JOHANNITER

Skilled in First Aid

Every second counts

Aus Liebe zum Leben

First Aid Learning Journey

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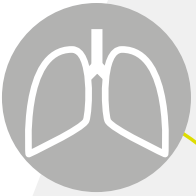

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Welcome!

First Aid – of course!

We congratulate you on the decision to become a first aider. You will find yourself here in very good company. First aiders are motivated because they want to help people, and not just because they are legally required to. As is stipulated in Article §323c of the German Criminal Code (StGB) failure to render assistance is punishable by imprisonment or a fine. However, when you provide first aid, you are well insured against accidents and damages.
You are an important part of the chain of survival, the initial tasks are performed by a first aider: Safety – Call – Help. The following links in the chain are performed by the emergency medical service (EMS) and the hospital.

The First Aid Learning Journey

This journey is via a series of first aid learning islands, like the ones that you will find in Johanniter courses. First of all you will learn what is always right and important in first aid. You will be given answers to questions such as:

- How is my safety as a first aider ensured and what do I need to pay attention to?
- What should I do in an emergency? **Follow this schema:**

Look

Safety

Rescue

Check

Call

Help

… and the PACKET

The PAKET contains four tasks that are the right thing to do in any emergency.

Confident in every situation

So that you are able to confidently use these first aid skills in an emergency, we will guide you through some situations in which you will need to provide first aid. You should always follow the schema shown above ‚What to do in an emergency‘: Look, Safety, Rescue, Check, Call, Help … and the PACKET. Every situation is different and first aiders need to act accordingly. For example, if there are any dangers to the first aider or to the person.

The most common emergencies in first aid have been assigned to six **learning islands**, where you can learn more about the following **main symptoms**:


Won‘t wake up


Chest problems


Neurological problems


Not breathing


Injuries


Stomach problems

A main symptom is an obvious ‚eye-catching‘ sign that you will see when you arrive at the scene of an emergency. For every main symptom you will learn which **first aid tasks** are the best way for you to respond.
These main symptoms can often be seen in different types of emergencies. Therefore, the same first aid tasks will normally be sufficient for each respective main symptom.

However, you will additionally discover specific details of these emergencies on each island. You will see that some emergencies have additional symptoms, which means that you can perform additional first aid tasks.

In keeping with the motto **‘First aid is silver – prevention is gold’**, we will also show you how to minimise or avoid dangers in an emergency situation. You can use the QR codes to watch short instructional videos on your mobile.

We wish you a pleasant and successful learning journey!

Your Johanniter

Let‘s go!

What is always right and important in first aid

What to do in an emergency – know how!

No matter what emergency you encounter, the course of action is always the same: Look – Safety – Rescue – Check – Call – Help... and the **PACKET**

Look
At first glance you can see:

- the cause of the accident
- the number of people
- possible injuries or illnesses
- the behaviour of people/bystanders
- hazards such as leaking petrol, traffic, fire, or electricity

Safety
Make sure that you protect yourself and others:

- hazard warning lights
- safety vest
- warning triangle
- disposable gloves
- etc.

Rescue
Move people away from immediate danger

for example with the Rautek rescue grip

Check
Check the vital signs:

- response: is the person awake or can they be woken up?
- check for breathing
- check the whole body for injuries

Emergency call
You can describe the situation with help from the 5 Ws:

- **Where** is the emergency?
- **What** has happened?
- **What** is the number of injured/sick people?
- **What** injuries/diseases have you found?
- **Wait** for further questions!

Help
Perform first aid tasks:

You should do these tasks in order of importance. Prioritise life saving tasks, such as CPR, recovery position, and stopping heavy bleeding.

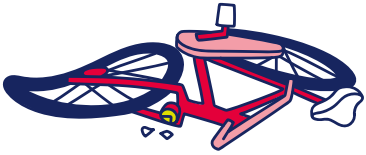
For each of the main symptoms that you have already learned, there is a group of practical tasks. You will find these on the learning islands below, which have been named after the main symptoms:

- Won't wake up
- Not breathing
- Chest problems
- Injuries
- Neurological problems
- Stomach problems

The PACKET
Four tasks that are the right thing to do in any emergency:

- Continue to check the person's vital signs (awake and breathing).
- Emergency call: if necessary. Has it already been done?
- Keep the person warm, for example place an emergency blanket on top of and under the person.
- Comfort the person and continue to take care of them.

How does it work exactly?



Look

Keep calm. Gather yourself, so that your nervousness, lack of confidence, or fear is not passed on to the person. Remember: first aid is very easy! As you approach the scene of the emergency, try to get an overview of what has happened.

Safety

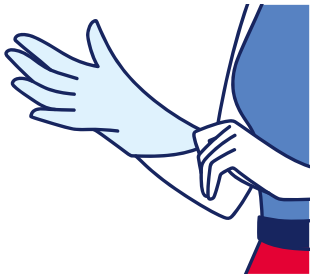
Safety always comes first, even in an emergency. As a first aider no one is expecting you to be a hero. Be realistic about your abilities and how you are best able to help. For example, in the event of an accident involving high voltage electricity or gas, immediately making an emergency call and requesting technical assistance might be the only thing that you can do without endangering yourself. As a matter of principle, tasks to safeguard others and protect yourself are more important than performing first aid tasks on the person. The safety of many – for example after a traffic accident – comes before rescuing one person.

Two tips for your own protection:

- If there is a chance that you will come into contact with bodily fluids or poisons: put on disposable gloves.
- With mouth-to-mouth breaths: if you are worried about contact with bodily fluids such as blood, you can use a breathing sheet or resuscitation aid. In the case of poisons, CPR rescue breaths are only allowed to be done with a ventilation mask or resuscitation bag.

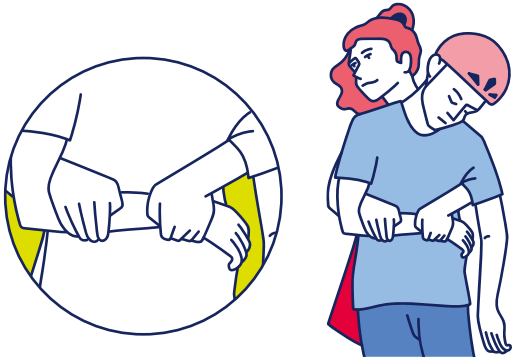
Rescue

If you see fire, smoke, or detect a dangerous leaking substance, if possible, remove the person to a safe place. If the person is not awake, the best option is with the Rautek rescue grip.



How to use the Rautek rescue grip when the person is lying on the floor:

- Stand at the person's **head**.
- Reach with **both hands** as far as you can **under their head, neck and shoulders**.
- **Use momentum to sit the person up.**
- **Support** them in the sitting position with your legs.
- Reach under the person's armpits.
- **Take hold of an uninjured arm with both of your hands.**
  Do not forget: All of your fingers, including your thumbs, must be over the person's arm (‚monkey grip'). Your hands should be as far apart as possible to spread out the pressure on the person's arm.
- Bend your knees slightly.
- Then use force to pull the person up onto your leg. It is important to push up through your knees to protect your back. Quickly place the person on your leg.
- If a second helper is available, they can carry the person's legs.



Rescue from a car

- Be careful of the **airbag**: do not lean over into the space between the steering wheel and the person.
- Turn the **motor and the ignition off**.
- Put the **handbrake** on.
- If the person‘s leg **is trapped**, try to free it.
- Undo the **seatbelt**, or cut through it.
- **Turn the person** so that their back is facing towards you.
- **Reach under the person‘s armpits**, and when possible, take hold of an uninjured arm with the **monkey grip** (with your thumbs also on top).
- Bend your knees slightly and pull the person onto your leg.
- If a second helper is available, they can take the person‘s legs.
- Drag the person to a safe place.

Rescue from a truck

Because of the height between the driver's cabin and the ground, even with several first aiders, it is almost impossible to rescue someone from a truck. Immediately make an emergency call and request technical assistance. Until they arrive, you can take care of the person as best as possible in the driver's cabin.

Check

At first glance you get important information:
appearance, location and behaviour of the person.

Check the vital signs:

- **Check to see if they are awake:** speak to the person. Shake them gently on the shoulder. Are you able to wake them up?
- If not, **check for breathing**: Lie the person on their back. Put one hand on their forehead and the other hand on their jaw. Tilt their head back and lean down over their mouth.
- Check for breathing (approx. 10 seconds): Can you **hear** breathing sounds? Can you **see** rise and fall of the chest? Can you **feel** exhaled air on your cheek?

If one or more of the vital signs are abnormal, respond with the appropriate first aid tasks that you will learn about later. Otherwise proceed as follows:

- **Ask** the person if they have any pain. **Check** the person: has their **breathing** or their **skin colour changed**? Are there any visible **injuries**? Scan the whole body from head to toe for injuries.

Emergency call

In the case of serious injuries and abnormal vital signs (unconscious and not breathing) always call the emergency services number 112.

If a second helper is available, they can call the emergency services while you concentrate on providing first aid to the person.

In the case of accidents on the motorway or highway, arrows on the top of the black and white reflector posts will guide you to the nearest emergency telephone. When you call, please also state the direction of travel and the number on the kilometre marker.

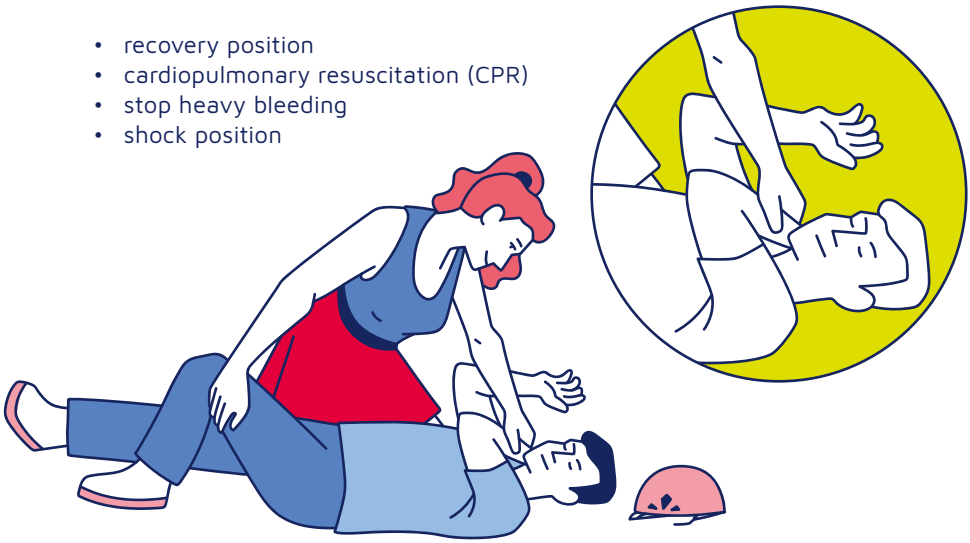
If you cannot approach the person due to dangers, such as fire or high voltage electricity, immediately call the emergency services number 112 and request technical assistance.

Help

Follow the first aid tasks. The six learning islands will take you through these first aid tasks in more detail.

Priority is given to first aid tasks that protect vital functions such as breathing:

- recovery position
- cardiopulmonary resuscitation (CPR)
- stop heavy bleeding
- shock position



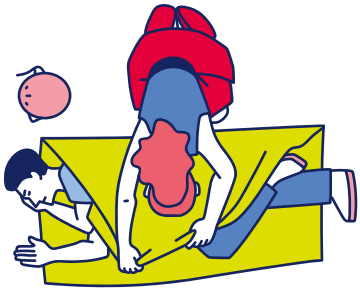
... and the PACKET
Four tasks that are the right thing to do in any emergency:

- Continue to check the person's **vital signs** (awake and breathing).
- **Emergency call**: if necessary. Has it already been done?
- **Keep the person warm**: Protect the person from loosing heat by wrapping them in a rescue blanket. The rescue blanket can also be calming.
- **Comfort the person** and continue to take care of them!

How to place a rescue blanket underneath a person who is not awake
This works best with a second helper:

- Place the person in the recovery position.
- Fold half of the rescue blanket together like an accordion.
- Place the folded half as close as possible to the back of the person.
- Now roll the person over onto the other side of their body.
- Pull out the folded rescue blanket from under the person.
- Put both sides of the rescue blanket over the person.

Comfort the person and continue to take care of them!
By being calm and caring you reduce the person's fear and stress, which has a positive affect on the vital functions such as circulation and breathing. This task is also helpful for people who are not awake.



Four rules for mental health care (Lasogga & Gasch):

- Say that you are there and that help is on the way.
- Try to carefully make physical contact.
- Shield the person from onlookers.
- Talk with the person and listen to them.

Learning Island 1: Won`t wake up

or: the recovery position

Look

George Shepherd is driving in his truck. After coming around a bend, he sees a car that has crashed into the safety barrier.
The car is sitting across the road.
There is steam coming out of the bonnet.
The driver is slumped over the steering wheel. He is not moving.
George does not see anyone else in the car.

Safety

George parks his car **on the side of the road**, far away from the accident.
Before getting out, he turns on the car's **hazard lights**.
He puts on a reflective **safety vest**, so that he is highly visible.
Then he grabs the **warning triangle** and sets it up on the side of the road before the accident.
For his **own protection**, he puts on **disposable gloves** from the first aid kit.

Rescue

Now George wants to remove the driver of the damaged vehicle from danger:
He opens the door and talks to the driver. But the driver does not answer.
Therefore, he rescues the driver and takes him to a safe place using the **Rautek rescue grip**.

Check

Now George **checks the driver's vital signs**:
He speaks to him and gently shakes his shoulder.
The driver does not wake up, but he is breathing. So the driver is **unconscious**.
George takes a quick look to see if there are any injuries.
However, the most important thing is that the person won't wake up.

Emergency call

George asks a driver from another car to call **112**.

Help

George knows: when someone is unconscious, the correct first aid task is the recovery position. He moves the person quickly into this position and completes the task with opening the person's mouth, so that any vomit will flow away from the airway.

... and the PACKET

Then George thinks about what is missing from the **PACKET**:
He gets a rescue blanket from the first aid kit and wraps the person in it, so that he stays warm.

In the case of the main symptom ‚won‘t wake up‘, the vital functions of the brain are disrupted. This is usually obvious, as the person has problems staying awake.

The causes for this can be:

- Disruption of other vital functions such as breathing or circulation (shock)
- Trauma to the head (severe concussion)
- Heatstroke or hypothermia
- Metabolic disorders, for example diabetic hypoglycaemia

You can see that:

- The person does not wake up.
- They are breathing.

So they are **unconscious**.

How to help:

With the ‘won‘t wake up’ first aid tasks:

- Recovery position
- The **PAKET**

INFO! The dangers of not waking up

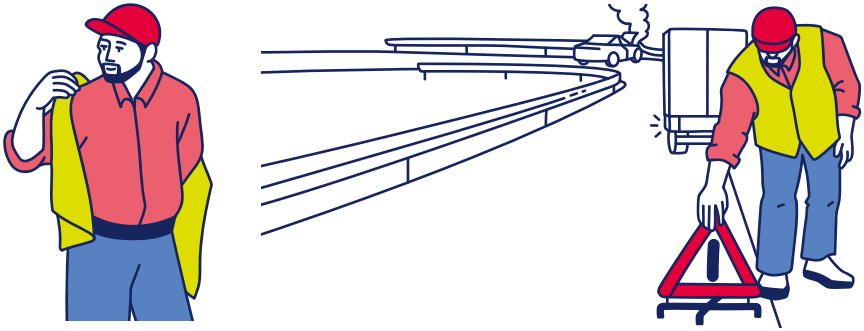
When someone is unconscious, the muscles of the body relax and the protective reflexes no longer work, for example the airway does not get closed off by the epiglottis. It is possible that when the person is lying down, the contents of their stomach could leak into their airway.

The tongue muscle can also relax back and block the airway.

How does it work exactly?

Safety: Protect yourself and others

- Stop your car in front of the accident and as far to the side of the road as possible.
- Turn on your **hazard lights**.
- Put on a reflective **safety vest**.
- Set up the **warning triangle** on the side of the road in front of the accident.



'Warning triangle' rule of thumb:

Place the warning triangle as far away from the accident in metres as the road speed allows for in kilometres. For example 50km/h = 50m.
If possible, set it up before any bends in the road, or other places where the view is obstructed.
If available, and if it is safe to do so, warn traffic traveling in the other direction with a second warning triangle. This should be set up the same distance away.

INFO! Helmet removal

Helmet removal from a motorbike rider who will not wake up is absolutely necessary!
If possible, remove the helmet with the help of a second person.

First aider A: Kneel above the person's head and hold on to the helmet firmly.
First aider B: Kneel next to the person, undo the clasp of the helmet and lift the visor. Now hold the person's head and support their neck (see left picture).
First aider A: Reach inside the helmet and grab the sides firmly, pull the sides apart and carefully remove the helmet.
Place the helmet to one side and hold the person's head still.
First aider B: Check for breathing.
If the person is breathing, place them in the recovery position.

Help
Recovery position: how to proceed

The person is lying on their back. Otherwise you need to carefully place them in this position.

1. Kneel next to the person.

2. Take the arm closest to you and place it at a right angle to their body with the palm facing up.

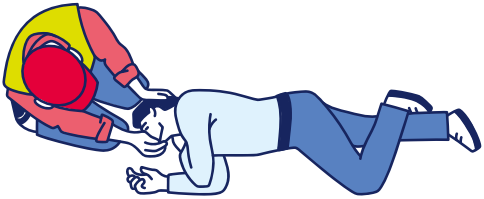
3. Put their other arm across their chest and place the back of their hand to their cheek.

4. Bend the far knee of the person.

5. Roll the person towards you and onto their side.

6. Keep the top leg bent and place it at a right angle to the body.

7. Tilt their head back.



8. Open the person's mouth and then check their vital signs again.

TIP! If you do not remember the exact steps of the recovery position: what are the most important things?

- The mouth should be open and be the lowest point of the body/ airway. This allows vomit to flow out and not obstruct the person's breathing.
- The head is tilted back. This lifts the relaxed tongue out of the throat, so that it will not obstruct the person's breathing.

Now watch the recovery position video!

Learning Island 1: Won`t wake up

Seizures

Look

Johanna is at the disco with her friends. She sees her friend Benny fall to the ground and then his whole body starts to shake.

Safety

Johanna asks the dancers to make space. She moves a bar stool out of the way. Johanna does not hold Benny down. Otherwise she might hurt herself or Benny.

Rescue

As long as Benny is seizing, Johanna has to leave him on the dance floor.

Check

After the seizure, she **checks his vital signs**: Johanna speaks to Benny and shakes him gently on the shoulder. He does not wake up, but he is breathing. So he is **unconscious**. Johanna checks to see if there are any injuries. However, the most important thing is that he is unconscious.

Emergency call

Johanna asks another person at the disco to call **112**.

Help

Johanna places Benny in the recovery position.

… and the PACKET

Then she thinks about what is missing from the **PAKET**:
She puts a rescue blanket over and under the person, so that he is warm.

Seizures belong to the main symptom 'won't wake up' because of the loss of consciousness. The cause is a strong and sudden stimulation in certain areas of the brain, for example due to a build up of heat in the body or a disease such as epilepsy. One in 20 children will have at least one seizure during their childhood. Parents are often concerned that these seizures are caused by epilepsy, however this is very rarely the case.

Tonic clonic seizures happen in phases:

- The person convulses.
- The person lies quietly and cannot be woken up/unconscious.
- The person slowly wakes up.

You can see that:

In the second phase, the loss of consciousness (deep sleep):
- The person does not wake up.
- They are breathing.

So they are **unconscious**.

How to help:

- Recovery position
- The **PACKET**

How does it work exactly?

Help

How to correctly treat each phase of a seizure:

1. Protect the person: clear dangerous objects out of the way. Place something soft underneath the person's head. Protect them from falling out of bed or falling off a seat. Do not hold the person down and do not put anything between their teeth, not even if you are afraid of them biting their tongue. If the object is made out of wood it can split, or in the case of a tissue small pieces could break off, both of which could obstruct the person's breathing.

2. Move the person into the recovery position and think about the first aid tasks in the **PACKET**, such as the emergency call (if it has not already been done) and keeping the person warm with an emergency blanket.
3. Take care of and comfort the person. Provide mental health first aid during the waking up phase.

Learning Island 2: Not breathing

or: cardiopulmonary resuscitation

Look

George Shepherd walks into the office. He sees his colleague Carl slumped over his desk with a limp upper body. At first glance he sees that Carl has collapsed and is not moving. The colour of the skin does not look normal, it is grey.

Safety

Since George does not see any dangers in the area, he goes straight over to his colleague. When he talks to Carl and touches him on the shoulder, there is no response.

Rescue

So that Carl does not fall of the chair and injure himself further, George moves him safely onto the ground. He does this with the **Rautek rescue grip**. Then he can easily provide Carl with first aid.

Check

Now he **checks the vital signs**:
He speaks to Carl and gently shakes him on the shoulder. Carl does not wake up. Then George checks his breathing by looking, listening and feeling. There is **no breathing**.

Emergency call

An immediate emergency call is important.
He shouts out to another colleague in an office nearby. She takes over the task of calling **112**. He also asks her to get the automated external defibrillator (AED) from the hallway. Meanwhile, George prepares everything for the following first aid tasks, cardiopulmonary resuscitation.

Help

He removes the clothes from the upper body and exposes the chest. Then he pushes **30 times** with his hands together hard on the chest, about **2 times per second** and **6 centimeters** deep. Despite all of his concerns, he makes sure to press down hard, and to compress the chest deep enough.
Then he gives Carl **2 rescue breaths**. To do this, he pinches Carl's nose closed with two fingers and does mouth-to-mouth breaths.
It continues on like this, **alternating between 30 compressions and 2 breaths**.
Meanwhile, their colleague arrives with the **AED**. They turn it on and the AED gives them further instructions. After a shock from the AED, they immediately continue with the compressions and rescue breaths..

... and the PACKET

Then George thinks about what is missing from the **PACKET**. In this case there is nothing else that they can do, so the two continue with cardiopulmonary resuscitation until the ambulance arrives.

With the main symptom ‘not breathing’, the vital functions of breathing and circulation are not working.

The causes for this can be:

- A heart attack or other serious cardiovascular disorder, such as a pulmonary embolism, cardiac arrhythmia, or shock
- A serious breathing disorder, for example a foreign body in the airway, a severe asthma attack, or anaphylactic (allergic) shock
- A serious metabolic disorder, such as diabetic hypoglycaemia

You can see that:

- The person cannot be woken up.
- They are not breathing (normally).

So they are **not breathing**.

How to help:

With the ‘not breathing’ first aid tasks:

- Cardiopulmonary resuscitation (CPR)
- When possible, with the use of an automated external defibrillator (AED)

- The **PACKET**

How does it work exactly?

Help: cardiopulmonary resuscitation

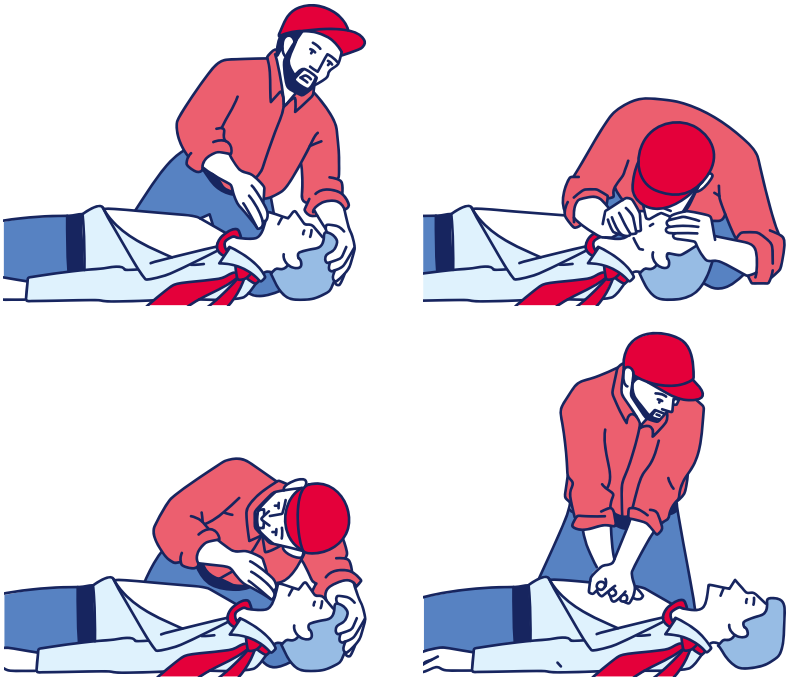
How to perform cardiopulmonary resuscitation:

How to do chest compressions:

- The person needs to be lying on their back and on a hard surface.
- Kneel beside them.
- Remove any clothing from the person's chest.
- Place one hand in the middle of their chest.
- Place your other hand on top.
- Straighten your arms.
- Push about 5 to 6 centimetres deep and fast – about 100 to 120 times per minute.
- Count the compressions out loud to 30.

How to do rescue breaths:

- Tilt back the person's head.
- Pinch their nose closed.
- Breath twice into the person's mouth.
- Count to 2 with each exhale.
- Start the chest compressions again.
- Do not stop the compressions and breaths until the emergency services take over. However, you can alternate with other first aiders.
- Or: if the person starts breathing again, stop the compressions and rescue breaths. Then you should put the person into the recovery position and continue to look after them.



TIP! Only two rescue breaths should be attempted and then chest compressions must be continued.

If **mouth-to-mouth breaths** are not possible, for example due to injury, then **mouth-to-nose breaths** are an alternative. For this, you need to keep the person's mouth closed with your hand, and place your mouth over the person's nose.

Now watch the CPR video:

Automated external defibrillator (AED)

How to use an AED:

- Turn the defibrillator on.
- The defibrillator will talk to you and tell you what to do.
- Listen closely and do exactly what it tells you.
- For example "Stay calm." – "Follow the instructions." – "Call 112 immediately." – "Expose the patients chest. Remove or cut away any clothing." – "Attach the patches to the person's chest as shown in the pictures."
- "Analysing rhythm": During this time, the AED analyses whether the heart activity is normal or if it has a disturbance. – "Shock advised." – "Do not touch the patient." With "3, 2, 1..." start CPR.
- Every two minutes the AED will analyse the heart rhythm and provide further instructions.

INFO! Automated external defibrillator (AED)

The most common cause of sudden heart failure is ventricular fibrillation. With a shock from a defibrillator (AED) this abnormal heart rhythm can be stopped and the heart can beat normally on its own again.

The fully automated devices – "automated external defibrillators (AED)" – are very easy for first aiders to use. These days they can be found in many company buildings and in public places (airports, train stations etc.).

This first aid task is a valuable addition to the resuscitation performed by first aiders. However, it does not replace the compressions and rescue breaths. Therefore, CPR must be continued, even after a shock has been given.

Now watch the AED user video:

Special considerations with electrical accidents

Be careful:

An electric shock is dangerous because it can disrupt the normal conduction pathway in the heart. The result can be ventricular fibrillation and therefore a cardiac arrest. Furthermore, high voltage electricity can cause internal and external burns. At the points where the electricity has entered and exited the body, prominent wounds might be visible – so called electrical burns.

Protect yourself and provide assistance

Turn off the power supply. If necessary, rescue the person to a safe place and then provide first aid according to the symptoms.

TIP! Protecting yourself

In the case of **low voltage electricity**: switch off the device, pull out the plug or remove the fuse. Do not approach the person until the current has been turned off.

In the case of **high voltage electricity**, there is a risk of electrical arcing. Therefore, keep a distance of at least 20 meters and leave the task of rescuing the person to specially trained personnel. When calling the emergency services inform them that it is an **"accident involving high voltage electricity"**! At your workplace alert specialist personnel on scene, who can turn off the power supply.

Then provide first aid depending on the symptoms:

- **'Won't wake up'** first aid tasks, or
- **'Not breathing'** first aid tasks and
- Treat the burns, see the first aid tasks in **'injuries'** – sterile dressing.

Special considerations with drowning accidents

A drowning presents many dangers for first aiders and also shows the limits of first aid. As a first aider, you have to decide: are you able to rescue the person by yourself or not? This makes it all the more important to alert the emergency services immediately, for example the lifeguard at a public swimming pool or at the beach.
Safely rescue and provide first aid!

Safety

Your safety comes first! Therefore, call the emergency services for professional help and if necessary, technical assistance.

Help according to the symptoms

After rescuing the person from the water, if the main symptom is for example 'not breathing!', perform the first aid tasks listed above.

INFO! Even if a drowning accident does not appear to be severe and the person does not show any symptoms, an **examination in hospital** is urgent. Water may have been inhaled into the lower respiratory tract and can later cause problems (inflammation etc.).

Learning Island 3: Chest problems

or: the supported breathing position

Look

Johanna Werning is at the gym in a spinning class. Suddenly next to her Herbert Lehmann grabs the left side of his chest in pain. He slips off his bike.

Safety

Johanna does not see any dangers in the area, so she immediately kneels down next to Herbert and puts a reassuring hand on his shoulder.

Rescue

The space between the bikes is very narrow. Johanna helps Herbert to take a few steps to where there is more space. She is careful that this does not cause him too much stress.

Check

She asks Herbert how he is doing. He has severe **pain in his chest**. The pain goes down his left arm. Because of the pain he has difficulty breathing. It is as if there is a 'stone sitting on his chest'.

Emergency call

She asks the trainer to call **112**. She says that it is probably a heart attack. She makes sure that Herbert cannot hear. She wants to avoid any panic.

Help

Johanna knows: with **'chest problems'** that the **upper body has to be kept upright**. This helps with breathing. She kneels behind Herbert, this way he can lean back on her. She unbuttons his polo shirt, to make sure that the clothes do not make his breathing more difficult. Another member in the class opens a window, so fresh air comes into the room.

... and the PACKET

Then she thinks about what is still missing from the **PACKET**:
She calms Herbert down. She demonstrates slow, deep breathing: inhaling through the nose and exhaling through the mouth. She shows him the breathing rate by placing her hands on his shoulders.

The main symptom ‘chest problems’ can be caused by the heart or the respiratory system, such as the windpipe or the lungs. The reason can be due to acute illness or chest injuries. It does not matter what the cause is, the first aid tasks for ‘chest problems’ are always the same.

You can see that:

The person

- has chest pain.
- has pale, cold and sweaty skin.
- may have blue lips.
- is breathing quickly and shallowly.
- may breath in loudly and out heavily.
- is restless and anxious.
- has signs of a chest injury: how the accident happened, bruising, wounds.

How to help:

With the ‘chest problems’ first aid tasks:

- Sit the person up (supported breathing position)
- loosen tight clothing
- provide fresh air (open a window)
- in the case of a wound: treat the wound (see ‘injuries’)
- The **PACKET**: for example, give instructions to calm the breathing down

TIP! How you can easily remember the first aid tasks for ‘chest problems’:

Upper body elevated ↓
Loosen clothing ↓
and fresh air ↓
in the PACKET

1. Sit the person up: this position supports the breathing and eases the heart
2. Undo tight clothing
3. Provide fresh air, open a window
4. And of course the four PACKET tasks. Here it is particularly important that you give breathing instructions, so that the person is breathing slowly and deeply.

How does it work exactly?

Special considerations with angina pectoris and heart attacks

You can do this in addition to the first aid tasks for 'chest problems': If the person has been prescribed **nitrate medication** by their doctor (usually this is a spray), you can give this to them if they ask for it. In this case, the 'chest problem' has already been diagnosed by a doctor.

INFO! Angina pectoris and heart attack

Whether it is angina pectoris or a heart attack: there is usually in both cases a narrowing of the arteries in the heart. These vessels supply the heart muscle with blood and oxygen.

Angina pectoris lasts for a short time and goes away with rest. It is caused by physical stress, when there is not enough blood flow to the heart muscle, or when the heart vessels cramp because the **heart muscles do not have enough oxygen**. Angina pectoris can be a precursor to a heart attack.

The difference with a **heart attack**: in this case the **heart vessels** are blocked by a **blood clot**. The area of muscle after the blockage is no longer supplied with blood and will after a short period of time die.

It is common in both emergencies, due to the lack of oxygen, to have **pain behind the breastbone**. The pain is stabbing, it does not get worse with breathing or movement, and can go down the left arm, up into the jaw, into the stomach or the back.

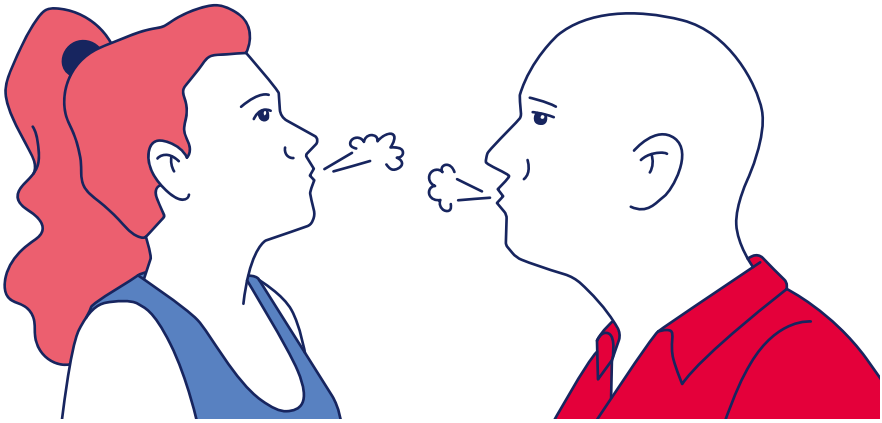
Special considerations with asthma

INFO! Asthma

Allergies or mental stress can trigger an asthma attack.
What happens?

1. The lower airways are narrowed by the muscles in the bronchi.
2. The lung mucosa swells, making it even narrower.
3. The mucosa secretes a very thick mucus. This makes breathing in the already narrowed space very difficult. Exhaling is particularly difficult and takes longer than normal.

You can do this in addition to the first aid tasks for 'chest problems':



When giving breathing instructions, demonstrate the pursed **lip breathing** (or **flute breathing**): The person should exhale against pursed lips, or as though they are blowing out a candle. This way the exhalation phase is longer and the pressure needed to breathe out is reduced. Because of the steady stream of air flowing out, there is not as much resistance from the thick mucus and exhaling is easier.

If the person uses a **metered dose aerosol** ('asthma spray') prescribed by their doctor, you can give this spray to the person if they ask for it.

Special considerations with an insect bite in the mouth or throat

INFO! Insect bites in the mouth and throat

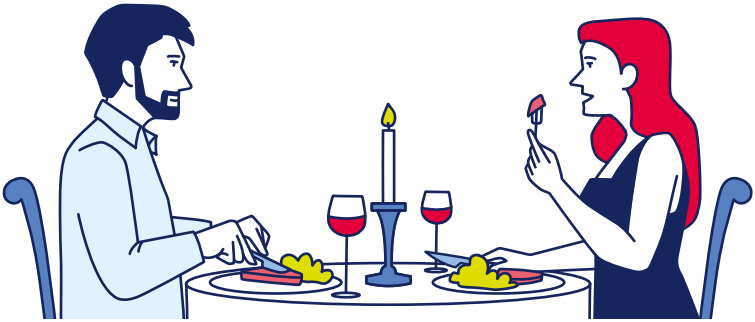
The problem here is also a severe narrowing of the airway. Insect bites can cause significant swelling of the mucosa in the mouth and throat, especially if the person has allergies. Children are in the most danger, due to the lack of space that they naturally have in the mouth and throat. In extreme cases, the person can go into allergic shock.

You can do this in addition to the first aid tasks for 'chest problems':

Cool internally and externally!

- Is the person is awake? Get them to suck on an ice cream or gargle with cold water.
- Cool the lower jaw and neck area down with wet towels or an ice pack. To prevent frostbite, wrap the ice pack in a cloth first.
- You can only cool an unconscious person down from the outside.

Special considerations with a foreign body in the airway



Look
George and Diane Shepherd are sitting in a restaurant eating dinner. George sees that Diane is choking on a mouthful of food.

Safety
He quickly moves the cutlery and glasses out of the way. To avoid any injuries.

Rescue
He helps his wife to stand up and they move away from the tables and chairs.

Check
George sees that is wife is having trouble coughing. She is not getting any air. Her lips are turning blue. It is obvious to him that she has a **foreign body in her airway**.

Emergency call
He asks a waiter to call **112**. The waiter explains to 112 what has happened.

Help
George tells Diane to keep **coughing**. He then asks Diane to lean forward. He slaps her **5 times** with the **palm of his hand between her shoulder blades**. This does not help, so he tries the **Heimlich maneuver**. With the second attempt, the foreign body comes out.

Now George continues with the other **first aid tasks for 'chest problems'**: **Elevate the upper body**, loosen clothing and fresh air ...

... and the PACKET
George kneels down behind Diane, so that she can lean against him and relax. He calmly gives her breathing instructions.

How does it work exactly?

INFO! Foreign body airway obstruction

As a rule, you come across this emergency when eating: a piece of food goes into the windpipe. The airway is not always completely blocked, however breathing is severely impaired.

When very small foreign bodies – for example if peanuts or bread are inhaled by children when they are playing – they can end up in the lower airways. After the need to cough has stopped, there might not be any more symptoms (silent interval). It is still important to be examined by a doctor, especially if a few days after the choking the coughing starts again.

You can see that:

The person

- has difficulty coughing
- has blue lips and a red face
- and other signs of a chest problem.

How to help:

- Ask the person to cough.
- **If this does not help, then the person should lean forward. Slap them 5 times with the palm of your hand** between the shoulder blades.
- **If that does not help, use the Heimlich maneuver on the upper abdomen**: To do this, place your hand in a fist below the end of their breastbone. With your other hand, hold on to the fist firmly and **pull backwards and upwards 5 times**. The position of the hand and how you pull are important to avoid injuries to organs such as the liver.
- Keep alternating between the back slaps and the Heimlich maneuver until you have successfully removed the foreign body.
- If the person becomes unconscious, start cardiopulmonary resuscitation (see the first aid tasks for 'not breathing').
- As soon as the foreign body is removed and the airway is free, continue with the other first aid tasks for 'chest problems'.

Learning Island 4: Injuries: wounds

or: treating a wound – preventing shock

Look

Johanna is startled by the screams of her friend Lucas. She sees him clutching his left arm in pain. A lot of blood is running down his arm. On the table, there is a saw.

Safety

She places the saw a safe distance away. She also sees a wobbly pile of wooden planks.

Rescue

She grabs a clean tea towel and Lucas presses the towel against the bleeding wound. Johanna supports Lucas to move away from the danger.

Check

She has a look at what has happened. She continues to elevate his arm, which will help to slow down the bleeding. The wound is bleeding heavily. Lucas' face looks pale. He is not feeling well and is becoming nauseous. Johanna knows that: Lucas has a severe bleed. Maybe he will also go into shock.

Emergency call

She reassures him: "I will quickly call **112** and get the first aid kit from the bathroom. Please keep holding your arm up. I'll be right back!"

Help

Johanna returns to Lucas as quickly as possible. She takes two bandages out of the first aid kit and dresses the wound with a pressure bandage. Then she lays Lucas down on the floor and puts pillows underneath his legs, so that they are higher than his head. This helps to prevent shock.

... and the PACKET

Then she thinks about what is missing from the **PAKET**:
She wraps Lucas in a rescue blanket from the first aid kit. The blanket not only keeps him warm, but also makes him feel safe. Then she continues to take care of Lucas until the ambulance arrives.

With the main symptom ‘injuries’, wounds are the most common emergency. In the case of wounds, the skin and, depending on the severity of the injury, the underlying tissue is damaged. The function of the skin is disrupted and it can no longer protect against germs.

Three dangers of wounds:

- Pain, blood loss and infection.
- Injuries with a large amount of blood loss can cause shock.
- The first aid tasks are aimed at decreasing or removing these dangers.

You can see that:

The person
- has a wound.
- is bleeding from the wound (mild, moderate, or severe bleeding).
- may be in shock.

How to recognise **shock**:

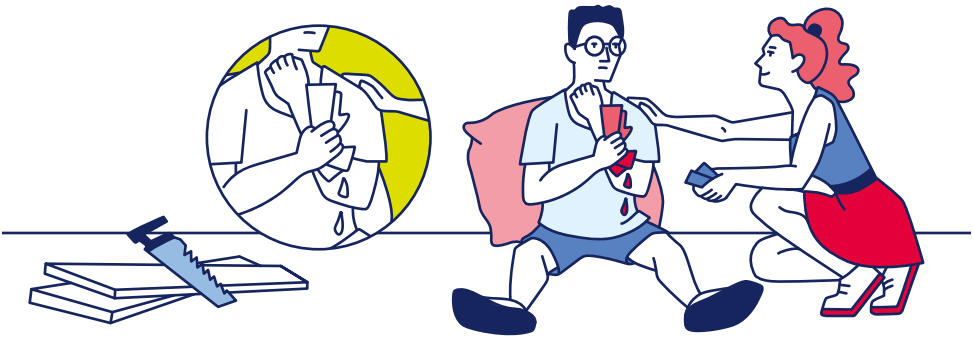
The person
- has pale, cold and clammy skin.
- might have blue lips.
- is breathing quickly and shallowly.
- might breath in loudly and out heavily.
- is restless and anxious.
- has a fast and weak pulse.

How to help:

With the first aid tasks ‘injuries: wounds’:

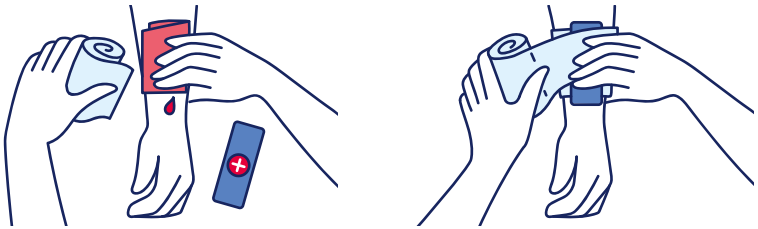
- In the case of severe bleeding: immediately hold up the body part that is bleeding (arm, leg).
- Protect yourself: wear disposable gloves.
- Use a sterile dressing to cover/dress the wound.
- In the case of severe bleeding: apply pressure to the wound and apply a pressure bandage.
- In the case of shock: if possible, put the person in the shock position (legs elevated higher than the head).
- The **PACKET**: Keep the person warm with a rescue blanket.

How does it work exactly?



How to help in the case of a severe bleed:

- Even if there is a severe bleed, the wound should be covered with a bandage.
- Elevate the bleeding limb.
- To stop severe bleeding, apply pressure to the wound (this can also temporarily be with a lint-free, clean cloth).
- Dress the wound with a **pressure bandage**.



For this you need:

A sterile wound dressing, a pressure pad and a bandage.
For this you can use the following material from a first aid kit:

1. Bandage + pressure pad (for example, another unopened bandage) = pressure bandage
2. Gauze + pressure pad + triangular bandage = pressure bandage

- Press the dressing firmly onto the wound.
- Then place the pressure pad on top.
- Finally, secure the pressure pad in place.
- Do not put on bandages too tightly. The bandage should stop the bleeding, but not cut off circulation to the limb.
- … and the **PACKET**

INFO! Shock

In shock, there is not enough blood circulating in the body to meet the demand. The body reacts to this with ‚centralisation': it reduces the amount of blood flowing to the skin, arms and legs. As a result, the remaining blood stays in the core of the body and supplies the vital organs, such as the heart, lungs and brain, with oxygen.

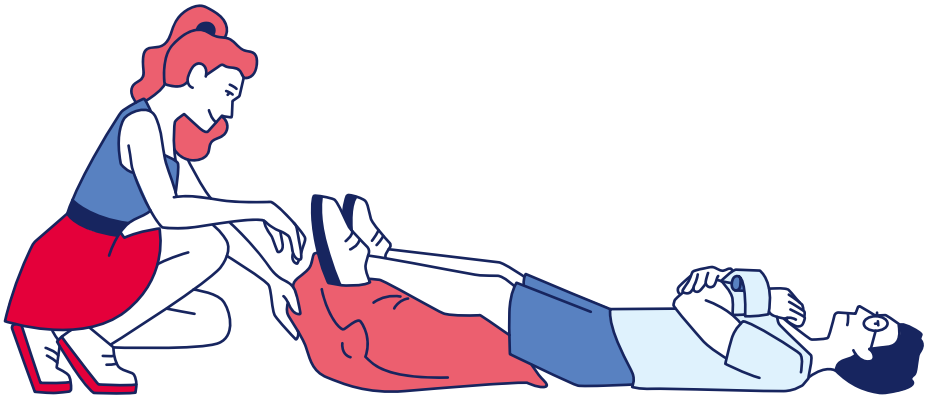
Shock is caused by a loss of blood internally or externally:

- Externally: loss of fluid due to injuries, scalds, or burns
- Externally: loss of fluid and electrolytes due to profuse sweating, vomiting, or diarrhoea
- Internally: allergic reactions, where the fluid from the blood vessels leaks into the surrounding tissue
- Internally: internal bleeding from injuries

How to help in the case of shock:

- If there is a severe bleed, consider the risk of **shock**.
  In children, the body can compensate blood loss for a long time. **Signs of shock** might appear later, start suddenly and be severe.

- If possible, place the person in the shock position. Lay the person down flat on their back. Then raise their legs, so that the legs are higher than the body and the head. Place something underneath the legs to allow for a relaxed and pain free position.



WARNING! In the case of serious leg injuries, such as broken bones, you should **not raise** the injured leg into the shock position.

Basic rules for treating a wound

Do`s

Protect yourself:
Put on disposable gloves.

Have the person sit or lie down.
Stay with the person and monitor them closely, so that you can detect any changes (eg. becoming pale) and take action (eg. shock position). Explain to the person what you are planning to do.

Remove causes of injury, prevent deterioration.

- Secure and put padding around foreign objects in wounds.
- In case of chemical burns, remove soaked clothes and rinse the affected area with lots of water (making sure that you protect yourself!).
- With burns, do not try to remove any clothes that are sticking to the wound.

Use sterile dressing to cover or dress the wound.
The right bandage depends on the type of wound and how severe the bleeding is. For burns, use a non-stick wound dressing. The sterile dressing can be held in place in different ways: with tape, a bandage, or a triangular bandage.

TIP! Ask about vaccinations!

With all injuries you should think about two infections:

tetanus and **rabies**. These are caused by animal bites, or contact with other bodily fluids from sick animals. Ask the person or check their vaccination book to see if they are protected.

Don`ts

Do not touch the wound!

As a general rule, do not wash out wounds: only in the case of chemical burns with acidic or alkaline solutions should the wound be rinsed with water. Be careful that the water draining away from the burn does not cause damage to other areas of skin.

As a general rule, do not remove foreign objects: Only very small foreign bodies, such as gravel, prickles, thorns or similar objects, are allowed to be removed. Provided that they are not splintered and will not leave small parts in the tissue.

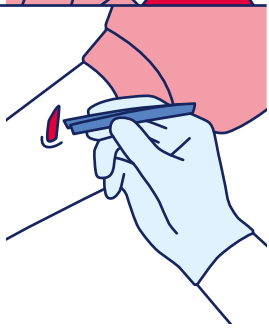
TIP! What about disinfecting a wound?

Especially when a wound needs to be treated by a doctor, for example with stitches, do not disinfect the wound. Cover the wound with a sterile dressing.

Minor injuries, (small grazes etc.) that **do not need to be treated by a doctor**, can be disinfected. There are specific preparations for this, which do not cause any further pain or an allergic reaction and are approved for this type of use, such as Octenisept®.

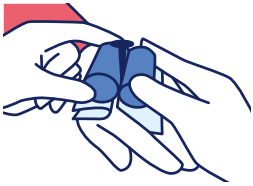
How to treat other wounds:

The right first aid for different types of wounds

Wounds with mild bleeding	For example: plaster / bandaid	
Wound with moderate bleeding	• adhesive bandage with a sterile dressing and tape • sterile dressing and a bandage or a triangular bandage • sterile bandage	
Wound with severe bleeding	Pressure bandage, shock position (see pages 43 and 44)	
Nose bleed	• Ask the person to lean their head forward. • They should pinch their nose together for 5-10 minutes, to stop the bleeding. Or you can do it for them. • Cool the neck and forehead. You can use either wet towels or an ice pack. Make sure that you wrap the ice pack in a cloth first.	
Small foreign bodies that are on the surface	• Remove them carefully with tweezers. • After removal, continue with the first aid tasks for 'wound with minor bleeding' or 'wound with moderate bleeding'. • If there are any problems removing the foreign body, proceed with the first aid tasks for 'large, penetrating foreign objects'.	

Large, penetrating foreign objects

- Leave the foreign object in place.
- Use padding to prevent the foreign object from moving around in the wound.



Foreign bodies in the eye

Only remove small foreign bodies such as insects or dust. Other foreign bodies should only be removed by an ophthalmologist. If this is the case, cover both eyes.

Foreign body under the eyelid:

- The person should look up.
- Pull the lower eyelid forward.
- Dab the inside of the lid with gauze, dab towards the nose.

Foreign body under the upper eyelid:

- The person should blink vigorously.
- Gently pull the upper eyelid down over the lower eyelid.
- Then let it go, so that the foreign body is wiped off onto the lower eyelid.

Foreign body in the nose or ear

- If necessary, foreign bodies in the nose can be 'blown out' (by covering the other nostril).
- Otherwise have the foreign body removed by a doctor.

Amputation

- Stop the wound from bleeding.
- Shock position!
- Wrap the severed body part and keep it sterile. Try to also keep it dry and cool.

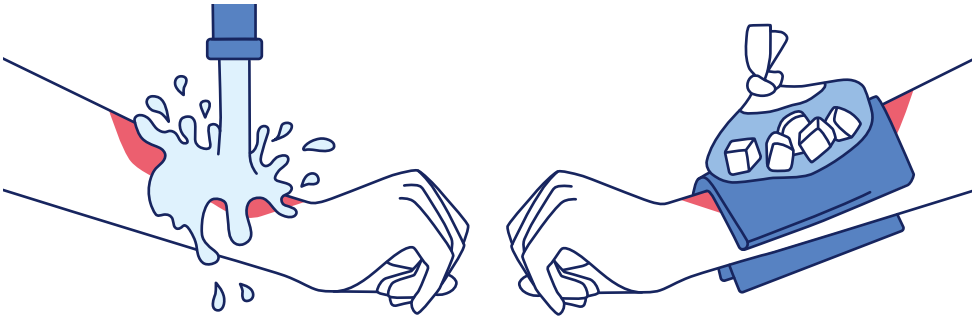
Animal bite

In addition to treating the wound:

- tetanus vaccine (booster)
- if the animal has rabies: rabies vaccine

Burns / scalds

INFO! The danger of a burn or scald depends on the size of the skin affected and how deep the heat has damaged the skin. With infants, if there is a large area of skin affected, then even a mild burn with reddened skin can be dangerous. If there is a threat to the vital functions, for example due to severe pain, the emergency services should be called.



- For pain relief, burns on the arm or leg (that are no larger than the size of the forearm) can be cooled with tap water. Cooling should only continue if it is providing pain relief, the person is comfortable, and there are no signs that the person is getting too cold. The biggest risk is hypothermia, which needs to be avoided at all costs. According to the current knowledge, cooling a burn does not reduce its severity.
- Cover the burn with a sterile bandage.
- Be careful not to put pressure on the wound.
- Shock can also occur in the event of a burn or scald!

Frostbite

- In the case of mild frostbite: Warm up the affected body parts with the person's own body warmth (eg. place hands in the armpits) and movement (eg. toes).
- For severe frostbite: cover the affected body parts loosely with a sterile dressing, for example with a bandage.

Chemical burns from acidic and alkaline solutions

- Wash the wound out with lots of water.
- The water should flow away from the body using the shortest possible route. This way you avoid damaging other areas of skin.
- After rinsing: cover the wound with sterile dressing.
- If the eyes are burned, rinse them well and then cover with wet gauze. The eyes need to be examined in an ophthalmology clinic.

For all injuries described here:

… and the PACKET:

TIP! What about broken teeth?

- Only touch the tooth at the crown, not at the root.
- Rinse off any dirt under running water, do not rub off.
- A tooth rescue box from the pharmacy is the best way of storing it.
- Otherwise, keep cool and damp, for example in a bag filled with cold water. However, never store them in the mouth or in milk.

Special considerations with insect bites

Bee, wasp and hornet stings are very painful. At the site of the sting, it is normal for it to be red and swollen. People who are allergic to insect venom are at high risk. Severe allergic reactions, for example in the respiratory area, can develop quickly and are a life-threatening emergency

.

TIP! Quick help for insect bites

- Carefully remove the sting, try not to squeeze the sac of venom.
- Cool the area with cold water or a cold can of soda. Never cool with ice, as this can cause frostbite.
- Warm up the site of the sting to around 50 degrees Celsius, this destroys the insect venom. However, this technique should only be carried out with special electronic sting healing devices.

Look

You can see at first glance:

- Redness and swelling at the site of the sting/bite. The person is complaining about pain.
- An allergic reaction:
  - Mild: light redness and swelling of a body part
  - Severe: significant redness, swelling and hives on the skin
  - Extreme: shortness of breath and other signs of shock

Safety

As a general rule, protecting yourself and others is not necessary.

Rescue

Normally there is no need to rescue the person.

Check

Check if the person is awake and breathing.

Emergency call

If they are not awake or their breathing is not normal, call **112** or ask another person to do it. Answer the emergency call 5 'W' questions.

Help

Cool the affected area with wet towels or ice packs.
Wrap the ice packs in a cloth first.

- In the case of an allergic reaction with shortness of breath, proceed as always with 'chest problems' (see page 34).

... and the PACKET

The four tasks that are the right thing to do in any emergency.

Special considerations with tick bites

Ticks wait for a suitable host on the leaves of low-growing plants. The host could be an animal or a human. When they pass by, the tick drops onto the host, where it will feed on blood until it is full. In Central Europe, ticks can cause disease such as Lyme disease or transmit tick-borne encephalitis (TBE). Signs of Lyme disease occur 3 days to 4 weeks after a bite. There will be an increasing reddening around the puncture site (at least the size of a Euro coin). TBE is an inflammation of the brain and the membranes surrounding it. Signs such as flu-like symptoms normally begin 2 to 14 days after the bite.

Look

Often ticks will be found on very hairy parts of the body, or in the creases of the body where the skin is thin. You will only see the round brown body and eight legs.

Safety

Usually there are no dangers. Protecting yourself and others is not necessary.

Rescue

Usually it is not necessary to rescue the person.

Check

Check the vital signs of the person and provide first aid.

Emergency call

An emergency call is not usually necessary.

Help

- Remove the tick with special tweezers, a tick card, or a tick remover. Do not twist or squeeze the tick.
- Place the tick on a light coloured surface and check that it is whole.
- If you were not able to remove all of the tick, take the person to a doctor.
- Cover the puncture site with a plaster/band aid.
- Over the next few days check the site and monitor the person's general condition.
- If they show any signs of Lyme disease or TBE, take the person immediately to a doctor.

... and the PACKET

The four tasks that are the right thing to do in any emergency.

Learning Island 4: Injuries: bones, joints and muscles

or: immobilise and cool

Look
While playing football, George Shepherd sees his teammate Luke fall over. Luke tried to break his fall with one arm.

Safety
The football game is paused.

Rescue
George can help Luke where he is.

Check
Luke has pain in his forearm. He is holding it with his other arm. This reduces movement and therefore any further pain (immobilisation). George sees a bump on the forearm. It does not look normal. The area swells up.

Emergency call
George asks the referee to call **112**.

Help
A teammate has fetched a first aid kit. George takes out two triangular bandages and puts a **sling** on Luke. Now the arm can rest completely, this will help to reduce the pain. Then George **cools** the swollen area with an ice pack from the first aid kit.

… and the PACKET
Now George wraps Luke in a rescue blanket from the first aid kit. He takes care of him until the emergency services arrive.

Injuries of the bones, joints and muscles

You can see that:

Closed injuries have:

- pain
- swelling at the site of the injury
- altered mobility: a reduction in movement or abnormal movement

With open injuries, you will see a wound. Sometimes the end of a broken bone will also be visible.

How to help:

- Avoid moving the injury.
- **Immobilise the injury**, including the joints on both sides of the injury. In the case of a broken arm, a sling helps (see right). In the case of an injury to the pelvis or legs, place rolled up blankets on both sides of the affected leg.
- In the case of a broken pelvis or a spinal injury, if possible, do not move the person.
- **Cool** the injured body part, for example with an ice pack. This helps to reduce swelling. Wrap the ice pack in a towel first.
- If necessary, treat the wound (see page 42 'Injuries: wounds').
- … and the **PACKET**

INFO! How to recognise injuries to the bones, joints and muscles

Bruising, sprains:

- swelling
- redness
- pain with pressure or movement

Dislocations:

- severe pain
- person holds the injury still
- deformity or abnormal position
- limited movement
- palpable joint socket
- swelling
- redness

Broken bones:

- pain
- deformity or abnormal position
- abnormal movement
- broken bones or splinters visible
- swelling
- redness

How does it work exactly?

How to put on a sling

The person holds their injured arm still (immobilisation).

Use a triangular bandage:

- Tie a knot at the point where the two short sides of the bandage meet.
- Slide the bandage underneath the injured arm, so that the knot is at the person's elbow.
- The half of the bandage closest to the person's body goes over the shoulder on the injured side.
- The other half goes over the shoulder on the uninjured side. Tighten both sides of the bandage so that the injured arm lies comfortably in the sling.
- Tie the ends together at the side of the person's neck.

TIP!

You can use a second triangular bandage to immobilise the arm further. Tie it around the body and sling, above the injured arm. This prevents the arm from swinging out in front of the body.

Learning Island 5: Neurological problems

or: head elevated!

Look

George and his friend Thomas have been fishing on the lake today, they have been out in the sunny weather for a long time. Despite the tip from George, Thomas was not wearing a hat. Back on land, he has become very quiet and his head is red.

Safety

George wants to protect Thomas from the sun.

Rescue

He goes with Thomas into the shade of a tree.

Check

Now George takes a closer look: Thomas' head is red and hot. George asks him if he has a headache. Thomas confirms that his head does hurt. Then George talks to his friend from the side. Thomas turns his whole body towards George. Thomas cannot turn his head properly. It causes him pain. Jürgen knows that Thomas has **sunstroke**.

Emergency call

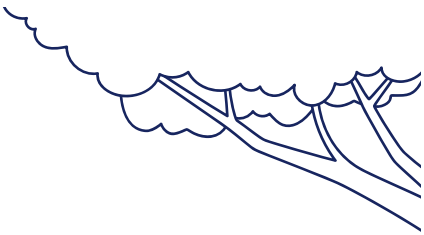
George says: "Today is Sunday. We cannot go to the family doctor. I'll call **112**."

Help

George lays Thomas on a blanket in the shade of the tree. He uses a jacket as a pillow. He knows that with '**neurological problems**' the head needs to be higher than the legs. The neck should stay straight. Then he cools Thomas' forehead with a damp cloth.

... and the PACKET

George thinks about what is still missing from the **PACKET**:
Mental health care is particularly important. He stays with Thomas and talks with him to keep him calm.



Causes of the main symptoms 'neurological problems' can include head injuries, or acute disease such as a stroke. Regardless of what the cause is (due to heat or cold, poisoning, or an acute illness) it is typical with neurological problems for there to be a difficulty controlling the movements of the body.

Possible signs of 'neurological problems':

- Memory loss
- Sensory disturbances
- Difficulty moving parts of the body
- Dizziness
- Nausea
- Vomiting

You can see that:

- The person has a headache.
- Nausea and / or dizziness
- The brain is having problems **controlling the body**: difficulty speaking, problems with movement and sensation, for example weakness on one side of the body.
- An **injury or wound to the head** and maybe memory loss
- A red, hot head with **sunstroke**, plus with **heat stroke** a red, hot body
- **Hypothermia** with coldness, blue lips, pale skin, drowsiness or unconsciousness.

How to help:

Elevate the head higher than the legs.

Additionally:

- In the case of a **wound**: treat the wound (see 'injuries: wounds')
- In the case of **heat/sun (sunstroke, heat stroke)**: move out of the sun, cool down the head and feet
- In the case of **hypothermia**:
  - Move to a warm place
  - Take off wet clothes
  - Wrap in warm blankets and use the person's own body heat to warm them up (eg. hands under the armpits)
  - If they are awake: give them something warm and sweet to drink, and get them to move
  - If they are drowsy or unconscious: do not warm them up and avoid movement
- ... and the **PACKET**

How does it work exactly?

By elevating the upper body and the head there is less blood flow to the head, and therefore less pressure on the brain.

INFO! Heads up!
Elevate the head higher than the legs.

It is important to keep the person's neck straight. Do not bend it sideways.

This position keeps the veins in the neck open and helps blood to flow away from the head.

Special considerations with a stroke

INFO! Stroke

In the case of a stroke, 80-90% of the time it is due to a cerebral artery blockage. The rest of the time is due to a cerebral artery bleed. Chronic high blood pressure and hardening of the arteries are the most important risk factors for this disease. Sometimes there are warning signs for a stroke. Warning signs can occur at the same time, or shortly after one another. Warning signs include: dizziness, nosebleeds due to high blood pressure, and sometimes a severe headache.

Signs of a stroke are:

- Difficulty seeing (eg. double vision)
- Sensory disturbances (eg. furry feeling on the tongue)
- One-sided paralysis/weakness (eg. one corner of the mouth drooping down)
- Difficulty speaking

You can do this in addition to the first aid tasks for `neurological problems':

Immobilise and/or put padding around paralysed/weak parts of the body: a paralysed arm can be immobilised by placing a blanket over it.

Special considerations for concussion/head injuries

If the person has concussion, you can do the following in addition to the first aid tasks for `neurological problems':

Problems with staying awake can be caused by severe traumatic brain injury. Even if at first glance they appear to only have mild signs of concussion, a doctor should always be consulted. If the person is drowsy or becomes unconscious, call 112. If necessary, the person might need to stay 1-2 days in hospital for **observation**. Renewed loss of consciousness or a headache with vomiting (usually 6-24 hours after an accident) could indicate that there is a bleed in the skull. **Therefore: call the emergency services!**

INFO! Concussion/head injuries

Regardless of whether a wound can be seen or not: if there has been a hit to the head, the person may have concussion.

How to recognise concussion: the person

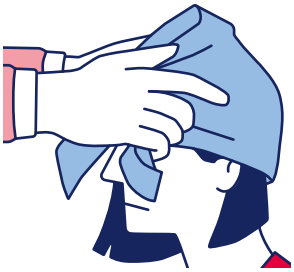
- may have been briefly unconscious after being hit on the head.
- has a headache and maybe also blurred vision. They are nauseous and vomiting.
- has memory loss.
- may later become confused and unconscious.
- may have a cut or a bruise on the head (bump, swelling).

Special considerations with open head wounds

With open head wounds, in addition to the first aid tasks 'neurological problems', you can also:

The same rules apply here for all 'injuries' (see page 38).

For larger, open injuries to the skull, put a bandage loosely over the wound. Put a cushion ring around the wound, you can use a triangular bandage to make this ring. Avoid putting pressure on the wound. To secure the ring in place, use a bandage or another triangular bandage to create a 'hood'.



Learning Island 6: Stomach problems

or: relaxation for the stomach

Look

It is Autumn and therefore mushroom season. The Nassar family has been collecting mushrooms with Johanna. The father, Amir, prepared the mushrooms.
Johanna saw that Amir had taste tested the food.
Now he is in pain. He is bending over and holding his stomach.

Safety

To be safe, Johanna warns the family not to eat the mushroom dish.
She turns off the stove.

Rescue

There are no further dangers. Therefore Johanna immediately takes care of Amir.

Check

She asks Amir how he is. He replies: "I have a lot of pain in my stomach. I feel ill. I think I'm going to vomit." Johanna knows that Amir has probably given himself **food poisoning** with the mushrooms.

Emergency call

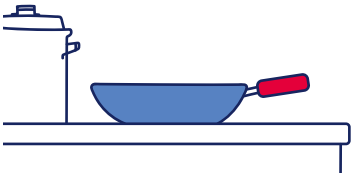
Amir's wife Dalia calls **112**.

Help

Johanna wants to help Amir with the pain in his stomach. She lays him down with **pillows underneath his head and knees**. This **relaxes the stomach**.
Because he is vomiting, Johanna fetches a bucket.
Dalia puts some of the food in a glass jar. She wants the emergency services to take the sample to hospital. That way the doctors will know what has poisoned Amir.

... and the PACKET

Johanna thinks about the other tasks in the **PACKET**:
First she covers Amir with a blanket. Johanna and Dalia stay by his side. Dalia holds Amir's hand and comforts him.



Causes of the main symptom 'stomach problems' are injuries in the abdominal area, acute disease such as appendicitis, diabetes mellitus, or poisoning.

You can see that:

- The person has pain in their stomach.
- Nausea/vomiting
- Maybe a wound on the abdomen
- Abnormal behaviour (suddenly quiet, whiny, crying, etc.)

How to help:

- Relax the stomach by lying down and placing cushions underneath the head and knees
- In the case of a wound: treat the wound (see page 38 'injuries: wounds')
- Collect a sample of the poison to show to the emergency services (be careful of your own safety!)
- Help if they are vomiting
- ... and the **PACKET**

How does it work exactly?

By lying on the back with padding under the knees and neck, the stomach can relax. This usually helps with stomach pain. If the person does not like this position, they should find their own position of comfort.

If the person vomits, help them in a sitting position. In the case of open abdominal injuries, it is best to use a bandage with a non-stick dressing. Because a bandage is very long, it is possible to dress the wound without putting too much pressure on it. Plus, it should not stick to the wound.

INFO! 'Stomach ache' in children

If your child says that their stomach hurts, take them seriously. Even if they have no signs of injury or illness.

Especially with young children, there are many causes of stomach pain that have nothing to do with the stomach: feeling unwell, fear, sadness, etc.

Special considerations with abdominal injuries

You can see that:

- An accident has occurred: hit to the stomach, for example falling over the handlebars of a bike.
- The person has pain in the stomach.
- The person feels nauseous and vomits.
- The person has bruising or a wound on their abdomen.
- The abdomen is 'rock hard'.
- The person may become confused and unconscious.

How to help:

Please note that this is in addition to the first aid tasks for 'stomach problems':

- for open abdominal wounds, severe pain and 'rock hard' abdomen: **Immediately call 112**! Or ask another person to do so.
- Cover the wound loosely with a sterile cloth or bandage. For large, open abdominal injuries, you can also use a cushion ring made with a triangular bandage. When fastening it in place, make sure that you do not put any pressure on the wound.

Special considerations with poisoning

Safety

If there are any dangers: protect yourself and others.
Avoid contact with bodily fluids or hazardous substances: wear disposable gloves!
If the person has come into contact with any poison: only touch them when wearing disposable gloves; and if necessary, only perform CPR breaths with a resuscitation mask or resuscitation bag!

Rescue

If there are any dangers: move the person to a safe area.

Check

How to recognise **poisoning**:

- The person has pain in the stomach.
- The person feels nauseous and vomits.
- The person behaves abnormally, is suddenly quiet or not speaking clearly.
- The person may become confused and unconscious.

Emergency call

Call **112**! Or ask another person to do so.

Help

How to help with poisoning:

You can do this in addition to the first aid tasks for 'stomach problems':

- Help the person if they need to vomit.
- Carefully collect the poison (use gloves!) and take it to hospital.

TIP!
If the poison is already causing problems with breathing or consciousness, then there is no time for a call to the poisons hotline. Call 112 immediately! The poison hotline information can be found on the back of this brochure.

Special considerations with abdominal illnesses

INFO! Diabetes mellitus

The hormone insulin is produced in the pancreas and is responsible for controlling the blood sugar level. This type of metabolic disorder is referred to as diabetes mellitus. Type 1 diabetes mellitus can begin in childhood. With this type the body does not produce enough insulin. Type 2, or adult-onset diabetes, accounts for approximately 95% of all diagnosed cases of diabetes. With type 2 diabetes the cells of the body no longer recognise the insulin and therefore are unable to use sugar in the blood efficiently.

Diabetics who need to inject insulin regularly, have to be particularly careful of their blood sugar level and the dangers of high and low blood sugar. When there is a decrease in food intake and/or high levels of physical exercise and mental stress, they can suffer from the medical emergency called hypoglycaemia very quickly. The symptoms of hypoglycaemia are in many ways similar to those of shock.

Diabetes mellitus (sugar disease)

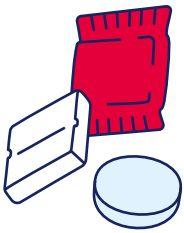
You can see that:

- The person is an insulin dependent diabetic
- Has sudden hunger
- Sweating
- Dizziness, nausea, changes in behaviour, decreased level of consciousness

How to help:

You can do this in addition to the first aid tasks for 'stomach problems':

If the person is awake and has low blood sugar levels, give them dextrose tablets. Experienced diabetics normally have these tablets with them.
This sugar is absorbed by the body quickly and corrects the low blood sugar levels. If there are no dextrose tablets available, offer the person something sweet to drink (no artificial sweeteners).



First aid is silver – prevention is gold

Avoid emergencies – Be aware of your own safety

Most emergencies can be avoided by taking preventive measures. A healthy life-style, safety equipment and careful planning can help to prevent emergencies.

Avoid emergencies

Main symptom 'won't wake up'

Is unconsciousness preventable? In many cases, yes.
If you prevent the major causes.

- Avoid head injuries by wearing a safety hat or a bicycle helmet.
- Avoid sunstroke by wearing a hat with good air circulation.
- Avoid heatstroke by drinking enough water, and having enough salts and minerals.
- Avoid heatstroke by wearing breathable clothing in warm and humid weather.
- Avoid swimming accidents, do not jump head first into unfamiliar water, do not go into the water with a full stomach or when you are overheated.
- Avoid triggers for epilepsy, such as alcohol and fast, bright, flashing lights at a disco. During pregnancy have regular check-ups in order to prevent eclamptic seizures.

Main symptom 'not breathing'

- Here it is also important to avoid causes, for example with heart disease, avoid electrical accidents or extreme mental / or physical stress.
- To avoid swimming accidents, observe the rules when swimming!

Main symptom 'chest problems'

Prevent foreign bodies in the airway. As simple as it might sound – Knigge was correct: 'Eat or talk? Not both at once!'

- Avoid insect bites in the throat: it is best to drink from a glass, so that you can see any insects in the drink. Cover up drinks! If possible, only drink from cans with a straw. Inspect bites of food before you put them in your mouth.

- Avoid asthma attacks:
  - Reduce allergens in your environment. In the case of a dust mite allergy, use special covers for your mattresses and a vacuum cleaner with a special filter.
  - If allergies occur at work, for example with bakers or hairdressers, take early warning signs seriously (redness or itching) and visit an allergist/dermatologist.
  - Do not smoke and avoid smoky rooms!
  - In traffic jams or heavy traffic, set the fans to recirculate the air in the car.
  - Be aware of the weather conditions: avoid physical exercise when the air quality is poor, or the air is cold and humid. Travel to areas that are the best for your respiratory system, for example in the mountains, by the sea, in a dry, warm desert climate, or somewhere pollen-free such as a cruise on the high seas.
  - Always carry prescribed medication with you, and if possible have an emergency dose on your person.

- Avoid heart attacks and other circulatory diseases:
  - Eliminate risk factors such as stress, smoking and obesity.
  - Eat a balanced diet that is not too high in fat.
  - Stay fit! Endurance training is particularly good. Avoid constantly fluctuating between excessive strain and minimal demand.
  - Take advantage of your health insurance company's offers for annual health checks. This enables the early detection of diseases and often successful treatment.
  - Avoid physical exertion when the air quality is poor.

Main symptom 'injuries'

In the area of occupational safety, the accident prevention regulations and other guidelines of the trade associations and accident insurance companies have, depending on the level of risk, compulsory and recommended measures to ensure protection.

These include, for example:
- Safety gloves or work gloves
- Protective aprons, eg. for butchers
- Protective or safety shoes

Important information about accident prevention and safety measures for your particular area of work can be found in your trade associations' safety brochure. The trade association is responsible for your work accident insurance and must make this information available.

- Avoid sports injuries:
  - Always warm up before lifting heavy weights.
  - Take pain as a serious warning sign.
  - Do not train with an infection (cold).
  - Drink enough water, so that your body has plenty of salts and minerals.
  - Wear protective gear when you are participating in high-risk sports, such as inline skating. Also, think about a helmet.
  - Avoid blisters by putting on socks that you have already worn. Freshly laundered socks could release substances from the detergent/fabric softener when you sweat and make the skin sensitive to friction.

- Avoid frostbite:
  - Wear clothing that is not too tight and provides an air heat buffer.
  - Protect extremities, such as the nose and fingers, from exposure to the cold.
  - To avoid hypothermia wear appropriate clothing. Remove any wet clothing and avoid excessive alcohol consumption when it is cold outside.

Main symptom 'neurological problems'

- Avoid head injuries: wear a suitable helmet!

- Prevent stroke:
  - Take early warning signs seriously and visit a doctor.
  - High blood pressure is a major risk factor, therefore it is important to avoid it. Your diet should limit the intake of salt and caffeine, and your doctor should advise you on medication.

- Avoid sunstroke or heatstroke:
  - Wear a hat that allows for air circulation.
  - When it is hot, drink enough water and do not wear clothes that trap heat or moisture.

Main symptom 'stomach problems'

- Avoid low blood sugar if you have diabetes:
  - Balance your food and insulin intake, and avoid physical and mental stress.
  - It is best to spread out your food intake and have five meals a day.
  - Always carry dextrose tablets with you in case of an emergency.

Be aware of your own safety

This way you can avoid the risk to yourself and other first aiders

- At first glance: recognise dangers at the scene of an emergency. Be aware of your own limitations as a first aider (see page 6 – What is always right and important in first aid).
  - In the case of contact with poisons: put on disposable gloves and only provide CPR breaths with the right safety equipment.
  - When someone falls through ice: if you want to attempt a rescue before the professionals arrive, it must be done on all fours. Increase the contact area when approaching the broken ice, for example with a ladder. Have a second person secure you with a safety line.
  - In the event of a swimming accident: if you attempt a rescue before the professionals arrive, be careful of the current. Do not dive headfirst into unknown bodies of water.
  - In the event of a gas leak or hazardous substances: avoid sparks and open flames. If you smell gas in the house, do not ring the doorbell! Warn other residents by shouting!
  - If carbon dioxide is suspected, for example in septic tanks, silos or wine cellars, the rescue is only possible with respiratory protection (by the fire brigade).
  - In the event of an electrical accident: if it is household electricity, switch it off at the fuse. If it is high voltage electricity, keep at least 20 meters away, because of electrical arcing and the discharge voltage pattern. In hazardous areas, such as substations, stay in the marked safety areas.
  - In the event of accidents with running machines: press the emergency stop button. Make the scene of the accident safe.

- Wear disposable gloves, especially when first aid requires you to come into contact with bodily fluids, toxins, or other hazardous substances.

Important facts for first aiders in the workplace

Special considerations with workplace first aid

In accordance with regulation 1 "Principles of prevention" of the German statutory accident insurance (DGUV) the company must provide effective first aid in the workplace. This includes, enough trained **first aiders**, and depending on the size of the company, qualified **in house paramedics**.
Plus, the company needs to ensure that emergency calls can easily be made (eg. telephones), provide appropriate first aid material in accordance with DIN 13157 and **first aid facilities**, including a room where there is a place to lie down.

INFO! Other organisational measures required by the company include:

- Posting information about first aid, eg. DGUV first aid posters
- Training employees in first aid
- Making sure that a first aider is always on duty
- Notifying the accident insurance company, if an accident has resulted in the employee being unfit for work more than 3 days
- Documentation of first aid provided

Tips on how to deal with emergencies in the workplace

Look

Tip: prepare for possible emergencies. Look for the possible sources of danger in your workplace.
In the event of an emergency, observe the **safety warning signs**:


Safety

Are there safety features on machines, for example an emergency switch? Take a look at these features in advance.

Rescue

For minor health problems, where transport to hospital is not necessary, you can take care of colleagues in the first aid room. Let them lie down and rest.

Check

If your company has a workplace medical service, there are further opportunities for the person to be examined (eg. measuring blood pressure or blood sugar levels).

Emergency call

In companies there may be a special facility for emergency calls or for alerting the emergency services, eg. workplace paramedics. Please inform yourself about your companies procedure.
In the case of minor injuries and mild illness, there is no need to call the emergency medical service. It can be decided on site how further care should be provided.

Help

- For **minor injuries** that do not require further medical attention, the care that a first aider is able to provide on site is normally sufficient.

- In the case of **minor injuries**, the person decides whether and which doctor they would like to visit – if necessary with the support of colleagues.
  As a first aider you can give advice about: vaccinations, accident insurance doctors (in the case of an accident at work), specialist medical care for eye or ear, nose and throat injuries.

- In the event of **serious injuries**, the emergency services should be alerted (emergency call), further care (including transport) is regulated by the EMS.

- The following applies to all care and treatment provided: it must be documented in the **first aid log book**.

- In the case of injuries with a subsequent inability to work for more than 3 days: the company must **notify the accident insurance company**.

For providing first aid, a first aid kit according to DIN 13157 (first aid box C) with the following contents is available (as of 2021):

Description	Quantity
List of contents	1
First aid brochure	1
Sterile eye pad	2
Triangular bandage DIN 13168 – D	2
Disposable gloves	4
First aid scissors DIN 58279 – B 190	1
Wet wipes to clean intact skin	4
Elastic gauze bandage DIN 61634 – FB 6	2
Elastic gauze bandage DIN 61634 – FB 8	2
Foil bag	2
Face mask, min. type 1, according to DIN EN 14683	2
Instant cold pack, min. 200 cm^3	1
Dressing, 10 x 10 cm	6
Assortment of ready-to-use plaster strips: - Adhesive bandage, 10 cm x 6 cm - Fingertip bandage, 5 cm x 4 cm - Finger bandage, 12 cm x 2 cm - Plaster strips, 7.2 cm x 1.9 cm - Plaster strips, 7.2 cm x 2.5 cm	 12 6 6 6 12
Rescue blanket, min. 210 cm x 160 cm	1
Roll of adhesive tape 500 cm x 2.5 cm with cover	1
Bandage DIN 13151 – K	1
Bandage DIN 13151 – M	3
Bandage DIN 13151 – G	1
Sterile gauze DIN 13152 – A, 60 cm x 80 cm	1
Non-woven towel	5

Keyword index

R

S

T

V

W

Notes

We at Johanniter see ourselves as a community of people who help others. With more than 46,000 volunteers, 29,000 full-time employees and 1.2 million supporting members, Johanniter-Unfall-Hilfe e.V. is one of the largest aid organisations in Germany. With a Christian mission, we have been helping people in need since our founding in 1952 – regardless of religion, nationality or culture.

We are active in rescue and medical services, disaster control and humanitarian aid. In our first aid courses, people learn how to help in an emergency. We care for the sick, accompany children and young people, support the elderly and stand up for refugees.

This first aid manual has been approved by the Qualitätssicherungsstelle Erste Hilfe (DGUV) in accordance with DGUV Grundsatz 304-001 as a participant's document for company first aid courses.

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JOHANNITER

Poison Information Hotline

Berlin
Giftnotruf der Charité Universitätsmedizin Berlin
Tel. 03019240
giftnotruf@charite.de, giftnotruf.charite.de

Bonn
Informationszentrale gegen Vergiftungen
Zentrum für Kinderheilkunde, Universitäts-klinikum Bonn
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Gemeinsames Giftinformationszentrum der Länder Mecklenburg-Vorpommern, Sachsen, Sachsen-Anhalt und Thüringen
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