Add to disclaimer:

The first aid section follows the 2010 American Heart Association and American Red Cross guidelines on First Aid as published in the journal Circulation. When the new standards are released, (likely sometime in late 2015) we will update the material.

**Responding to Illnesses and Injuries on Land**

A large focus of this course is on preventing, recognizing and responding to emergencies in water. Lifeguards must also be able to apply a similar diligence in dealing with emergencies on land. OSHA defines first aid as "emergency care provided for injury or sudden illness before professional emergency medical treatment becomes available.” Since lifeguards can be considered professional rescuers, it is very important to be able to follow the standard of care. Just like in water emergencies, lifeguards are normally the initially first responders in an emergency and must be able to provide adequate care before the arrival of medical providers.

**Workplace Injuries Statistics Update These**

At work, injuries and illnesses kill about 2.2 million people in the world each year.

i Unintentional injury is the leading cause of death in the United States for individuals younger than 44 years of age. On average, 15 workers die each day in the U.S. from traumatic injuries,

and more than four million workers suffer a nonfatal injury or illness each year.

ii In the U.S., about one-third of all injuries and 20 percent of injury deaths occur at home. For every home injury death there are about 650 nonfatal home injuries.

**Aquatics Injuries Statistics**

Assessing a Victim

Before a lifeguard can provide care to a victim, a lifeguard MUST perform an assessment to find out what happened and decide how best to help a victim. As part of the lifeguard class, we expect lifeguard students to commit the assessment steps to memory-no exceptions. As part of the final scenario for this course, you will be required to perform an in-water rescue, remove the victim from the pool and perform an assessment to make the transition to CPR. A student who cannot do all the correct steps, in the correct order, will not be able to complete that scenario.

Skill: Perform a Primary or Initial Assessment

To put it simply, the purpose of the primary assessment is to identify life threatening conditions to the victim. Those are airway, breathing, circulation and severe bleeding.

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**Notes:**

These skills should have been included in the CPR at a healthcare provider level, but we are proving them as well.

Skill: Recover Position

If the victim is breathing (but unresponsive) lifeguards normally leave victim in a face up position. An airway can be maintained by leaving one hand on the forehead. There are some situations where a victim should be moved to a recovery position. Two examples are if the lifeguard needs to leave the side of the victim to call 911 or if the victim begins to vomit. In these cases, the victim can be moved to a recovery position to keep the airway open.

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**Notes:**

*A victim with a suspected spinal cord injury should NEVER be moved into a recovery position*. In those cases, we use the High Arm in Endangered Spine (H.A.I.N.E.S.) position.

Skill: H.A.I.N.E.S. Position

Lifeguards learn the H.A.I.N.E.S. Position as part of CPR. Since spinal cord injuries are a concern in aquatics environments, it bears repeating and inclusion in this manual. Anytime a lifeguard suspects the victim has a spinal cord injury, the H.A.I.N.E.S. Position is used to roll the victim to maintain an open airway. An example is if the victim vomits.

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Secondary Assessment

Once we determine, the scene is safe, the victim is breathing and there is no apparent life threatening condition, lifeguards move to the secondary assessment. The purpose of the secondary assessment is determine if the victim has additional illnesses or injuries that may require additional medical care.

Lifeguards are not trained to be doctors and diagnose victims' medical problems. Instead, the secondary assessment is designed to help lifeguards identify if the potential issues that a victim should seek a professional medical opinion for. Another reason is because the victim may become unconscious. If they do, we have some additional information we can pass to first responders. The secondary assessment for a conscious victim really comes down to asking the right questions. To do that, we use the acronym S.A.M.P.L.E.

* Signs and Symptoms
* Allergies
* Medications
* Past, Pertinent Medical History
* Last Oral Intake
* Events Leading Up To

**How to ask questions**

For lifeguard students that have ever had an illness or injury, this part should be easy to understand. Medical professional ask the same questions multiple times, in multiple ways, to try to get as much information as possible. We encourage the same behavior for lifeguards when they are asking a victim questions.

There are times when a question is asked a little different that a different answer is given. For example, a victim may be asked if they have any medical condition and they answer "No." However when asked if the take any medication, the victim states they take Lipitor for high cholesterol-which is a medical condition.

The other suggestion is to make sure the questions asked are age appropriate. If a lifeguard asks a 5 year-old child if they are having a myocardial infarction (heart attack), the child will probably not have any idea what that is. Below is a synopsis of what each acronym of S.A.M.P.L.E stand for and what kinds of questions to ask.

**Signs and Symptoms**

A sign is what the lifeguard sees. For example bleeding. As symptom is what the victims reports. Pain is a perfect example. Rescuers cannot see pain, they have to rely on what the victim is telling them.

**Allergies**

When asking questions about allergies, lifeguards want to know about food, medication and environmental allergies. Instead of asking the victim if they have food allergies, we encourage lifeguards to break the question up into all three with examples. "Are you allergic to any foods?" "Can you drink milk?" "Is there any medication that makes you sick?" "Are there medications your doctor says you cannot take?" "Do you have hay fever?" "Are there things that make you stuffed up?" "Do you or can you have pets?" All of those questions are asking about allergies, but may get unique responses to each one.

**Medications**

A lifeguard will probably not know what all the medications a victim tells them they take. In fact, there may be some medications a lifeguard cannot even pronounce. That is okay. The lifeguard should ask what prescription and non prescription medication the victim takes. Sometimes victims have a list of medication they take. Other times, they may have it in their possession. Make sure when the first responders arrive, they are passed that information. We encourage lifeguards to write the list of medications down and give them to first responders.

**Past, Pertinent Medical History**

Sometimes, lifeguards struggle with this question. As rescuers, lifeguard do not need to know the complete medical history of a victim. However, it is important to zero in on some conditions that may apply. For example, if a 54 year old victim is complaining of chest pain and is showing signs of shock, asking about heart conditions is very important. It is not so important, in this scenario, to ask them multiple questions about a broken arm they sustained as a child.

**Last Oral Intake**

This is a fancy way of finding out what has the person eaten recently. This includes food, drinks and medication. Try to find out how much the consumed and when.

**Events Leading Up To**

Sometimes what the victim was doing before they are injured is helpful in determining what is wrong. For example, if a victim stated they fell off a ladder, the lifeguard should start to ask questions about pain, injuries, looking for bleeding, etc. If a victim states they were stung by a bee, this should clue a lifeguard into a possible allergic reaction.

**Ongoing Assessments**

**Shock**

ALL of emergency care really deals with recognizing and treating shock. As stated previously, lifeguards are not trained to diagnose medical problems. Instead, we teach lifeguards when a victim appear to be having a problem and to call for advanced medical care. We do not expect lifeguards to be able to recognize every injury or medical problem a victim may have. However, we do expect lifeguards to recognize shock.

Shock, by definition, is nothing more than a lack of oxygen. What causes that lack of oxygen, well anything can. This includes, strokes, seizures, diabetic emergencies, allergic reactions, heart attacks, bleeding, burns, etc. If a lifeguard understands the indicators of shock, the rest of first aid is easy.

Signs and Symptoms of shock include:

* Increased Heart Rate
* Increased Breathing
* Altered Mental Status or Confusion
* Restlessness or Irritability
* Nausea or vomiting
* Pale, cool, moist skin
* Complaining of thirst

As we cover the various illnesses and injuries, lifeguard students should notice most of not all of the indicators of the illness or injury will contain shock indicators. For example, the indicators of a heart attack is shock with chest pain that can radiate to different areas of the body. By the way, shock with chest pain are many of the same indicators of a victim suffering from a breathing emergency.

**Managing Shock**

If all of emergency care deals with recognizing and treating shock, then all of emergency care also deals with treating shock. To help minimize the effects of shock:

* Have the victim stop what they are doing
* The victim should lay down flat on his/her back
* Control the victim's from being too hot or cold. This includes covering the victim with a blanket
* Keep the victim comfortable
* The rescuer should be as comforting and reassuring as possible
* Monitor the victim's vital signs and level of consciousness
* Control any external bleeding
* Do **NOT** give the victim food or drink.

Lifeguard students will notice that the care steps above will also be care steps for all the illnesses and injuries discussed in this book.

**Notes:**

Shock is a life threatening condition and 911 or your local emergency number should be called right away.

Sudden Illness

* Altered Mental Status
* Stroke
* Diabetic Emergencies
* Seizure
* Breathing Difficulty, Shortness of Breath
* Asthma
* Severe Allergic Reaction
* Pain, Severe Pressure, or Discomfort in the Chest
* Severe Abdominal Pain
* Pregnancy Complications
* Ingested Poison
* Inhaled Poison
* Snakebites
* Pit Vipers
* Coral Snakes
* Spider Bites
* Stinging Insects
* Tick Bites
* Marine Animal Stings
* Human and Animal Bites

Soft-Tissue Injuries

* Bleeding
* Skill: Removing Gloves
* Skill: Controlling Bleeding
* Internal Bleeding
* Amputations
* Impaled Objects
* Open Chest Injury
* Open Abdominal Injury

Muscle, Bone and Join Injuries

**Head, Neck, or Back Injury (Spinal)**

Find an opensource picture of a spine.

As discussed in previous sections of the book, one of the main injuries lifeguards want to prevent are spinal cord injuries. There is about a 2% risk of cervical spinal cord injuries of blunt trauma incidents that result in emergency room visits and are severe enough to require imaging (MRI, CT, etc) (David Markenson, 2010).

Suspect a spinal cord injury in the following situations:

* The victim is greater than 65 years old
* Driver, passenger, or pedestrian, in a motor vehicle, motorized cycle, or bicycle crash
* Fall from a greater than standing height
* Tingling in the extremities
* Pain or tenderness in the neck or back
* Sensory deficit or muscle weakness involving the torso or upper extremities
* Not fully alert or is intoxicated
* Other painful injuries, especially of the head and neck
* Children 2 years of age or older with evidence of head orneck trauma
* Brain Injury
* Swollen, Painful, Deformed Limb
* Skill: Immobilizing a body part
* Impaled Object in the Eye
* Chemicals in the Eye
* Nosebleed
* Injured Tooth

Burns

* Types of Burns
* Minor Burns
* Critical Burns
* Chemical Burns
* Electrical Burns

Environmental

* Heat Emergencies
* Heat Exhaustion
* Heat Stroke
* Cold Emergencies
* Hypothermia
* Frostbite

Other

* Moving a Victim
* Emotional Considerations