



Unit 5 Common Medical Emergencies

Learning Outcomes

By the end of this unit the learner will be able to:

- ✓ Provide support and assistance to a child who is having a seizure
- ✓ Understand common types of seizures and their causes
- ✓ Deal appropriately with other common medical issues and injuries

Unit 5

Common Medical Emergencies

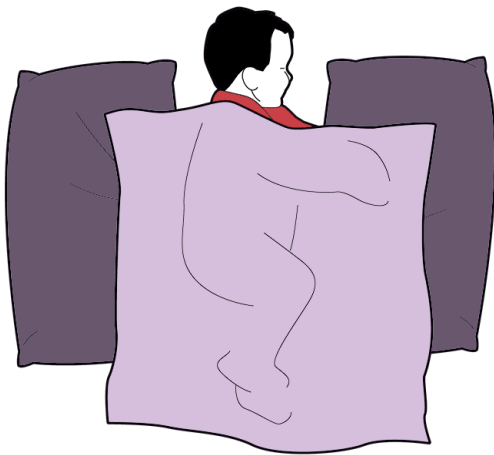
Seizures in Children

In young children, seizures—sometimes called convulsions or fit—are most often the result of a raised body temperature associated with a throat or ear infection or other infections. This type of seizure, also known as a febrile seizure, occurs because the electrical systems in the brain are not mature enough to deal with the body's high temperature.

Although seizures can be alarming, they are rarely dangerous if properly dealt with. However, you should always seek medical advice for the child to rule out any serious underlying condition.

What to Do

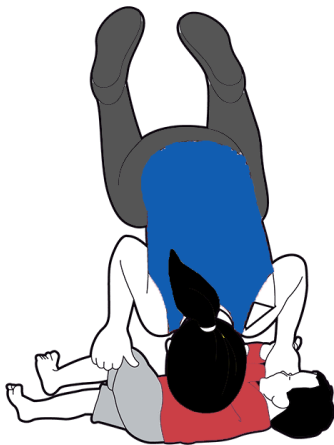
1. Place pillows or soft padding around the child so that even violent movement will not result in injury. Do not restrain the child in any way.



2. If the child's seizure was caused by a fever, cool them by removing any bedding and clothes, for example T-shirt or pajama top; you may have to wait until the seizure stops. Ensure a good supply of fresh air (but do not overcool the child)



3. Once the seizures have stopped, maintain an open airway by placing the casualty in the recovery position. Call 999 for emergency help.



4. Reassure the child as well as the parents or caregiver. Monitor and record vital signs—level of response, breathing, and pulse until emergency help arrives.

Caution

- Do not over- or under-dress a child with fever; do not sponge a child to cool her because there is a risk of overcooling.

Your Aims

- To protect the child from injury during the seizure
- To cool the child

- To reassure the parents
- To arrange removal to the hospital

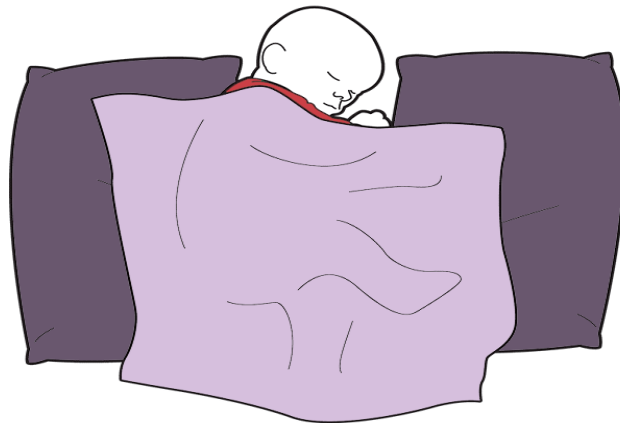
Seizures in Babies

A seizure can also be known as a convulsion or fit. In babies, seizures are usually caused by a raised body temperature, often following an infection. This type of seizure, known as a febrile seizure, occurs because the brain is not mature enough to cope with the body's high temperature.

Signs and symptoms

Look for:

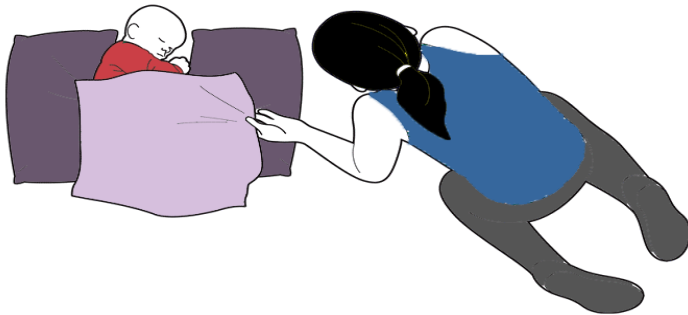
- loss of or lack of a response
- vigorous shaking, with clenched fists and an arched back
- signs of a fever, with hot, flushed skin and sweating
- twitching of the face
- squinting, fixed or rolled back eyes
- breath holding with a red face and neck
- drooling at the mouth
- vomiting
- loss of bladder or bowel control.



What to do

Clear any objects away from around the baby that could be dangerous. Then place pillows or soft padding, such as rolled up towels around the baby. This will help to protect them from injuring themselves while having the seizure.

- Do not restrain the baby or move them unless they are in immediate danger.
- Do not put anything in their mouth.



Try to cool the baby down. Take off any bedding and clothes such as a t-shirt to help cool them. You might need to wait for the seizure to stop to do this. Make sure there is fresh air circulating but be careful not to overcool the baby.



When the seizure has stopped, place the baby in the recovery position to keep the airway open. You then need to call 999 or 112 for emergency help.



While you wait for help to arrive, try to keep the baby calm and monitor their level of response

Fever

The normal body temperature varies, but it is approximately 98.6°F (37°C). Fever is generally defined as a temperature over 100.4°F (38°C). It is usually caused by a bacterial or viral infection, and may be associated with earache, sore throat, measles, chickenpox, meningitis or local infection, such as an abscess. The infection may have been acquired during overseas travel. In young children, fever can be a symptom of or a precursor to serious illnesses. See list at right, and if you are in any doubt about a casualty's condition, seek medical advice.

WHAT TO DO

1. Keep casualty cool and comfortable—preferably in bed with a light covering.
2. Give her plenty of cool drinks to replace body fluids lost through sweating
3. If the child appears distressed or ill, she may have the recommended dose of acetaminophen syrup (not aspirin). An adult may take the recommended dose of acetaminophen or ibuprofen, or his own pain relievers.
4. Monitor and record a casualty's vital signs—level of response, breathing, pulse, and temperature —until she recovers

Caution

- If you are concerned about the casualty's condition, seek medical advice.
- Do not over- or under-dress a child with fever; do not sponge a child to cool her because there is a risk of overcooling.
- Do not give aspirin to any person under 16 years of age

Recognition

- Raised body temperature above 100.4°F (38°C)
- Pallor; casualty may feel cold with goose pimples, shivering, and chattering teeth
Later:
 - Hot, flushed skin and sweating
 - Headache
 - Generalized aches and pains

Your Aims

- To bring down the fever To obtain medical aid if necessary, for:
 - An infant less than 3 months of age with a rectal temperature of 100.4°F (38°C) or higher
 - A child 3 months – 3 years old with a rectal temperature of 100.4°F (38°C) or higher for more than three days or who appears ill or fussy
 - A child 3 months – 3 years old with a rectal temperature of 102°F (38.9°C) or higher
 - A child of any age with a temperature of 104°F (40°C) or higher
 - A child of any age who has a febrile seizure
 - A child of any age who has a chronic medical problem
 - An infant or child of any age who has a fever as well as a new skin rash

Meningitis

This is a condition in which the linings that surround the brain and the spinal cord become inflamed. It can be caused by bacteria or a virus and can affect any age group. Meningitis may be a very serious illness and the casualty may deteriorate very quickly. If you suspect meningitis, you must seek urgent medical assistance because prompt treatment in the hospital is vital. For this reason it is important that you can recognize the symptoms of meningitis, which may include a high temperature, headache, and a distinctive rash. With early diagnosis and treatment, full recovery is possible.

What to Do

1. Seek urgent medical advice if you notice any of the signs of meningitis; for example, shielding eyes from the light. Do not wait and signs to appear because they may not all develop. Treat the fever.
2. Check the casualty for signs of a rash. On dark skin, check on lighter parts of the body; for example, the inner eyelids or fingertips. If you see any signs, **call emergency help.999 for**
3. While waiting for help to arrive, reassure the casualty and keep her cool. Monitor and record vital signs— level of response, breathing, and pulse.

Caution

- If a casualty's condition is deteriorating, and you suspect meningitis, **call 999 for emergency help** even if she has already seen a doctor.

Recognition

The symptoms and signs are usually not all present at the same time. They include:

- Flulike illness with a high temperature
- Cold hands and feet
- Joint and limb pain
- Mottled or very pale skin. As the infection develops:
- Severe headache
- Neck stiffness (the casualty will not be able to touch her chest with her chin)
- Vomiting
- Eyes become very sensitive to any light—daylight, electric light, or even the television
- Drowsiness
- In infants, there may also be high pitched moaning or a whimpering cry, floppiness, and a tense or bulging fontanelle (soft part of the skull) Later:
- A distinctive rash of red or purple spots that do not fade when pressed

Your Aim

- To obtain urgent medical help

Important Meningitis Rash

Accompanying the later stage of meningitis is a distinctive red or purple rash that does not fade if you press it. If you press the side of a glass firmly against most rashes they will fade; if a rash does not fade, **call 999 for emergency help** immediately

Fainting

Fainting is a brief loss of consciousness caused by a temporary reduction of the blood flow to the brain. It may be a reaction to pain, exhaustion, lack of food, or emotional stress. It is also common after long periods of physical inactivity, such as standing or sitting still, especially in a warm atmosphere. This inactivity causes blood to pool in the legs, reducing the amount of blood reaching the brain. When a person faints, the pulse rate becomes very slow.

However, the rate soon picks up and returns to normal. A casualty who has fainted usually makes a rapid and complete recovery. Do not advise a person who feels faint to sit on a chair with his head between his knees because if he faints he may fall and injure himself. If the casualty is a woman in the late stages of pregnancy, help her lie down so that she is leaning toward her left side to prevent the pregnant uterus from restricting blood flow back to her heart.

What to Do

1. When a casualty feels faint, advise him to lie down. Kneel down, raise his legs, supporting his ankles on your shoulders to improve blood flow to the brain. Watch his face for signs of recovery.
2. Make sure that the casualty has plenty of fresh air; ask someone to open a window if you are indoors. In addition, ask any bystanders to stand clear. He may be more comfortable if his knees are bent.
3. As the casualty recovers, reassure him and help him sit up gradually. If he starts to feel faint again, advise him to lie down once again, and raise and support his legs until he recovers fully



Caution

- If the casualty does not regain consciousness quickly and is not breathing normally, begin CPR with compressions

Recognition

- Brief loss of consciousness that causes the casualty to fall to the ground
- A slow pulse
- Pale, cold skin and sweating

Your Aims

- To improve blood flow to the brain
- To reassure the casualty and make him comfortable

Allergy

An allergy is an abnormal reaction of the body's defense system (immune response) to a normally harmless "trigger" substance (or allergen). An allergy can present itself as a mild itching, swelling, wheezing, or digestive condition, or can progress to full-blown anaphylaxis, or anaphylactic shock (opposite), which can occur within seconds or minutes of exposure to an offending allergen. Common allergy triggers include pollen, dust, nuts, shellfish, eggs, wasp and bee stings, latex, and certain medications. Skin changes can be subtle, absent, or variable in some cases.

What to Do

1. Assess the casualty's signs and symptoms. Ask if she has any known allergy.
2. Remove the trigger if possible, or move the casualty from the trigger.
3. Treat any symptoms. Allow the casualty to take her own medication for a known allergy.
4. If you are at all concerned about the casualty's condition, seek medical advice.

Caution

- Call 999 for emergency help if the casualty does not improve, she has difficulty breathing, or is becoming distressed. Monitor and record vital signs while waiting for help.

Recognition

Features of mild allergy vary depending on the trigger and the person. There may be:

- Red, itchy rash or raised areas of skin (hives)
- Red, itchy eyes.

- Wheezing and/or difficulty breathing
- Swelling of hands, feet, and/or face
- Abdominal pain, vomiting, and diarrhea

Your Aims

- To assess the severity of the allergic reaction
- To seek medical advice if necessary

Anaphylactic Shock

This is a severe allergic reaction affecting the whole body. It may develop within seconds or minutes of contact with a trigger and is potentially fatal. In an anaphylactic reaction, chemicals are released into the blood that widen (dilate) blood vessels.

This causes blood pressure to fall and air passages to narrow (constrict), resulting in breathing difficulties. In addition, the tongue and throat can swell, obstructing the airway. The amount of oxygen reaching the vital organs can be severely reduced, causing hypoxia. Common triggers include: nuts, shellfish, eggs, wasp and bee stings, latex, and certain medications. A casualty with anaphylactic shock needs emergency treatment with an injection of epinephrine.

What to Do

1. Call 999 for emergency help. Tell the dispatcher that you suspect anaphylaxis.
2. If the casualty has an auto injector of epinephrine, help her use it. If she is unable to take the medication, administer it to her yourself. Pull off the safety cap and, holding the injector with your fist, push the tip firmly against the casualty's thigh until it clicks, releasing the medication (it can be delivered through clothing). Hold for ten seconds, remove the auto injector, and then massage the injection site for ten seconds.
3. Help the casualty sit up in the position that best relieves any breathing difficulty. If she becomes pale with a weak pulse, help her lie down with legs raised and treat for shock.
4. Monitor and record vital signs—level of response, breathing, and pulse—while waiting for help to arrive. Repeated doses of epinephrine can be given at five-minute intervals if there is no improvement or the symptoms return.

Caution

- If a pregnant casualty needs to lie down, lean her toward her left side to prevent the pregnant uterus from restricting blood flow back to the heart.
- If the casualty loses consciousness and is not breathing normally, begin CPR with chest compressions

Recognition

Features of allergy (opposite) may be present:

- Red, itchy rash or raised areas of skin (hives)
- Red itchy, watery eyes
- Swelling of hands, feet, and/or face
- Abdominal pain, vomiting, and diarrhea There may also be:
- Difficulty breathing, ranging from a tight chest to severe difficulty, causing the casualty to wheeze and gasp for air
- Pale or flushed skin
- Visible swelling of tongue and throat with puffiness around the eyes
- Feeling of terror
- Confusion and agitation
- Signs of shock, leading to collapse and loss of consciousness

Your Aims

- To ease breathing
- To treat shock
- To arrange urgent removal to the hospital

Headache

A headache may accompany any illness, particularly a feverish ailment such as flu. It may develop for no reason, but can often be traced to fatigue, tension, stress, or undue heat or cold. Mild “poisoning” caused by a stuffy or fume-filled atmosphere, or any drug, can also induce a headache. However, a headache may also be the most prominent symptom of meningitis or a stroke.

What to Do

1. Help the casualty sit or lie down in a quiet place. Give him a cold compress to hold against his head
2. An adult may take the recommended dose of acetaminophen tablets or his own pain relievers. A child may have the recommended dose of acetaminophen syrup (not aspirin).

Caution

- Do not give aspirin to anyone under 16 years of age. Seek urgent medical advice if the pain:
- Develops very suddenly.
- Is severe and incapacitating.
- Is accompanied by fever or vomiting.
- Is recurrent or persistent.
- Is accompanied by loss of strength or sensation, or by impaired consciousness.
- Is accompanied by a stiff neck and sensitivity to light.
- Follows a head injury.

Your Aims

- To relieve the pain
- To obtain medical advice if necessary

Migraine

Migraine attacks are severe, “sickening” headaches and can be triggered by a variety of causes, such as allergy, stress, or fatigue. Other triggers include lack of sleep, missed meals, alcohol, and some foods—for example, cheese or chocolate. Migraine sufferers usually know how to recognize and deal with attacks and may carry their own medication.

What to Do

1. Help the casualty take any medication that he may have for migraine attacks.
2. Advise the casualty to lie down or sleep for a few hours in a quiet, dark room. Provide him with some towels and a container in case he vomits.
3. If this is the first attack, advise the casualty to seek medical advice.

Caution

- To relieve the pain.
- To obtain medical advice if necessary

Recognition

- Before the attack there may be disturbance of vision in the form of flickering lights or an aura
- Intense throbbing headache, which is sometimes on just one side of the head
- Abdominal pain, nausea, and vomiting
- Inability to tolerate bright light or loud noise

Your Aims

- To relieve the pain
- To obtain medical aid if necessary

Sore Throat

The most common sore throat is a “raw” feeling caused by inflammation, which is often the first sign of a cough or cold. Tonsillitis occurs when the tonsils at the back of the throat are infected. The tonsils become red and swollen and white spots of pus may be seen. Swallowing may be difficult and the glands at the angle of the jaw may be enlarged and sore.

What to Do

1. Give the casualty plenty of cold fluids to help ease the pain and keep the throat from becoming dry
2. An adult may take the recommended dose of acetaminophen tablets or his own pain relievers. A child may have acetaminophen syrup

Caution

- Do not give aspirin to anyone under 16 years of age.
- If you suspect tonsillitis, tell the casualty to seek medical advice

Your Aims

- To relieve the pain
- To obtain medical advice if necessary

Earache and Toothache

Earache can result from inflammation of the outer, middle, or inner ear, often caused by an infection associated with a cold, tonsillitis, or flu. It can also be caused by a boil, an object stuck in the ear canal, or transmitted pain from a tooth abscess. There may also be temporary hearing loss. Earache often occurs when flying as a result of the changes in air pressure during ascent and descent.

Infection can cause pus to collect in the middle ear; the eardrum may rupture, allowing the pus to drain, which temporarily eases the pain. Toothache can develop when pulp inside a tooth becomes inflamed due to dental decay. If untreated, the pulp becomes infected, leading to an abscess, which causes a throbbing pain. Infection may cause swelling around the tooth or jaw.

What to Do

1. An adult may take the recommended dose of acetaminophen or ibuprofen tablets or her own pain relievers. A child may have the recommended dose of acetaminophen syrup.
2. Give her a source of heat, such as a hot water bottle wrapped in a towel, to hold against the affected side of her face.
3. For toothache, you can apply benzocaine, in many tooth pain products, to the painful tooth.
4. Advise a casualty to seek medical advice if you are concerned, particularly if the casualty is a child. If a casualty has toothache, advise her to see her dentist.

Caution

- Do not give aspirin to anyone under 16 years of age.
- If there is a discharge from an ear, fever, or hearing loss, obtain medical help

Your Aims

- To relieve the pain
- To obtain medical or dental advice if necessary

Abdominal Pain

Pain in the abdomen often has a relatively minor cause, such as food poisoning. The pain of a stitch usually occurs during exercise and is sharp. Distension (widening) or obstruction of the intestine causes colic—pain that comes and goes in waves— which often makes the casualty double up in agony and may be accompanied by vomiting.

Occasionally abdominal pain is a sign of a serious disorder affecting the organs and other structures in the abdomen. If the appendix bursts, or the intestine is damaged, the contents of the intestine can leak into the abdominal cavity, causing inflammation of the cavity lining. This life-threatening condition, called peritonitis, causes intense pain, which is made worse by movement or pressure on the abdomen, and will lead to shock.

An inflamed appendix (appendicitis) is especially common in children. Symptoms include pain (often starting in the center of the abdomen and moving to the lower right-hand side), loss of appetite, nausea, vomiting, bad breath, and fever. If the appendix bursts, peritonitis will develop. The treatment is urgent surgical removal of the appendix.

What to Do

1. Reassure the casualty and make her comfortable. Prop her up if she finds breathing difficult. Give her a container to use if she is vomiting.
2. Give the casualty a hot-water bottle wrapped in a towel to hold against her abdomen. If in doubt about her condition, seek medical advice.

Caution

- If the pain is severe, or occurs with fever and vomiting, call 999 for emergency help. Treat the casualty for shock do not give her medicine or allow her to eat or drink, because an anesthetic may be needed.

Your Aims

- To relieve pain and discomfort
- To obtain medical help if necessary

Special Case Stitch

This common condition is a form of cramp, usually associated with exercise, which occurs in the trunk or the sides of the chest. The most likely cause is a buildup in the muscles of chemical waste products, such as lactic acid, during physical exertion. Help the casualty sit down and reassure him. The pain will usually ease quickly. If the pain does not disappear within a few minutes, or if you are concerned about the casualty's condition, seek medical advice.

Vomiting and Diarrhea

These problems are usually due to irritation of the digestive system. Diarrhea and vomiting can be caused by a number of different organisms, including viruses, bacteria, and parasites. They usually result from consuming contaminated food or water, but infection can be passed from person to person. Good hygiene helps prevent infectious diarrhea. Vomiting and diarrhea may occur either separately or together. Both conditions can cause the body to lose vital fluids and salts, resulting in dehydration. When they occur together, the risk of dehydration is increased and can be serious, especially in infants, young children, and elderly people.

The aim of treatment is to prevent dehydration by giving frequent sips of water or unsweetened fruit juice, even if the casualty is vomiting. Dehydration products, whether added to water or sold in liquid form, provide the correct balance of water and salt to replace those lost through the vomiting and diarrhea and can be purchased at a pharmacy.

What to Do

1. Reassure the casualty if she is vomiting and give her a warm damp cloth to wipe her face.
2. Help her sit down and when the vomiting stops give her water or unsweetened fruit juice to sip slowly and often.
3. When the casualty is hungry again, advise her to eat easily digested foods such as pasta, bread, or potatoes for the first 24 hours.
4. If the vomiting and/or diarrhea are severe, or the casualty develops chest pain, difficulty breathing, or severe abdominal pain, take or arrange to send her to the hospital. If the casualty becomes lightheaded or dizzy, treat for fainting

Caution

- Do not give antidiarrheal medicines.
- If you are concerned about a casualty's condition, especially if the vomiting or diarrhea is persistent, or the casualty is a young child or an older person, seek medical advice

Recognition

There may be:

- Nausea
- Vomiting and later diarrhea
- Stomach pains
- Fever

Your Aims

- To reassure the casualty
- To restore lost fluids and salts

- ✓ *Avoiding Common Errors in the Emergency Department 2nd Edition by Amal Mattu MD (Editor),2017*
- ✓ *Avoiding Common Prehospital Errors 1st Edition by Benjamin J. Lawner DO EMT-P ,2012*