

## First Aid Introduction

Unintentional injury is the fifth leading cause of death in the United States. There are 37 million emergency room visits per year. This number is absolutely staggering, and means that 1 out of 7 people will sustain injury requiring medical intervention. The need for people with first aid skills is absolutely critical in decreasing the permanent damage or death to the victim.

According to government statistics, unintentional injuries are the leading cause of death in children from age of 1 to 21. More than 200,000 children are injured on the playground and require a trip to the emergency room. Several other common examples of unintentional injuries that might require first aid intervention by a trained and certified person:

- Motor vehicle and bicycle accidents
- Home or Work Place Violence
- Falls
- Strokes
- Fire and Poisoning



At eCPRcertification.com we design our courses so they provide you with essential skills and information necessary to offer medical help to someone in critical need. After completion of the coursework and the test you will be able to assess the need for first aid and how to administer. You will also receive nationally recognized certification in First Aid, downloadable via computer and/or mail.

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## First Aid - First Aid Kit (page 1 of 11)

Let's define first aid. Urgent medical care provided to someone who is in need of immediate assistance due to illness or injury, before qualified professional help arrives on the scene. You may be assisting people with injuries that vary in severity. One day you might be helping someone with a paper cut, and tomorrow it could be heart attack or cardiac arrest. The most important thing is to define the situation based on the information available and proceed with medical assistance according to your training and knowledge. This course will prepare you for these types of situations and besides other benefits and requirements could put you in the position to save someone's life. Also, this material should be reviewed on regular basis to refresh your knowledge. We all forget things we do not often use, and refreshing what you already know will only enhance your first aid administration skills.

### First Aid Kit

One of the keys to performing successful first aid is a properly stocked First Aid Kit. These are readily available online or at major retailers and generally have everything necessary to perform First Aid. Once the First Aid Kit is purchased, the personnel should be informed of the location. The location should be in the common and accessible area so everyone in need can use the supplies. Also, a procedure for regularly checking and replenishing the Kit is essential to insure that necessary supplies are available when needed.

Typical content of the common size kit would include (content and quantities may vary by manufacturer):

#### Sample First Aid Kit ·

- (16) 3/4"x3" Adhesive plastic bandages ·
- (1) 2"x4" Elbow & knee plastic bandage ·
- (1) 1-3/4"x2" Small fingertip fabric bandage ·
- (4) 2"x2" Gauze dressing pads, (2) 2-pks ·
- (4) 3"x3" Gauze dressing pads, (2) 2-pks ·
- (2) 4"x4" Gauze dressing pads, (1) 2-pack ·
- (1) 5"x9" Trauma pad ·
- (1) 2"x4.1 yd. Conforming gauze roll bandage ·
- (1) 3"x4.1 yd. Conforming gauze roll bandage ·
- (1) Triangular sling/bandage ·
- (1) 6"x9" Instant cold compress ·
- (2) Exam quality gloves, 1 pair ·
- (1) Sterile eye pad ·
- (3) Triple antibiotic ointment packs ·
- (1) Burn relief pack, 3.5 gm ·
- (6) Alcohol cleansing pads ·
- (6) Antiseptic cleansing wipes (sting free) ·
- (1) 1"x5 yd. First aid tape roll ·
- (6) Aspirin tablets, (3) 2-pks ·
- (1) 4-1/2" Scissors, nickel plated ·
- (1) 4" Tweezers, plastic ·
- (1) First aid guide



You should review the above list and be aware of the content, so when the need arise you know which supplies are available to you. Also, review the first aid guide, which is included in the kit to become familiar with directions and guidelines on how to use the material.



## First Aid - General Guidelines (page 2 of 11)

### Scene Safety

One of the critical skills for performing effective First Aid is to ensure that the scene is safe for the victim as well as everyone else present. All precautions have to be taken prior to administering the actual First Aid. If it's a traffic accident, insure that the cars driving by are aware of the accident, signal for help from drivers, and ask them to monitor/direct traffic while you proceed with first aid. Engage help!!!!

### Help from Others

The chances of performing successful and effective first aid increase if there is more than one person assisting in Emergency. First Aid trained professional should make every effort to locate additional help in the vicinity of the incident. These people could be deployed to call 911 or help secure the scene.



Before beginning First Aid one of the important things about administering effective First Aid is to determine when it is needed.

Below are some general guidelines for:

1. If the victim is responsive introduce yourself and offer help
2. If the victim agrees proceed with First Aid administration
3. If the victim refuses, call 911 and wait for the arrival with the victim
4. If person is unresponsive, assume that your help is needed and proceed with First Aid/CPR

Following these guideline will help you with effective care for the victim.



## First Aid - OSHA (page 3 of 11)

### Occupational Safety and Health Organization (OSHA) Guidelines

This section briefly outlines the recommendations issued by OSHA. The coursework has been designed in adherence with these guidelines. Please review the lists below and familiarize yourself with information.

Gear, which might be needed or is required by your employer to effectively protect yourself from threats related to First Aid administration:

- Gloves - to protect from blood or other bodily fluids
- Eye protection - to protect from blood or other bodily fluids
- Mask protection - when giving mouth to mouth protects from germs and bacteria

In case you came in contact with bodily fluids, blood or skin follow the following instructions as soon as you can:

- Take the gloves off, if wearing any
- Wash the area with soap (work up soap lather for 15 seconds) and water, if contact with eyes, nose, or ear rinse with water
- Wash your hands thoroughly with soap, if not available use waterless hand sanitizer, and wash your hands with water later
- Dry your hands with paper towel and use paper towel to close the faucet
- Inform your supervisor/person responsible for emergency response and consult your medical provider as soon as possible



## First Aid - Burns (page 4 of 11)

The first step is to determine the degree of the burn and the damage to the skin.

Burns are categorized as first-, second-, or third-degree.



### First-degree burn

The least serious burns are those in which only the outer layer of skin is burned. The skin is usually red, with swelling and painful. The skin is dry without blisters.

### Second-degree burn

Second-degree burns are more serious and involve the skin layers beneath the top layer. These burns produce blisters, severe pain, and redness.



### Third-degree burn

The most serious burn. These burns are painless (due to nerve damage) and involve all layers of the skin. The burned area may be charred brown, leathery or appear dry and white.

### Important:

- Don't apply butter or ointments to the burn to ensure proper healing of the burned skin.
- Don't break blisters to prevent infection.
- Don't use ice to prevent destruction to the skin.
- Don't immerse large severe burns in cold water to prevent shock.

For major burns call for emergency medical assistance. Until an emergency unit arrives, follow these steps:

- Make sure the victim is no longer in contact with the burning material or exposed to smoke or heat.
- Don't immerse large severe burns in cold water to prevent shock.
- Check for signs of circulation and if there is no breathing or other sign of circulation, proceed with CPR.
- If possible, raise the burned body part above heart level.
- Use a cool, moist bandage to cover the burned area.



## First Aid - Fractures, Sprains and Strains (page 5 of 11)

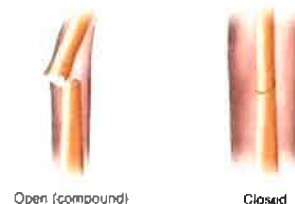
**Fracture** is a broken bone. There are two types of fractures:

**Closed** fractures are those in which the skin is intact

**Open**, also called compound fractures, involve wounds with mild or severe bleeding.

**Sprain** is an injury which occurs as a result of stretching or tearing of ligaments.

**Strain** is an injury which occurs as a result of stretching or tearing of muscles.



The symptoms are mild to severe pain, stiffness, swelling and/or bruising. Generally, it is hard to differentiate fracture vs. sprained/strained, however for the purposes of first aid administration the method of treatment is the same. Therefore, when talking about sprain/strain, differ the diagnosis, and assume it can be a break, and vice versa.

### First Aid:

- If someone is there, send to call for help
- If the person is unresponsive, isn't breathing or isn't moving, proceed with CPR
- If bleeding, stop the bleeding by applying pressure to the wound with a sterile bandage or a clean cloth
- Apply a bag of ice to the injured area for up to 20 minutes, with a towel (paper or cloth) between the skin and ice
- If raising the injured part does not cause more pain to the victim, attempt to raise it
- If the person feels faint or is breathing in short, rapid breaths lay the person down with the head slightly lower than the trunk and, if possible, elevate the legs



### First Aid - Breathing Problems and Choking (page 6 of 11)

Our body relies on oxygen to work properly, without oxygen the survival time could vary from 1 to 3 minutes. So, someone who is having breathing problems is in need of immediate medical attention. Common cause for such problems is air passage block.

General reasons for developing mild or severe air passage block include:

- Asthma
- Swelling of the lining of the airway, can be related to allergic reactions (eggs, peanuts, stings by insects and bees)
- Food, or small object, like medication pill, going down in to the air passage instead of stomach
- Infections
- Injuries to vital organs (head, stomach, etc.)

If the victim is developing an asthma attack, he/she might experience mild or severe breathing problems. Usually, the person will have the necessary medication, which should relieve the symptoms quickly. Check with the victim whether the medications are available and get it if out of reach.

In case of an allergic reaction, common treatment includes epinephrine, and can be injected through cloth. Verify the expiration date prior to administering.

When the victim is choking, older than 1 year of age, give abdominal thrusts (Heimlich Maneuver). It's not recommended for choking in infants under age 1. These thrusts push the air out of lungs, causing an artificial cough, which will help remove the foreign body that is blocking the airway of the victim.

If the person is sitting or standing, stand behind him or her. Form a fist with one hand and place your fist, thumb side in, just below the person's rib cage in the front. Grab your fist with your other hand. Keeping your arms off the person's rib cage, give four quick inward and upward thrusts. Repeat until the obstructing object is coughed out or emergency personnel arrive.



If the person is lying down or unconscious, place the heel of your hand just above the waistline. Place your other hand on top of this hand. Keeping your elbows straight, give four quick upward thrusts. Repeat this several times until the obstructing object is coughed out or emergency personnel arrives.

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### First Aid - Bleeding, Cuts and Scrapes (page 7 of 11)

When dealing with bleeding wound, Priority #1 is to stop the bleeding. Below are several rules to keep in mind:

- Maintain composure, no need to panic
- In most cases, bleeding can be stopped by applying pressure to the wound
- Bleeding generally looks much worse, than it really is. If the bleeding is not stopping, apply clean cloth or bandage to the wound for 15 to 30 minutes with reasonable amount of pressure.



Make sure the cloth stays in place and is not moved during that time, as movement can re-aggravate the wound and cause bleeding to resume. If the bleeding persists, apply the second dressing to the wound and increase the pressure. As mentioned above, you can control or stop the bleeding in majority of the cases with pressure alone. Priority #2 is to keep the wound clean. This will minimize the chance of the victim getting an infection. If water source and soap is available, wash the wound. If not, and there is visible debris, extract it with your hands or tweezers.

Contact emergency services if the bleeding has not stopped or you suspect potential for infection or internal injuries (fractures, breaks, head injury, etc.) For small wounds and scrapes it is generally advised to use triple antibiotic ointment, which is the best in preventing infections.

Here is a quick outline of first aid steps:

- Involve the victim, if able, to apply pressure on the wound while you are putting on protective equipment or taking care of other wounds
- Stop the bleeding by applying pressure to the wound with dressing
- If not effective, apply second dressing and attempt to increase the pressure on the wound
- Contact emergency services, unless the wound is minor or you are confident there is no need for further intervention

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### First Aid - Non-Bleeding Wounds (page 8 of 11)

Wounds that do not cause bleeding should be treated with as much and probably more attention than the wounds that do bleed. The danger here is that the damage cannot be clearly assessed. As a first aid administrator you should be looking for signs of internal damage, like internal bleeding, internal tissue or organ damage, etc. For example, a blow to the head might not show any exterior signs of distress, not even a bruise, but the victim might be experiencing a life threatening condition because of internal bleeding. If misdiagnosed, the consequences can be catastrophic.

Below is the list of injuries where you should suspect internal injury:

- Car crashes, even when the impact/damage is minor
- Shock signs after the injury, even with no signs of any exterior damage
- Injury via collision, generally sustained in sports, especially if there is a loss of consciousness
- Injury to abdominal or pain in abdominal
- Injury to the chest or pain in the chest
- Blood discharge after the injury
- Firearm or knife wounds

When faced with the victim that you suspect has a non-bleeding injury follow the following steps:

- Contact emergency services
- Put the victim in the horizontal position on his back
- Make sure the victim does not move
- Check for signs of shock
- If the victim does not respond start CPR

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### First Aid - Nosebleed (page 9 of 11)

Nosebleeds in majority of cases (more than 90%) tend to be benign and can be easily stopped with simple steps that we will outline a little later. The condition is caused by rupture of blood vessel in the nasal septum. However, in certain cases nosebleed is a much more serious event and can indicate life threatening or serious condition. These are relatively rare and usually occur with elderly. These nosebleeds generally originate in the artery located in the back part of the nose, and are much more complicated to treat.

Steps to follow if dealing with common nosebleed:

- Have the victim sit in upright position
- Pinch victim's nose with thumb and index finger, and hold it for about 10 minutes, this generally applies enough pressure to the septum to stop the bleeding

To prevent reoccurrence, advise the victim to avoid picking or blowing the nose, until the bleeding stopped for a couple of hours, and also avoid bending.

If bleeding re-occurs, blow the nose with force to clear out the remaining blood clots, and repeat the pinching procedure described above. It is recommended for the victim to contact a physician for consultation.

Contact emergency services immediately:

- If bleeding persisted uncontrollably for more than 15 minutes
- If the bleeding is the result of an injury, where there is a potential for broken nose



### First Aid - Head, Neck and Spine Injury (page 10 of 11)

The skull is a bony structure, and its purpose is protecting the brain from any damage. If the injury to the head occurs there is always a risk of brain damage. Also, it should always be assumed, that if there is a risk of head injury then there is also a risk of spine injury and neck injury.

#### You should suspect a head, neck or spine injury in case of the following accidents:

- Car or motorcycle accident, even minor bump can cause internal head injury
- Fall from height
- Injury to the head, fight, sporting event, etc.
- Electrocution

#### You should suspect a head, neck or spine injury if the symptoms below follow the accident:

- Lack of responsiveness or moaning
- Vision problems or confusion
- Trouble walking or moving
- Seizures, Vomiting, or Headache

#### Steps for administering First Aid:

- As always, make sure the scene is safe for you and the victim(s)
- Phone or ask someone to phone 911
- Hold the neck and head so it does not move, twists, or bend
- Turn the victim only if: \*victim is in danger, \*if you need to check if the victim is breathing, \*if the victim is vomiting
- If the victim does not respond, begin CPR

**Important:** If you must turn, make sure you are holding the head and neck in place to avoid/minimize movement, twisting or bending. Ideally, this requires two rescuers.

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### First Aid - Review (page 11 of 11)

- First Aid Kit content is explained in the First Aid Guide, which is included in the Kit.
- Your chances of performing successful First Aid increase dramatically if more than one person is involved. Be sure to seek assistance from bystanders, even if they are not certified.
- If the victim refuses first aid, call 911 and stay with the victim until help arrives.
- One of OSHA's key recommendations is when you come in contact with bodily fluids, skin, or blood be sure to tell your supervisor and contact your doctor as soon as possible.
- If the victim sustained broken bone or strain, you can raise the injured body part as long as it does not increase the level of pain.
- Heimlich maneuver is used to remove foreign body, which is blocking the airway. Upward thrusts are performed until the item is forced out or emergency services arrive to the scene.
- Three types of burns, 1st, 2nd, and 3rd degree. In case of third degree burn, do not remove clothing or apply water or fluids to the wound, but rather concentrate on getting the victim to the hospital as soon as possible or call 911. If the victim suffered electrical burn, make sure he/she contacts a doctor as soon as possible.
- In case of bleeding wound, first apply pressure; second, keep the wound clean to minimize chances of infection.
- Non bleeding wounds should be treated extra carefully, because it is hard, if not impossible, to assess damage with naked eye.
- If treating internal injury, place victim on his back, horizontally, and do not allow victim to move.

**Proceed to exam**

