First Aid

Notes: Welcome to the Health 9 Lesson: First Aid. Please click the next button to continue.

Lesson Objectives

In this lesson, you will learn to:

- **Describe** the steps for responding to life-threatening emergencies
- **Demonstrate** strategies for responding to an emergency situation requiring CPR
- **Identify** strategies for responding to a shock or choking victim
- **Identify** other common injuries and their proper treatment
What to Do in an Emergency Situation

In an emergency you need to act quickly - the first few minutes after a medical crisis are usually the most critical.

The key to knowing what to do, remaining calm, and making a decision to act.

If the victim in an emergency is unresponsive, you must begin immediately the chain of survival.

Notes: Your quick response to a medical crisis could make the difference in the life of the victim. By remaining calm, making the decision to act and enacting the chain of survival, you will be doing your part to respond to emergencies.

Chain of Survival

If the victim is an adult, you can begin the first two links in the chain: call 911 and begin CPR.

The next two links are early defibrillation and transfer to advanced care.

An automated external defibrillator (AED) is a handheld device that almost anyone can be trained to use.

Notes: The first two links in the chain of survival with an adult victim are to call 911 and begin CPR. Next, use a defibrillator if available and transport the victim to receive advanced medical care. AEDs are handheld devices used to apply electrical impulses to the heart in an attempt to restore proper rhythm.
When to Administer CPR

A person whose breathing and heartbeat have stopped may need **cardiopulmonary resuscitation (CPR)**.

You must be properly trained by a professional and certified before administering CPR.

**Notes:** CPR should be administered to a victim who is not breathing and has no pulse. One must be trained properly by a professional before providing CPR to a victim.

CPR for Adults

- If an adult victim is unresponsive, tap him or her and ask in a loud voice, "Are you okay?"
- If the victim doesn't respond, start the chain of survival.
- First, call 911 or have someone else do so.

**Notes:** In adults, if a victim does not respond when tapped or asked if they are okay, start the chain of survival by calling 911 or have someone else do so.
Notes: However, with infants and children, one should first administer CPR to the victim for about 1 minute prior to calling 911. When performing CPR on an infant, place your mouth over the infant’s mouth and nose when administering breaths.

Notes: Shock occurs when blood flow is reduced throughout the body, therefore limiting oxygen to the cells. Shock is a life-threatening emergency that requires immediate medical attention. Restlessness, irritability, altered consciousness, nausea, pale, cool and moist skin, and rapid breathing and pulse are all signs and symptoms of shock.
First Aid for Shock Includes:
1. Have the victim lie down.
2. Call 911
3. Control external bleeding
4. Elevate the victim’s legs
5. Don’t give anything by mouth such as food or drink to the victim
6. Provide reassurance to the victim until help arrives

Recognize the Signs of Choking

- Choking occurs when a person’s airway becomes blocked by food or an object.
- If the obstruction is not removed, the victim can die from lack of oxygen within a few minutes.
- A person may clutch his or her throat with one or both hands, which is the universal sign for choking.
- If someone appears to be choking but can cough forcefully or speak, do not attempt first aid.
- A strong cough can expel the object from the airway.
Notes: Another life threatening emergency is choking or airway obstruction. Recognition of a choking victim is critical, therefore one should know the universal sign for choking is 1 or 2 hands clutching the throat. If however, a victim can cough forcefully or speak, do not attempt first aid.

Ways to Help a Choking Adult or Child

If the choking victim is an adult or a child, use abdominal thrusts to force the obstruction out of the airway.

To perform this procedure, stand behind the victim and place your arms around him or her.

Make a fist with one hand, and grasp it with your other hand. Pull inward and upward just under the rib cage.

If you begin to choke while you are alone, use your own fist and hand to perform the procedure on yourself.

You can also try pressing your abdomen forcefully against the back of a chair.

Notes: For an adult or child choking victim that cannot cough or speak, use the Heimlich maneuver or abdominal thrusts to force the obstruction out of the airway. By standing behind the victim and placing your arms around him or her, make a fist with 1 hand and grasp it with your other hand. Administer thrusts by pulling inward and upward just below the rib cage. If you are alone and begin to choke, administer abdominal thrusts to yourself against the back of a chair.
Ways to Help a Choking Infant

Hold the baby face-down on your forearm.

Support the infant’s head and neck with your hand and point the head downward so that it is lower than the chest.

With the heel of your hand, give the infant five blows between the shoulder blades.

If the object is not dislodged, turn the infant over and perform five chest thrusts as described in the CPR section.

Call 911 if the object is not dislodged within one minute.

Notes: With a choking infant, position the baby face down on your forearm and support the head and neck with your hand. While pointing the head downward, give the infant 5 blows between the shoulder back blades using the heel of your hand. If you cannot dislodge the object, turn the infant over and perform 5 chest thrusts as described for CPR. Call 911 if object is not dislodged within a minute.

Muscle Cramps

A muscle cramp is the sudden and painful tightening of a muscle.

If a muscle cramp occurs, you need to:
- Stretch out the affected muscle to counteract the cramp.
- Massage the cramped muscle firmly.
- Apply moist heat to the area.
- Get medical help if the cramp persists.

Notes: There are three common injuries that we would like to address. Muscle cramps, strains and sprains. A muscle cramp is the sudden and painful tightening of a muscle.
If a muscle cramp occurs, you need to:

- Stretch out the affected muscle to counteract the cramp,
- Massage the cramped muscle firmly,
- Apply moist heat to the area for relief, and
- Get medical help if the cramp persists.

**Notes:** A strain is an injury to a muscle, usually resulting from overuse of the muscle. The symptoms of a strain include pain, swelling, bruising, and loss of movement caused by small tears in the muscle.

A sprain is an injury to a ligament. Sprains usually result from a sudden twisting force. Sprains also cause pain and swelling form badly stretched or torn ligaments.
Notes: Strains and sprains can be treated with the R.I.C.E. or RICE method.

R - Rest: Do not move the affected area. Avoid anything that causes pain.
I - Ice: Ice the injured area to reduce pain and swelling.
C - Compression: Lightly wrap the area with a bandage to reduce swelling.
E - Elevate: Elevate the affected area above the level of the heart to reduce pain and swelling.

Classification of Burns

Heat radiation from the sun, certain chemicals, and electricity can all burn the skin and soft tissues of the body.

Burns are classified according to depth: first-degree burns are superficial, and second- and third-degree burns are deep.
Notes: Burns are also common injuries. There are two classifications of burns. Heat, radiation from the sun, certain chemicals and electricity can burn skin and soft tissues. Also, burns are classified according to depth. 1st degree burns are superficial while 2nd and 3rd are deep.

Types of Burns and Treatments

In a first-degree burn, only the outer layer of skin is burned and turns red. Cool the burn with cold running water or by immersing it in cold water for 10 minutes.

A second-degree burn is one in which the top several layers of skin are damaged. The skin will have blisters and appear blotchy. Wrap the area loosely with a sterile, dry dressing.

A third-degree burn is a serious burn in which deeper layers of skin and possibly fat, muscle, nerves, and bone are damaged. Call for professional medical help immediately.

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Notes: Other common injuries include open wounds. The types of open wounds are abrasion, laceration, puncture, and avulsion.

Notes: We've all scraped our hand or knee against a hard surface and broken the skin. This scraping of the outer layer of skins is called an abrasion. When dirt and bacteria enter the wound site, this calls for the need to clean the wound to prevent future infection.
Notes: A laceration is another open wound usually caused by a sharp object slicing through layers of skin. All lacerations are accompanied by bleeding. Some lacerations can cause heavy damage to nerves and large blood vessels.

Notes: A puncture wound is a small but deep wound which is caused by an object that pierces the skin. Puncture wounds can cause internal bleeding and there is high risk of infection such as tetanus.
Notes: The last of the wounds is the avulsion. The tissue becomes partially or completely separated from the body. You will have heavy bleeding with an avulsion. If a body part is severed, it is essential to pack the severed part in ice or ice water until you can get some professional, medical help to attempt to reattach the severed part surgically.

Notes: When cleaning wounds use protective gloves, wash a minor wound with mild soap. Do not attempt to clean a severe injury. Also remember to wash your hands before and after providing care even if you wear gloves.
**How to Control Bleeding**

Cover the wound with sterile gauze or a clean cloth, and press firmly.

If possible, elevate the wound above the level of the heart.

Cover the gauze or cloth dressing with a sterile bandage.

If necessary, cover the dressing with a pressure bandage and/or use pressure point bleeding control.

Call for help or have someone else do so.

**Notes:** Bleeding is controlled by using sterile gauze or cloth and pressing firmly elevate the wound above heart level. Cover the gauze or cloth with a sterile bandage. If necessary, use a pressure bandage or use pressure point bleeding control. Finally, call for help.

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**First Aid for Nosebleeds**

Keep the person quiet.

Tell the person to breathe through his or her mouth.

Have the person sit down and lean forward.

Do not tilt the person’s head back - doing so may cause the person to choke as blood runs down the back of the throat.

Using a protective barrier, press on the bleeding nostril.

Maintain pressure for 15 minutes.

**Notes:** Nosebleeds are also quite common. If a person has a nosebleed, have the person sit down and lean forward. Do not tilt the person’s head back. Use a sterile protective barrier to press on the bleeding nostril for approximately 15 minutes.