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You are training to become a professional lifeguard, taking responsibility for the lives of people who are participating in a variety of aquatic activities. You are going to be a professional rescuer; in order to protect the people you are watching you must be self-disciplined and confident in your knowledge and skills during an emergency. You need to have a solid public-relations and customer-service skills as you will have to deal with and work with many people like patrons and your co-workers. You must be willing to be a leader as well as a good team member. Being a lifeguard requires maturity, professionalism and competence in specialized rescue techniques.

The purpose of the American Red Cross/Ellis Hybrid Lifeguarding course is to teach you the skills needed to prevent and respond to aquatic emergencies. This includes land and water rescue skills plus first aid and CPR.
Water Rescue Skills

While you are on duty you have to be ready to make 6 different rescues at any time. This means that you have the proper equipment immediately available and are properly stationed to see your entire zone of responsibility. You must always be scanning your zone as it is your main priority. You cannot be distracted by anything, for it is your job to look for signs that someone may need your help. If someone does need help, you must assess the situation, perform an appropriate rescue, move the victim to safety and provide additional care as needed. The skills discussed in this chapter will give you the tools needed to safely perform a rescue in most aquatic environments. However some steps may need to be modified depending on the actual situation in the water. When performing a rescue, you should keep in mind what you have learned, but the main focus is to safely rescue the victim and provide appropriate care.
General Procedures for a Water Emergency

Entries

The main purpose of learning and perfecting entries is to get in the water quickly and safely, and begin your rescue of the victim. It may not be safe to enter the water from an elevated lifeguard stand if your zone is crowded or due to the design or position of the stand. If this is the case you will have to climb down and travel on the deck to enter the water. The type of entry used depends on:

- The depth of the water
- The height and position of the lifeguard station (elevated or at ground level)
- Obstacles in the water, such as people, lane lines and safety lines
- The location and condition of the victim.
- The type of rescue equipment
- The design of the facility

There are several ways to enter the water for a rescue:

- Slide-in entry. The slide-in entry is slower than other entries, but it is the safest in most conditions. You should use this technique in shallow water, crowded pools or if there is a spinal injury
- Compact jump. You can use the compact jump to enter water from the deck or from your lifeguard stand. If you jump from a height of more than 3 feet above the water must be at least 5 feet deep
- run-and-swim entry. To enter the water from a gradual slope zero-depth area, such as a shoreline or wave pool use the run-and-swim entry

Rescue Approaches

The objective of a rescue approach is to safely and quickly move toward the victim in the water. You should never lose sight of the victim while performing your rescue approach.

The best way to swim to the victim using a rescue tube is with a modified front crawl or breaststroke. Swim towards the victim with your head up with the rescue tube under your armpits or torso. While keeping the rescue tube in control at all times. For long distances either let the tube trail behind you, or make the assessment that it could be faster to travel on deck.

In shallow water, it may be quicker or easier to walk to the victim. Hold the rescue tube at your side and walk quickly toward the victim. If necessary, position the tube in front of you before contacting the victim.
Assists

The objective of an assist is to safely and effectively help a victim who is struggling in the water and move him or her to safety. Assists commonly happen with lifeguards near shallow water. An assist may be required to help a patron:

- Stand up because he or she is small or has been thrown off balance, such as by landing at the bottom of a slide
- Get to the surface when he or she is submerged in shallow water
- Enter and exit an attraction
- Get in or out of inner tubes or rafts
- Reach shallow water or a ladder when he or she is tired

If you are stationed in the water, such as when standing in a catch pool for a water slide, assists can be performed quickly without interrupting patron surveillance. However, if a rescue is needed instead of an assist, activate the EAP.

The most common assists include the:

- Simple assist- A simple assist can be used in shallow water and may be merely helping a person to stand or rescue a victim who is submerged in shallow water and is within reach
- Reaching assist from the deck- To assist a distressed swimmer who is close to the side of the pool or a pier, use a reaching assist from the deck by extending a rescue tube within the victim’s grasp. If a victim is struggling to keep his or her mouth above the water’s surface you may have to enter the water and perform a rescue.

Rescues at or Near the Surface

The purpose of rescuing a victim at or near the surface of the water is to support the victim before the victim submerges. The victim’s airway needs to remain above the water otherwise the victim may start to panic. While you move to a safe removal point, assess the victim’s condition and then provide the appropriate care. Use the following rescues for victims at or near the surface of the water:

- active victim front rescue: for a drowning victim who is facing toward you
- active victim rear rescue: for a drowning victim who is facing away from you
• Passive victim rear rescue: for a drowning victim is who is face-down at or near the surface in a vertical-to-horizontal position, seems unconscious and is not suspected of having a head, neck or spinal injury
• having a head, neck or spinal injury

**Submerged Rescues**

Sometimes a drowning victim is below the surface of the water. This could be in shallow water if they are a child or in deep water beyond your reach. The purpose of rescuing a submerged victim is to quickly go under water, and bring him or her to the surface to support the victim on the rescue tube while maintaining an open airway. You must continue to maintain an open airway while you move the victim to a safe exit point in the pool. Once you reach the exit point remove the victim then assess the victim’s condition and provide appropriate care.

Use the following rescues, based on the victim’s position in the water:

• Submerged victim in shallow water: for a victim who is passive, submerged in shallow water and beyond your reach
• Submerged victim in deep water: for a victim who is submerged in deep water

Additional lifeguards may be required to provide the appropriate assistance, specifically for a deep water rescue. For example, the additional lifeguard may need to retrieve or re-position your rescue tube if you had to remove the strap to reach the victim.
Breathing Emergencies

In a breathing emergency, a person’s breathing can become so impaired or restricted that their life is being threatened. If air cannot travel freely and easily into the lungs, the body may cut off the oxygen supply entirely. The heart will stop beating if oxygen is longer reaching it and this will prevent blood from reaching the brain and other vital organs potentially leading to death. Once this happens the heart goes into what is known as cardiac arrest. This can occur in as little as 3 minutes after submerging. Permanent brain damage or death can occur within 4 to 6 minutes. As a lifeguard, you may be called upon at any time to respond to a breathing emergency. Therefore, you must be able to recognize, respond, and care for these emergencies.
Recognizing and Caring for Breathing Emergencies

Respiratory Distress

A victim who is having difficulty breathing is experiencing respiratory distress. Respiratory distress can be caused by a number of ways including: a partially obstructed airway, illness, chronic conditions such as asthma and emphysema, allergic reactions, electrocution, heart attack, injury to the head, chest, lungs or abdomen, drugs, poisoning, emotional distress, or anaphylactic shock.

Signs and symptoms of respiratory distress include:

- Slow or rapid breathing
- Unusually deep or shallow breathing
- Shortness of breath
- Dizziness or light-headedness
- Changes in LOC (Loss of Consciousness)
- Increased heart rate
- Chest pain or discomfort
- Skin that is flushed, pale, ashen or bluish
- Unusually moist or cool skin
- Gasping for breath
- Wheezing, gurgling, or high-pitched noises
- Inability to speak in full sentences
- Tingling in the hands, feet or lips
- Feelings of apprehension or fear

It is not necessary to know the cause of respiratory distress if you are trying to provide care for the victim. However, you must activate your emergency action plan (EAP) when you realize a person is experiencing difficulty breathing and then you need to:

- Maintain an open airway.
- Summon emergency medical services (EMS) personnel
- Help the victim get into a comfortable position that makes breathing easier for them
• Reassure and comfort the victim
• Assist the victim with any of his or her prescribed medication
• Keep the victim from getting chilled or overheated
• Administer emergency oxygen, if available and you are trained to do so

**Respiratory Arrest**

A victim who has stopped breathing is in respiratory arrest. Respiratory arrest can develop from respiratory distress or respiratory failure, this includes: drowning, obstructed airway (choking), injury to the head, chest, lungs or abdomen, chronic respiratory conditions such as emphysema or asthma, illnesses such as pneumonia, heart attack, allergic reactions (food or insect stings), electrocution, shock, poisoning, drugs, and emotional distress.

Just like respiratory distress you do not need to know the exact cause to provide care to someone. Begin your assessment by following the general procedures for injury or sudden illness on land. Check to see if someone is breathing, look at the the victim’s chest to see if it clearly rises and falls. Listen for escaping air and feel for air against the side of your face to check for breathing and a pulse during the primary assessment. The normal breathing rate for an adult is between 12 and 20 breaths per minute.

Normal breathing is regular, quiet, and effortless. When a person is unconscious, you may hear or see isolated or infrequent gasping. These are called agonal gasps, which can occur even after the heart has stopped beating. Agonal gasps do not count as breathing care for the victim as though he or she is not breathing at all.

**Giving Ventilations**

Giving ventilations is a technique for breathing air into a victim to provide the oxygen necessary to survive. The air you exhale may not be perfect oxygen, but it doesn't contain enough to keep a person alive. Each ventilation should last about 1 second and make the chest clearly rise. After each ventilation you give you should let the chest fall before you give another ventilation to the victim. Give 1 ventilation every 5 seconds for an adult, and give 1 ventilation about every 3 seconds for a child or an infant.

When giving ventilations to a victim:

• Maintain an open airway by keeping the head tilted back in the proper position
• Seal the mask over the victim’s mouth and nose
• Give ventilations for about 2 minutes, then reassess for breathing and a pulse
• If the victim has a pulse but is not breathing, continue giving ventilations
Continue giving ventilations until:

- The victim begins to breathe on his or her own
- Another trained rescuer takes over
- More advanced medical personnel, such as EMS personnel, take over
- You are too exhausted to continue
- The victim has no pulse, in which case you should begin CPR or use an AED if one is available and ready to use.
- The scene becomes unsafe.

**CPR Breathing Barriers**

CPR breathing barriers help protect you against disease transmission when giving ventilations or performing CPR (Cardiopulmonary Resuscitation). There are 2 types of CPR breathing barriers; a resuscitation mask and bag-valve-mask resuscitator (BVMs). All lifeguards should have a resuscitation mask in their hip pack.

A resuscitation mask allows you to breathe air into a victim without making mouth-to-mouth contact. This presents several benefits for lifeguards: they help get air quickly to the victim through both the mouth and nose, they create a seal over the victim’s mouth and nose, they can be connected to emergency oxygen, and they protect against disease transmission. A resuscitation mask should have the following characteristics:

- Be easy to assemble and use
- Be made of transparent, pliable material that allows you to make a tight seal over the victim’s mouth and nose
- Have a one-way valve for releasing exhaled air
- Have a standard 15- or 22-mm coupling assembly (the size of the opening for the one-way valve)
- Have an inlet for delivering emergency oxygen (if facility protocols include administering emergency oxygen)
- Work well under different environmental conditions, such as extreme heat or cold or in the water

A BVM (Bag Valve Mask) has three parts: a bag, a valve and a mask. The only disadvantage brought on by a BVM is that it requires 2 lifeguards to operate, but has several advantages including:
• Increased oxygen levels in the blood by using the air in the surrounding environment instead of the air exhaled by a rescuer.

• Can be connected to emergency oxygen.

• Are more effective for giving ventilations than a resuscitation mask when used correctly by two rescuers.

• Protect against disease transmission and inhalation hazards if the victim has been exposed to a hazardous gas.

• May be used with advanced airway adjuncts.

BVMs are not a one size fit all piece of equipment, they come in various sizes are a reason. You should use the appropriately sized BVM for the size of the victim. Using an adult BVM on an infant has the potential to cause harm, and they should not be used unless a pediatric BVM is not available and more advanced medical personnel advise you to do so.

**Airway Obstructions**

An airway obstruction is the most common cause of breathing emergencies. If a victim has an airway obstruction they can quickly stop breathing, lose consciousness and die. A partial airway obstruction moves some air to and from the lungs, this often results in the victim coughing or wheezing.

There are two types of airway obstruction: mechanical and anatomical. Any foreign object lodged in the airway is a mechanical airway obstruction and requires immediate attention. An anatomical airway obstruction is caused by the victim’s body, usually this happens when a victim loses consciousness. When a victim is unconscious the victim loses control and muscle tone, this can cause the tongue to fall back and block the victims airway.

Common causes of choking include:

• Swallowing poorly chewed food

• Drinking alcohol before or during meals (Alcohol dulls the nerves that aid swallowing, making choking on food more likely)

• Eating too fast or talking or laughing while eating

• Walking, playing or running with food or small objects, such as toy parts or balloons, in the mouth

• Wearing dentures (Dentures make it difficult to sense whether food is fully chewed before it is swallowed)

A conscious person who is clutching the throat is showing what is commonly called the universal sign of choking. This person’s airway may be partially or completely obstructed. If the victims
airway is completely obstructed the victim will not be able to cough, speak or cry. However, a victim with a partially obstructed airway will be able to do these actions.

The objective in this case is to clear the obstruction before the person becomes unconscious. Abdominal thrusts, back blows and chest thrusts each have been proven to effectively clear an obstructed airway in conscious victims. Usually a combination of abdominal thrusts, back blows, and chest thrusts will be needed to expel the object from the victim’s airway.

If the victim is conscious and they are choking you need to get consent before helping this person. If the person is a child or infant, get consent from a parent or guardian. However, if there no parent or guardian nearby then consent is implied. If you think a person is choking, ask the victim, “Are you choking?” Then, identify yourself and ask if you can help. If the victim is coughing, encourage continued coughing, because this means that their airway is only partially blocked and using some of your techniques could potentially harm the victim. If the victim cannot cough, speak or breathe, activate the EAP and have another person summon EMS personnel.

When caring for a conscious choking adult you will have to perform a combination of 5 back blows followed by 5 abdominal thrusts. This is the same procedure for children and infants, but with less force for a child, and even less force on an infant.

For unconscious choking you should provide care to an unconscious adult, child or infant who is choking on a firm, flat surface. When you try to give the first ventilation and the chest does not clearly rise and fall, you must re-tilt the victims head and try again. If the ventilation still does not go in then you must assume the airway is being blocked by a foreign object. Next you will position yourself to give chest compressions as you would when performing CPR chest compressions. After you complete your 30 chest compressions, look in the mouth for an object remove it with a gloved finger. For an infant, use your little finger to remove the object. If you do not see an object in the mouth repeat the cycle until you do find an object or the victim starts to breathe on their own. If the chest clearly rises, quickly check for breathing and a pulse for no more than 10 seconds. Provide care based on your assessment of the situation.
Cardiac Emergencies

A cardiac emergency is life threatening. It can happen at any time to a victim of any age, on land or in the water. If you are called upon to care for a victim of cardiac emergency you will need to know how to perform CPR and use an automated external defibrillator (AED). If you follow the Cardiac Chain of survival, your victim has a much greater chance of survival. This chapter covers how to provide care for cardiac emergencies, such as heart attack and cardiac arrest.

In order to respond to cardiac emergencies efficiently you must understand the Cardiac Chain of Survival. The four links in the Cardiac Chain of Survival are:

- Early recognition and early access to the emergency medical services (EMS) system. The sooner someone calls 9-1-1 or the local emergency number, the sooner EMS personnel will arrive and take over.

- Early CPR. CPR helps supply oxygen to the brain and other vital organs. This helps keep the victim alive until an AED is used or more advanced medical care is provided.

- Early defibrillation. An electrical shock, called defibrillation, may help restore an effective heart rhythm. Defibrillation is delivered using an AED.

- Early advanced medical care. EMS personnel provide more advanced medical care and transport the victim to a hospital.

For each minute CPR and defibrillation are delayed, the victim’s chance for survival is reduced by about 10 percent.
Heart Attack

When the muscle of the heart suffers a loss of oxygenated blood, the result is a myocardial infarction (MI), or heart attack. Heart attacks usually result from cardiovascular disease, but can also include: respiratory distress, electrocution, and traumatic injury. The most common conditions caused by cardiovascular disease include coronary heart disease and stroke.

Recognizing a Heart attack

The sooner you recognize the signs and symptoms of a heart attack the better. With each minute that goes by the victim’s chance of survival goes down. Heart attacks can be hard to recognize immediately, because the pain can be confused with indigestion, muscle spasms or other conditions. This delay often harms the victim significantly, because it delays them from getting medical care. Brief, stabbing pain or pain that gets worse when bending or breathing deeply usually is not caused by a heart problem. Once you realize that the victim is having a heart you need to Summon EMS personnel and provide prompt care. It is much better to ask the victim open-ended questions, such as “How are you feeling?” because you want to hear the symptoms described in the victim’s own words. If these are some of the things your victim is telling you then provide immediate care until EMS personnel arrive

- Chest discomfort or pain that is severe, lasts longer than 3 to 5 minutes, goes away and comes back, or persists even during rest
- Discomfort, pressure or pain that is persistent and ranges from discomfort to an unbearable crushing sensation in the center of the chest, possibly spreading to the shoulder, arm, neck, jaw, stomach or back, and usually not relieved by resting, changing position or taking medication
- Pain that comes and goes (such as angina pectoris)
- Difficulty breathing, such as at a faster rate than normal or noisy breathing
- Pale or ashen skin, especially around the face
- Sweating, especially on the face
- Dizziness or light-headedness
- Nausea or vomiting
- Fatigue, lightheadedness or loss of consciousness

Caring for a Heart attack

If you think someone is having a heart attack:

- Take immediate action and summon EMS personnel.
• Have the victim stop any activity and rest in a comfortable position.
• Loosen tight or uncomfortable clothing.
• Closely monitor the victim until EMS personnel take over. Note any changes in the victim’s appearance or behavior.
• Comfort the victim.
• Assist the victim with prescribed medication, such as nitroglycerin or aspirin, and administer emergency oxygen, if is available and you are trained to do so.
• Be prepared to perform CPR and use an AED.

You should also use the SAMPLE method to get information that relates to the victim’s condition. Such as: what symptoms they are feeling, if they have any allergies, whether the victim has any medical conditions or is taking any medications, or when was the last time the victim had anything to eat or drink, and what happened leading up to their pain.

Cardiac Arrest

Cardiac arrest is a life-threatening emergency that may be caused by a heart attack, drowning, electrocution, respiratory arrest or other conditions. Cardiac arrest occurs when the heart stops beating, or beats too irregularly or weakly to circulate blood effectively.

The signs of a cardiac arrest include sudden collapse, unconsciousness, no breathing and no pulse.

A victim who is unconscious, not breathing and has no pulse is in cardiac arrest and needs CPR. The purpose of CPR is to circulate blood that contains oxygen to the victim’s brain and other vital organs through a combination of chest compressions and ventilations. CPR is performed in cycles of 30 chest compressions followed by 2 ventilations most of the time.

Summoning EMS personnel immediately is critical for the victim’s survival. If an AED is available, it should be used in combination with CPR and according to local protocols until EMS personnel take over.

When giving chest compressions you want to place your hands in the center of the chest right above the nipple line. Avoid pressing directly on the xiphoid process, or the lowest point of the breastbone. If you compress the chest straight down you will provide the most blood flow and will be much less tiring for you. Kneel at the victim’s side with your hands in the correct position. When you give compressions try to keep your arms as straight as possible, with your shoulders directly over your hands. The effectiveness of compressions can be increased if:

• The victim is on a firm, flat surface
• Compressions are the proper depth.
• Compression rate is appropriate.
• The chest fully recoils after each compression (letting the chest come all the way back up).

• CPR is performed without interruption.

When giving ventilations to a victim, you should:

• Maintain an open airway by keeping the head tilted back in the proper position.

• Seal the mask over the victim’s mouth and nose.

• Blow into the one-way valve, ensuring that you can see the chest clearly rise and fall. Each ventilation should last about 1 second, with a brief pause between breaths to let the chest fall.

Once you begin CPR, do not stop. Continue performing CPR until:

• You see an obvious sign of life, such as breathing.

• An AED is available and ready to use.

• Another trained rescuer takes over, such as a member of your safety team.

• EMS personnel take over.

• You are too exhausted to continue.

• The scene becomes unsafe.

When performing CPR, a victim's ribs may break and cartilage may separate the victim may vomit, and they could be frothing at the nose and mouth. You must not falter in this chaotic scene for the victim's life depends on it. Remember that agonal gasps do not count as breathing this victim will still need CPR.

Understand that, despite your best efforts, not all victims of cardiac arrest survive.

**Two-Rescuer CPR**

When an additional rescuer is available, you should provide two-rescuer CPR. One rescuer gives ventilations and the other gives chest compressions. Rescuers should change positions about every 2 minutes to reduce fatigue of each rescuer.

When CPR is in progress by one rescuer and a second rescuer arrives, the second rescuer should confirm whether EMS personnel have been summoned. If EMS has not been called the second rescuer needs to do so, for EMS is the most critical type of care this person can get. Once EMS has been called the second rescuer should then get an AED or help the first rescuer perform two-rescuer CPR. When performing two-rescuer CPR on a child or infant, rescuers should change the compression to ventilation ratio to 15:2. When providing two-rescuer CPR to an infant, rescuers
should perform a different technique. For this technique you will place both of your thumbs on the infant’s chest and wrap your hands around the infant’s torso.

**AED**

AEDs are portable electronic devices that analyze the heart’s rhythm and provide an electrical shock. Defibrillation is the delivery of an electrical shock that may help re-establish an effective rhythm. The sooner an AED is used, the greater chance of survival. You must assess victims quickly and be prepared to use an AED in cases of cardiac arrest.

**Using an AED on Adults**

When cardiac arrest occurs, use an AED as soon as it is ready to use. First, apply the AED pads and allow the AED to analyze the heart rhythm. After the AED has analyzed the victim follow the prompts given by the AED. If CPR is still in progress, do not interrupt chest compressions until the AED is turned on and the pads are placed correctly.

After a shock is delivered, or if no shock is advised, perform about 2 minutes of CPR before the AED analyzes the heart rhythm again. If at any time you notice an obvious sign of life, such as breathing, stop CPR and monitor the victim’s condition. Administer emergency oxygen if available and you are trained to do so.

**Using an AED on Children and Infants**

If cardiac arrest triggers on a child or infant follow the AED and use the pediatric pads that come with an AED. Even though it is very rare for a child or infant to go into cardiac arrest it can still happen and these may be the causes:

- Airway and breathing problems.
- Traumatic injuries or accidents (e.g., drowning, motor-vehicle collision, electrocution and poisoning).
- A hard blow to the chest.
- Congenital heart disease.
- Sudden infant death syndrome (SIDS).

AEDs equipped with pediatric AED pads are capable of delivering the lower levels of energy considered appropriate for infants and children up to 8 years old or weighing less than 55 pounds. If pediatric pads are not available, an AED designed for adults can be used on children and infants. If you have to, place one pad on the child or infant’s chest and the other on the back.

**AED Precautions**

When operating an AED, follow these general precautions:

- Do not use alcohol to wipe the victim’s chest dry; alcohol is flammable.
• Do not touch the victim while the AED is analyzing. Touching or moving the victim could affect the analysis.

• Before shocking a victim with an AED, make sure that no one is touching or is in contact with the victim or the resuscitation equipment.

• Do not touch the victim while the device is defibrillating. You or someone else could be shocked.

• Do not defibrillate a victim when around flammable or combustible materials, such as gasoline or free-flowing oxygen.

• Do not use an AED in a moving vehicle. Movement could affect the analysis.

• Do not use an AED on a victim wearing a nitroglycerin patch or other patch on the chest. With a gloved hand, remove any patches from the chest before attaching the device.

• Do not use a mobile phone or radio within 6 feet of the AED. Electromagnetic and infrared interference generated by radio signals can disrupt analysis.

**AEDs around Water**

A shock delivered in water could harm rescuers or bystanders; however, AEDs are safe to use on victims who have been removed from the water. If the victim is in water:

• Remove the victim from the water before defibrillation. A shock delivered in water could harm rescuers or bystanders.

• Be sure that there are no puddles of water around you, the victim or the AED.

• Remove the victim’s wet clothing to place the AED pads properly, if necessary.

• Dry the victim’s chest and attach the AED pads.

If it is raining, make sure that the victim is as dry as possible and sheltered from the rain. Make sure that the victim’s chest is wiped dry. AEDs can be used in rain and snow, when all precautions and manufacturer’s operating instructions are followed. You must avoid getting the AED or AED pads wet.
First Aid

When you see an ill or injured victim, you must follow the general procedures designed to provide proper assessment and response. These include activating the emergency action plan (EAP), sizing up the scene, performing a primary assessment and calling emergency medical services (EMS) personnel for any life-threatening emergencies. If you do not find a life-threatening situation, you should perform a secondary assessment and provide the appropriate first aid for the victim. This chapter covers how to perform a secondary assessment, including how to check a conscious victim and how to take a brief history for information about the victim leading up to the incident. It also describes how to recognize and provide first aid for some of the injuries, illnesses and medical conditions that you might encounter while on the job.
Responding to Injuries and Illness

Even when everyone works to prevent emergencies, injuries and illnesses can and do occur at aquatic facilities. Some injuries are very easy to treat such as a nosebleed. However, some situations will be much harder to determine what is wrong and how to treat it, such as a sudden illness.

Checking a Conscious Person

Check the victim by visually performing a head-to-toe exam. Tell the person what you are going to do before you do this examination. Visually inspect the person’s body, look for any bleeding, cuts, bruises and obvious deformities. Look for a medical identification (ID) tag, necklace or bracelet on the person’s wrist, neck or ankle. These can provide medical information about the person, explain how to care for the identified injuries and list whom to call for help. If the person has a potential head, neck, or spinal injury do not ask them to move any area where they have pain.

For a secondary assessment use SAMPLE to take a Brief History

Use the SAMPLE mnemonic as an easy way to remember what you should ask about when you are taking the brief history:

S = Signs and symptoms
   • These include bleeding, skin that is cool and moist, pain, nausea, headache and difficulty breathing.

a = Allergies
   • Determine if the victim is allergic to any medications, food, or environmental elements, such as pollen or bees.

M = Medications
   • Find out if the victim is using any prescription or nonprescription medications.

P = Pertinent past medical history
   • Determine if the victim is under the care of a health care provider for any medical condition, has had medical problems in the past or recently has been hospitalized.

L = Last oral intake
   • Find out what the victim most recently took in by mouth as well as the volume or dose consumed. This includes food, drinks and medication.

E = Events leading up to the incident
• Determine what the victim was doing before and at the time of the incident. When talking to a child, get down at eye level with the child, speak slowly and in a friendly manner, use simple words and ask questions that the child can easily understand.

Seizures

There are many different types of seizures. Seizures usually last 1 to 3 minutes and can produce a wide range of signs and symptoms. When this type of seizure occurs, the person loses consciousness and can fall, causing injury. A person having a seizure may become rigid and experience uncontrollable muscular convulsions. Breathing may become irregular and could even stop temporarily.

When the seizure is over, the person usually begins to breathe normally. The victim may be drowsy and disoriented or unresponsive for a period of time. Once the seizure is over perform a secondary assessment to check to see if the person was injured during the seizure. Ask bystanders not to crowd around the person, they will be tired and want to rest. Stay with the person until he or she is fully conscious and aware of his or her surroundings.

If the person is known to have periodic seizures, there is no need to summon EMS personnel. He or she usually will recover from a seizure in a few minutes. However, summon EMS personnel if:

• The seizure occurs in the water.
• The seizure lasts more than 5 minutes.
• The person has repeated seizures with no sign of slowing down.
• The person appears to be injured.
• The cause of the seizure is unknown.
• The person is pregnant.
• The person is known to have diabetes.
• The person fails to regain consciousness after the seizure.
• The person is elderly and may have suffered a stroke.
• This is the person’s first seizure.
Stroke

Strokes occur suddenly and can be spotted by a sudden change in how the body is functioning. This may include sudden weakness or numbness of the face, an arm or a leg. Weakness or numbness generally occurs only on one side of the body. Other slightly less obvious signs and symptoms include difficulty with speech, blurred or dimmed vision, sudden severe headache, dizziness or confusion, loss of balance or coordination, trouble walking, and ringing in the ears.

When a person is having a stroke time is critical and EMS must be called as soon as possible. The objective is to recognize a possible stroke and summon EMS personnel immediately. To identify and care for a victim of stroke, think FAST:

Face—Weakness on one side of the face
  • Ask the person to smile. This will show if there is drooping or weakness in the muscles on one side of the face. Does one side of the face droop?

Arm—Weakness or numbness in one arm
  • Ask the person to raise both arms to find out if there is weakness in the limbs. Does one arm drift downward?

Speech—Slurred speech or trouble speaking
  • Ask the person to speak a simple sentence to listen for slurred or distorted speech.
  • Example: “The sky is blue.” Can the victim repeat the sentence correctly?

Time—Time to summon EMS personnel if any of these signs or symptoms are seen
  • Note the time of onset of signs and symptoms, and summon EMS personnel immediately.

Closed Wounds

Closed wounds occur beneath the surface of the skin. The simplest closed wound is a bruise or contusion. Bruises usually result in damage to soft tissue layers and blood vessels beneath the skin, causing slight to moderate internal bleeding. Most closed wounds do not require special medical care. However, a significant violent force can cause injuries involving larger blood vessels and the deeper layers of muscle tissue. These injuries can result in severe bleeding beneath the skin. In these cases, medical care is needed quickly.

Summon EMS personnel immediately if:
  • The victim complains of severe pain or cannot move a body part without pain.
  • The force that caused the injury was great enough to cause serious damage.
  • An injured arm or leg is blue or extremely pale.
  • The victim has excessive thirst, becomes confused, faint, drowsy or unconscious.
• The victim is vomiting blood or coughing up blood.
• The victim has skin that feels cool or moist, or looks pale or bluish.
• The victim has a rapid, weak pulse.
• The victim has tender, swollen, bruised or hard areas of the body, such as the abdomen.

Closed Wounds

Closed wounds occur beneath the surface of the skin. The simplest closed wound is a bruise or contusion. Bruises result when the body is subjected to blunt force, such as when you bump your leg on a table or chair. Such a blow usually results in damage to soft tissue layers and blood vessels beneath the skin, causing internal bleeding. Most closed wounds do not require special medical care. However, a significant violent force can cause injuries involving larger blood vessels and the deeper layers of muscle tissue. These injuries can result in severe bleeding beneath the skin. In these cases, medical care is needed quickly.

Summon EMS personnel immediately if:

• The victim complains of severe pain or cannot move a body part without pain.
• The force that caused the injury was great enough to cause serious damage.
• An injured arm or leg is blue or extremely pale.
• The victim has excessive thirst, becomes confused, faint, drowsy or unconscious.
• The victim is vomiting blood or coughing up blood.
• The victim has skin that feels cool or moist, or looks pale or bluish.
• The victim has a rapid, weak pulse.
• The victim has tender, swollen, bruised or hard areas of the body, such as the abdomen.

Open Wounds

In an open wound, the break in the skin can be as minor as a scrape of the surface layers or as severe as a deep penetration. Most injuries that you encounter at a pool or waterpark will be minor, such as a small cut that can be cared for by cleaning the wound and applying an adhesive bandage. Small cuts will usually stop by itself within 10 minutes when the blood clots. However, some cuts are too large to effective clot the cut. In these cases, you need to recognize the situation and provide care quickly. Remember to always wear non-latex disposable gloves and follow all other standard precautions when giving care.

The following are the four main types of open wounds:

Abrasions

• Skin has been rubbed or scraped away (e.g., scrape, road rash, rug burn). The area usually is painful. Dirt and other matter may have entered the wound. Cleaning the wound is important to prevent infection.

Laceration
• Cuts bleed freely, and deep cuts can bleed severely. Deep cuts can damage nerves, large blood vessels and other soft tissues.

Avulsion

• An avulsion is a cut in which a piece of soft tissue or even part of the body, such as a finger, is torn loose or is torn off entirely (e.g., amputation). Often, deeper tissues are damaged, causing significant bleeding.

Puncture

• Puncture wounds often do not bleed profusely and can easily become infected. Bleeding can be severe, with damage to major blood vessels or internal organs. An object embedded in the wound should be removed only by EMS personnel.

Shock

Any serious injury or illness can result in a condition known as shock. Shock is a natural reaction by the body. Signs and symptoms of shock include restlessness or irritability, altered LOC, pale or ashen skin, nausea or vomiting, rapid breathing and pulse, and excessive thirst.

To minimize the effects of shock:

• Make sure that EMS personnel have been summoned.
• Monitor the victim’s condition and watch for changes in LOC.
• Control any external bleeding.
• Keep the victim from getting chilled or overheated.
• Have the victim lie flat on his or her back.
• Cover the victim with a blanket to prevent loss of body heat. Do not overheat the victim—your goal is to maintain a normal body temperature.
• Comfort and reassure the victim until EMS personnel take over.
• Administer emergency oxygen, if available and trained to do so.

Note: Do not give food or drink to a victim of shock, even if the victim asks for them.
**Burns**

Burns are a special kind of soft tissue injury. Like other types of soft tissue injury, burns can damage the top layer of skin or the skin and the layers of fat, muscle and bone beneath. There are four sources of burns: heat, radiation, chemicals and electricity.

Burns are classified by their depth; the deeper the burn, the more severe. Burns can be superficial (first degree), partial thickness (second degree) or full thickness (third degree). Burns are classified as more severe depending on several different categories, these include: the temperature heat, length of exposure, the location of the burn, area and size of the burn and the victim’s age and general medical condition.

Certain burns can lead to shock and need immediate medical attention. These include burns:

- That cause a victim to have difficulty breathing.
- That cover more than one body part or a large body surface area.
- To the head, neck, hands, feet or genitals.
- To the airway (burns to the mouth and nose may be a signal of this).
- To a child or an elderly person (other than very minor burns).
- From chemicals, explosions or electricity.

**Insect Stings**

Insect stings can be painful, and potentially deadly. People who have severe allergic reactions can result in a breathing emergency. If someone is having a breathing emergency, summon EMS personnel. To care for an insect sting:

- Examine the sting site to see if the stinger is in the skin (if there is one). Remove the stinger if it is still present. Scrape it away with the edge of a plastic card, such as a credit card.
- Wash the wound with soap and water, cover the site with a dressing and keep the wound clean.
- Apply a cold pack to the site to reduce pain and swelling.
- Watch the victim for signals of an allergic reaction—shortness of breath; swelling of the face, neck or tongue; rash or hives; or a tight feeling in the chest and throat.
- Care for life-threatening conditions.
- Monitor the victim’s condition, look for changes in LOC and keep the victim comfortable.
Heat Related Illness

Heat-related illnesses are progressive conditions all that correlate to each other by overexposure to heat. If heat related illnesses are recognized in the early stages they can usually be reversed. However if they are not recognized early, they may progress to heat stroke, a life-threatening condition. There are three types of heat-related illnesses:

- Heat cramps are painful muscle spasms that usually occur in the legs and abdomen. Heat cramps are the least severe of the heat-related illnesses.

- Heat exhaustion is an early indicator that the body’s cooling system is becoming overwhelmed. Signs and symptoms of heat exhaustion include cool, moist, pale, ashen or flushed skin; headache, nausea and dizziness; weakness and exhaustion; and heavy sweating.

- Heat stroke occurs when the body’s systems are overwhelmed by heat and stop functioning. Heat stroke is a life-threatening condition. Signs and symptoms of heat stroke include red, hot, dry skin; changes in LOC; and vomiting.

Take the following steps to care for someone suffering from a heat-related illness:

- Move the victim to a cool place.
- Loosen tight clothing and remove perspiration-soaked clothing.
- Cool the victim by spraying with cool water or applying cool, wet towels to the skin.
- Fan the victim.
- Encourage the victim to drink small amounts of a commercial sports drink, milk or water if the victim is conscious and able to swallow.
- If the victim refuses water, vomits or starts to lose consciousness:
  - Send someone to summon EMS personnel.
  - Place the victim on his or her side.
  - Continue to cool the victim by using ice or cold packs on his or her wrists, ankles, groin and neck, and in the armpits. If possible, wrap the victim’s entire body in ice-water-soaked towels.
  - Continue to check for breathing and a pulse
**Cold Related Illness**

Temperatures do not have to be extremely cold for someone to suffer a cold-related emergency, especially if the victim is wet or if it is windy.

Hypothermia occurs when a victim’s entire body fails to keep warm. A victim with hypothermia will die if care is not provided, because eventually as the body begins to shut down due to the cold the heart will stop beating. The signs and symptoms of hypothermia include shivering; numbness; glassy stare; apathy, weakness or impaired judgment; and loss of consciousness.

To care for hypothermia:

- Perform a primary assessment, including a pulse check for up to 30 to 45 seconds.
- Summon EMS personnel.
- Gently move the victim to a warm place. Sudden movements may cause a heart arrhythmia and possibly cardiac arrest.
- Remove any wet clothing.
- Warm the victim by wrapping all exposed body surfaces in blankets or by putting dry clothing on the victim. Be sure to cover the head since a significant amount of body heat is lost through the head.
- If the victim is alert, have him or her drink liquids that are warm, but not hot, and do not contain alcohol or caffeine.
- If you are using hot water bottles or chemical hot packs, first wrap them in a towel or blanket before applying.
- Monitor the victim’s condition and watch for changes in LOC.

**Muscle Bone and Joint Injuries**

Accidents like falling or tripping are a common cause of injuries to muscles, bones and joints. There are four types of muscle, bone and joint injuries:

- **Fracture**—A complete break, a chip or a crack in a bone. Factures can be open or closed.
- **Closed fractures**: The skin over the broken bone is intact.
- **Open fractures**: There is an open wound in the skin over the fracture.
- **Dislocation**—Displacement of a bone away from its normal position at a joint. These usually are more obvious than fractures.
- **Sprain**—Tearing ligaments at a joint.
Strain—Stretching and tearing muscles or tendons.

It is difficult to know whether a muscle, bone or joint injury is a closed fracture, dislocation, sprain or strain and will usually require an x-ray to know for sure. However, you do not need to be able to know what the actual injury is because the type of care provided is universal. The objective is to keep the injured area stable in the position found until EMS personnel take over.

Caring for Muscle, Bone and Joint Injuries

When caring for muscle, bone and joint injuries, except for an open fracture, use the general procedures for a land emergency and:

- Summon EMS personnel if the victim cannot move or use the injured area.
- Support the injured area above and below the site of the injury.
- Check for circulation and sensation below the injured area.
- Immobilize and secure the injured area only if the victim must be moved and it does not cause further pain or injury. In many cases, it may be best to allow EMS personnel to immobilize the injury prior to transport.
- Recheck for circulation and sensation below the injured area. Caring for an open fracture is described in a later section.

Immobilizing Muscle, Bone and Joint Injuries

Immobilizing a muscle, bone or joint injury helps keep the injured body part from moving. You want to immobilize the affected area to help reduce any pain and to make sure it does not get hurt any further by movement. Splinting is the primary method of immobilizing an injured extremity and should be used only if you are moving or transporting a person to seek medical attention. Do not splint the injured extremity if it causes the victim more pain. If splinting is necessary, splint the injury in the position in which the injured area was found. When you make a splint, splint the injured area and the joints or bones above and below the injury. Make sure you check for circulation and sensation before and after splinting.

A tool or device used to immobilize an injury is called a splint. Commercially manufactured splints are widely available, but if necessary you can improvise one from items available at the scene. The following can be used to immobilize common muscle, bone and joint injuries:

- Anatomic splints- The person’s body is the splint. For example, an arm can be splinted to the chest, or an injured leg to the uninjured leg.
- Soft splints- Soft materials, such as a folded blanket, towel, pillow or folded triangular bandage, can be used to form a splint. A sling is a specific kind of soft splint that uses a triangular bandage tied to support an injured arm, wrist or hand.
• Rigid splints- Boards, folded magazines or newspapers, or metal strips that do not have sharp edges can serve as splints.

See the splinting skill sheets at the end of this chapter for specific steps to follow when caring for arm, leg and foot injuries.
Caring for Head, Neck, and Spinal Injuries

Every year, approximately 12,000 spinal cord injuries are reported in the United States. Nearly 8 percent of these injuries occur during sports and recreation, some from head-first entries into shallow water. It is very rare for a head, neck, and spinal injury to occur while a lifeguard is on stand, because most of the time the lifeguards will be enforcing rules that prevent these types of injuries. However, they can still happen and are potentially life-threatening; prompt and effective care is required this ever happen. As a professional lifeguard, you must be aware of the causes of head, neck and spinal injuries. You also must know how to recognize them and provide appropriate care.
Head, Neck, and Spinal Injuries

Head, Neck, and Spinal Injuries in the Water

If you suspect a head, neck or spinal injury and the victim is in the water, follow these general rescue procedures:

1. Activate the facility’s emergency action plan (EAP). Facilities may have a distinct signal to begin a suspected head, neck or spine injury rescue.

2. Safely enter the water. If the victim is near a pool wall or pier, minimize water movement by using a slide-in entry rather than a compact or stride jump. If you use a running entry, slow down before reaching the victim.

3. Perform a rescue providing in-line stabilization appropriate for the victim’s location and whether the victim is face-up or face-down.

4. Move the victim to safety. If in deep water, move to shallow water if possible.

5. Check for consciousness and breathing

6. Backboard the victim using the spinal backboarding procedure.

7. Remove the victim from the water

8. Re-assess the victim’s condition and provide appropriate care.

Manual In-line Stabilization

The head splint technique is used for performing manual inline stabilization for victims in the water. You can use this technique when the victim is face-up or face-down in either shallow or deep water. The technique is performed in subtly different ways, depending on the victim’s location and position in the water. However, your objective should remain the same; get the victim into a face-up position while minimizing movement of the head, neck and spine. Vary the technique in the following ways, based on the victim’s position in the water:

• If the victim is face-up, approach from behind the victim’s head.

• If the victim is face-down, approach from the victim’s side.

• If the victim is in shallow water, you do not need to use the rescue tube to support yourself.

• If the victim is at the surface in deep water, you may need the rescue tube to support yourself and the victim.
• If the victim is submerged, do not use the rescue tube when you are submerging and bringing the victim to the surface. Once at the surface, another lifeguard can place a rescue tube under your armpits to help support you and the victim.

The point of the head splint technique is to use the victim's arms like a clamp to help hold their head in line with their body. Avoid lifting or twisting the victim when performing this skill, and try to not move the victim any more than necessary. Minimize water movement by moving the victim away from crowded areas and toward the calmest water possible. You must keep the victim’s mouth and nose out of the water and minimize water splashing onto the victim’s face.

Once the victim is stabilized in the head splint and is face-up in the water, immediately do primary assessment of the victim. Checking the victim for consciousness and breathing.

**Spinal Backboarding Procedure**

After stabilizing the victim’s head, neck and spine, you and at least one other lifeguard should place and secure the victim on a backboard. You will use the backboard to help immobilize the victim while you attempt to get them out of the water. This is vital, because EMS cannot help the victim until they are out of the water. A minimum of two lifeguards is needed to place and secure a victim on a backboard, but additional lifeguards or bystanders should also help if they are able. To place a victim on a backboard, submerge the board, position it under the victim and carefully raise it up to the victim’s body. You must maintain in-line stabilization while you are doing this. You then secure the victim to the backboard with straps and a head immobilizer device.

Throughout the spinal backboarding process, you or another lifeguard must maintain manual inline stabilization of the victim’s head and neck. To aid in floatation off the backboard, rescue tubes can be placed under the board Additional lifeguards also can assist in keeping the board afloat.

Communication between lifeguards is critical during the spinal backboarding procedure. Communication with the victim also is important. Let the victim know what you are doing and reassure them through the whole process. Tell the victim not to nod or shake his or her head, but instead to say “yes” or “no” in answer to your questions.

**Team Spinal Backboarding**

Spinal backboarding and removal from the water can be a challenge in deep or shallow water. Having other lifeguards work with you is helpful and may be necessary to ensure your safety as well as that of the victim. Working together as a team, other lifeguards can help by:

• Submerging and positioning the backboard under the victim.
• Supporting the rescuer at the head of the backboard in deep water
• Supporting the backboard while the straps and head immobilizer are secured.
• Securing the straps or the head immobilizer device
• Communicating with and reassuring the victim.
• Guiding the backboard as it is being removed from the water
• Removing the backboard from the water

Head, Neck, and Spinal Injuries on Land

If you suspect that a victim on land has a head, neck or spinal injury, your goal is the same as for a victim in the water: minimize movement of the head, neck and spine. Activate the facility’s EAP and follow the general procedures for injury or sudden illness on land:

• Size-up the scene.
• Perform a primary assessment.
• Summon EMS personnel.
• Perform a secondary assessment.
• Provide the appropriate care.

Use appropriate personal protective equipment, such as disposable gloves and breathing barriers.

Approach the victim from the front so that he or she can see you without turning the head. Tell the victim not to nod or shake his or her head, but instead respond verbally to your questions, such as by saying “yes” or “no.

On Stand Procedure and Rotation

When you have completed your lifeguarding training you most likely will be heading into a job. With this comes the greatest responsibility from this course where you actually use the skills you have just learned. Jeff Ellis and Associates and Red Cross have both developed rotations that are extremely effective. These rotations are either 15 or 20 minutes long, and every 5 minutes our lifeguards must stand up and do a full scan of the zone they are currently watching. This Procedure not only keeps lifeguards more alert, but has been scientifically proven that after 20 minutes in the heat a person starts to lose focus. This is why the rotations are so short, because when lifeguards lose their focus that is when accidents and emergencies happen.

Our lifeguards will also be subject to visual and water audits to make sure all of our lifeguards are up to our standard. The result of a failed audit will be re-training in either a certain area or an entire re-training of the course.

Well this concludes my lifeguard training manual; hopefully you all learned a lot and had some fun with it too. Best of luck to anyone who read or trained with this manual, and happy guarding!