



# Presents

Driving school King E-learn system



# Lesson No. 6

First aid course



# Introduction





## Basics

You never know when you will witness a car accident as a motorist. By law, a witness is obliged to provide first aid. Therefore, it is necessary to know and practically master at least its basics. Remember that not providing first aid is a crime punishable by up to two years in prison.

Anesthesia and resuscitation is a medical discipline that is constantly evolving, is discussed at regular intervals among doctors at international congresses, and therefore lay first aid is also evolving and new trends need to be followed.



## Basics

With development, first aid becomes simpler, now everyone should be able to handle it without difficulty.

First aid is basic knowledge, such as cycling or swimming.

Not providing first aid may result in a criminal sentence of unconditional imprisonment, but if you perform first aid and the injured person dies or has permanent consequences, you will not be penalized.







# First steps

## Five steps rule

The procedure of behavior in a traffic accident can be simply divided into 5 steps.

1. Prevent further accidents and secure the accident site
2. Overcome the barrier of fear, fear of failure, embarrassment and hesitation
3. Act decisively, effectively, take the "lead"
4. Ensure that the accident is reported as soon as possible, preferably to the emergency services' dispatch center 155 or 112
5. Search for disabled people who need to perform life-saving procedures



## First step

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### **Prevent further accidents and secure the accident site**

The absolute basics include preventing further accidents and securing the accident site. Therefore, first stop your vehicle in a safe place, approximately 50 meters from the accident. Don't forget your safety - turn on the warning lights, put on your warning vests and position the warning triangle correctly.

Take a first aid kit from your vehicle and if there are passengers in your vehicle, make sure they leave the vehicle in a safe area.







## Second step

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**Overcome the barrier of fear, fear of failure,  
embarrassment and hesitation**

Take a deep breath, take a decisive step. Orient yourself around yourself and look for possible dangers. Watch out for the panic reaction. Don't be afraid to ask others for help.



## Third step

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### **Act decisively, effectively, take the "lead"**

Don't forget to protect yourself. Take rubber gloves, a protective veil (mask), etc.

When approaching a crashed vehicle, switch off the ignition, apply the parking brake, or you can support the wheels against movement, for example with a brick.

Find out the number of injured, the number of people in cars (post-catastrophic syndrome) and search the vehicle (sunken children behind the seats).



## Fourth step

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**Ensure that the accident is reported as soon as possible,  
preferably to the emergency services' dispatch center  
155 or 112**

First of all, say your name and your contact phone number. Then announce the place of the accident (street name, road number, number of the mileage on the highway, street lamp number, etc.). Subsequently, report the number of injured and the severity of the accident.





## Fifth step

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### Search for disabled people who need to perform life-saving procedures

Attention! People at risk of life **do not** draw attention to themselves - they may be unconscious, shocked, etc.

The most common injuries include: bleeding, shock, fractures, pneumothorax and burns.





# Bleeding

## Bleeding

Heavy bleeding directly endangers the life of the victim. Immediate cessation of bleeding significantly increases the chance that a possible CPR will be successful. Blood loss can be so great that with CPR, there will be nothing to oxygenate in the lungs or to pump it into the brain.

We always sit or lay the wounded. If possible (for example, for injured limbs), we raise the bleeding area above the level of the heart. We stop bleeding, call an ambulance, take anti-shock measures and calm the injured and the surroundings.





## Bleeding

### External bleeding

It is a bleeding from a wound on the body, so we see a skin disorder that can be of different depths. Wounds can be formed by various mechanisms, but for first aid it is always necessary to stop the bleeding from them. To do this, we can use the following options:

**Fingers in the wound:** With our fingers (for our own safety in gloves!) We press the bleeding vessel against the bone directly in the wound.



## Bleeding

### External bleeding

**Pressure bandage:** The most used and safest method of stopping bleeding before the arrival of an ambulance. The bandage consists of **three layers** and these are:

**Topcoat:** Must be sterile and be applied directly to the wound. If we have nothing sterile, we will use the purest material we have with us.

**Pressure layer:** A layer of absorbent material that exerts pressure on the wound. We can use up to 3.

**Fixing layer:** We use it to attach the previous layers to the wound.





## Bleeding

### External bleeding

**Emergency tourniquet:** These are cuff-like devices designed to stop severe traumatic bleeding before or during transport to a care facility. They are wrapped around the limb, proximal to the site of trauma, and tightened until all blood vessels underneath are occluded. The design and construction of emergency tourniquets allows quick application by first aid responders or the injured persons themselves.





## Bleeding

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### Internal bleeding

Internal bleeding is bleeding that takes place inside the body, ie in first aid without the possibility of inspecting the wound. It can be the result of an injury (wound or impact to the abdomen, chest or lumbar region) or certain disease states (aneurysm rupture, advanced gastric or duodenal ulcer disease, ...). A person can easily bleed into the body cavities, so in this case it is necessary to call an ambulance immediately.



# Bleeding

## Internal bleeding

First aid:

- 1) call the ambulance quickly.
- 2) place the wounded person and lift the lower limbs at an angle of at least 30 degrees.
- 3) Take anti-shock measures (we will provide thermal comfort to the victim, soothe him and give him nothing to eat or drink).





# Restoration of vital functions



## Restoration of vital functions

**It is first necessary to perform a vital signs check.**

- 1) Perform a verbal contact - what happened, what and where hurts.
- 2) If there is no verbal reaction, shake or pat the victim lightly, possibly we perform a mild painful stimulus (pinch to the earlobe).
- 3) We place the wounded carefully on the back and check the breath - we feel it on our face and the chest rises regularly. We then check the oral cavity.



## Restoration of vital functions

### **CPR – (chest compressions and rescue breaths)**

If a person is not breathing, his heartbeat will stop. Do CPR to help circulation and get oxygen into the body. (Early use of an AED—an automated external defibrillator—if one is available, can restart a heart with an abnormal rhythm.

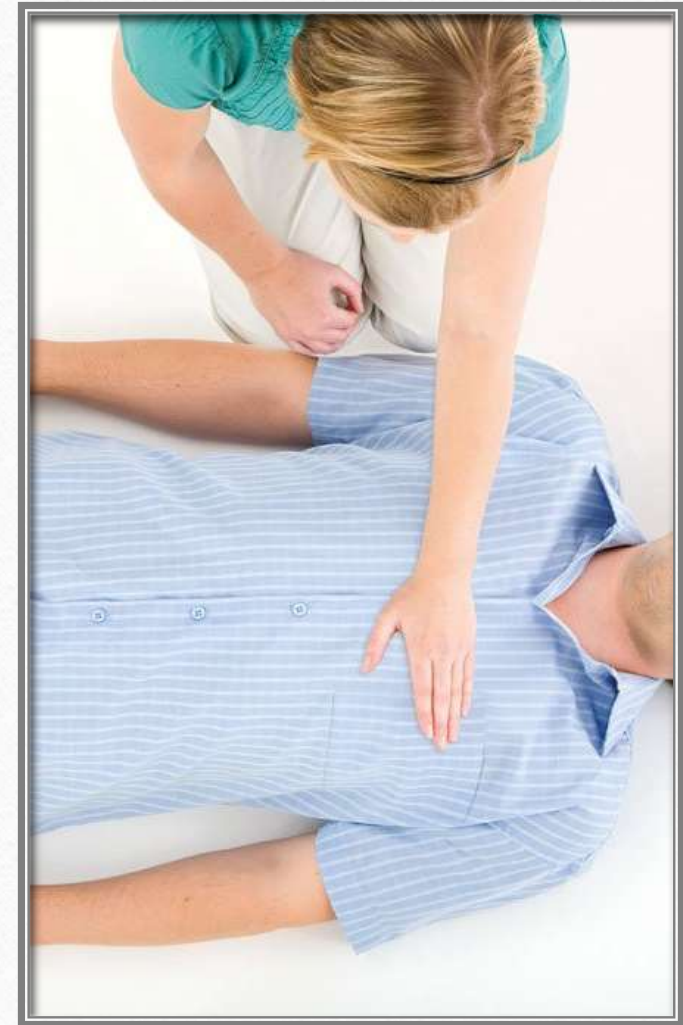
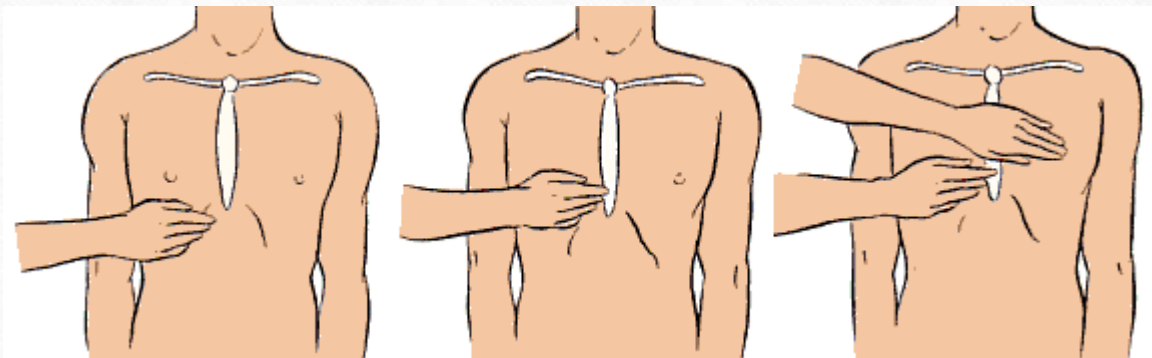
First, open a person's airway to check if they are breathing (don't begin CPR if a patient is breathing normally). Then, get help. If you are not alone, send someone to call for help as soon as you have checked breathing. Ask the person to come back and confirm that the call has been made.



## Restoration of vital functions

### 1) Position your hand

Make sure the patient is lying on his back on a firm surface.  
Kneel beside him and place the heel of your hand on the centre of the chest.





## Restoration of vital functions

### 2) Interlock fingers

Keeping your arms straight, cover the first hand with the heel of your other hand and interlock the fingers of both hands together. Keep your fingers raised so they do not touch the patient's chest or rib cage.



## Restoration of vital functions

### 3) Give chest compressions

Lean forward so that your shoulders are directly over the patient's chest and press down on the chest about two inches. Release the pressure, but not your hands, and let the chest come back up.

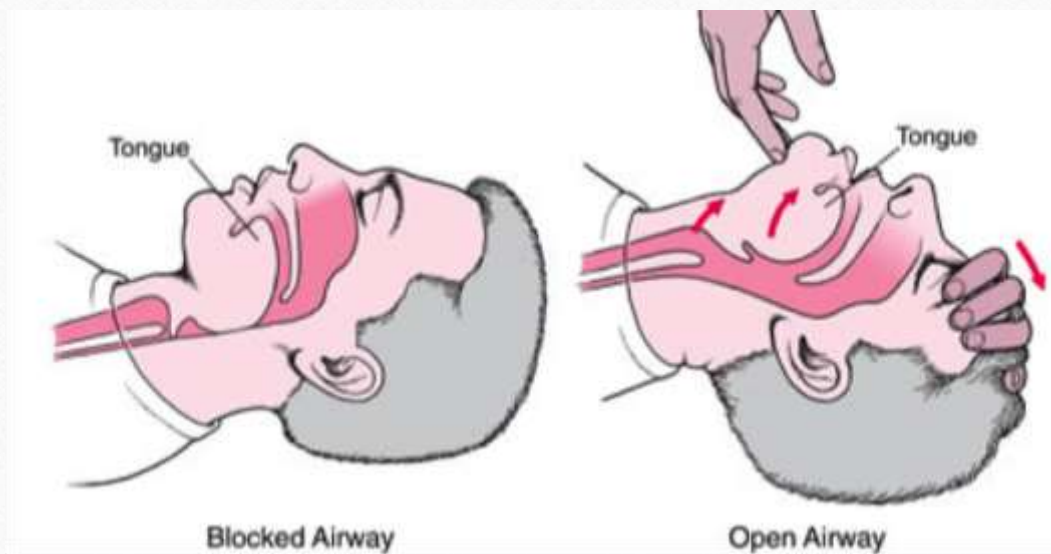
For many reasons (such as hygiene), it is often recommended to perform **Hands-Only CPR** (CPR without rescue breaths, which are detailed below).



## Restoration of vital functions

### 4) Open the airway

Move to the patient's head. Tilt his head and lift his chin to open the airway again. Let his mouth fall open slightly.





## Restoration of vital functions

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### 5) Give rescue breaths

Pinch the nostrils closed with the hand that was on the forehead and support the patient's chin with your other hand. Take a normal breath, put your mouth over the patient's, and blow until you can see his chest rise.



## Restoration of vital functions

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### 6) Watch chest fall

Remove your mouth from the patient's and look along the chest, watching the chest fall. Repeat steps five and six once.



## Restoration of vital functions

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### **7) Repeat chest compressions and rescue breaths**

Place your hands on the chest again and repeat the cycle of 30 chest compressions, followed by two rescue breaths.

Continue the cycle.





## Restoration of vital functions

### Performing child and baby CPR

1) Kneel beside the child or baby.

2) Push hard, push fast.

For children, place the heel of one hand on the center of the chest, then place the heel of the other hand on top of the first hand, and lace your fingers together. Deliver 30 quick compressions that are each about 2 inches deep.

-For infants, use 2 fingers to deliver 30 quick compressions that are each about 1.5 inches deep.



## Restoration of vital functions

### Performing child and baby CPR

#### 3) Give 2 rescue breaths

With the head tilted back slightly and the chin lifted, pinch the child's nose shut, make a complete seal by placing your mouth over the child's mouth and breathe into the child's mouth twice.

For infants, use your mouth to make a complete seal over the infant's mouth and nose, then blow in for one second to make the chest clearly rise. Now, deliver two rescue breaths.

#### 4) Keep going.





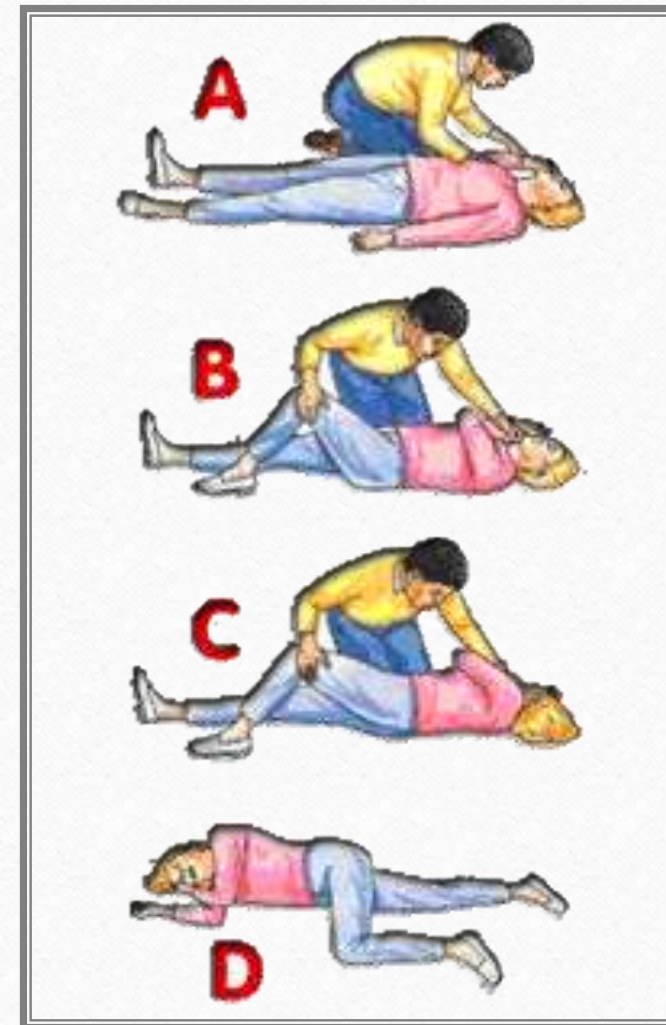
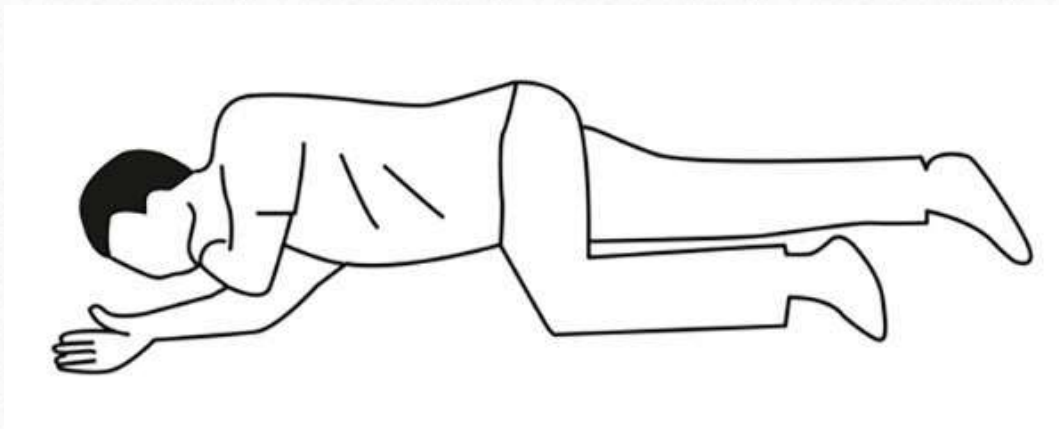
# Recovery position



## Recovery position

If a person is unconscious but is breathing and has no other life-threatening conditions, they should be placed in the recovery position.

Putting someone in the recovery position will keep their airway clear and open. It also ensures that any vomit or fluid won't cause them to choke.



## Recovery position

With the person lying on their back, kneel on the floor at their side.

Extend the arm nearest you at a right angle to their body with their palm facing up.

Take their other arm and fold it so the back of their hand rests on the cheek closest to you, and hold it in place.

Use your free hand to bend the person's knee farthest from you to a right angle.

Carefully roll the person onto their side by pulling on the bent knee.



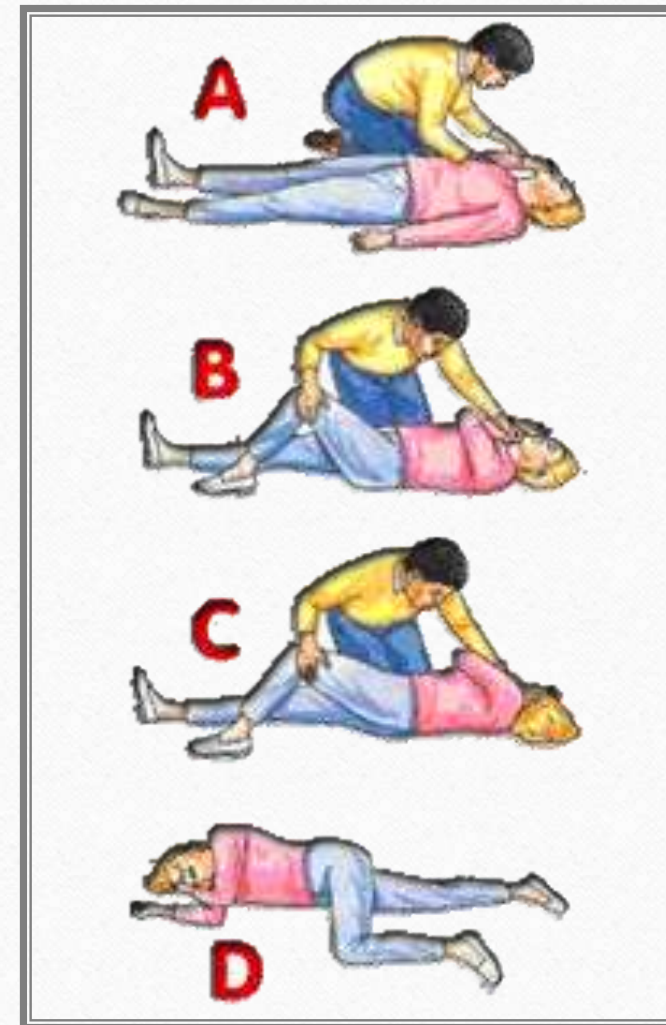
## Recovery position

Their bent arm should be supporting the head, and their extended arm will stop you rolling them too far.

Make sure their bent leg is at a right angle.

Open their airway by gently tilting their head back and lifting their chin, and check that nothing is blocking their airway.

Stay with the person and monitor their condition until help arrives.





## Spinal injury

If you think a person may have a spinal injury, do not attempt to move them until the emergency services reach you.

If it's necessary to open their airway, place your hands on either side of their head and gently lift their jaw with your fingertips to open the airway. Take care not to move their neck.



## Spinal injury

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You should suspect a spinal injury if the person:

- has been involved in an incident that's directly affected their spine, such as a fall from height or being struck directly in the back
- complains of severe pain in their neck or back
- won't move their neck
- feels weak, numb or paralysed
- has lost control of their limbs, bladder or bowels





# Open pneumothorax



## Open pneumothorax

An open pneumothorax is defined as an opening in the chest wall that results from a penetrating chest wound. Normally, during the process of respiration, air passes through the trachea during inspiration and expiration. But when a wound at least two thirds the size of the trachea, and sometimes even smaller, air will prefer to pass through the hole in the chest wall. This is due to the decreased resistance to flow. Also, when the victim inhales, the chest will expand as it normally does in normal respiratory cycle, however, air remains outside the lung and in the pleural space. As a result, there becomes inadequate oxygenation and ventilation. Air will also build up in the pleural space. An open pneumothorax is also called a sucking chest wound.



## Open pneumothorax

### Signs and Symptoms of Open Pneumothorax

An open wound in the chest area

Bloody froth coming from the wound, especially when the victim exhales (bubbling appearance)

A sucking sound coming from the wound site, especially when the victim inhales

Rapid, shallow and difficulty breathing

Decreased breath sounds

Chest pain



## Open pneumothorax

### First Aid Management for Open Pneumothorax

Apply sterile occlusive dressing to the wound. Dressing should also be nonporous. To do this, apply a tape dressing on only three of the four sides allowing air to escape from the pleural cavity but not reenter. This is called a Valve effect. One can make use of a plastic wrapping.

If one is trained to place a chest tube, do so. This is the primary management for an open chest wound. The wound should not be completely occluded until the chest tube is in place.







# Burns

## Burns

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The first step in treating a burn injury is determining whether the burn is a minor or major one. That determination will direct action and treatment. Read on to learn the difference and how to treat both types.



## Burns

### What is a major burn?

Major burns can be recognized by four primary characteristics:

deep

result in dry, leathery skin

larger than 3 inches in diameter or cover the face, hands, feet, buttocks, groin, or a major joint

have a charred appearance or patches of black, brown, or white





## Burns

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### What is a minor burn?

Minor burns are recognized by the following characteristics:

- less than 3 inches in diameter

- surface redness (like a sunburn)

- skin blistering

- pain



## Burns

### First aid for a major burn

The first step in treating a major burn is to call 155 or 112 or seek emergency medical care.

Steps to take until emergency arrives include:

Make sure you and the person who's burned are safe and out of harm's way. Move them away from the source of the burn. If it's an electrical burn, turn off the power source before touching them.

Check to see if they're breathing. If needed, start rescue breathing if you've been trained.





## Burns

Remove restrictive items from their body, such as belts and jewelry in or near the burned areas. Burned areas typically swell quickly.

Cover the burned area. Use a clean cloth or bandage that's moistened with cool, clean water.

Separate fingers and toes. If hands and feet are burned, separate the fingers and toes with dry and sterile, nonadhesive bandages.

Remove clothing from burned areas, but don't try to remove clothing that's stuck to the skin.





## Burns

Avoid immersing the person or burned body parts in water. Hypothermia (severe loss of body heat) can occur if you immerse large, severe burns in water.

Raise the burned area. If possible, elevate the burned area above their heart.

Watch for shock. Signs and symptoms of shock include shallow breathing, pale complexion, and fainting.



## Burns

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### First aid for a minor burn

Cool down the burn. After holding the burn under cool, running water, apply cool, wet compresses until the pain subsides.

Remove tight items, such as rings, from the burned area. Be gentle, but move quickly before swelling starts.

Avoid breaking blisters. Blisters with fluid protect the area from infection. If a blister breaks, clean the area and gently apply an antibiotic ointment.



## Burns

Apply a moisturizing lotion, such as one with aloe vera. After the burned area has been cooled, apply a lotion to provide relief and to keep the area from drying out.

Loosely bandage the burn. Use sterile gauze. Avoid fluffy cotton that could shed and get stuck to the healing area. Also avoid putting too much pressure on the burned skin.

Take an over-the-counter pain reliever if necessary. Consider acetaminophen (Tylenol), ibuprofen (Advil), or naproxen (Aleve).







# First aid kit



## First aid kit

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2020 first aid kits have a relatively small content. It doesn't matter if they are out of date and unopened at the same time.

When you use the first aid kit, you need to check all its components.



## First aid kit

### Contents of the first aid kit

Complete bandage with one cushion – 3x

Complete bandage with two cushions – 3x

Smooth plaster – 1x

Rubber tourniquet – 1x

Rubber gloves (latex) – 1x

Isothermal foil (200 x 140 cm) – 1x

Scissors – 1x







## In conclusion

In our last lesson, we learned the basics of first aid. First aid instruction is interpreted differently in different countries. We hope that our online lessons will help you in the future. Don't forget to visit our lessons in person.



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