	Horizontal or vertical
Locomotion	• Little or no forward progress • Increasingly less able to support self	None	None
Sounds	Able to call for help but may not do so	Cannot call for help	None
Location in water	At the surface	At the surface, underwater or sinking	Floating at the surface, sinking or submerged on the bottom

face above the water by pressing down with his arms at his sides or in front. However, the person's mouth may slip underwater, often repeatedly. Young children may tip forward into a horizontal face-down position and be unable to keep the mouth above the surface of the water at all. The person will not make any forward progress in the water, and may only be able to stay at the surface for 20–60 seconds, if at all. The person may continue to struggle underwater but eventually will lose consciousness and stop moving.

Some drowning victims are not at the surface when the problem occurs. For example, the person may slip into water over his head, incur an injury, or experience a sudden illness and struggle underwater to reach the surface. These drowning victims may look like they are playing or floating underwater. It may be difficult to recognize a drowning victim when the person is underwater.

Drowning Victim—Passive

Some people who are drowning do not struggle. They suddenly slip underwater (for example, as a result of a sudden illness or injury or a dangerous behavior such as hyperventilation and prolonged underwater breath-holding). The use of alcohol or other drugs is also frequently a contributor to this type of drowning incident.

Fig. 3-3 A drowning victim who is underwater can be difficult to see. The person may look like a shadow, a smudge or an object like a towel.

A person who is drowning but not struggling may be floating face-down at the surface of the water, or she may be underwater in a face-down or face-up position, or on her side. The person may be limp or have slight convulsive movements. The person is not moving or breathing. It can be difficult to see a drowning victim who is underwater, especially if the person is at the bottom of the pool or in a natural body of water where the water is murky. In a pool, the person may look like a shadow or an object like a towel on the bottom **(Fig. 3-3)**.

Distressed Swimmer

A distressed swimmer is someone who is not drowning, but needs help. A swimmer can become distressed for several reasons, including exhaustion, cramping or a sudden illness. A swimmer who is distressed may be afloat and able to breathe and call for help. However, you will notice that she is making little or no forward progress. She may be treading water or clinging to a line for support. A distressed swimmer may be unable to reach safety without assistance. Without help, a swimmer in distress may soon become a drowning victim.

Responding to an Emergency

In an emergency, your role is to recognize the emergency, decide to act, call emergency medical services (EMS) personnel for help and give assistance consistent with your knowledge and training until EMS personnel arrive and take over **(Box 3-1)**. If you work at an aquatic facility, you are a member of the safety team, which works to prepare for, prevent and respond to emergencies. As such, you are responsible for being familiar with the facility's emergency action plan, as well as your role in implementing it should an emergency occur.

Deciding to Act

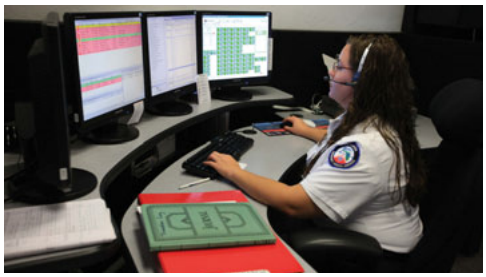
In an emergency, deciding to act is not always as simple as it sounds. People are often slow to act in an emergency because they are not exactly sure what to do or they think someone else will take action. In an emergency situation, your decision to act could make the difference between life or death for the person who needs help.

Box 3-1

The Emergency Medical Services (EMS) System

The emergency medical services (EMS) system is a network of professionals linked together to provide the best care for people in all emergencies, both in and out of the water.

The system begins when someone sees an emergency and decides to take action by calling 9-1-1 or the local emergency number.



This action allows the EMS dispatcher to take down information about the emergency and provide it to the trained EMS professionals who will respond to the scene.

EMS professionals may include paramedics (trained to give advanced-level medical care at the scene of an emergency); emergency medical technicians (EMTs; trained to give mid-level medical care at the scene of an emergency); emergency medical responders (EMRs; trained to give basic-level care at the scene of an emergency); police officers; firefighters and other professional rescuers (for example, ski patrollers, park rangers).

Once on the scene, these professionals will take over the care of the person, including transportation to a hospital or other facility for the best medical care if needed.

In the excitement of an emergency, it is easy to become frightened or confused about what to do. Remember to stay calm; you can help. In any emergency situation, follow the three action steps, **CHECK—CALL—CARE:**

- **CHECK** the scene and the person.
- **CALL** 9-1-1 or the local emergency number.
- **CARE** for the person. Give care according to the conditions that you find and your level of knowledge and training.

Let's take a look at the first step: check. First, check the scene. Be on the lookout for other victims, and for signals that the scene is unsafe. Look for clues as to what happened. Also check

for bystanders who may be able to help you. *Never* rush into a dangerous situation, or you risk becoming a victim yourself. After you check the scene, check the person.

An aquatic emergency can take place on land or in the water. If the person is in the water, you must decide whether he or she needs help getting out of the water. Only help the person get out of the water if you can do it safely (for example, by using a reaching or throwing assist, which you will learn about later in this chapter). Do not enter the water to help the person unless you are specifically trained to perform in-water rescues. Your safety must be your top priority. If you cannot safely help the person out of the water, get help from a trained responder, such as a lifeguard, or call 9-1-1 or the local emergency number and wait for help.

Calling for Help

Once you have checked the scene and the person, take the second emergency action step: call 9-1-1 or the local emergency number to activate the EMS system. Whenever possible, send another person to make the call while you continue to stay with the person. Whether you make the call yourself or send someone else to call, be prepared to give the dispatcher the following information:

- Your name (or the name of the person making the call)
- The telephone number of the phone being used
- The location of the emergency (the exact address, city or town; nearby intersections or landmarks; the name of the facility)
- A description of what happened
- A description of the number of victims
- A description of what help has been given so far

Stay on the phone with the dispatcher until the dispatcher tells you it is all right to hang up. The dispatcher may need additional information from you, or he or she may be able to help by giving you first aid instructions over the phone.

The following conditions and situations are serious and require a call to 9-1-1 or the local emergency number to activate the EMS system:

- Fatal or nonfatal drowning
- Injury or suspected injury to the head, neck or spine
- Trouble breathing
- Persistent chest or abdominal pain or pressure
- Unconsciousness
- Severe bleeding, vomiting blood or passing blood
- Seizures that occur in the water or last more than 5 minutes
- Severe headache or slurred speech
- Poisoning
- Possible broken bones
- Multiple injuries

If you are unsure about whether professional help is needed, act on the side of caution and activate the EMS system.

Giving Assistance

The final emergency action step is to give care according to the conditions that you find and your level of knowledge and training **(Box 3-2)**. Make the person comfortable until EMS personnel arrive and take over.

Box 3-2

Learn Lifesaving Skills!

Many different types of first aid emergencies can occur in aquatic settings, ranging from the relatively minor (such as an abrasion or jellyfish sting) to the life-threatening (such as sudden cardiac arrest or anaphylaxis). People who experience sudden cardiac arrest or other serious first aid emergencies have a better chance of surviving when those around them know how to respond and give care until trained personnel arrive to take over. Unfortunately, many people do not know how to provide basic first aid and emergency cardiovascular care or are uncomfortable providing this care.

Red Cross first aid, CPR and AED (automated external defibrillator) training programs are designed to give you the confidence to respond in an emergency situation with skills that can save a life. By taking a Red Cross course, you learn from the best. Red Cross materials are developed in collaboration with leading educational and medical authorities and incorporate the latest science in first aid and emergency cardiovascular care. Courses are taught by certified instructors and, upon successful completion, participants earn nationally recognized certificates. Spanish-language courses are also available. To enroll in a Red Cross first aid, CPR and AED class visit www.redcross.org.

In an aquatic emergency such as drowning, knowing how to do full CPR (cycles of chest compressions and rescue breaths) is critical.

Basic Water Rescue: Helping Others in an Aquatic Emergency

Learning basic water rescue skills is important for anyone who lives, works or plays near water. There are many different ways to help a person who is in trouble in the water to safety. The method you will use depends on your level of training and the situation. Always take care to choose an assist that helps the person, while keeping you as safe as possible as you respond.

Reaching and Throwing Assists

Reaching and throwing assists allow you to help a conscious person who is in trouble without entering the water yourself. These types of assists are the safest assists for responders who are not professionally trained lifeguards to perform during an aquatic emergency. They are also the best type of assist to use when someone has fallen through ice **(Box 3-3)**. To keep yourself safe, always remember "*Reach or throw, don't go!*"

When doing a reaching or throwing assist:

- Start the rescue by talking to the person, if possible. Let the person know help is coming.
- Use gestures to communicate with the person if it is too noisy or if the person is too far away to hear.
- Tell the person what he or she can do to help with the rescue, such as grasping a line, rescue buoy or other floating device.
- Encourage the person to move toward safety by kicking or stroking. Some people are able to reach safety by themselves with calm encouragement from a person on the deck or shore.

Reaching Assists

If the person is close enough, use a reaching assist to help him or her out of the water. To do a reaching assist, use any available object that will extend your reach and give something for the person to grab so you can pull the person in. Items that work well for reaching assists include

a pole, an oar or paddle, a tree branch, a shirt, a belt or a towel. Community or hotel pools and recreational areas often have reaching equipment, such as a shepherd's crook (an aluminum or fiberglass pole with a large hook on one end), located close to the water.

You can perform a reaching assist from the pool deck, pier surface or shoreline. If no equipment is available and you are close enough, you may be able to perform a reaching assist by extending your arm to the person. You can also perform a reaching assist from a position within the water by extending an arm or a leg to the person, if you are already in the water and you have something secure to hold onto. **Water Rescue Skill Sheet 3-1** describes how to perform a step-by-step reaching assist.

Throwing Assists

A throwing assist involves throwing an object that the person can grasp so you can pull him or her to safety. A floating object with a line attached is ideal for a throwing assist; however, lines and floats can also be used alone. Rescue devices that are meant for throwing assists include a heaving line, ring buoy, throw bag or heaving jug **(Fig. 3-4)**. In some situations, you may have to improvise with an object that floats but is not specifically meant for throwing assists, such as a rescue tube (a vinyl, foam-filled tube with an attached tow line that is standard equipment for lifeguards), life jacket or cooler. If possible, keep a throwing object with a coiled line in a prominent location that is accessible to the water, so that anyone can quickly access it to throw to someone in trouble. All boats should have rescue equipment for throwing assists onboard. **Water Rescue Skill Sheet 3-2** describes how to perform a step-by-step throwing assist.

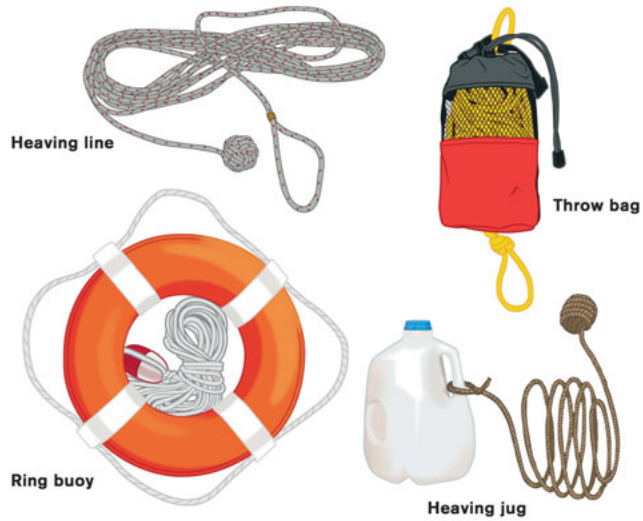


Fig. 3-4 A variety of items can be used for a throwing assist.

Box 3-3

Using a Reaching or Throwing Assist to Help a Person Who Has Fallen Through Ice

Never go out onto the ice in an attempt to rescue a person who has fallen through the ice. Because a person has just fallen through it, the ice is unsafe. A responder who rushes out onto the ice is likely to become a victim as well. Instead, follow these guidelines:

1. Send someone to call EMS personnel immediately. Trained responders may be needed to get the person out of the ice. Even if you are successful in rescuing the person from the ice without the help of EMS personnel, the person will still need medical care.
2. From a secure place on land, try a reaching or throwing assist. Use anything at hand that the person can grasp for support, such as a tree branch, pole, life jacket or weighted rope. Act quickly. Within 1 minute, the person's hands may be too numb to grasp the object.
3. Pull the person to shore and give first aid for hypothermia. If it is not possible to safely pull the person to shore, reassure the person and make sure he or she is as secure as possible until help arrives.

Wading Assists

If a throwing assist does not work and the water is shallow enough for wading (that is, less than chest deep), you can try a wading assist **(Fig. 3-5)**. A wading assist involves wading into the water and using a reaching assist to help pull the person to safety. Objects that may help extend your reach and give the person something to grab on to include rescue equipment (such as a rescue tube or ring buoy), kickboard, life jacket, tree branch, pole, air mattress or paddle.

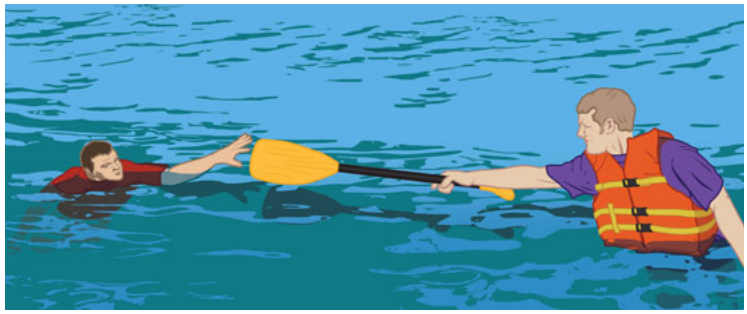


Fig. 3-5 A wading assist can be used when the water is less than chest deep and there are no conditions that make wading dangerous. For your own safety, wear a life jacket when performing a wading assist. Take an object to extend to the person to hold on to so that the person does not have to hold on to you.

You can also use a wading assist to rescue an unconscious or submerged person who is in water that is less than chest deep. When the person is unconscious or submerged, instead of using a reaching assist to pull the person to safety, use a flotation device to keep the person at the surface of the water and support him while you tow him to safety.

For your own safety, wear a life jacket if one is available when attempting a wading assist. Only perform a wading assist in water that is less than chest deep. If a current or soft bottom makes wading dangerous, do not enter the water. **Water Rescue Skill Sheet 3-3** describes how to perform a step-by-step wading assist.

Sloped Entry Assists

A walking assist or a beach drag may be used to remove a person from shallow water along a sloping beach, shore or pool entry. A walking assist can also be used to help a person out of the water using the steps of a pool. Use a walking assist when the person is conscious and able to support some or all of his weight. Use a beach drag when the person is unconscious or otherwise unable to bear weight. **Water Rescue Skill Sheet 3-4** describes how to perform these step-by-step assists.

Two-person Removal from the Water Using a Backboard

A backboard is the standard piece of equipment used by lifeguards to remove a person from the water when the person is unable to exit the water on his or her own or when the person has a possible injury to the head, neck or spine. Usually this type of rescue is performed by two lifeguards, but if a second lifeguard is not available, a bystander may be required to assist. **Water Rescue Skill Sheet 3-5** describes how to assist a lifeguard in removing a person from the water using a backboard.

Manual In-line Stabilization

Manual in-line stabilization is a technique used to minimize movement of a person's head, neck and spine when a head, neck or spinal injury is present or suspected **(Box 3-4)**. Injuries to the head, neck or spine can be serious because they may result in lifelong disability

Box 3-4

Recognizing Head, Neck and Spinal Injuries

If you are unsure whether a person has a head, neck or spinal injury, think about what the person was doing and what happened to cause the injury when checking the scene. In aquatic settings, head, neck or spinal injuries are usually caused by high-impact, high-risk activities, such as:

- Entering head-first into shallow water
- Falling from greater than standing height
- Entering the water from a height, such as a diving board, waterslide, embankment, cliff or tower
- Striking a submerged or floating object
- Receiving a blow to the head
- Colliding with another swimmer
- Striking the water with high impact, such as falling while water skiing or surfing

In addition to noting the circumstances of the injury, observe the person for signals of a possible head, neck or spinal injury. These include:

- Changes in level of consciousness
- Severe pain or pressure in the head, neck or spine
- Loss of balance
- Partial or complete loss of movement of any body part
- Back pain, weakness, tingling or loss of sensation in the hands, fingers, feet or toes
- Persistent headache
- Unusual bumps, bruises or a depression on the head, neck or spine
- Impaired breathing or vision
- Nausea or vomiting
- Bruising of the head, especially around the eyes and behind the ears
- The person is holding his head, neck or back
- Behavior resembling intoxication

(e.g., paralysis) or death. If possible, let a lifeguard or a person with more advanced training respond first. However, if such a person is not around, you will need to act. If you suspect a head, neck or spinal injury, follow these general guidelines:

- Have someone call 9-1-1 or the local emergency number immediately.
- If the person is in the water and breathing, use an in-line stabilization technique to minimize movement of the head, neck and spine and keep the person's face out of the water. If the person is on land, place your hands on both sides of the person's head and support it in the position in which you found it. Continue to immobilize the person's head until EMS personnel arrive and take over.
- If the person is in the water and not breathing, immediately remove the person from the water and give care according to the conditions you find and your level of knowledge and training.

Manual in-line stabilization techniques that are used to minimize movement of the person's head, neck or spine when the person is in water include the hip and shoulder support and the head splint. The hip and shoulder support (**Water Rescue Skill Sheet 3-6**) is used for a person who is face-up. The head splint (**Water Rescue Skill Sheet 3-7**) provides better stabilization than the hip and shoulder support and can be used for a person who is face-up or face-down.

Basic Water Rescue: Helping Yourself in an Aquatic Emergency

An aquatic emergency can happen to anyone, even someone who has a great deal of experience being in and around the water. A swimmer can develop a physical condition, such as cramping or fatigue, which hinders his or her ability to keep swimming. A boating accident, mechanical malfunction or rough water can cause the craft to capsize, tossing its occupants into the water. In fact, many people who find themselves involved in an aquatic emergency never intended to go into the water in the first place. A car may go off the road into a body of water, or ice may crack, causing an ice skater to fall through. If you find yourself in trouble in the water, knowing what you can do to help yourself is imperative.

Relieving Muscle Cramps

Muscle cramps can occur when muscles become tired or cold from swimming or other activity. A cramp is an involuntary muscle contraction, usually in the arm, foot or calf. A muscle cramp can occur at any time, in any depth of water. If you develop a muscle cramp in shallow water, try to relax the muscle by stopping or changing the activity. Get out of the water, begin floating or change to a different swimming stroke. Changing the position of the affected limb to stretch the cramped muscle and massaging the area may also help to relieve the cramp. If you develop a muscle cramp in deep water, take a deep breath, roll forward so that you are face-down and float. Extend your leg and flex the ankle or toes while massaging the cramped muscle **(Fig. 3-6)**.

Abdominal cramps are rare, but can happen. If you experience an abdominal cramp, try to relax and maintain your position in the water until the cramp passes.

Fig. 3-6 If you experience a muscle cramp in deep water, position yourself face-down, extend the affected leg, flex the ankle or toes and massage the area.

Using Clothing as a Flotation Aid

If you find yourself in the water fully clothed and without a life jacket, you may be able to use an article of clothing that you are wearing as a makeshift flotation device **(Fig. 3-7)**. Once filled with air, articles of clothing such as a shirt, jacket or pants can aid floating, as well as provide protection against cold water, marine life, sun exposure and fuel spills. If shoes are light enough to allow swimming comfortably, leave them on. But if your shoes are too heavy or if you intend to use your pants as a flotation device, assume a jellyfish float position (see Chapter 5, Fig. 5-6A) and remove them. **Water Rescue Skill Sheet 3-8** describes step-by-step how to use articles of clothing to aid flotation.

Fig. 3-7 Articles of clothing inflated with air can aid floating.

Self Rescue in Warm Water

In warm water, you may decide to try to swim to safety, or to float in place until help arrives. Remember that swimming long distances to safety should only be used as a last resort. If you decide to swim, use the survival swimming stroke, which will allow you to cover a considerable distance while using a minimal amount of energy, whether you are buoyant or not. Use survival floating to rest while you are making your way to safety. If it is not possible to reach safety and you must wait for help, use survival floating alone. **Water Rescue Skill Sheet 3-9** describes the survival float step-by-step, and **Water Rescue Skill Sheet 3-10** describes the survival swimming stroke.

Self Rescue in Cold Water

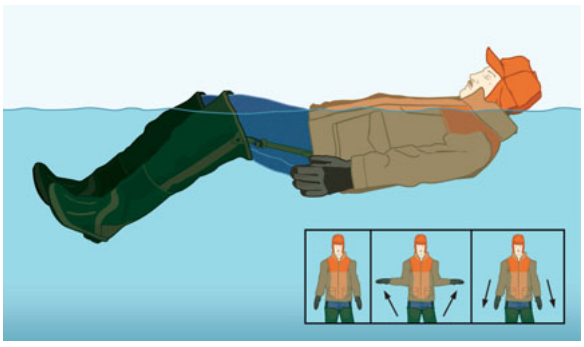
Cold water presents several challenges. It is not possible to swim as far in cold water as it is in warm water. If you are in open water or a great distance from the shore, floating in place until help arrives is the best way to survive a cold water emergency. If you do decide to attempt to swim, consider your swimming ability, the amount of insulation you have and the water conditions. When the water is 50° F (10° C) or colder, even a good swimmer may have difficulty reaching shore, so only attempt to swim if you can reach the shore in a few strokes. Keep in mind that in emergencies it is often hard to judge distance, so be careful not to underestimate the distance to shore. If you do attempt to swim to safety, use a stroke with an underwater arm recovery (such as the breaststroke or elementary backstroke) to help maintain heat.

In cold water, keep all of your clothes on, including a hat if you are wearing one **(Box 3-5)**. Tight-fitting foam vests and flotation jackets with foam insulation help to retain heat and can double survival time. Even wet clothes help retain body heat, and if you are not wearing a life jacket, you can try inflating your clothing with air for flotation. Avoid splashing in an attempt to warm up. Splashing increases blood circulation in the arms and legs and will drain energy, resulting in heat loss. Similarly, treading water chills the body faster than staying still. In cold water, tread water only if it is necessary. Keep your face and head above the water, and turn your back toward waves to help keep water off of your face. Look around for a log or anything floating for support. In the event of a boating accident, try to right the boat and reenter. If that is not possible, climb up onto the capsized boat to keep more of your body out of the water.

If you are not in immediate danger but you are far from shore, stay still and let your life jacket provide support until help arrives. When you are wearing a life jacket, you can use the heat escape lessening posture (HELP) (if you are alone) or the huddle position (if you are in a group of two or more people) to stay warmer. The HELP and the huddle positions can increase the

Box 3-5

Falling Into the Water Fully Clothed



People who fall into the water wearing winter clothes, especially heavy boots or waders, usually panic because they think they will sink immediately. But winter clothes and outdoor gear (such as a snowmobile suit, hip boots or waders) can actually trap air and aid floating, in addition to helping to delay hypothermia. If you fall into the water wearing hip boots, waders or rubber boots, relax and bend your knees—the trapped air in the boots will bring you back to the surface quickly. Then lie back, spread your arms and legs and perform a “winging” motion with your arms to move toward safety.

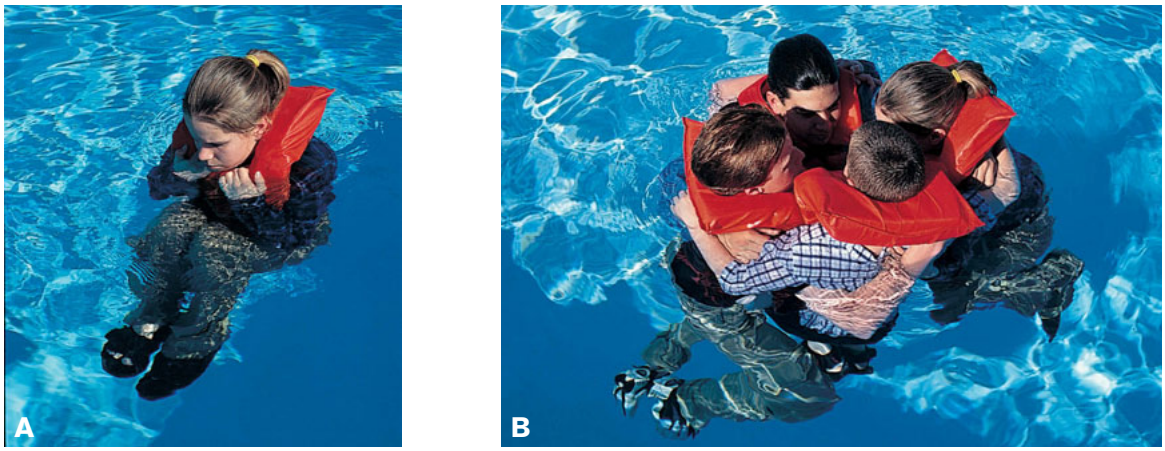


Fig. 3-8 The HELP and the huddle positions can be used to reduce exposure to cold water. (**A**) HELP position. (**B**) Huddle position.

chances of survival when floating in cold water by reducing the amount of body surface area that is directly exposed **(Fig. 3-8)**.

- To get into the HELP position, draw your knees up to your chest, keeping your face forward and out of the water. Hold your upper arms at your sides and fold your lower arms against or across your chest **(see Fig. 3-8A)**.
- To get into the huddle position, put your arms around the other person so that your chests are together. If you have a group of three or more people, put your arms over one another's shoulders so that the sides of your chests are together **(see Fig. 3-8B)**. If there is a child or older adult in the group, put the child or older adult in the middle.

The HELP and huddle positions should not be used in swift river currents or white water. If you are wearing a life jacket and you are caught in a current, remain calm and try to swim to safety if the current is carrying you toward some danger. Float on your back and go downstream feet-first until your breathing slows (sudden immersion in cold water can cause the breathing rate to increase). Breathe normally for a few seconds before starting to swim to shore.

Self Rescue: Falling Through Ice

If you fall through ice, try to stay calm and resist the urge to climb out onto the ice. It is likely to be weak in the area where the fall took place. Instead, turn toward the direction you came from, since the ice is likely to be strongest there. Quickly get into a floating position on your stomach. Bend your knees to help trap air in your pant legs and boots. Reach forward onto the broken ice, but do not push down on it. If you have ice rescue picks ("ice claws"), dig the points of the picks into the ice. Use a breaststroke or other kick to push your body farther onto the ice. Once you are on the ice, do not stand up! Roll away from the break area until a rescuer on shore is able to perform a reaching or throwing assist to help you the rest of the way, or until you are well clear of the broken area. Because of the risk for hypothermia, call 9-1-1 or the local emergency number if this has not been done already.

Self Rescue: Falling Into Moving Water

If you fall into moving water, do not stand up—the force of the water can entrap your feet or legs and hold you in place. A modest amount of water volume and velocity can exert significant force. Instead, float downstream on your back feetfirst to fend off obstacles and avoid entrapment of your feet and legs. Use your arms to back-paddle to slow down and steer out of the main current. Swim or wade toward the shore when you are out of the main current, or as soon as it is safe to do so. Because of the force of the current, this will result in a slightly

downstream path **(Fig. 3-9).** If you fell into the water because the boat you were in capsized, try to hold onto the boat, staying upstream of it, and swim with the boat to shore **(Fig. 3-10)**. However, if it is unsafe to continue holding onto the boat, let it go.

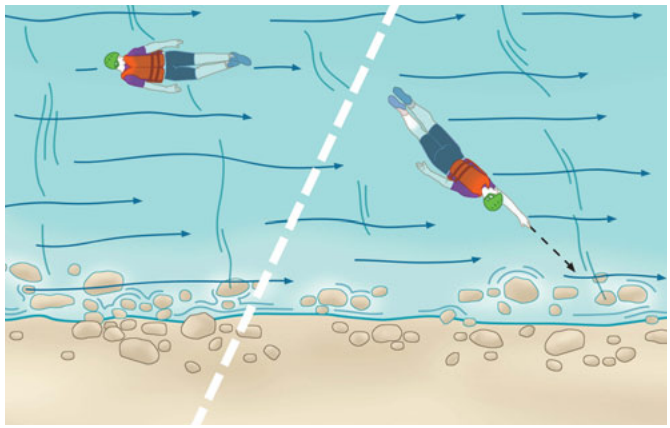


Fig. 3-9 If you are caught in a current, float downstream on your back, feetfirst. Back-paddle with your arms to break free of the main current. Once free of the main current, swim or wade toward the shore. This will result in a slightly downstream path because of the force of the current.

Self Rescue: Capsized Boat

It is important to stay calm if your boat capsizes. If you are not wearing a life jacket, put one on immediately.

If you can right the boat, do so. Once you right the boat, try to reboard:

- On larger boats, use the ladder or swim platform to reboard. If the weight in the boat is distributed correctly, climb up over the transom (i.e., the wide, flat area at the back of the boat). Be careful not to injure yourself on the boat's propeller or outboard engine.
- For smaller boats (like canoes, kayaks and rowboats), pull yourself over the middle of the boat and lie across it. Once the boat is stabilized, roll your legs into the boat. Canoes, kayaks and rowboats can often be rowed to shore even when filled with water.

Fig. 3-10 If your boat capsizes in moving water, try to hold onto the boat, staying upstream of it. *Image © Steve Heap, 2014. Used under license from Shutterstock.com*

If you cannot right the boat or reboard, stay with the boat and wait for rescue. If the water is cold, climb on top of the overturned boat to keep as much of your body out of the water as possible. Staying with your boat will help you conserve energy (because the boat will help you float) and make you more visible to rescue personnel. If you filed a float plan at your launch site and do not return on time, someone should notice when you are missing and look for you.

If the boat sinks or floats away, stay where you are if it is safe to do so. Make sure your life jacket is securely fastened, remain calm and wait for help. If you are not wearing a life jacket, look for another buoyant item, such as a cooler, oar, paddle or decoy, to use as a flotation aid instead, or consider inflating your clothes. If the water is warm, you also may need to use survival floating, survival swimming or both.

Self Rescue: Sinking Vehicle

If you are in a vehicle that plunges into water, staying calm, knowing what to do and acting quickly can save your life. Many people who find themselves going off the road into a body of water try to call 9-1-1 or the local emergency number for help. This is a waste of valuable time. A heavy vehicle will float for 30 seconds to 2 minutes before the water reaches the bottom of the side windows. Use that time to do the following:

1. Leave your seatbelt on until the vehicle hits the water. Then immediately unfasten it. If you are traveling with a child, unfasten the child's seatbelt after you have unfastened your own.

2. Open or break the window. A window-break tool kept within reach in the car can make quick work of breaking the window, and requires no strength or force to use. (Never open the doors, because this can cause the vehicle to sink very quickly.)
3. Exit through the window as soon as you have opened or broken it. If you are traveling with a child, push the child through the open window and then follow behind.

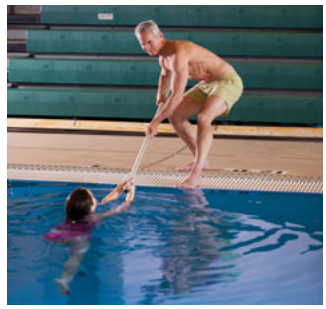
If you cannot open a window and escape during the initial floating phase, your chances of survival decrease significantly. When a vehicle starts to sink, it can be difficult or impossible to open the door because of the water pressure pushing on it from the outside. You will need to wait for the water level inside the car to rise so that the pressure equalizes. As the vehicle starts to sink, it will tilt engine-end down until it is in a nearly vertical position. Move to the higher end so that you can continue to breathe for as long as possible. Water pressure will be equal when the vehicle is nearly full of water. When the pressure equalizes, open the door. If you are traveling with a child, push the child through the open door and then follow behind.

Water Rescue Skill Sheet 3-1

Reaching Assist

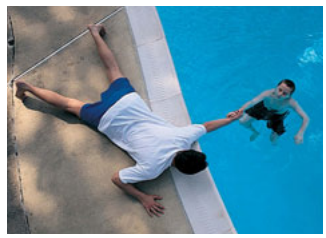
Reaching Assist with Equipment

1. Brace yourself on the pool deck, pier surface or shoreline.
2. Extend the object to the person:
   - When using a rigid object such as a pole or oar, sweep it toward the person from the side until it makes contact with the person's arm or hand.
   - When using a shirt or towel, lie down and flip it into the person's hands.
3. When the person grasps the object, slowly and carefully pull the person to safety. Keep your body low and lean back to avoid being pulled into the water.



Reaching Assist without Equipment

1. Brace yourself on the pool deck or pier surface.
2. Extend your arm and grasp the person.
3. Pull the person to safety.



Reaching Assist without Equipment from a Position in the Water

1. Hold onto a secure object (such as a pool ladder, gutter or piling) with one hand.
2. Extend a free hand or one leg to the person. Do not let go of the secure object or swim out to the person.
3. Pull the person to safety.

Water Rescue Skill Sheet 3-2

Throwing Assist

1. If the line has a wrist loop, place your nonthrowing hand (the hand that will be holding the line) through it. If there is no wrist loop, step on the nonthrowing end of the line. Hold the coil of the line in the open palm of your nonthrowing hand.
2. Grasp the side of the object with your throwing hand. Holding the object vertically, step back with your leg on the throwing side and then swing the object backward and then forward for an underhand toss.
3. Aim the throw so that the object lands just beyond the person with the line lying on the person's shoulder. If there is a crosswind or current, throw upwind or up current of the person.
4. Tell the person to grab the object. After the person has a firm grasp on the object or line, drop the remaining coil, if any, and slowly pull the person to safety while offering reassurance.
    - As you pull, keep your body low and lean back to avoid being pulled into the water.
    - Reach out with one hand and grasp the line with your thumb inward. Pull the line in to your side with that hand while reaching out with the other. Continue the alternate pulling and reaching action until the person is at the side or is able to stand in shallow water.

Step 2

Step 3

Step 4

Water Rescue Skill Sheet 3-3

Wading Assist

	Wading assists are used in water that is less than chest deep. Do not attempt a wading assist if there is a current or a soft bottom that will make wading dangerous.
Wading Assist: Conscious Person	1. Put on a life jacket, if one is available. Select an object to use for the reaching assist. 2. Wade into the water and extend the object to the person. 3. Tell the person to grab the buoyant object and to hold on tightly. 4. Pull the person to safety, keeping the object between yourself and the person (this will help to prevent the person from grasping you).
Wading Assist: Unconscious Person	1. Put on a life jacket, if one is available. Select a buoyant object to assist with moving the person to safety. 2. Wade into the water and turn the person face-up. 3. Position the buoyant object under the person's shoulders. 4. Move the person to the edge of the pool or the shoreline, keeping the person's mouth and nose out of the water. 5. Remove the person from the water. 6. Give first aid according to the conditions you find and your level of knowledge and training.
Wading Assist: Submerged Person	1. Put on a life jacket, if one is available. Select a buoyant object to assist with moving the person to safety. 2. Wade into the water. 3. Reach down, grasp the person and pull her to the surface. 4. Turn the person face-up. ○ If the person is unconscious, position the buoyant object under her shoulders. ○ If the person is conscious, tell the person to grab the buoyant object and to hold on tightly. 5. Move the person to the edge of the pool or the shoreline, keeping the person's mouth and nose out of the water. 6. Remove the person from the water. 7. Give first aid according to the conditions you find and your level of knowledge and training.

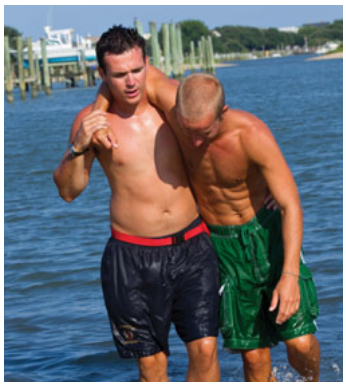
Water Rescue Skill Sheet 3-4

Sloped Entry Assists

Sloped entry assists are used to remove a person from the water in areas where there is a gently sloping entry and exit point.

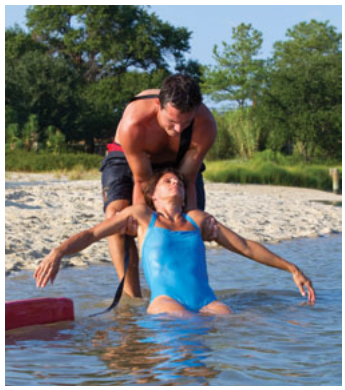
Walking Assist

1. Place one of the person's arms around your neck and across your shoulder.
2. Grasp the wrist of the arm that is across your shoulder, and wrap your free arm around the person's back or waist.
3. Maintain a firm grasp, and help the person walk out of the water.



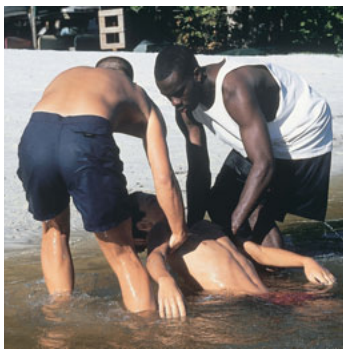
Beach Drag: One Responder

1. Stand behind the person, and grasp him or her under the armpits. Support the person's head with your forearms, if possible.
2. Walk backward slowly, dragging the person out of the water. Use your legs, not your back, to power the movement. If you are not able to move the person completely out of the water, at least make sure the person's head and shoulders are out of the water.



Beach Drag: Two Responders

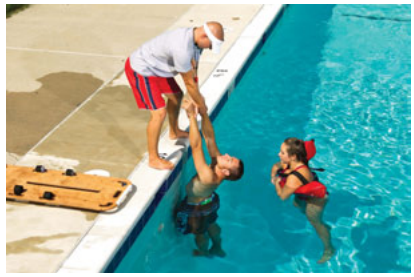
1. Both responders stand on either side of the person, facing the shoreline.
2. Place one hand under the person's armpit and use the other hand to support the person's head. Have your partner do the same.
3. Lift the person's torso up, using your legs, not your back. Walk forward slowly, dragging the person out of the water.



Water Rescue Skill Sheet 3-5

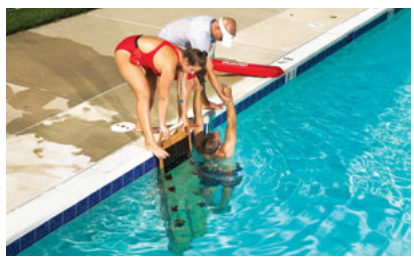
Two-Person Removal from the Water Using a Backboard

1. Bring a backboard (with the head immobilizer and straps removed, if possible) to the side of the pool.
2. The lifeguard brings the person to the side of the pool and turns the person to face the wall.
3. Cross your hands and grab the person's wrists, pulling the person up slightly to keep the person's head above the water and away from the wall.
4. The lifeguard ensures that the person's face is out of the water, and then climbs out of the pool, removes the rescue tube and gets the backboard.
5. The lifeguard guides the backboard, foot-end first, into the water along the wall next to the person.
6. Immediately turn the person onto the backboard by uncrossing your hands. Allow the backboard to float up beneath the person.
7. Grab one of the person's wrists and one of the handholds on the backboard while the lifeguard does the same on the other side.

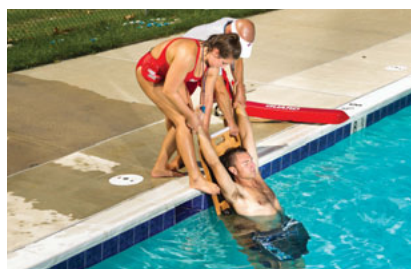


Step 3

Step 5



Step 6



Step 7

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Two-Person Removal from the Water Using a Backboard

8. On the lifeguard's signal and working together, pull the backboard and the person onto land, resting the underside of the board against the edge of the pool. Remember to lift with your legs, not your back.
9. Together, step backward and carefully lower the backboard to the ground.

Step 8

Step 9

Water Rescue Skill Sheet 3-6

Hip and Shoulder Support

With this manual in-line stabilization technique, support the person at the hips and shoulders to keep the face out of the water and minimize movement of the head, neck and spine. Use it for a person who is face-up.

1. Approach the person from the side and lower yourself to about shoulder depth.
2. Slide one arm under the person's shoulders and the other arm under his hips. Hold the person's body horizontally, keeping the person's face out of the water.
3. Do not lift the person. Hold the person still in the water until help arrives.

Water Rescue Skill Sheet 3-7

Head Splint

Head Splint: Face-Up Victim

This manual in-line stabilization technique provides better stabilization than the hip and shoulder support. Use it for a person who is face-up or face-down.

1. Approach the person from behind. Stand behind the person's head and lower yourself to about shoulder depth.
2. Grasp the person's arms midway between the shoulder and elbow. Grasp the person's right arm with your right hand and the person's left arm with your left hand.
3. Gently move the person's arms up alongside the person's head, so that the person's head is supported in between the person's arms.
4. Position yourself to the person's side with the person's head close to the crook of your arm. Squeeze the person's arms against the person's head to help hold the head in line with the body. Do not move the person any more than is necessary.
5. Check for consciousness and breathing:
   - If the person is not breathing, immediately remove the person from the water, call 9-1-1 or the local emergency number and provide resuscitative care according to your level of knowledge and training.
   - If the person is breathing, hold the person still in the water until help arrives.

Step 2

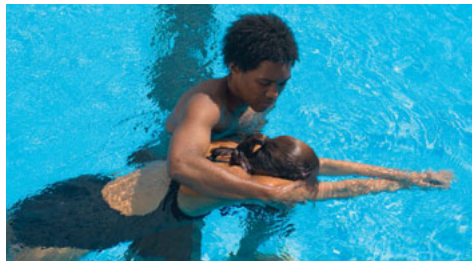
Step 3

Step 4

Head Splint

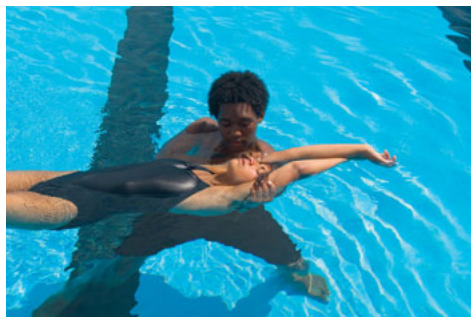
Head Splint: Face-Down Victim

1. Approach the person from the side.
2. Grasp the person's arms midway between the shoulder and elbow. Grasp the person's right arm with your right hand and the person's left arm with your left hand.
3. Gently move the person's arms up alongside the person's head, so that the person's head is supported in between the person's arms. Squeeze the person's arms against the person's head to help hold the head in line with the body.
4. If you are in shallow water, lower yourself to about shoulder depth. Glide the person slowly forward, turning the person until he or she is face-up. To do this, push the person's arm that is closest to you under the water while pulling the person's other arm across the surface toward you.
5. Position yourself to the person's side with the person's head close to the crook of your arm. Squeeze the person's arms against the person's head to help hold the head in line with the body. Do not move the person any more than is necessary.
6. Check for consciousness and breathing.
   - If the person is not breathing, immediately remove the person from the water, call 9-1-1 or the local emergency number and provide resuscitative care according to your level of knowledge and training.
   - If the person is breathing, hold the person still in the water until help arrives.



Step 2

Step 4



Step 5

Water Rescue Skill Sheet 3-8

Self-Rescue with Clothes

Shirt or Jacket: Blowing Air Method

1. Tuck the shirt or jacket in or tie the shirttail ends together around your waist.
2. Unbutton the collar button if you are using a shirt. Take a deep breath, bend your head forward into the water, pull the shirt or jacket up to your face and blow into it.
3. Keep the front of the shirt or jacket under water and hold the collar closed.
4. Repeat steps 1–3 to reinflate the shirt or jacket as necessary.

Step 2

Shirt or Jacket: Striking Air Method

1. Fasten the buttons or close the zipper up to the neck.
2. Hold the bottom of the shirt or jacket out with one hand, keeping it just under the surface of the water, and lean back slightly.
3. From above the surface of the water, strike the water with your cupped free hand, following through so that the air caught by your hand is pulled to a point below the bottom of the shirt or jacket.
4. Keep the front of the shirt or jacket underwater and hold the collar and the bottom of the shirt or jacket closed.
5. Repeat steps 1–4 to reinflate the shirt or jacket as necessary.

Step 3

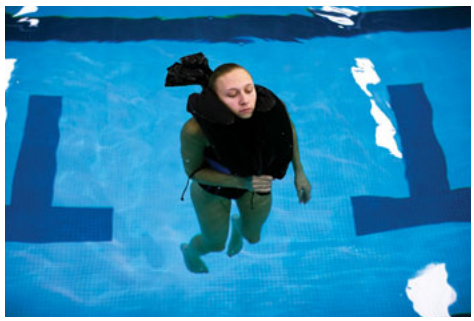
Step 4

Self-Rescue with Clothes

Pants: Striking Air Method

1. Take a deep breath, lean forward into the water and reach down and remove your shoes.
2. Loosen your waistband and belt.
3. Take another deep breath, lean forward and reach down. Take off your pants one leg at a time without turning them inside out. Lift your face from the water and take a breath whenever necessary.
4. Once you have removed your pants, either tie both legs together at the bottom or tie a knot in each leg as close as possible to the bottom. Then zip or button the pants to the waist.
5. Hold the back of the waistband underwater with one hand. Keeping the pants on the surface of the water, strike the water with your cupped free hand, following through so that the air caught by your hand is forced into the waistband opening below the surface. You can also inflate the pants by submerging them and then blowing air into the open waistband below the surface of the water.
6. Once the pants are inflated, gather the waistband together with your hands or by tightening the belt. Slip your head in between the pant legs where they are tied together or, if they are each tied separately, place one pant leg under each arm for support.
7. Repeat steps 1–6 to reinflate the pants as necessary.

Step 5



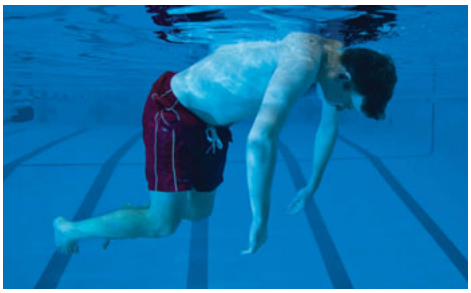
Step 6

Water Rescue Skill Sheet 3-9

Survival Float

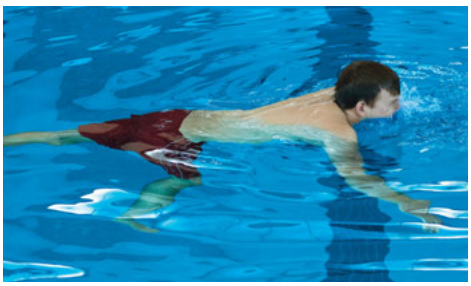
The survival float is used in warm water while awaiting rescue or to rest while swimming.

1. Take a breath, then place your face down into the water. Allow your arms and legs to hang freely. Rest in this position for a few seconds.
2. When you are ready to breathe again, slowly lift your arms to about shoulder height and separate your legs, moving one leg forward and one leg back (stride position).
3. Gently press down with your arms while bringing your legs together. This movement lifts your mouth above the surface of the water, allowing you to take a breath.
4. Take a breath, and then return to the resting position.



Step 1

Step 2



Step 3

Water Rescue Skill Sheet 3-10

Survival Swimming

If a person is very buoyant, it can take several minutes to complete the following sequence of movements, which helps to conserve energy. A person who is not very buoyant must perform this sequence of movements slightly faster to prevent sinking before the breath.

1. Start in the survival float position. After taking a breath, bend forward at the waist and bring your hands up alongside your head.
2. Separate your legs, moving one leg forward and the other back (stride position). Extend your arms forward, then bring your legs together again to propel yourself diagonally toward the surface.
3. Sweep your arms out and back to your thighs and glide near and almost parallel to the surface.
4. When you need to breathe, bend your legs and draw them toward your torso while bringing your hands up alongside your head. If you do not float well, pull hard with your arms, downward and outward. Take a breath, and then quickly return to the survival float position.
5. Extend your arms forward and separate your legs into the stride position once again. Tilt your head back and prepare to breathe out, as in survival floating.
6. Repeat steps 1–5.

Step 1

Step 2

Step 3

Step 4