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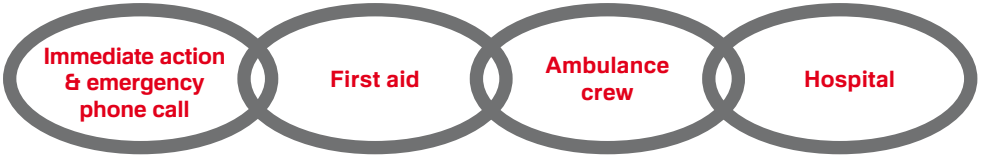
# FIRST AID COURSES FOR LEARNER DRIVERS, STUDENTS, COMPANY EMPLOYEES, AND CHILD CARERS

## COURSE OF ACTION
## BASIC LIFE-SAVING MEASURES IN THE EVENT OF AN ACCIDENT

| | |
|---|---|
| **1. Make the area safe** | > *Keep yourself safe: warning triangle* |
| **2. Call the emergency services** | > *Where? What happened? What injuries? How many injured? Don't hang up!* |
| **3. Remove casualty from danger zone** | > *Drag casualty to safety* |
| **4. Staunch severe bleeding** | > *Pressure bandage* |
| **5. Make sure casualty is breathing** | |
| **>check if casualty is responding** | = *Study, speak to and shake casualty*<br>> ***Casualty responding:*** *Treat for shock*<br>> ***Casualty not responding:***<br>> *Tip casualty's head back: listen, look and feel for breathing* |
| **>casualty breathing** | > ***Recovery position*** *to ensure that liquids can drain from mouth* |
| **>casualty not breathing** | > ***Cardiopulmonary resuscitation (CPR)*** *30 heart-massage compressions followed by 2 rescue breaths. Repeat cycle until paramedics arrive.* |
| **Remove helmet** | > *If casualty is not responding, helmet must be removed to allow artificial respiration.* |
| **Treat for shock** | > *If casualty is responsive (i.e. conscious or semi-conscious) > treat for shock: lay person down with legs in elevated position, soothe, cover with blanket or similar.* |

## LINKS IN THE CHAIN OF ASSISTANCE




***First aiders save lives by being the first to provide aid.***
*Casualties are taken to hospital by ambulance.*

# 1 BASIC MEASURES IN THE EVENT OF AN ACCIDENT

## 1.1 Self-preservation and making the area safe

On public roads in particular it is important for you to look out for your own safety and that of anyone else involved – be they casualties or other drivers approaching from the rear. This is why the first priority of a first aider is to make the scene of the accident safe.

What to do:

> Switch your hazard lights on and dab your brakes as soon as you realise there has been an accident up ahead. This will warn traffic approaching from the rear.

> Drive slowly up to the scene of the accident, parking at the roadside 10-15 metres before reaching the vehicles/casualties. If it is dark, you may want to illuminate the scene with your dipped headlights.

> Put your high-visibility vest on and get your warning triangle out of the car. Assemble it on the spot, hold it up and walk/jog back in the direction of the oncoming traffic.

> Set up the warning triangle on the tarmac near the roadside and at an appropriate distance from the scene of the accident:

- ca. 200 m on motorways
- ca. 100 m on 'A' and 'B' roads
- max. 50 m in built-up areas

## 1.2 Emergency phone call

Call an ambulance as soon as possible. **112 is the emergency number** that is recognised throughout Europe.

Callers can also get through on 110. Calls to these numbers take precedence on the telephone networks and are not affected by power cuts.

Emergency calls should always be possible from a mobile phone: a SIM card is not required, there is no dialling of regional codes, and few areas are without reception because all networks cooperate to connect the call.

No coins or cards are required when calling from public phones.

Motorways and many other major roads have emergency roadside phones at intervals of 1-2 kms. Little black arrows on the white roadside marker posts point in the direction of the nearest emergency phone.

**IMPORTANT:** *Do not hang up too soon! The switchboard staff will run through the most important points and give any necessary instructions.*

*Describing the location may be difficult. Look for prominent signs and kilometre markers on the roadside. Use the GPS feature on your mobile phone or the sat-nav in your car. When calling from an emergency roadside phone, you do not need to give the location.*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*EMERGENCY PHONE CALL:*

***Where** did the accident occur?*

***What** happened?*

***How many people** are injured?*

***What injuries** are there?*

***Don't hang up!***

## 1.3 Remove casualty from danger zone (Rautek grip)

As a rule, injured people should not be moved, but some situations are too dangerous for them to be left where they are.

### 1.3.1 Drag casualty to safety (along the ground)

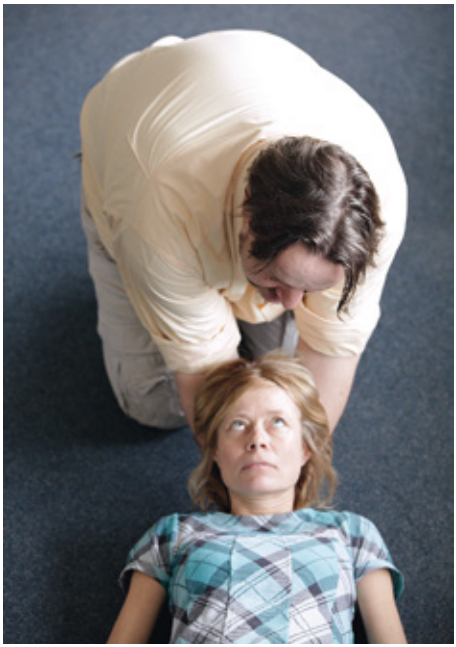
> Approaching the casualty from behind, lift her upper body with your hands under her shoulder blades and your forearms cradling her head (as in a volleyball 'bump').

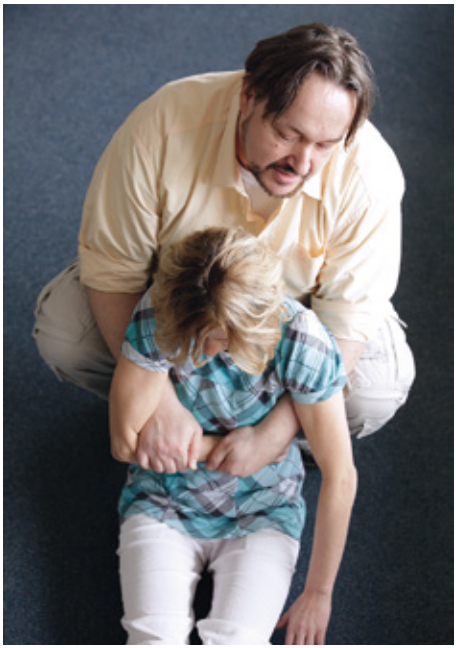
> Carefully lift the casualty into a sitting position, using your legs to prevent her from tipping to one side.

> Pull one of the casualty's forearms across her stomach. Then reach under and through her arms from behind, grasping her forearm with both hands. Your thumbs should be hooked forwards, alongside your other fingers.

> If kneeling, come to your feet. Then lift the casualty and, with her bottom clear of the ground or even supported on your thighs, drag her off the road. Another helper could support the weight of her legs. Heavy casualties can be dragged with their bottom still in contact with the ground.

> When laying the person down, support the head and neck again.





*Photos: © Erste Hilfe Station*

### 1.3.2 Drag casualty to safety (from a vehicle)

It is often better to leave badly injured people in their vehicle. But there are also situations where they must be moved to a safe location, for instance if the vehicle is in an exposed position, there is a petrol leak or the casualty has to be resuscitated.

Use the same technique described above. If casualties are able to get out of the vehicle by themselves, help them if necessary.

**Note the following when pulling someone from a vehicle:**

> If the driver's door is stuck, try another door. The locking mechanism should have released automatically, and not all doors will be jammed.

> Switch off the ignition to reduce the likelihood of a fire.

> Release the safety belt, cutting it with scissors from a first-aid kit if necessary. Support the casualty as you do so.

> Tip the casualty's upper body carefully forwards, leaning his face against the steering wheel.

> Rotate the casualty in his seat so his back is angled towards you. To do this, use handholds on his shoulder, knee and trouser waistband.

> Now use the Rautek grip as described earlier: Pull one of the casualty's forearms across his stomach. Then reach under and through his arms from behind, grasping his forearm with both hands. Your thumbs should be hooked forwards, alongside your other fingers.

> Lift the casualty and, with his bottom clear of the ground or even supported on your thighs, drag him from the vehicle. Another helper could support the weight of his legs. When laying the person down, support his head and neck again.

**IMPORTANT:** *Two deployed and deflated airbags should be visible in the vehicle. If your casualty's airbag cannot be seen, it may well go off at any moment. You should never leave the side of your head unprotected if leaning in front of the steering wheel or glove compartment. The sudden deployment of an airbag may cause serious injury!*

## 1.4 Staunch severe bleeding

Severe bleeding can be stopped using a pressure bandage or simply by placing a sterile pad on the wound and applying direct pressure. If the limb can be raised, this will slow the bleeding, which in turn will make bandaging easier.

Squeezing the artery itself will also reduce the flow of blood:

- **Reducing blood flow through upper arm:**

On the inside of the upper arm, probe with the fingertips between the two main muscle groups (biceps and triceps) and press the artery against the bone. The flow of blood will diminish. Manual pressure should not be too heavy and should not last too long.

- **Reducing blood flow through thigh:**

Kneel down beside the casualty and push with both thumbs into the groin area of the relevant thigh, pressing in against the edge of the pelvis. This may hurt because more pressure is needed than when pressing the upper arm (see above), as the artery is less accessible.

*Pressure dressing (© Erste Hilfe Station)*

### 1.4.1 Pressure dressing

> While another person (or the casualty herself) squeezes the artery, you can apply the dressing using materials from the first-aid kit. A pressure bandage is ideal as it staunches bleeding without cutting off blood to the surrounding tissue.

> Cover the wound with a sterile pad and make a few turns with a bandage. Then place a pressure pad (preferably thick, non-porous and not too hard) over the wound and bind it tightly into the dressing. Suitable examples of a pressure pad would be a bandage in its packaging or an unopened pack of paper handkerchiefs.

> If necessary, add a second pressure pad on top of the first. Use the entire bandage in the dressing. A pressure dressing must be tight if it is to stop severe bleeding. The end of the affected limb may become slightly discoloured. If discolouration is marked, the bandage is too tight and should be reapplied.

### 1.4.2 Direct manual pressure

If you are unable to apply a pressure dressing, the only remaining solution is to cover the badly bleeding injury with sterile material and apply direct pressure with your hand, maintaining the pressure until the emergency services arrive.


*Pressure-dressing materials from the first-aid kit (© Erste Hilfe Station)*

**IMPORTANT:** *Your first-aid kit should contain rubber gloves. Wear a pair!*

*Unlike grazes and shallow lacerations, this type of bleeding is life-threatening. Bear in mind that if the person is unconscious, it may be more important to ensure that he can breathe.*

**Standard procedures if bleeding is severe:**

- Call 112!
- Lay the casualty down to prevent him from collapsing!
- Cover the wound with a sterile dressing!
- Do not clean or disinfect the wound. Leave foreign objects in the wound!

### 1.4.3 Severed limbs/extremities

As it may be possible to reattach a severed body part, a tourniquet should not be applied to the stump if at all possible. This could damage the tissue irreparably.

Severed body parts should be wrapped, unwashed, in a sterile cloth and kept cool and dry. Give the body part to the paramedics, who will package it properly.

## 1.5 Ensure casualty is breathing

**IMPORTANT:** *People who are unconscious may stop breathing. If help is not provided, they will suffer brain damage within minutes and may become brain-dead.*

*It is our task to restore lung function as soon as possible and, if that does not work, to begin resuscitation, continuing until the emergency services arrive. Paramedics are often able to end cardiac and respiratory arrest using adrenalin and a defibrillator.*

### 1.5.1 Check responsiveness of casualty

As breathing can only stop if a person is unconscious, we first check responsiveness by > studying him > speaking to him > and gently shaking him.

If the person responds, he must be breathing and we proceed to treat him for shock (see back).

**Exception:** An unconscious person who has a blueish face and seems to be trying to inhale is not breathing and must be resuscitated immediately!

If the casualty does not respond, we > clear the airway by > removing foreign objects and > tipping the head back.

### 1.5.2 Tip head back and check for breathing

Push the chin up and tip the head back slightly so that the base of the tongue lifts away from the back of the throat. This is often enough to restart the breathing! Now:

- with the head of the casualty in the tipped-back position
- check for breathing
- by listening, looking and feeling

*Tipping the head back (© Erste Hilfe Station)*

*Checking for breathing (© Erste Hilfe Station)*

### 1.5.3 Casualty is breathing > Recovery position

**IMPORTANT:** *People are only placed in the recovery position if they are unconscious and are breathing. Check that they are breathing!*

*The aim of the recovery position is to allow any regurgitated material to drain from the mouth of the casualty.*

#### Putting a casualty in the recovery position

With the casualty on her back, kneel down and pull her nearest arm outwards from her torso, angling it slightly upwards.

Fold her furthest arm over her chest so that the back of her hand is touching her cheek. You may want to hold it in this position.

Flex her furthest leg at the knee and raise it up.

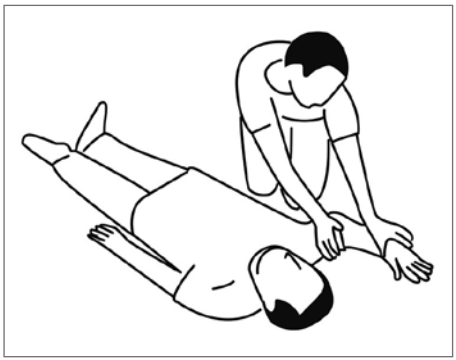
Shifting your grip, pull and press down on the knee simultaneously, rolling the casualty onto her side.

Keep holding her hand in its position under the cheek so that it provides a cushion for the head.

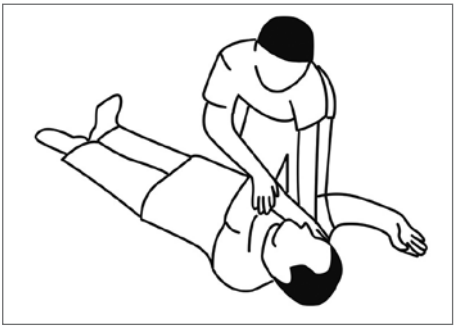
To finish off, tip the casualty's head back again and open her mouth to allow any vomit or other liquids to drain freely.

**IMPORTANT:** *Even when casualties are in the recovery position, their breathing must be monitored regularly. Cover the patient with a blanket to prevent loss of body warmth.*

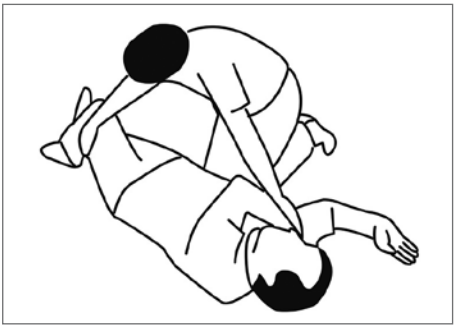
*Recovery position in 4 steps*
*Fotolia - © Thomas Zagler*



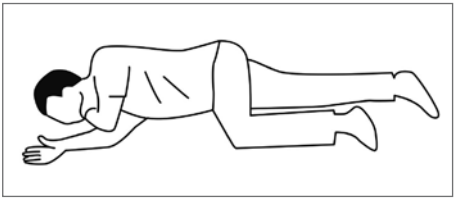
*Cactus branch*



Cuddly Hand



Angle knee



Recovery position

### 1.5.4 Casualty is not breathing > Cardiopulmonary resuscitation (CPR)

**IMPORTANT:** *If the patient has not resumed breathing, we must begin cardiopulmonary resuscitation immediately.*

*The patient must be lying flat on his back on a firm surface with his torso free of clothing.*

#### Heart massage

Heart massage is when a person applies rhythmic pressure to the sternum (breastbone), thereby pressing the heart against the spine and pumping blood through the body. With each release of pressure, the heart fills with blood again.

> Kneel down, facing the chest of the casualty.

> Open the person's upper clothing and locate the pressure point (in the centre of the chest between, or slightly below, the nipples). Make sure you press on hard bone (the sternum), not the stomach.

> Place the heel of one hand on the central spot, with the heel of the other hand on top.

> Pressure should be applied through the heels of the hands, not the palms.

> The two arms must be straight and rigid!

> Press vertically downwards!

> Each stroke should depress the chest by 5-6 cm in the direction of the spine.

> Work at a rate of 100-120 compressions per minute.

*Heart-massage demonstration using a mannequin (© Erste Hilfe Station)*

> If artificial respiration is possible, give 2 rescue breaths after every 30 compressions. Try to manage four cycles per minute: 30:2 - 30:2 - 30:2 - 30:2 ...

### Artificial respiration

Rescue breaths can be given using the mouth-to-nose or mouth-to-mouth techniques.

### Mouth-to-nose resuscitation

> Tip the casualty's head back. Use one hand to keep the person's mouth closed to prevent air from escaping. A thumb over the lips should be sufficient. With your other hand keep the casualty's forehead tipped back.

> Inhale, but not too deeply. Seal your mouth around the person's nose and blow your breath into his airway, ensuring that no air escapes round the side.

> After each breath, withdraw from the nose and turn your head sideways, allowing the casualty to exhale automatically. While this happens, inhale again.

*Artificial respiration using a mannequin (© Erste Hilfe Station)*

**Mouth-to-mouth resuscitation**

> Casualties can also be given rescue breaths through the mouth. In this variation the hand holding the forehead back also pinches the nose closed. Otherwise the procedure is as outlined above.

**Special cases:**

- Small children and infants are given rescue breaths via the mouth and nose simultaneously.
- If the casualty has been fitted with a stoma in the throat, rescue breaths are given via the stoma.

**CPR performed by two persons**

If two people are performing CPR, one provides heart massage and then the other gives rescue breaths. This is more efficient and less tiring. **The two-person method is preferable.**

### 1.5.5 AED – Automated External Defibrillator

**IMPORTANT:** *Using an AED is safe for the following reasons:*

1. *The device gives voice prompts to the people providing first aid, telling them what to do.*

2. *The device has sensors that analyse the state of the heart and only instruct the helper to deliver a shock if this could be useful.*

*Be quick when interrupting CPR to attach the pads.*

*This sign indicates the location of an AED.*


*A defibrillator (AED) showing the correct position of pads*
*(Fotolia - Sethy Photography)*

### How to use an AED

If you find an unresponsive person who is not breathing normally:

1. Call for help!
2. Call an ambulance by dialling 112. Tell someone to get an AED.
3. Perform CPR until the AED is hooked up to the casualty: 30 chest compressions followed by 2 rescue breaths.
4. Following the illustrations on the pads, attach the pads to the casualty's chest. Switch AED on (large power button).
5. If a shock is recommended, press the lightning-bolt button. The device may deliver the shock automatically. If a shock is not recommended, continue with CPR for two minutes and then follow the voice prompts again.

**IMPORTANT:** *Protect yourself! Make sure that no one is touching the patient when the electric shock is delivered.*

## 1.6 Removing a casualty's helmet

**IMPORTANT:** *If the person is responsive, she can keep her helmet on or remove it herself. However, if she is **unconscious/semi-conscious**, the helmet **MUST** be removed to enable a helper to perform artificial respiration if necessary! People who are unconscious (or 'not responsive') may stop breathing, leading to death by asphyxiation.*

*Do not be afraid to remove the helmet! A helmet provides good protection, making severe head injuries unlikely. Neck injuries are also rare, but as a precaution try to have a 2nd person stabilising the neck while the helmet is taken off.*

### How to remove a helmet

> If possible, the helmet should be removed by two people!

> Person A kneels behind the casualty's head and grips the rim with both hands while Person B opens the visor, takes off the casualty's glasses and unclips the chin strap.

> Person B stabilises the spinal column by supporting the neck, keeping it under tension with one hand and holding the chin steady (using the C grip).

> Person A now removes the helmet, pulling in a seesaw motion to clear the neck, nose and back of the head. Throughout the process Person B maintains the linear tension on the spine.

> Person A then takes over the job of stabilising the spine, gripping the casualty's head from behind and maintaining slight tension.

> Check the casualty's breathing, keeping hold of the head.

If you are on your own, you must still remove the casualty's helmet. There will

*Person B (right) stabilises the neck during removal of helmet (© Erste Hilfe Station)*

*Person A (left) takes over stabilisation of the neck until a paramedic fits a neck brace (© Erste Hilfe Station)*

not be a second person to stabilise the neck, but you can prevent the head from falling backwards by supporting it with one hand and lowering it to the ground. **Saving life has priority!**

## 1.7 Treating a person for shock

**IMPORTANT:** *If the casualty is responsive, you do not need to check for breathing. Instead, the person must be treated for shock, a life-threatening condition often encountered in accident situations.*

### 1.7.1 Shock

A person will suffer from circulatory shock if his peripheral circulation is inefficient or otherwise interrupted. This can happen as a result of a sudden loss of body fluids (e.g. severe bleeding), dilation of blood vessels, serious injuries, a myocardial infarction (heart attack), a pulmonary embolism or other major medical issues such as an allergic reaction or severe mental trauma.

### 1.7.2 Symptoms

- Pale skin
- Weakness
- Cold, clammy skin
- Shivering
- Fear
- Confusion
- Nausea
- Apathy
- Sometimes changing to agitation

*Standard treatment for shock (© Erste Hilfe Station)*

### 1.7.3 Action

> Call the emergency services

> Comfort the casualty, get him to lie down, cover him with a blanket.

> Place the casualty on his back. If you can detect no injuries to the head, stomach or legs, elevate the person's legs, resting them on a suitcase or several blankets to encourage blood flow to the important organs.

> If you suspect that the person has had a heart attack (see below), lay him in a semi-upright position, which will make it easier for him to breathe. Respect the wishes of the casualty.

*Treatment for shock if a heart attack is suspected (Fotolia - william87)*

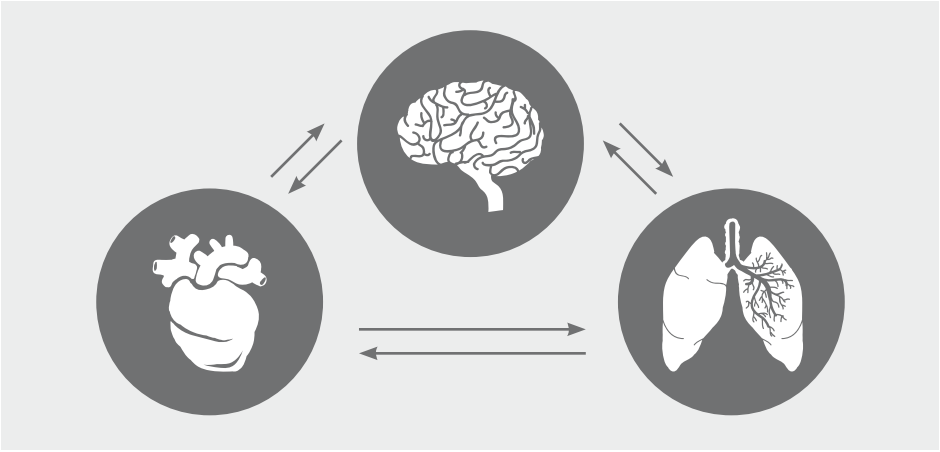
# 2 RECOGNISING AN EMERGENCY/SERIOUS CONDITIONS

## 2.1 Definition of an emergency

We talk of an emergency when an illness or injury results in impairment of a person's breathing, circulatory system or level of responsiveness. If any of these three situations appears possible or probable, it is likewise considered an emergency.

Breathing, consciousness and blood circulation are the elemental functions of the body, essential for the sustaining of life. When the heart, brain or lungs stop working, the other two organs also cease to function, resulting in death within a few minutes unless help is forthcoming. Hence, instead of waiting for one of the vital organs to fail, we should call an ambulance at the first sign of danger and start providing first aid. Quick action improves a person's chances of survival. A number of classic emergency situations are set out below.

**IMPORTANT:** *First aiders are not usually in a position to provide detailed diagnoses, and this is not what is required. We only have to* ***understand that the casualty needs help****, call for help and start providing help immediately.*



*(Fotolia - Soulsiz)*

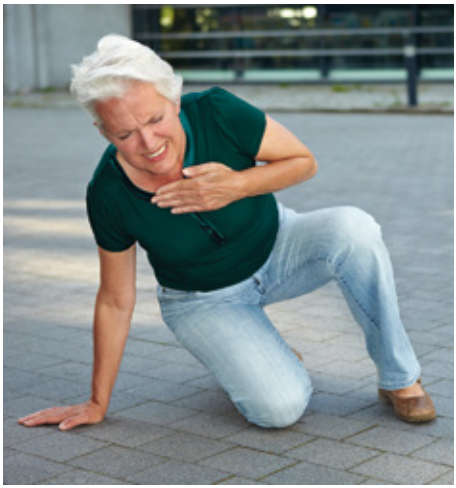
## 2.2 Heart attack

A heart attack is when one or more coronary blood vessels become blocked, preventing the cardiac muscle from being supplied with oxygen and nutrients. The severity of the heart attack depends on the number and size of the blocked arteries.

**IMPORTANT:** *A heart attack is potentially lethal. Do not wait for it to occur; call an ambulance at once! If the casualty receives help immediately, a heart attack can often be treated successfully (lysis therapy).*

### Symptoms

Sudden pain in the chest, often also in the left arm, throat, stomach and back; pale, clammy skin, a tight feeling inside the chest, agitation, fear of death, sometimes nausea, vomiting, impaired responsiveness leading to unconsciousness.



*Possible presentations of a heart attack (Fotolia - © Robert Kneschke)*

### Action

Call an ambulance immediately! Calm the casualty (fear of death), loosen tight clothing (tie, shirt..) and open a window for fresh air.

- **If casualty is responsive:**

Put him/her in a reclining position (to facilitate breathing). Keep checking vital functions (breathing, consciousness)

- **If casualty stops breathing:**

Start resuscitation immediately, using an AED if available.

## 2.3 Stroke

A stroke is caused by an interruption of the blood supply in the brain, brought about by the blockage (or bursting) of a blood vessel in the brain.

**IMPORTANT:** *A stroke is often not recognised as such, because the symptoms may be mild. In diagnosing a stroke, focus on the **'FAST' checklist**.*

### Symptoms

- Headache
- Nausea
- Vomiting
- Dizziness
- Motoric impairment
- Fear of death
- Indications of paralysis
- Sometimes sight and speech

*Possible presentations of a stroke (Fotolia - sframe)*

### 'FAST' checklist

**F**ace: Ask the person to smile. If the face is slack on one side, this may indicate partial paralysis.

**A**rms: Ask the person to reach forward with their palms pointing upwards. If one arm cannot be raised, or if it drops down or twists, the person is partially paralysed.

**S**peech: Ask the person to repeat after you a simple sentence. If they can't comply with the request, or if they slur their words, their speech may be impaired.

**T**ime: Every minute counts if the person is to be saved or if permanent damage is to be avoided. A stroke can often be treated successfully if help is provided quickly!

### Action

Call 112 at once! Calm the patient down (fear of death). Place him/her in a reclining position (to relieve pressure). Immobilise and pad any paralysed limbs. Consider the recovery position (with the patient leaning towards the paralysed side) as a precaution. If the casualty loses consciousness, check his/her breathing.

## 2.4 Respiratory disorders

Breathing problems or respiratory arrest is usually due to a blockage of the airways or a breathing-related ailment. Some of the more common causes are:

- aspiration of a foreign body
- bronchial asthma
- insect stings
- windpipe injuries or ailments
- injuries to the ribcage
- pulmonary conditions
- heart issues (e.g. chronic cardiac insufficiency, myocarditis..)
- or the base of the tongue is blocking the trachea of an unconscious person.

Other causes include: hyperventilation, hypoxia (insufficient oxygenation), drowning, strangulation ...

**IMPORTANT:** *Any noticeable respiratory disorder may be followed by complete respiratory collapse and should be taken extremely seriously. If you are worried about a person's ability to breathe, call 112 immediately!*

*Heimlich manoeuvre*

### 2.4.1 Foreign body blocking the airway

This emergency is most likely to occur during the eating process and may be due to the person eating too quickly, talking or laughing while eating, or a piece of food "going down the wrong way". Young children are especially prone to choking because they often put things in their mouth.

**Symptoms**

- Sudden onset while eating
- Person clutches at throat
- Coughing/gagging accompanied by difficulty breathing
- Wheezing sound; blueish face

**Action**

Get the person to lean forward. Bang him/her hard between the shoulder blades. Lay small children head downwards over your knee and slap their back. As a last resort use the Heimlich manoeuvre. Risk of injury!

**Heimlich manoeuvre**

Standing behind the patient, reach under his arms from behind and place one fist in the soft area directly below the breastbone. Grip the fist with your other hand and jerk it backwards/inwards 4-5 cm. The aim is to increase the pressure of air in the lungs so that the object is expelled from the trachea. Do this up to five times. If the Heimlich manoeuvre has been used, the person should be taken to hospital and checked for internal injuries. Do not use the Heimlich on infants; instead, use two fingers to depress the ribcage by 2 cm, as in CPR.

**IMPORTANT:** *If the person loses consciousness, call an ambulance and do heart massage and artificial respiration (CPR) until paramedics arrive. This may help save a life. Do not assume the person has died!*

### 2.4.2 Insect stings

In the warmer months of the year it is not unusual for a person to be stung inside the mouth or throat by a wasp or bee, leading to potentially life-threatening swelling as a reaction to the toxin – especially (but not only) if the person is allergic to stings.

*A person whose throat has swollen (e.g. due to an insect sting) can be treated with ice or given cold drinks. (Fotolia - Catalin Pop)*

**Symptoms**

- Sudden difficulty breathing
- Pain, flushed skin, increased swelling

**Action**

- Call 112 immediately!
- External cooling with ice packs or other cold material
- Internal cooling by sucking ice cubes or eating ice cream

### 2.4.3 Hyperventilation

People under psychological stress may begin to hyperventilate, which is when breathing increases in depth and frequency. The level of oxygen in the blood rises and increased amounts of carbon dioxide are exhaled.

**Symptoms**

- Panting
- Fear
- Restlessness
- Pale skin
- Sweating
- Tingling sensation in the arms and hands
- Cramps in the hands, stiffness/bunching of fingers, 'O'-shaped mouth/lips

**Action**

Calm the person and try to distract her from whatever may have caused stress. Give her a plastic bag to exhale into and breathe from (but discuss this with her beforehand).

*Hyperventilation: Have the person breathe into and out of a bag. (Fotolia - Lorelyn Medina)*

### 2.4.4 Asthma

Although asthma is not, in itself, life-threatening, a severe attack must be taken seriously, since it may go hand-in-hand with other illnesses.

**Symptoms**

- Wheezing
- Gasping for breath
- Agitation
- Fear

**Action**

- Calm the person down
- Keep the torso elevated
- Ensure a supply of fresh air
- Loosen clothing
- Help the person take their medicine

*Asthma: Help the patient to take any prescribed medicine. (Fotolia - pololia)*

### 2.4.5 Drowning

Many deaths by drowning occur because people have been careless or have overestimated their own capabilities. Only 10% of emergencies involve sea water; 90% of drownings happen in rivers, lakes or swimming pools. Paddling pools can be lethal for small children.

**IMPORTANT:** *People pulled out of the water need NOT have water pumped out of their lungs. Focus on checking their vital functions and, if necessary, begin CPR as soon as possible.*

*If the person's body temperature has dropped significantly as a result of submersion, the chances of a successful resuscitation are relatively good, even if the person was underwater for an extended period of time.*

**Symptoms**

If person is responsive/conscious:

- Agitation
- Panic
- Difficulty breathing
- Irregular breathing
- Coughing
- Wheezing/rattling breath
- Blue/grey skin (esp. lips and fingernails)
- Hypothermia

If person is unconscious:

- No breathing
- No pulse


*Lifeguards (Fotolia - © Fotoherkules)*

**Action**

- Do not injure yourself! Stay out of dangerous waters! Drowning people in a state of shock should be rescued only by qualified personnel! Call an ambulance if no lifeguards are present!
- Remove the victim's wet clothes and cover him/her with a blanket or similar
- Keep checking vital functions (breathing, consciousness)
- If victim loses consciousness, make sure airway is clear
- If breathing has stopped, begin cardiopulmonary resuscitation (CPR)

**IMPORTANT:** *Small children who have been underwater even for a short period of time and have inhaled water must always be taken to hospital for a comprehensive examination. Their lives are still in danger.*

*Do not leave children unsupervised. (Fotolia - AlcelVision)*

## 2.5 Diabetes mellitus

Diabetes mellitus is a condition that arises from the body's failure to metabolise sugar properly. Blood sugar can rise above a safe level (hyperglycaemia) or fall too low (hypoglycaemia). Low blood sugar is particularly dangerous and occurs more frequently. Causes include strenuous physical activity,

alcohol consumption and disruption of eating routines and/or insulin dosages.

**Symptoms**
- Agitation
- Trembling
- Sweating
- Food cravings
- Confusion
- Dizziness
- Impaired vision
- Impaired responsiveness

**Action**
Diabetics will usually know what the problem is. Give them sugary food if they request it or help them find their insulin-injection kit. Do not inject diabetics yourself! If they have difficulty injecting their insulin or if they are confused, suffering from cramps or no longer responding, call an ambulance!

## 2.6 Poisoning

Regardless of how the poison enters the body, toxins always cause damage to the organism as a whole. A person may be poisoned:

- via the airways, e.g. by exposure to gas, solvent vapour
- via the digestive tract (mouth, stomach, intestines), e.g. by alcohol, medicines, food that has gone off, poisonous plants
- via skin contact
- via blood vessels as a result of bites or injections

**Symptoms**
- Nausea
- Vomiting
- Diarrhoea
- Stomach ache, cramps
- Impaired responsiveness
- Lack of responsiveness, with risk of respiratory or cardiac arrest

**Action**
- Protect yourself from sickness or injury (gas, acid, contact poison)
- If possible, remove victim from danger zone. If necessary, secure yourself with a rope. Avoid using electrical equipment if you can smell gas.
- Call an ambulance. What poison? When? How many people? Age? Symptoms?
- As well as 112, also call the hotline for poisons (Berlin: 030-19240)

**Collect information**
Treatment is quicker and more effective if the type and quantity of poison are known.

> Get information from witnesses.

> Look for packaging and containers or drugs and poison residues etc in the vicinity of the victim. Collect and preserve left-over substances that may be poisons.

**IMPORTANT:** *The drinking of milk as an antidote is now considered to do more harm than good. Inducing vomiting or giving the victim charcoal tablets*

*to swallow can also harm the person and should be avoided.*

**EXCEPTION:** *If the casualty has swallowed large quantities of narcotics (drugs, alcohol, etc), it may be a good idea to ask them to stick a finger down their throat to trigger vomiting.*

## 2.7 Abdominal pain

A number of emergencies stemming from acute ailments affecting internal organs, particularly the digestive tract, are referred to collectively as "abdominal pain". If you are faced with the following symptoms, the person must be examined by a doctor.

### Symptoma

- Pain or (severe) colic/cramps
- Vomiting (more serious if material contains blood or looks like coffee-grounds)
- Severe diarrhoea, especially if stool is tar-like in appearance

### Action

- Calm the patient, get her to lie down with knees raised or adopt the foetal position. Keep patient warm.
- Do not give patient food or drink. Moisten lips if desired.
- Accompany patient to doctor or call an ambulance, depending on severity

## 2.8 Excessive body temperature/hypothermia

The body's temperature is regulated by the brain. Sweating, shivering and other processes are used to counter fluctuations in temperature. If the temperature diverges considerably from the norm, the consequences can be serious. A person with a body temperature below 36°C is described as hypothermic. A thermometer reading of over 38°C denotes a fever. Children cope with high temperatures better than adults because the fever can also ward off childhood illnesses.

If an excessive body temperature is linked to atmospheric heat, we talk of **sunstroke, heat stroke and heat exhaustion**.

**Causes:** Lengthy exposure of unprotected head to strong sunlight; humid weather; strenuous physical activity; excessive amounts of clothing.
**Effects:** Breakdown of body's temperature regulation; body heat cannot be released; dehydration due to profuse sweating; shock.

### Symptoms

- Profuse sweating
- Hot/red head
- Headache
- Nausea
- Dizziness
- Stiff neck
- Sudden collapse

- Signs of shock (pale, clammy skin, quick pulse, shivering with cold),
- Person loses consciousness or is not fully responsive

**Action**

- Get the person into the shade. Lay him down flat with head slightly raised.
- Cool his head with cold, damp cloths. Open or remove clothes.
- Let him sip cool drinks (fruit cordial, water).
- If condition does not improve quickly, call an ambulance.
- Possibly: carefully lower body temperature using cold, damp cloths.
- Treat for shock. If he loses consciousness, check breathing (recovery position or CPR).

## 2.9 Hypothermia

**Symptoms**

- Cold, pale skin
- Shivering
- Fear
- Person is not fully conscious

**Action**

Get the person to a warm environment, remove damp, cold clothing, wrap her in blankets etc (not electric blankets), offer her warm drinks (fruit tea). Do not rub skin or induce physical activity! The person must warm up from within using her own body warmth, otherwise she risks suffering from severe shock and collapsing. If her condition does not improve quickly, call an ambulance.

# 3 WOUNDS AND INJURIES

## 3.1 Treatment of cuts and lesions

### 3.1.1 General

- Do not touch open wounds with bare fingers!
- To protect yourself and the casualty from infection, make sure to wear disposable gloves. You should also avoid poking into the wound itself; this would only cause the casualty unnecessary pain and may also make the cut dirty.
- It is not normally the first-aider's job to clean or disinfect cuts, but there are exceptions to this rule. Burns should be cooled with copious amounts of water or wet cloths. Acid/chemical burns should be sluiced with water to remove or dilute the acid or alkali.
- Do not apply powders, salves, sprays or disinfectants!
- Do not remove foreign objects such as nails, large pieces of wood or shards of glass! This might cause additional pain, worsen the injury and increase the bleeding.

**Treatment of cuts according to type/size of wound**

- Lightly bleeding cuts: apply adhesive plasters
- Cuts with moderate bleeding: cover with sterile pad + sticky tape or sterile pad + gauze/compression bandage
- Severe bleeding: apply pressure bandage or direct manual pressure on sterile material
- Leave foreign objects in the injury until the paramedics arrive. Larger objects should be stabilised by taping unopened dressings to the limb around the object.
- Pack severed body parts in cool, dry, sterile materials and hand to paramedics. In many cases they can be reattached to the body.

Mandatory first-aid kits for car drivers contain instructions for responding to accidents, compression bandages, sterile dressings and pads, triangular bandages, sticky tape, disposable gloves, a pair of scissors, an emergency blanket, damp swabs for cleansing skin, a pack of 14 plasters and a list of contents. Check contents and expiry dates regularly.

### 3.1.2 Dressing methods

Every bandage is made up of two parts: a germ-free pad and a fixation material (plaster, bandage, triangular bandage, etc).

*Dressing methods (Fotolia - © Avanne Troar)*

- Sterile pad and gauze bandage: when treating extremities, bandage the lesion from its distal end towards the trunk of the body so as not to impede circulation of blood.
- Triangular bandage: when the wound has been covered with a sterile pad, it can be rolled up and used as an emergency bandage.
- Head bandage: applied as a head scarf/pirate bandanna.
- Hand dressing: cover wound with a sterile pad and lay the forearm across the long edge of the bandage. Fold the apex over the hand and wind the two ends around the wrist.

- Eye bandage: fold a triangular bandage into a cravat shape and tie round the head, covering both eyes. Stay with the casualty!

**Special cases**

- **Nosebleeds**

Do not plug the nose with cotton wool, gauze or a handkerchief. Have the casualty tip his head forward to allow blood to run out rather than be swallowed. Press a cool, damp cloth, ice bag or cool pack on the forehead or the nape of the neck. Call ambulance if bleeding is copious and does not stop. If casualty shows signs of losing consciousness, put him in the recovery position to keep his airways open.

- **Injuries to the face**

A fall on the face can cause severe bleeding and casualties can drown in their own blood if it enters the throat. Take care that the blood can flow out of the body. Place the casualty in the recovery position or have her lie on her stomach with her head on her folded arms. Ensure that her airways stay open. Keep checking her breathing.

- **Stomach injuries**

While broken ribs are not usually very serious, they are extremely painful. Apart from the pain experienced when breathing, the casualty may have difficulty getting enough air and display signs of shock. A perforated lung may prove fatal. Lay the casualty down with a slightly elevated torso to facilitate breathing, taking the casualty's wishes into account.

- **Ribcage injuries**

While broken ribs are not usually very serious, they are extremely painful. Apart from the pain experienced when breathing, the casualty may have difficulty getting enough air and display signs of shock. A perforated lung may prove fatal. Lay the casualty down with a slightly elevated torso to facilitate breathing, taking the casualty's wishes into account.

## 3.2 Injuries to bones, muscles and joints

Most injuries to the musculoskeletal system result from external trauma such as a blow or another form of heavy impact. Stumbling or slipping can also cause injuries to ligaments or bones. We distinguish between broken bones, sprained joints and pulled muscles. It is not always easy to diagnose the problem as some symptoms (pain, swelling, discolouration) may be common to several different injuries.

**IMPORTANT:** *If you are unsure about the injury, call an ambulance. This is because broken bones may be accompanied by shock, embolisms and major trauma to blood vessels.*

### 3.2.1 Broken bones

We distinguish between open and closed breaks. With an open break the skin above the injury is perforated and one or more sections of bone may be pro-

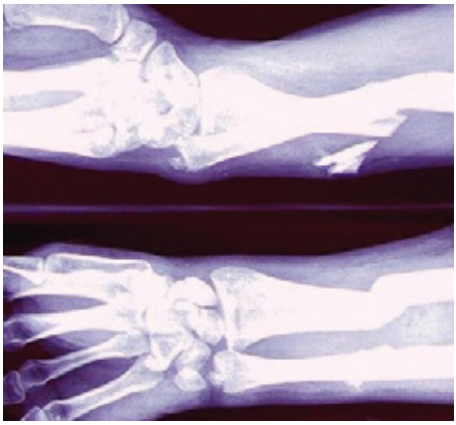
truding, although usually there will only be a small lesion and minor bleeding. The risk of infection is high.

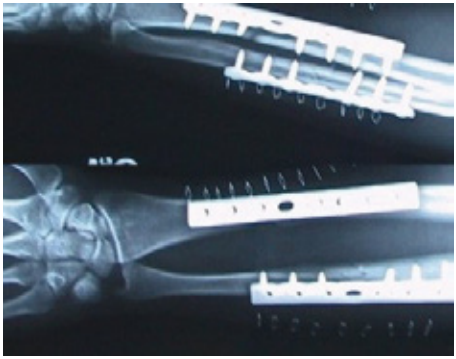
### Diagnosing broken bones

- Jagged pieces of bone may protrude from wound
- Severe pain, swelling, impaired movement, and favouring of the broken limb
- Malalignment/abnormal mobility of limb

### Action

- Open injury: Cover with a sterile dressing due to risk of infection.
- Closed injury: Cooling the swelling without pressing on the site helps to alleviate pain and reduces swelling.
- Surround the injured limb with padding and keep it immobilised. Use blankets, bags, clothing, cushions, triangular bandages, etc.
- Help the casualty find the position that is least painful.
- Keep the casualty warm, calm him down and call an ambulance.





*State-of-the-art therapeutic techniques also extend to the treatment of major fractures. (Bild gemeinfrei)*

## 3.2.2 Injuries to joints

### Types of injury

- **Twists/sprains**

With a twist or sprain the joint is briefly pushed out of its normal position.

- **Dislocated joints**

With a dislocation the joint is pushed out of its normal position and remains in the abnormal position.

- **Pulled ligaments**

Ligament injuries often accompany injuries to joints or result from them. We distinguish between strains, sprains and ruptures.

### Symptoms

- Swelling and high level of pain
- Motoric impairment, malalignment of limbs

**Action**

- A first-aider is usually unable to identify the precise problem.
- The casualty should therefore always be examined by a doctor. On no account should a layperson relocate a dislocated joint.
- If possible, the joint should be immobilised and not subjected to loads or pressure. Apart from immediate cooling, elevating the affected limb can also help to alleviate pain and swelling.

### 3.2.3 Injuries to muscles and tendons

**Types of injury**

- **Strain**

A pulled muscle.

- **Rupture**

The tearing of individual muscle fibres or fascicles.

- **Contusion**

An area of pinched or crushed flesh, often accompanied by bleeding. Unlike sprains and ruptures, relatively harmless.

**Symptoms**

- Swelling and a high level of pain
- Possible motoric impairment or malalignment of limbs

**Action**

- Cool with a cool pack or a cool, damp pressure bandage.

*Athlete cools a swollen ankle with a cool pack. (Fotolia - Dan Race)*

- If possible, the relevant extremity should be immobilised, elevated and no longer subjected to loads/ pressure.

## 3.3 Spinal injuries

**Symptoms**

- Pins and needles in hands and feet; paralysis
- Nausea, vomiting
- Temporary blackouts, loss of consciousness

**Action**

- Do not move casualty if he is responding to questions.
- If casualties are breathing unassisted, place them in the recovery position, taking care not to twist the neck in the process! Any helmet should be removed!
- If casualty has had a heart attack, perform cardiopulmonary resuscitation (CPR).

**IMPORTANT:** *Life-saving action must always be taken, even if a spinal injury is suspected.* ***Saving lives has priority!*** *The risk of making an existing injury worse is relatively small.*

## 3.4 Head injuries

A blow on the head can cause concussion or worse.

**Symptoms**

- Headache, dizziness, memory loss
- Nausea, vomiting
- Temporary blackouts, loss of consciousness

**Action**

- Call an ambulance.
- If the casualty is responsive, lay him down with his torso slightly raised.
- If he is unconscious, perform CPR or place him in the recovery position, depending on the situation.

## 3.5 Burns, scalds, frostbite

### 3.5.1 Burns and scalds

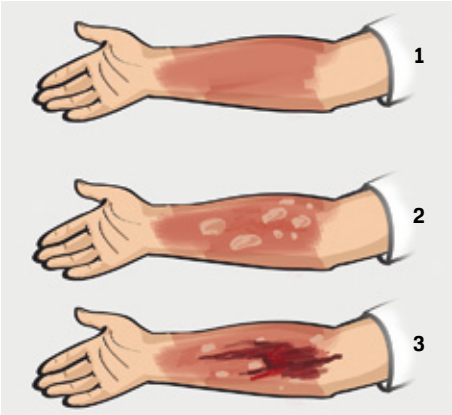
Reasons for burns include contact with hot objects, radiated heat and electric shocks. Scalds are caused by hot liquids and steam. These conditions are potentially life-threatening due to:

- shock caused by extreme pain and loss of liquid
- poisoning caused by burnt material residues and toxins
- resulting infection.

**Symptoms**

Burns/scalds can be grouped according to severity:

- 1st degree: redness, pain, possible slight swelling
- 2nd degree: additional blistering




*3 degrees of burning: (1) redness, (2) blistering, (3) exposed flesh (Fotolia - LaFfofora)*

*Cool burnt fingers under running water (Fotolia - Dan Race)*

- 3rd degree: flesh exposed or skin grey/white or black

**Action**

- Call an ambulance.
- Protect yourself, putting out flames if necessary.
- In a case of scalding, remove casualty's clothes! If burnt clothing has fused with the skin, leave the garment on or cut around it. Cool the affected area at once with clean running water (10 mins).
- Afterwards, cover the burn with germ-free material.
- Lay the person down, soothe and cover with a blanket.
- Monitor the person closely. If she becomes unresponsive, check breathing and act accordingly!

### 3.5.2 Frostbite

Frostbite is caused by prolonged exposure to the cold, resulting in lack of circulation, which leads to localised tissue damage. This especially affects protuberances such as fingers, ears, nose and toes. Although, like burns, frostbite can be divided into three degrees of severity, first-aiders are mostly concerned with the early stages.

**Symptoms**

- Blueish-red skin, becoming yellowish-white or grey.
- Severe pain, loss of the sense of touch.
- Some hours later: blistering and black discolouration.

**Action**

- Move person to a warm location; remove any wet clothing.
- Extremities must warm up using the body's own warmth (e.g. put hands in armpits, press own hand on the relevant spot, etc.).
- Do not use localised sources of warmth (e.g. hot water bottles etc.).
- Person should not exercise frostbitten limbs.
- Cover damaged tissue with sterile material.

## 3.6 Corrosive burns from acid or alkaline solution

Many industrial production processes involve the use of hazardous substances. Some household agents (e.g. powerful detergents or battery acid) are extremely corrosive. All chemical burns bring with them a risk of infection and the casualty may experience shock due to extreme pain. Chemicals etc in the eye may cause blindness.

### Symptoms

- Skin: redness, pain, formation of scabs and blisters
- Eye: redness, pain, weeping, involuntarily scrunched-up eyelids

### Action

- Protect yourself! Wear gloves. Avoid skin contact with acid/alkali!
- Remove casualty's contaminated clothing.
- Use running water to dilute/remove any corrosive substances, tipping the head to ensure that chemicals are not washed into the good eye.
- Dab the area using a sterile pad and then apply a sterile dressing (over both eyes).
- Corrosive burns are serious and the person may go into shock. Call an ambulance.
- Verätzungen sind schwere Verletzungen mit Schockgefahr. Immer Notruf!

## 3.7 Electric shocks

### Symptoms

- Burn marks at entry/exit points of electric charge
- Pale skin, weakness, dizziness, fear, agitation
- Signs of paralysis in the affected limb

**IMPORTANT:** *Electrocution in the domestic environment (220 V alternating current) can trigger ventricular fibrillation and with it a cardiac arrest. Even if the casualty seems to have recovered, the heart can still shut down, so an ambulance should always be called!*

### Action

- Break the electric circuit by pulling the plug from its socket, removing a fuse or separating the casualty from the electric current using a non-conducting object.
- Warn bystanders not to touch live objects.
- Call an ambulance.
- If possible, cool burn marks with water and then loosely cover with sterile material.
- Lay casualty down, soothe and cover with a blanket
- In incidents involving high voltage, stay several metres away from the source of electricity and wait for paramedics to arrive.

*Electric shocks may trigger a cardiac arrest (Fotolia - © Artur Golbert)*

# 4 FIRST AID FOR BABIES AND CHILDREN

## 4.1 Emergency prevention

According to statistics, most emergencies are caused by falls, drowning, burns and sports accidents.

**60% of emergencies with children are preventable.** Do not leave children unattended. Avoid hazards. Make sure to:

- use a nappy-changing table that babies cannot fall off,
- fit socket protectors,
- keep knives, forks, scissors and naked flames out of reach,
- store medicines and chemicals under lock and key,
- check for poisonous plants in the house and garden,
- keep swallowable objects out of reach,
- use child seats in the car,
- have the child wear a cycle helmet,
- provide climbing aids ...

## 4.2 Knocked-out teeth

Touch the knocked-out tooth as little as possible and put it in a 'tooth-rescue box' (available from chemists). Alternatively, put it in milk or a clean handkerchief. If the child is bleeding badly from the mouth, press a gauze bandage or clean lint-free cloth to the cut.

**IMPORTANT:** *Take the child to the dentist immediately! For the operation to succeed, the tooth must be reimplanted within half an hour of the accident.*

*If conditions are right, teeth can be re-embedded.*
*(Fotolia - © Katarzyna Leszczynsk)*

## 4.3 Fever/febrile seizure

### 4.3.1 Fever

Fever itself is a natural response of the immune system to fight off pathogens. The normal body temperature is 36.5 - 37.5°C

**Symptoms**
- Elevated temperature 37.5 - 38°C (typical for infections)
- Moderate fever: 38 - 39°C
- High fever: > 39°C

**Action**
- Drink plenty.
- Keep warm (hot water bottle).
- Change sweaty clothes.
- (Poss.) apply a leg compress and take pills (Paracetamol or Ibuprofen).

**When should the child see a doctor?**
- If their temperature is higher than 38.5°C.
- If there are additional symptoms such as headache, stiff neck, vomiting, difficulty drinking, febrile seizures.

### 4.3.2 Febrile seizure

Febrile seizures occur mainly between the age of 6 months and 5 years of age. The older the age of the child, the quicker the temperature tends to rise.

**Symptoms**
Similar to those of epileptic seizures. It recurs in one third of cases.

**Action**
The child should see a doctor, particularly if the seizure is prolonged or followed immediately by another. Note how long the seizure lasts. If the child has a high temperature, you may have to apply a leg compress and administer medicine.

## 4.4 Choking
(See also page 22)

If a foreign object enters the airway, **blows on the back will help**:

- Lay an infant face down along your forearm, with its head lower than its bottom.
- Stand behind an older child and bend his/her upper body forward.
- Give up to five blows between the shoulder blades with the heel of your hand.

If banging on the back does not help:

- **In infants > chest compressions:**
  - Place the infant on its back along your forearm, with its head lower than its bottom.
  - Hold its head firmly.
  - Find the pressure point in the lower half of the baby's breast-bone.
  - Perform up to five chest compressions, similar to cardiac massage but stronger and slower.

- **In children > abdominal compressions (Heimlich manoeuvre):**
  - Stand or kneel behind the child and reach under his arms.
  - Place one fist in the middle of his upper abdomen, just below the ribcage.
  - Cover the fist with your other hand and pull sharply inwards and upwards.

**IMPORTANT:** *If this doesn't work either, perform cardiopulmonary resuscitation (CPR) until help arrives! The emergency services can help more effectively if you have made a start!*

## 4.5 Traumatic brain injury (TBI)

**IMPORTANT:** *Craniocerebral injury is the leading cause of death in children, so prevention is very important. use a nappy-changing surface that babies cannot fall off, hold and support your child well and provide climbing aids.*

### 4.5.1 Concussion

**Symptoms**
- Dizziness
- Memory loss
- Nausea
- Vomiting
- Impaired consciousness, child is unconscious for less than a minute or two.

**Action**
- Call an ambulance!
- Keep her head and shoulders slightly raised.
- Cool the swelling.

### 4.5.2 Cerebral contusion

**Symptoms**
- Neurological deficits
- Amnesia
- Nausea
- Vomiting
- Prolonged unconsciousness

**Action**
- Call an ambulance!
- If child is breathing, place in recovery position.
- To treat respiratory and cardiac arrest, perform CPR.

### 4.5.2 Cerebral compression

**Symptoms**
- Deep, prolonged unconsciousness caused by a visible injury or heavy pressure on the brain due to haemorrhage or oedema

**Action**
- Call an ambulance!
- If child is breathing, place in recovery position.
- To treat respiratory and cardiac arrest, perform CPR.

## 4.6 Basic steps for saving lives

As with adults, so with children: impairment of one of the three important vital functions – consciousness, breathing, circulation – can be fatal. (See also page 19)

If the child passes out, respiratory arrest will follow. If breathing stops, we can only survive for a very short time. Our highest priority is to get the child breathing again!

### Special treatment for babies/children

- **Recovery position**

With infants in the prone position the recovery position is achieved by flexing one leg at the knee and crooking the diametrically opposed arm at the elbow behind the head. The mouth is the lowest point. Head and neck are in the neutral position; do not tip the head back or lift the chin. You can also hold the baby in your arms with her head tipped downwards and supported. This keeps her air passages open and allows fluid to drain away.

- **Resuscitation**

With infants, do not tip the head back. Keep the head in the neutral position. Start with 5 initial rescue breaths, then check for breathing again. If breathing has resumed, place the child in recovery position! If the child is still not breathing, perform CPR! 30 chest compressions alternating with 2 rescue breaths. Compression rate: 100-120 per minute. Depth of compression: 2-3 cm in infants, 3-5 cm in children. Approx. 1/3 of the total depth of the chest. The pressure point is in the lower third of the sternum between the nipples. In infants cardiac massage is performed with 2 fingers, in children with the heel of one hand. Rescue breaths can be given either mouth to nose, mouth to mouth, or mouth to nose + mouth.

- **Psychological support**

It is particularly important to comfort and calm children who have regained consciousness. If possible, find people who they are close to (a relative, a teacher) and who can help calm them down. Give them a cuddly toy or something that will serve the purpose. As the saying goes, a trouble shared is a trouble halved.

## 4.7 Typical diseases

### 4.7.1 Bronchial asthma

Variable and recurring symptoms, reversible airflow obstruction, and bronchospasms.

***Basic steps for saving lives:***

| | |
|---|---|
| ***> Check for consciousness*** | *= look, speak, touch* |
| ***> No reaction yet*** | *> tip the head back + listen for, look for and feel for breathing* |
| ***> Child is breathing*** | ***> Place in recovery position*** *so that liquid can run out of the mouth* |
| ***> Child is not breathing*** | ***> Cardiopulmonary resuscitation (CPR)*** *30 chest compressions alternating with 2 rescue breaths until emergency services arrive.* |

**Symptoms**
- Episodes of wheezing
- Coughing
- Chest tightness and shortness of breath

**Action**
- Breathe together.
- Open windows and loosen tight clothing.
- If the attack lasts longer than 15 minutes, call an ambulance.

### 4.7.2 Croup

An inflammatory disease of the larynx triggered by a virus. The mucous membrane beneath the glottis swells. Occurs almost exclusively during the winter months and in children up to 6 years old. A "harmless" temporary illness.

**Symptoms**
- Barking cough
- Stridor and a hoarse voice
- Fever and runny nose may also be present

**Action**
Keep the child calm, wrap in a blanket and put in front of an open window or in front of the open refrigerator and let him breathe the fresh, cold air. Give a cool drink in small sips (water or tea). If prescribed by the doctor, administer corticosteroids such as dexamethasone and budesonide.

### 4.7.3 Epiglottitis

A bacterial inflammation of the epiglottis with severe swelling.

**Symptoms**
- Swallowing is difficult and painful
- drooling
- Hoarseness
- Difficulty breathing
- High fever
- Fear of death and an increased breathing rate

**Action**
- Call an ambulance!

See also ‘Croup’.

### 4.7.4 Sudden infant death syndrome

SIDS (the internationally recognised term) occurs in infants up to one year old and happens unexpectedly when the baby is asleep. The causes are not clear. The risk factor is 1 : 1,000 and the peak incidence between the ages of 2 and 4 months.

**Symptoms**
- Slack muscles
- Pallor
- Respiratory arrest
- Cardiac arrest

**Action**
- Immediate cardiopulmonary resuscitation
- Call an ambulance

**IMPORTANT:** *Be aware of risk factors: gestation period was shorter than 33 weeks, birth weight was less than 2 kg, baby sleeping in prone position, mattress is too soft, environment is smoky and/or too warm, child is not being breast-fed. The doctor may prescribe respiratory monitors (sensor mat, baby monitor, baby phone).*

### 4.7.5 Infectious diseases

Infectious diseases are caused by viruses or bacteria. This distinction is important, because antibiotics and penicillin are effective only against bacteria. Important preventive measures are vaccination and a strengthening of the immune system through healthy eating, physical fitness and mental well-being. With infectious diseases you should see your doctor, who will decide on treatment, isolation of patient and notification of health authorities.

#### Chickenpox (airborne droplets, viral pathogens)

**Symptoms**

- Intensely itchy blisters all over the body (often under the hair or inside the mouth),
- Headache and aching body
- Discomfort
- Sluggishness
- New waves of spots
- Scabbing
- Fever

Only after scabs have healed is the condition no longer contagious (about 2-3 weeks).

**Action**

- Medications or lotions to relieve itching
- Enhanced skin care
- Wear light clothing (to reduce the urge to itch)
- Bed rest

#### Measles (viral infection)

**Symptoms**

- Discomfort
- Increased temperature
- Irritability (contagion)
- Red eyes
- Runny nose
- White spots on the tongue
- Cough
- Fever
- Rash starts on the face and behind the ears then spreads over the entire body

**Possible complications**

- Otitis media
- Lung inflammation
- Life-threatening measles encephalitis

**Action**

- Bed rest
- Antipyretic drugs
- Isolation
- Treatment of additional bacterial infections
- Drink plenty of fluids
- Vaccination at 11 months provides lifelong immunity!

### Mumps (also: epidemic parotitis, viral infection)

#### Symptoms include
- Headache
- Fever
- Discomfort
- Pain when chewing
- Swelling and redness in front of and below the ears (on one cheek at first)
- Inflammation of the pancreas
- Poss.: inflammation of parotid gland at a later stage
- On rare occasions: meningitis

#### Action
- Bed rest
- Cooling of swelling
- Isolation
- Rigorous oral hygiene
- Vaccination recommended!
- 80% of unvaccinated children will contract the illness.

### Rubella (viral infection)

#### Symptoms
- Similar to those of a common cold
- Swollen lymph nodes and rash

#### Action
- Bed rest
- Isolation
- Vaccination is recommended from the age of 12 months

### Scarlet fever (bacterial infection)

#### Symptoms
- Sore throat
- Raspberry tongue
- Eash starts on the neck, groin and armpits and spreads all over the body
- Several days later: flaking of the skin on palms of hands and soles of feet

#### Possible complications
- Rheumatic fever
- Damage to the heart
- Kidneys and joints

#### Action
- Bed rest
- Isolation
- Medical therapy
- Rest
- No physical stress
- During the night fits of coughing can occur
- Provide cool, humid air

### Diphtheria (bacterial infection)

#### Symptoms
- Sore throat
- Difficulty swallowing
- Swelling of the neck area
- Breath smells sweet
- Fever

#### Possible complications
- Myocardial inflammation
- Pneumonia
- Narrowing of the airways
- Vaccination possible from the age of 3 months

#### Action
- Early medication
- Isolation

## Pertussis (bacterial infection)

Vaccination from the age of 3 months is recommended. Infants with pertussis must be hospitalized due to the risk of suffocation. With older children the physician should be consulted.

### Symptoms

- Flu-like symptoms
- Spasmodic coughing fits
- Vomiting
- Nosebleeds
- Bleeding into tissue and eye

### Action

- Antibiotics (also to be taken by carers with no immunity!)
- Isolation
- Vitamin-rich diet
- Plenty of fluids
- Monitoring of vital signs

# 5 LEGISLATION

## § 323c Strafgesetzbuch (StGB)[1] - Failure to provide assistance

An individual failing to provide assistance in the event of an accident or in a dangerous situation, when people need help and the individual can reasonably be expected to provide it – particularly in cases where there is little risk to the individual and he/she can assist without neglecting other important obligations – is subject to a fine or a maximum penalty of one year in prison.

## § 34 Straßenverkehrsordnung (StVO)[2] - Accidents

(1) Any person involved in an accident must

1. stop immediately,
2. make the scene of the accident safe and park on the side of the road,
3. find out if persons or property have been harmed/damaged,
4. help injured persons (pursuant to § 323c Strafgesetzbuch), ...

## § 2 Siebtes Buch Sozialgesetz (SGB VII)[3] - Statutory accident insurance

(1) The following individuals are automatically covered by accident insurance:
[...]
13) persons
   a) who, in the event of an accident or in a dangerous situation, provide assistance or rescue someone whose life or health is in immediate danger
   ...

**IMPORTANT:** *Insurance coverage for first-aiders means that people whose property has been damaged and/or who have lost earnings as a result of their intervention will be reimbursed, on request, through the accident-insurance policy of the local authority concerned. They are also entitled to psychological counselling free of charge. If you have helped others in the aftermath of an accident, do not hesitate to seek help yourself.*

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[1] Penal Code
[2] Highway Code
[3] Book 7 of the Social Welfare Code

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Strange but true: our first aid course for learner drivers is fun. Check us out for yourself! We look forward to seeing you.

If you have attended one of our courses and enjoyed the experience, recommend us to your friends.

We provide courses for learner drivers at 12 locations in Berlin and also visit schools and companies. We offer first aid courses to children, parents, students and people who may need the skills in the course of their work. We teach in English, Spanish, French and Russian…

Information on all courses and dates is available on www.erstehilfekursberlin.de.

*PS: Due to our teachers' skills and qualifications in other areas we can also organise acting courses, speech training, communications seminars, comedy workshops, private tutoring and other coaching. Please contact: info@erstehilfestation.de.*

ERSTE HILFE STATION

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**People who had fun on their first aid course may well have received their training from us. Alongside their medical qualifications, our staff have trained as teachers, communications experts or actors. Some of our teachers are even comedians. Yep, first aid classes can be entertaining – because helping people makes everyone happy.**