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AMERICAN SAFETY & HEALTH INSTITUTE

Basic First Aid

Student Handbook Preview

AMERICAN SAFETY & HEALTH INSTITUTE

Basic First Aid

Student Handbook, *Version 7.0*

Purpose of this Handbook

This ASHI *Basic First Aid Version 7.0 Student Handbook* 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.

ASHI certification may only be issued when an ASHI-authorized Instructor verifies a student has successfully completed the required core knowledge and skill objectives of the program.

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Section 1 — First Aid Provider

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.[iii]

Safe practices at work, home, and play can prevent many injuries, illnesses, and deaths. However, once injury or sudden illness has occurred, effective first aid can make the difference between a rapid or prolonged recovery, a temporary or permanent disability, and even life or death.

The Occupational Safety and Health Administration (OSHA) defines first aid as "emergency care provided for injury or sudden illness before professional emergency medical treatment becomes available."

A first aid provider is someone trained in the delivery of initial emergency procedures, using limited equipment to perform a primary assessment and intervention until Emergency Medical Services (EMS) personnel arrive. The essential responsibilities of a first aid provider are:

- Recognizing a medical emergency,
- Making the decision to help,
- Identifying hazards and ensuring personal safety,
- Activating the EMS system, and
- Providing supportive, basic first aid care.

The goal of this training is to help you gain the knowledge, skills, and confidence necessary to manage a medical emergency until more advanced help is available. First aid does not require making complex decisions or having in-depth medical knowledge. It is easy to learn, remember, and perform.

Legal Considerations

Some people fear being sued as a result of performing first aid in an emergency. Understanding more about the legalities can help reduce this fear.

All states have passed what are known as "Good Samaritan laws," to help encourage bystanders to assist those in need. These laws help protect anyone who:

- Voluntarily provides assistance, without expecting or accepting compensation,
- Is reasonable and prudent,
- Does not provide care beyond the training received, and
- Is not "grossly negligent," or completely careless, in delivering emergency care.

Good Samaritan laws vary slightly from state to state. Become familiar with the laws in your state and other states where you work or travel.

Everyone has the right to refuse medical treatment. It is appropriate to ask a responsive person if they want help before providing care. When a person is or becomes unresponsive, the legal concept of "implied consent" allows a provider to help without asking, because it assumes the person would agree to be helped if responsive.

Other Legal Considerations

Duty to Act — A pre-determined requirement to provide care, typically by job description (such as firefighter, police officer or lifeguard) or by relationship (such as parent or guardian). In general, a first aid trained person is encouraged, but not required by duty, to act.

Negligence — Occurs when someone is caused further harm due to care that did not meet the expected standard of someone with a duty to act.

Assault & Battery — Placing a person in fear of bodily harm. Forcing care on a person against his wishes may be considered grounds for this.

If a parent or guardian is present with an ill or injured child, obtain the parent or guardian's consent prior to giving care. When one is not present, the consent to provide care to a child is legally implied. Provide care and contact a parent or guardian as soon as reasonably possible.

Once care has begun, and it is safe to do so, remain with an ill or injured person until someone with equal or greater emergency medical training takes over. If alone, it is okay to leave to activate EMS, but return to the person as soon as you can.

There has never been a successful lawsuit in the United States against a person providing first aid in good faith. Still, it is appropriate to use common sense:

- Activate EMS immediately.
- If the scene is unsafe, do not enter!
- Ask a responsive person for permission before giving care.
- Never attempt skills that exceed your training.
- And, once you have started, don't stop until someone with equal or greater training relieves you.

Recognizing an Emergency

A general impression is a quick sense of what has occurred, or is occurring, when you first observe an emergency scene. This impression can help guide you in your approach.

If injured, how was the person injured? Injuries occur from 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.

Does the person appear to be unresponsive? A person who is not moving and appears to have collapsed can be in a life-threatening condition known as sudden cardiac arrest. Your immediate assessment and care can be his or her only chance for survival.

Deciding to Help

The most critical decision you will make is whether to get involved when a medical emergency has occurred. It is normal to feel hesitant because you are unsure of your ability to help.

You might hesitate because you feel like you are alone in helping. 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 providers—in most cases, a very short period of time.

You might hesitate for fear of making things worse. Your basic first aid training provides you with sound knowledge and skills designed only to help – and not harm – those in need.

You might also hesitate because you think you don't have a lot of medical knowledge. Extensive medical knowledge is not necessary. First aid skills are based on common sense and simple, effective procedures that can be easily learned and safely applied.

Finally, you might hesitate because others have already stopped to help. It never hurts to see if additional assistance is needed. Other bystanders may not have any first aid training or may be hesitant to provide care.

Section 2 — Assessment

Primary Assessment — Unresponsive Person

The primary assessment helps you assess for immediate life-threatening problems, activate the EMS system, and rapidly provide priority care. It is the same for all ages and is performed quickly.

Before anything else, pause and assess the scene for hazards. If the situation is dangerous to you, do not approach.

Tap or squeeze the person's shoulder and ask loudly, "Are you okay?" Use his name if you know it. For an infant, tap the foot.

If the person is unresponsive, have another bystander activate EMS. If you are alone with an unresponsive adult, immediately alert EMS yourself. Get an AED, if one is available, and quickly return to the person. When alone with an unresponsive child or infant, provide about two minutes of CPR before leaving to call for EMS and get an AED yourself.

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.

Look at the face and chest for normal breathing. Do this quickly. Normal breathing is effortless, quiet, and regular. If normal breathing is found, place the person on his or her side in the recovery position.

Weak, irregular gasping, snorting, or gurgling sounds can occur early in cardiac arrest. These actions provide no usable oxygen. This is not normal breathing. If someone is not breathing, or only gasping, perform CPR. Use the AED as soon as one becomes available.

Unresponsive and Breathing — Recovery Position

Even if a person is breathing normally, a lack of responsiveness is still considered to be a life-threatening condition that requires immediate care. There are a variety of things that can result in unresponsiveness, including medical conditions such as stroke or seizures, or external factors, such as alcohol or drug overdose.

HAINES Position

This version of the recovery position is also known as the High Arm in Endangered Spine, or HAINES, position and can be used when someone is injured.

Regardless of the cause, the greatest treatment concern is the ability of the person to maintain a clear and open airway.

If an unresponsive person has been seriously injured, do not move the person unless fluids are collecting in the mouth and airway, or you are alone and need to leave to get help.

Frequently assess the breathing of anyone placed in a recovery position. The condition can quickly become worse and require additional care.

Compression-Only CPR

Sudden cardiac arrest is a life-threatening medical emergency in which a heart's electrical system malfunctions and the heart abruptly stops working. An affected person will become unresponsive and collapse. Breathing will stop. If a normal heart rhythm is not restored within a few minutes, death becomes certain.

If you see an adult collapse and find he or she is unresponsive and not breathing, or only gasping, the immediate application of continuous compression to the chest and use of an AED could significantly increase the person's chance of surviving.

Compression-only CPR is a simpler, but limited, alternative to standard CPR, which combines compressions and rescue breaths. As a first aid provider, it is highly recommended for you to receive additional training in standard CPR.

Skill Guide 3

Unresponsive and Breathing — Recovery Position

Assess Patient

- Pause and assess scene. ***Scene is safe!***
- Tap or squeeze shoulder. Ask loudly, "Are you okay?" ***No response!***
- Have someone alert EMS and get an AED.
- Look quickly at face and chest for normal breathing. Occasional gasps are NOT considered normal. ***Normal breathing present!***

Prepare

- Extend arm nearest to 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 foot is flat on ground.

Roll

- Grasp shoulder and hip and roll patient toward you. Roll in a single motion, keeping head, shoulders, and torso from twisting.
- Roll far enough for face to be angled forward.
- Position elbow and knee to help stabilize head and body.

Suspected Injury

- If person has been seriously injured, do not move unless fluids are collecting in airway, or you are alone and need to leave to get help.
- During roll, make sure head ends up resting on extended arm and head, neck, and torso are inline.

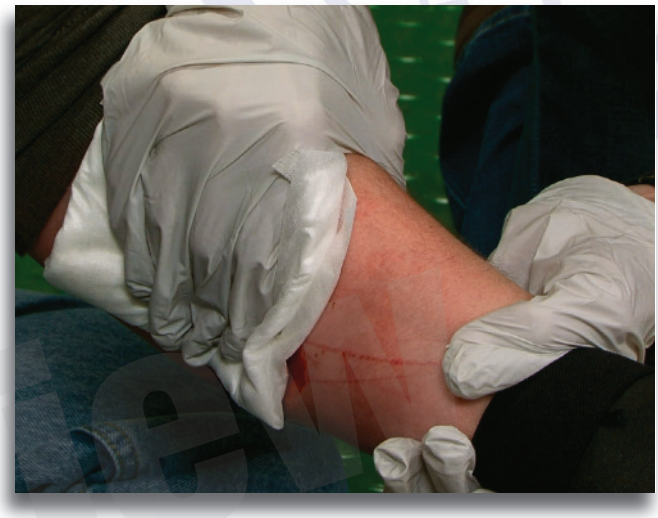
Section 3 — Soft-Tissue Injuries

Control of Bleeding

Blood vessels are present throughout the body. Bleeding occurs when tissues are damaged. Heavy bleeding is likely if a major blood vessel is damaged. Bleeding reduces the oxygen-carrying capacity of blood. If heavy or uncontrolled, bleeding can quickly become life threatening.

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 the blood is dark red and flowing steadily, it is likely coming from a damaged vein. Bleeding from a vein can be heavy. Regardless of the source, all heavy bleeding must be controlled as soon as possible.



Clot-forming fibers naturally collect at a wound site to create a patch to stop bleeding. Severe bleeding can overwhelm this process and prevent clotting from occurring.

Activate EMS immediately for any heavy bleeding.

Bleeding exposes you, the provider, to potentially infectious body fluids. Always use protective barriers, such as disposable gloves, to protect both you and the injured person.

Continuous firm and direct pressure applied to a wound is the best method for controlling external bleeding.

When barriers are not available, an injured person can provide self-care or a provider can use improvised barriers, such as a plastic bag.

Minor Wounds

Wash minor open wounds with clean, running water, with or without soap, until all foreign matter has been removed. Apply firm, continuous, direct pressure to control any bleeding. If the person is not allergic to it, apply a triple antibiotic lotion or cream to speed healing and reduce infection. Cover the wound with a clean adhesive bandage or gauze pad.

Internal Bleeding

A significant blow can create injury and bleeding inside the body. This is especially true for organs in the chest and abdomen. Internal bleeding can be difficult to detect. Suspect it if the chest or abdomen is hit hard.

Surgery may be the only way to control internal bleeding. Early suspicion and activation of EMS is critical for effective treatment, and possibly survival.

Managing Shock

Shock develops when poor blood flow creates a shortage of oxygen to body tissues. Any serious illness or injury has the potential to cause shock. If not treated early, it can get worse and become life threatening.

Shock is progressive in nature. Early signs can be difficult to detect. A person may simply appear uneasy, restless, or worried. Other more serious signs can emerge gradually over time. Responsiveness may diminish. The skin may become pale, cool, and sweaty.

A person in shock must get to a hospital as quickly as possible in order to survive. Early recognition, treatment, and activation of EMS are essential for survival.

To limit the effects of shock, help the body maintain adequate oxygen by ensuring an open and clear airway, ensuring normal breathing, and controlling any external bleeding.

If there is no difficulty in breathing, lay the person flat on the ground.

Skill Guide 7

Control of Bleeding

Apply Direct Pressure

- Quickly expose and inspect wound.
- Using a clean, absorbent pad, apply direct pressure with flats of fingers directly on point of bleeding.
- If a pad is not available, apply direct pressure with just your gloved hand.

Apply Pressure Bandage

- Wrap a roller gauze or elastic bandage around limb and over injury to provide continuous pressure to wound.
- Include enough pressure to control bleeding.
- Avoid wrapping so tight that skin beyond bandage becomes cool to touch, bluish, or numb. Make sure a finger can be slipped under bandage once applied.

If Bleeding Continues…

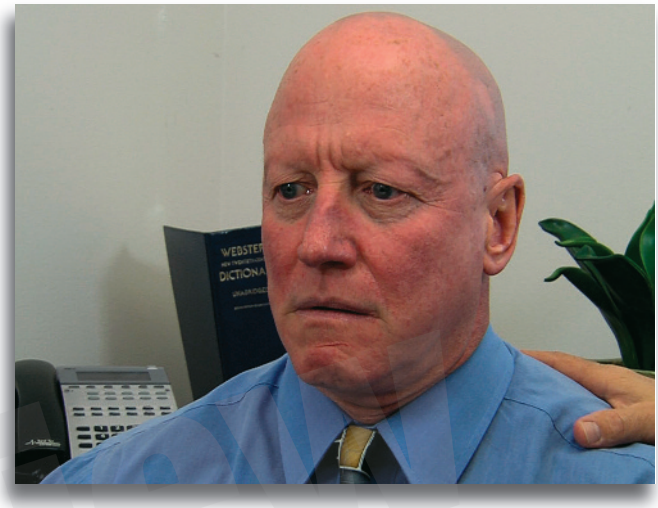
- If blood soaks through the pad, apply another pad, leaving the initial pad in place.
- Apply more pressure with the palm of your hand.
- When direct pressure is not effective at controlling bleeding from a limb, apply a tourniquet only as a last resort.

Section 7 — Sudden Illness

Medical conditions and illnesses can suddenly trigger an unexpected medical emergency. Suspect a serious illness when, without warning, a person suddenly appears weak, ill, or in severe pain. A sudden onset of fever, headache, and stiff neck or a blood-red or purple rash, especially in children, can indicate the possibility of severe infection.

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

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



Altered Mental Status

Caused by a number of medical conditions, 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 the person's level of responsiveness is or becomes severely diminished, consider placing the person in a recovery position to protect the airway. Reassess regularly until another provider or EMS personnel take over.

Fainting

Fainting is the result of a drop in blood flow to the brain, usually due to a reaction to sudden stress, lack of food or water, or prolonged standing in place. A person suddenly becomes light-headed or dizzy and may collapse. In most cases, the effects are temporary and not serious.

Lay the person flat. If there is no evidence of injury, raise the feet about 6 to 12 inches. If not possible, sit the person forward and place his head between his knees. Keep the person still and quiet until he or she feels better.

Stroke

A stroke, or brain attack, occurs when the blood supply to a portion of the brain is suddenly interrupted. This most commonly occurs when a blood clot gets caught in a blood vessel. A stroke can also occur when a weak spot in the wall of a blood vessel, known as an aneurysm, bursts open and bleeds into the surrounding brain tissue. In both cases, brain cells die.

Signs of a stroke can vary. They tend to show up suddenly.

- Numbness or weakness of the face, arm, or leg, especially on one side of the body, may be present.
- A person may appear confused.
- A change in the ability to speak or understand can occur.
- Sight and balance can be affected, and,
- A severe, sudden headache may be described.

A stroke is a true medical emergency. Activate EMS immediately if a stroke is suspected. Rapid treatment in a hospital is critical in limiting the damage that can occur.

A person experiencing a stroke can become frustrated at being unable to move or communicate clearly. The person may appear confused but still be aware of what is happening. Calm, comfort, and reassure the person until another provider or EMS personnel take over. Do not give anything to eat or drink.

Stroke Assessment

A quick method to determine if someone could be suffering from a stroke is to ask the person to:

- Smile
- Hold up both arms
- Speak a simple sentence

If the person has trouble with any of these tasks, a stroke may have occurred.

CAUTION!

Stroke treatment is time sensitive! Stroke victims who get to the emergency room as soon as possible are less likely to have long-term impairment.

Whenever a stroke is suspected, be prepared for the possibility of sudden cardiac arrest and the need for CPR and the use of an AED.

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