

Basic First Aid



**AMERICAN
SAFETY &
HEALTH
INSTITUTE**



Basic First Aid

Student Book, *Version 8.0*

Purpose of this Student Book

This ASHI *Basic First Aid Version 8.0 Student Book* is solely intended to facilitate certification in an ASHI Basic First Aid training class. The information in this handbook is furnished for that purpose and is subject to change without notice.

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PREVIEW

First Aid Provider



Accidents and emergencies happen anywhere, at any time. According to the Centers for Disease Control and Prevention, there are hundreds of millions of emergency department visits for injuries and illnesses in the United States every year.

Safe practices at work, home, and play can prevent many injuries, illnesses, and deaths. However, once an injury or sudden illness has occurred, effective first aid can often improve recovery and even prevent permanent disability or death.¹

First Aid

First aid is the initial care provided for an acute illness or injury, when advanced care procedures are not readily available. First aid is intended to preserve life, alleviate suffering, prevent further illness or injury, and promote recovery. First aid can be initiated by anyone in any situation.

A first aid provider is someone trained to do the following:

- Recognize, assess, and prioritize the need for first aid
- Provide appropriate first aid care
- Recognize limitations
- Seek professional medical assistance when necessary



Recognizing an Emergency

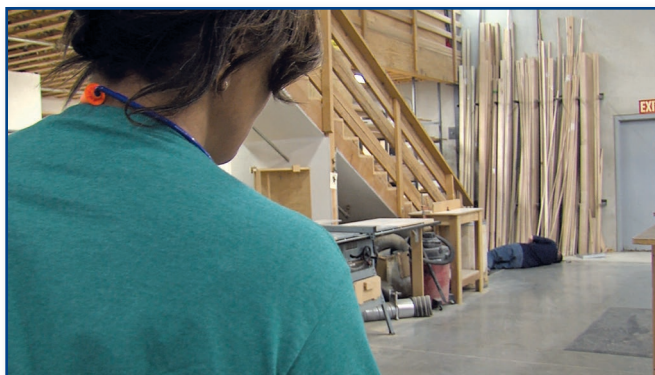
Before helping as a trained first aid provider, you must be able to recognize that a medical emergency exists. Often, emergency situations are unexpected events and can be confusing.

A general impression is a quick sense of what has occurred, or is occurring, when you first observe an emergency scene. This impression can provide important clues to help guide you as you continue:

- Where is the person located?
- How is the person's body positioned?
- Does the person look sick or injured?
- Is it safe for me to be here?

Does the person appear to be unconscious? A person who is not moving and appears to have collapsed could have experienced a sudden cardiac arrest. You could be the person's only chance for survival.

If you suspect an injury, how do you think it happened? Injuries occur due to physical force against the body. The manner in which that force creates an injury is called the mechanism of injury. Mechanisms that transfer significant force are best assumed to result in serious injury until proven otherwise.



Personal Safety

Emergency scenes are often unsafe. Your personal safety is the highest priority, even before the safety of an ill or injured person. Putting yourself in danger to help someone can make the situation worse.

Always pause for a moment before approaching. Look for obvious hazards. Consider the possibility of hidden dangers. If the scene is unsafe, do not approach. If your current location becomes unsafe, get out!

Setup

SETUP is a mnemonic device that can help you remember the important points of making sure it is safe to provide care:

- Stop — Pause to identify hazards
- Environment — Consider your surroundings
- Traffic — Be careful along roadways
- Unknown Hazards — Consider things that are not apparent
- Personal Safety — Use protective barriers

Deciding to Help

One of the most difficult decisions to make is whether or not to get involved when you think a medical emergency has occurred. It is normal to feel hesitant about your ability to help.

You might hesitate because you feel like the problem is too big for you to handle alone.

- You are only the first link in a progressive chain of emergency care. Your involvement lasts only until relieved by another first aid provider or responding EMS personnel — in most cases, a very short period of time.



You might hesitate for fear of making things worse.

- Your training provides you with sound knowledge and skills designed only to help — and not harm — those in need.

You might hesitate because you think you don't have a lot of medical knowledge.

- Extensive medical knowledge is not necessary. First aid is simple and easy to provide.

Finally, you might hesitate because there are others around who you think might take charge.

- In fact, others may feel the same way, resulting in no one stepping forward to help.

If it is safe to do so, take action. Put what you learn in this program to work. Your actions can help to protect or save a life.

Primary Assessment — Unresponsive Person



The primary assessment is a simple way to quickly identify if a life-threatening condition is present. It is the initial approach to anyone suspected of being ill or injured.

The steps of the primary assessment are always the same:

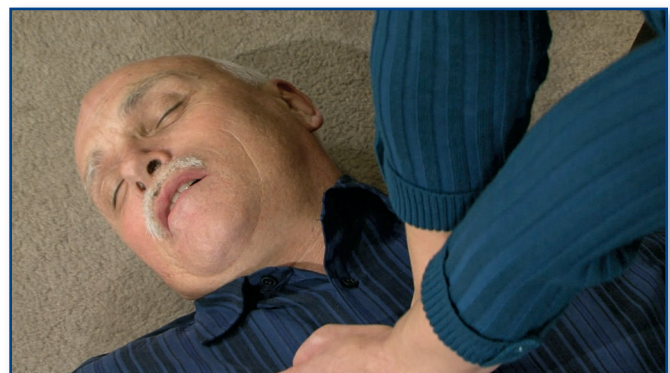
- If it is safe to provide care, check for responsiveness.
- If unresponsive, activate EMS and get an AED.
- Check for normal breathing.

If you determine a person is unresponsive, send a bystander to activate EMS and get an AED, if one is available. If you are alone, do this yourself and quickly return to the person.

If you have a mobile phone, use it to activate EMS. The speaker function will allow you to follow instructions, especially for CPR, from an EMS dispatcher while providing care.

To check for normal breathing, quickly look at the face and chest. Take no longer than 10 seconds. Normal breathing is effortless, quiet, and regular. If you are unsure, assume breathing is not normal.

Weak, irregular gasping, snorting, or gurgling sounds can occur early in this type of situation. These actions provide no usable oxygen. This is not normal breathing.



Compression-only CPR

If the person is not breathing, or only gasping, CPR and the use of an AED are required. It is highly recommended for you to supplement your first aid instruction with training in CPR. However, compression-only CPR is an approach that is being widely promoted to people who are not trained in traditional CPR, which provides both

compressions and breaths. Simple instructions in compression-only CPR can be shared in many different ways including social media and as public service announcements. EMS dispatchers can also provide compression-only instructions during an emergency call. Still, compression-only CPR is a limited approach to treating cardiac arrest. At some point, rescue breaths are essential for all cardiac arrests, especially those involving an airway or breathing problem, or those involving children.

Recovery Position

When an unresponsive person is breathing normally, and uninjured, place him or her in a side-lying recovery position to help protect the airway.

The recovery position helps protect the air passage between the lungs and the mouth by using gravity to drain fluids from the mouth and keep the tongue from blocking the airway.

Frequently assess the breathing of anyone placed in the recovery position. The person's condition could quickly become worse and require additional care.



Assess, Alert, and Attend

Assess, alert, and attend is a convenient way of remembering the general approach to a primary assessment. Assess the scene and person, alert or activate EMS, and attend to the person's problem until EMS arrives.



Knowledge Check

A fellow employee collapses near you during a staff meeting. As a trained first aid provider, you move to help. You kneel next to him, squeeze his shoulder, and loudly ask, "Are you all right?" He is unresponsive, so you direct other employees to activate EMS and get the company's AED. You look closely at the face and chest for breathing; he makes a brief gasping snort, but then remains still. What do you do next?

Primary Assessment — Unresponsive Person



Assess Scene

- Pause and assess scene for safety.
- If unsafe, or if it becomes unsafe at any time, GET OUT!



Check for Response

- Tap or squeeze shoulder and ask loudly, “Are you all right?”
- If unresponsive, have someone activate EMS and get an AED, if one is available.



Look for Normal Breathing

- Position person face-up on a firm, flat surface.
- Look at face and chest for normal breathing. Take no longer than 10 seconds. If unsure, assume breathing is not normal.
- Weak, irregular gasping, snorting, or gurgling is not normal breathing.



Provide Indicated Care

- If person is not breathing, or only gasping, the indicated care is CPR and the use of an AED.
- If normal breathing is found, place an uninjured person in recovery position.

Recovery Position



Prepare

- Place arm nearest you up alongside head.
- Bring far arm across chest and place back of hand against cheek.
- Grasp far leg just above knee and pull it up so the foot is flat on ground.



Roll

- Grasping shoulder and hip, roll person toward you in a single motion, keeping head, shoulders, and body from twisting.
- Roll far enough for face to be angled toward ground.



Stabilize

- Position elbow and legs to stabilize head and body. Ensure there is no pressure on chest that restricts breathing.
- Make sure head ends up resting on extended arm and head, neck, and body are aligned.
- If person has been seriously injured, do not move unless fluids are in airway, or you need to leave to get help

Choking



Choking can occur when a solid object, such as a piece of food, or a small object, enters a narrowed part of the airway and becomes stuck. On inhalation, the object can be drawn tighter into the airway and block air from entering the lungs.

A forceful thrust beneath the ribs and up into the diaphragm can pressurize the air in the chest and pop an obstruction out of the airway. Compression of the chest over the breastbone can also create enough pressure to expel an object.

Mild Obstruction

To provide the appropriate care, you must first be able to recognize the difference between a mild blockage and a severe blockage.

With a mild blockage, a person can speak, cough, or gag. This type of blockage is typically cleared naturally through forceful coughing. Allow someone with a mild blockage to try and resolve the problem on his or her own. Stay close and be ready to take action if things worsen.



Severe Obstruction

When a severe blockage occurs, a person cannot take in enough air to dislodge the object. Signs of severe obstruction include very little or no air exchange, lack of sound, and the inability to speak or cough forcefully. The person may hold his or her hands to the throat while attempting to clear the obstruction.

A person without any air exchange requires your help to survive.



Pregnant or Obese

When someone is clearly pregnant or obese, use chest thrusts instead of abdominal thrusts. Position yourself directly behind the person. Reach under the armpits and place the thumb side of your fist on the center of the chest. Grasp your fist with your other hand and thrust straight backward. Try to not put pressure on the ribs.

Self-Care

If you are choking and alone, try pressing your abdomen quickly against a rigid surface, such as falling onto the back of a chair. If one is not available, attempt abdominal thrusts on yourself.



Knowledge Check

You are in the company cafeteria eating lunch with a coworker. He is laughing at something you said when he suddenly stops, grasps his throat with his hands, and stands up quickly. He clearly looks distressed, so you stand up next to him and ask, "Are you choking?" He is unable to answer you and completely silent. You decide to perform abdominal thrusts. Describe how to perform them.

Choking



Assess Person

- Ask, “Are you choking?”
- If person nods yes, or is unable to speak or cough, act quickly.
- If available, have a bystander activate EMS.



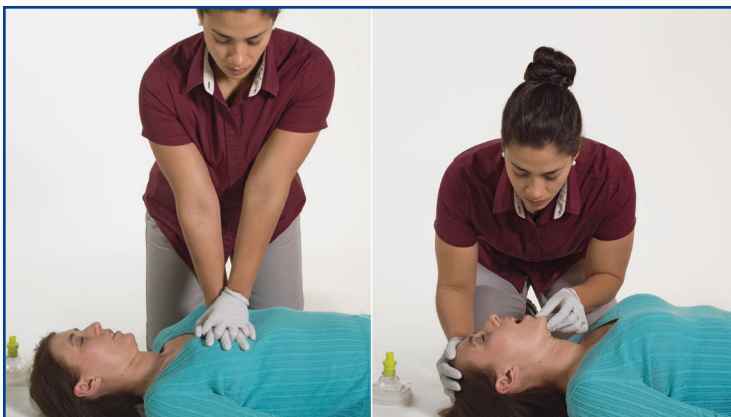
Position Yourself

- Stand behind person. Reach around and locate navel.
- Make a fist with other hand and place thumb side against abdomen, just above navel and below ribs.
- Grasp fist with other hand.



Give Thrusts

- Quickly thrust inward and upward into abdomen.
- Repeat. Each thrust needs to be given with intent of expelling object.
- Continue until person can breathe normally.



If Person Becomes Unresponsive

- Carefully lower person to ground.
- If not already done, activate EMS and get an AED, if one is available.
- If possible, perform compression-only CPR
- If you think something has been dislodged by your compressions, look in the mouth for an object.
- Continue compression-only CPR until person shows obvious signs of life, or another provider or EMS personnel take over.

Control of Bleeding



Sudden injuries occur quickly, often from traumatic events, and may become life threatening.

Bleeding occurs when blood vessels, found throughout the body, are damaged. Heavy bleeding is likely if a large blood vessel is involved.

Arterial bleeding is bright red and will often spurt from a wound. It can be difficult to control due to the pressure created by the heart's contractions. If blood is dark red and flowing steadily, it is likely coming from a damaged vein.

Clot-forming fibers naturally collect at a wound site to try to stop bleeding, but heavy bleeding can overwhelm this and prevent clotting from occurring. Bleeding reduces the amount of oxygen that can be delivered to the body. If heavy or uncontrolled, bleeding can quickly become life threatening.

Pressure applied directly to a bleeding site until bleeding stops is the standard method for controlling external bleeding. Activate EMS immediately for any heavy bleeding.

Bleeding exposes you, the provider, to potentially infectious body fluids. Always use disposable gloves as a barrier to protect both you and the injured person. When gloves are not available, an improvised barrier, such as a plastic bag, can be used.

Tourniquets

If direct pressure is unable to control bleeding on a limb, use a tourniquet. Tourniquets utilize a simple binding method around a limb to stop blood flow.

Commercially made tourniquets are ready and easier to use than improvised ones. A compressing band is snugly placed around a limb a few inches above the open injury. A solid handle, connected to the band, is twisted to tighten the band evenly around the limb until bleeding stops. The handle is secured in place to maintain the constriction.

Improvised tourniquets, using the same concept, can be created with nearby materials such as triangular bandages and something solid to twist with.



A tourniquet can also be considered as a primary step to control severe limb bleeding when it is clear direct pressure cannot be applied effectively, such as in a mass casualty event, for a person with large or multiple injuries, in a dangerous environment, or for an inaccessible wound.

Training in the application of a tourniquet is helpful for its effective use.

Hemostatic Dressings

When direct pressure is unable to control bleeding, and the injury is located where a tourniquet cannot be applied, you can consider the use of a hemostatic dressing.

A hemostatic dressing is a unique dressing impregnated with an agent that speeds up the clotting process. A hemostatic dressing is packed into an open wound and held in place with direct pressure or a pressure bandage. Pressure is maintained until bleeding has stopped.

Training is essential to learn the proper application of a hemostatic dressing.



Knowledge Check

What is the standard method for controlling external bleeding?

PREVIEW

Control of Bleeding



Apply Direct Pressure

- Quickly expose and inspect wound.
- Using a clean pad, apply pressure directly on point of bleeding. Use just gloved hand if pad not available.
- If blood soaks through pad, leave in place. Apply second pad on top of first.
- When controlled, maintain continuous direct pressure.



If Bleeding is Controlled

- Consider a pressure bandage. Wrap a conforming bandage around limb and over dressings to provide continuous direct pressure.
- Avoid wrapping so tight that skin beyond bandage becomes cool to the touch or blue in color.



If Bleeding Continues on a Limb

- Apply a commercial tourniquet. If not available, use an improvised one instead.
- Snugly place compressing band a few inches above injury. Twist handle and tighten band until bleeding stops. Secure handle in place.



If Bleeding Continues on Torso

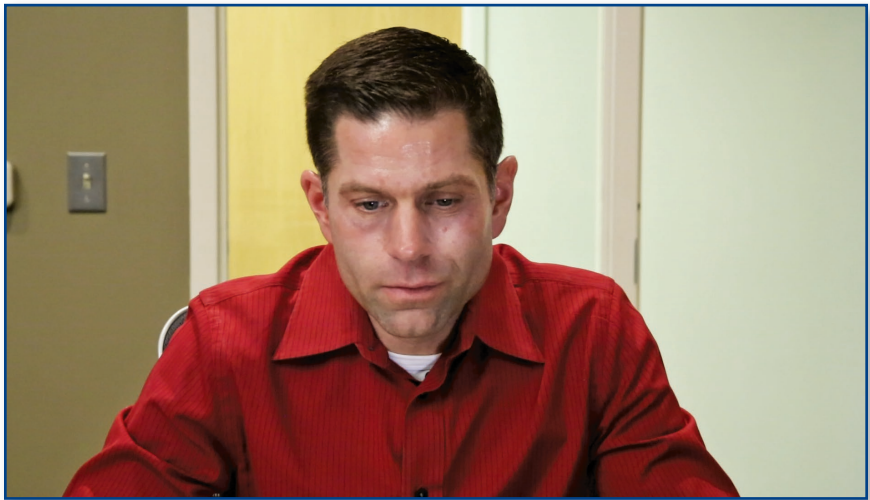
- Consider using a hemostatic dressing if one is available and you are trained to use it.
- Pack dressing tightly into open wound. Place remaining dressing on top of packed wound.
- Secure in place with direct pressure or pressure bandage.

Sudden Illness

Medical conditions and illnesses can suddenly trigger an unexpected medical emergency. In general, suspect a serious illness when, without warning, a person suddenly appears weak, ill, or in severe pain.

In many cases, the human body displays warning signs to alert us to serious illness. The most common warning signs of serious illness include the following:

- Altered mental status
- Breathing difficulty or shortness of breath
- Pain, severe pressure, or discomfort in the chest



Altered Mental Status

Caused by a number of medical conditions, as well as the use of alcohol, medications, or drugs, an altered mental status is a significant or unusual change in a person's personality, behavior, or consciousness. It is an indication of a change in brain function.

Regardless of the cause, an altered mental status is a warning sign of a serious problem and is considered a medical emergency.

- Activate EMS.
- Position the person for comfort.
- Calm and reassure the person as best you can.
- If responsiveness becomes severely diminished, consider placing in a recovery position to protect the airway.
- Reassess regularly until another provider or EMS personnel take over. The condition could deteriorate quickly and require additional care.



Fainting

Fainting is a momentary loss of consciousness caused by an unexpected drop in blood pressure and blood flow to the brain. Anxiety, fear, pain, stress, standing in place too long, or rapid movements in position, such as standing up quickly from a seated or lying position, can all result in someone feeling faint or fainting. A medication or underlying medical condition might also contribute to the cause.

If someone complains of suddenly feeling warm, light-headed, or that his or her vision is narrowing, follow these guidelines:

- Quickly lay the person flat on his or her back on the ground.
- You can elevate the feet about 6 to 12 inches, which allows blood from the legs to move back into the body.
- Do not elevate the feet if it causes pain or you suspect a person may be injured.

This is a temporary condition that should pass quickly and allow the person to get back to normal activities.



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