Febrile seizures

Febrile seizures are common in young children. Usually they are over quickly, don’t happen again, and have no lasting effects.

Febrile seizures can happen when a child has a high temperature. Seeing your young child have a seizure (fit) can be frightening. But if it is brief and they have a high temperature there’s usually nothing to worry about.

Your child may lose consciousness for a few minutes and their body may jerk or twitch. But febrile seizures usually pass in a minute or two and children recover completely.

We’ve brought together the best research about febrile seizures and weighed up the evidence about how to treat them - although most children don’t need any treatment at all. You can use our information to talk to your doctor and decide which treatments, if any, are best for your child.

What are febrile seizures?

Febrile seizures are quite common in babies and young children. They are brief seizures, or fits, which can happen when your child has a fever (a high temperature).

Febrile seizures are usually nothing to worry about. But if your child has a febrile seizure you should take them to see your doctor as soon as you can afterwards, especially if it’s their first seizure. The doctor probably won’t give them any treatment. They will usually just check that the seizure wasn’t a sign of a more serious problem.

Doctors used to think that febrile seizures were caused by fever (the word febrile means feverish). But sometimes the seizure comes first, before the high temperature.
Febrile seizures are quite common in babies and young children. They usually stop by the time the child reaches 5 or 6 years.

All sorts of illnesses may cause a fever. And in some children a febrile seizure sometimes happens alongside the fever. When this happens your child's body may twitch or shake.

It can be really scary to see your child having a seizure. But febrile seizures are usually over quickly and children recover completely afterwards. Most children don't even need treatment.

The kind of febrile seizures we talk about here are called **simple febrile seizures**. These seizures usually last only a few minutes. Most children recover completely an hour or so after the seizure stops.

But some kinds of febrile seizure last longer and may take longer to recover from. See Other types of seizures.

Children can get febrile seizures from when they are a few months old. They usually grow out of them by the time they're 5 or 6 years old. Having simple febrile seizures as a child usually doesn't cause any long-term health problems.

Febrile seizures can happen during any illness that causes a high temperature (a fever). Common types of fever that can be related to a febrile seizure are caused by:

- An infection with a virus
- An ear infection
- Tonsillitis.
Why does my child get febrile seizures?

Most children don't get febrile seizures. Doctors think that the reason they happen to some children and not others is the genes children inherit from their parents. This means that febrile seizures happen more often in some families than in others. If you or your partner had febrile seizures as children, your child is more likely to have them. And a child whose brother or sister had febrile seizures is more likely than most children to have them.

Other things that make it more likely that a child will have febrile seizures, or will have them more often, include:

- Being under 1 year old when they have their first febrile seizure
- Having had a febrile seizure before.

There has been a lot of debate about the role of childhood vaccinations in febrile seizures. But research now suggests that vaccinations don't cause febrile seizures.

What are the signs of febrile seizures?

The main sign of a febrile seizure is that your child's body twitches or shakes. Children also lose consciousness (black out). Your child won't look at you or react to your voice.

It can be really worrying seeing your child having a seizure (fit). They may foam at the mouth, vomit, or wet or soil themselves. But it's important to remember that children recover completely after most kinds of febrile seizures.

The main kind of seizure we talk about here is called a simple febrile seizure. Some other kinds of febrile seizures may last longer or take longer to recover from. To find out more, see Other types of seizures.

Febrile seizures are related to a fever (high temperature). But the fever doesn't always come first. The seizure can be the first sign that your child has a fever. So don't worry if you hadn't noticed your child was feeling ill. Lots of parents don't notice anything unusual about their child until the seizure starts.

Simple febrile seizures

Most children who have a simple febrile seizure twitch or shake evenly on both sides of their body. Or they may go rigid, holding their arms and legs stiffly. They won't respond to anything around them.

The seizure will probably be over in a minute or two, and certainly in less than 15 minutes. Some last only a few seconds.
After a seizure

Children may go into a very deep sleep after their seizure. You may not be able to wake them up. But this isn't unusual, and it's not part of the seizure. If the jerking stops and your child's eyes are open but they are still not responsive, the seizure may still be going on.

What you should do

If your child has a febrile seizure, your first instinct will probably be to take your child to hospital or call 999 for an ambulance. It's always a good idea to see a doctor if someone has had a seizure. It's especially important to see a doctor if it's the first seizure your child has had.

Your child probably won't need treatment. But your doctor will want to check that the seizure isn't related to anything more serious than a simple febrile seizure.

There are also some other things you can do to help your child and to help their doctor find out what type of seizure they had. To find out more, see What should I do if my child has a seizure?

Complex febrile seizures

This type of seizure is much less common than simple febrile seizures. If one side of your child's body seems to jerk or twitch more vigorously, it could mean your child is having a complex febrile seizure. A seizure that lasts longer than 15 minutes may also be a complex seizure. These seizures can take longer for your child to recover from.

If only one side of your child's body moves, or the seizure lasts longer than five minutes, take your child to see their doctor or to hospital, or call 999 for an ambulance.

How common are febrile seizures?

Febrile seizures are quite common in young children.

Between about 2 and 5 children in every 100 in Western Europe have at least one febrile seizure by the time they're 5 years old.[11]

Children don't usually get febrile seizures after the age of 6.

What treatments work for febrile seizures?

Seeing your child have a seizure (fit) can be really frightening. But most febrile seizures are over quickly and they don't usually need any treatment. Most children totally recover within an hour.

If your child has a seizure there are things you can do to make sure they're safe. To find out more, see What should I do if my child has a seizure?

If it's your child's first seizure, or if you're worried about them for any reason, take your child to see a doctor or call 999 for an ambulance.
Febrile seizures

- Febrile seizures can happen when a child has a fever (a high temperature). Paracetamol and ibuprofen can help reduce a fever. You can buy these drugs from a pharmacy. But we don't know if taking one of these drugs during a fever can prevent a seizure.

- Paracetamol can be used for children over 3 months. Ibuprofen is suitable for children aged 6 months and older.

- Your child's fever could have been caused by a cold, an ear infection, or another illness. Your doctor may give your child medicine to treat an infection.

- Most children who've had a febrile seizure can go home once they've been seen by a doctor. Occasionally a child might need to go to hospital for some tests or so that doctors can keep an eye on them. This is more likely if your child is very young, if their seizure lasted a long time, or if their doctor thinks they might have a more serious illness.

- Doctors have tried using drugs called anticonvulsants to prevent febrile seizures. Some of these drugs may help prevent febrile seizures in the short term. But they can cause side effects, so they're not usually recommended. And not all the research shows that they can help. If your child has a seizure that lasts a long time, doctors will use one or more of these drugs to stop the seizure. [7]

The kind of febrile seizures we talk about here are called simple febrile seizures. These seizures usually last only a few minutes. Most children recover completely an hour or so after the seizure stops, without any treatment. To prevent more seizures, doctors have tried treatments to bring down a fever, as well as anticonvulsants.

Which treatments work best? We've looked at the best research and given a rating for each treatment according to how well it works.

**Treatment Group 1**

**Treatments for febrile seizures**

**Treatments that need further study**

- [Treatments to lower your child's temperature](#)

- [Anticonvulsants](#)

**What will happen to my child?**

Seeing your child have a seizure can be very frightening. But febrile seizures are usually over quickly. And most children get completely back to normal after an hour.
What should I do?

There are some simple things you should do if your child has a seizure. These things can keep your child safe and, later on, help their doctor find out what happened. To find out more, see What should I do if my child has a seizure?

It's a good idea to get any seizures checked out by a doctor. If you're worried at all, take your child to their doctor or hospital, or call 999 for an ambulance. You should definitely take your child to a doctor if it's their first seizure or the seizure lasts longer than five minutes.

What will happen when my child sees a doctor?

The doctor will examine your child. Your child's seizure will probably have ended before you get to hospital or see a doctor. So the doctor will ask you some questions. Your doctor may ask you:

- How your child was just before the seizure started
- What happened exactly during the seizure
- Whether your child's twitching seemed the same on both sides of their body
- How long you think the seizure lasted
- How your child was after the seizure ended
- Whether your child has had a seizure before.

Your child's doctor will look for whatever may have caused the fever your child had when they had the seizure. This could be an ear infection, for example. Your child's doctor may prescribe treatment for the infection, such as antibiotics.

Most children won't need any more tests. But if your doctor can't find an infection that could have caused the seizure, they may ask for a urine sample or a blood test. This is to check for anything that might have caused the infection. Or the doctor might send your child to hospital for a short while, to keep an eye on them. But most children who've had a febrile seizure will be able to go home as soon as they've seen a doctor.

Very young children are more likely than older children to need to go to hospital. That's because it can be harder for doctors to spot where in their body the infection is.

Your child may also need to go to hospital if the doctor thinks they might have meningitis. Meningitis can sometimes cause a seizure. It's a serious illness but it's quite rare in children with febrile seizures. For example, one study looked at 135 children who'd had a febrile seizure. None of them had meningitis.
Other kinds of seizures

The kind of febrile seizures we talk about here are called simple febrile seizures. They're usually over in less than five minutes. Other types of seizures will be treated differently. To read more, see Other types of seizures.

Will my child have another seizure?

Children recover completely from a simple febrile seizure. But if your child has had one seizure they may have another. Children have about a 1 in 3 chance of a second seizure if they get a fever again in the future. But they don't happen very often. Only 1 in 10 children who get febrile seizures have more than three seizures.

If your child has another seizure within 24 hours, or if they get repeated seizures, you should take them to the doctor or call 999 for an ambulance.

If a child has a febrile seizure it may mean they have a slightly higher chance of getting epilepsy. Epilepsy is a serious condition where people get repeated seizures. But this is rare. It's likely that less than 1 in 100 normally healthy children who have a febrile seizure go on to develop epilepsy. See our articles on epilepsy.

Will the seizure cause any lasting problems?

No. Febrile seizures don't cause any problems with children's learning or development. Children who've had seizures do just as well at school as other children, and there don't seem to be long-term effects on thinking and reasoning. Children usually grow out of having febrile seizures by the time they're 5 or 6.

Treatments:

Treatments to lower your child's temperature

In this section

Febrile seizures are linked to a high temperature. So cooling your child down if they have a high temperature might help stop them having a seizure. But there isn't enough evidence to say whether this works.

Some medicines, including over-the-counter painkillers, can lower your child's temperature. Paracetamol and ibuprofen (brand names include Nurofen) can both reduce a fever. You can buy these drugs as syrups, which your child might find easier to swallow than tablets. Brand names for syrups include Calpol and Calprofen.

Generally, paracetamol can be used for children over 3 months, and ibuprofen is suitable for children aged 6 months and older. But some over-the-counter brands are suitable only for children over certain ages. Ask your pharmacist for advice or check the packaging.

You shouldn't give your child paracetamol and ibuprofen at the same time. But if one of these doesn't work, then you can try the other.
Some parents might try to cool their child down by sponging them with tepid water. But there hasn’t been any good research to show this helps to reduce a fever. One thing you can do is make sure your child has regular drinks. If you’re breastfeeding then carry on with this.

We found two reviews of the research (systematic reviews) that looked at using paracetamol and ibuprofen to prevent febrile seizures. The reviews included 230 children. They showed that these medicines didn’t stop children getting seizures. Children with a temperature who took one of these drugs were just as likely to have a seizure as children who didn’t.

Another study compared children who took paracetamol with children whose carers sponged them down with tepid water. It looked at 120 children in total. Children in both groups were equally likely to have a seizure.

We need more research to be able to say whether cooling a child down can prevent febrile seizures. But having a fever can be uncomfortable. Even if these treatments don’t prevent seizures they may help your child feel better. Paracetamol and ibuprofen help with pain as well as reduce a temperature, and this may also help your child feel better.

Cooling a child down can sometimes cause shivering or goose pimples.

Ibuprofen can cause an upset stomach. But this side effect is less common in children than in adults. Also, ibuprofen can cause asthma to get worse. If your child has asthma, ask your doctor if this medicine is suitable.

Paracetamol is less likely than ibuprofen to cause side effects. But paracetamol can cause severe liver damage if your child takes too much of it. This can be bad enough to cause death. You should always read the instructions that come with medicines carefully. Make sure you don’t give your child more than the recommended dose.

**Anticonvulsants**

In this section

Your child is not likely to be given these drugs after a febrile seizure.

Anticonvulsants are drugs that prevent seizures. Doctors sometimes use them to treat epilepsy. Doctors have also tested them in studies to see if giving these drugs to children who have had febrile seizures in the past might help prevent another seizure. But there is little good evidence that they work. We need better research before we can say for sure how well these drugs work for febrile seizures.

Children who have one febrile seizure may get another in the future. There’s about a 1 in 3 chance. But your child probably won’t be given these drugs to prevent a febrile seizure. If your doctor does think your child needs one of these drugs, they should discuss with you why they think that.
Febrile seizures

Some studies have looked at taking anticonvulsants regularly to prevent febrile seizures. These drugs may help a little, but they have side effects. So doctors don't usually recommend taking them to try to prevent another seizure.

Most simple febrile seizures last only a minute or two. But if your child gets a seizure that lasts a long time, doctors or paramedics might use an anticonvulsant to stop it.

Anticonvulsants can cause side effects. Diazepam can cause:

- Hyperactivity
- Problems with movement
- Tiredness
- Irritability
- Problems with speech
- Problems sleeping.

In one study, about 2 in 5 children who took diazepam for febrile seizures had one of these side effects. Another study found that side effects from diazepam were mild and did not last long.

Further informations:

Other types of seizures

The kind of febrile seizures we talk about here are called **simple febrile seizures**. They're usually over in less than five minutes. But there are other, less common, kinds of febrile seizures that last longer.

**Complex febrile seizures**

Complex febrile seizures cause a slightly different movement in your child's body. Only one side of your child's body may twitch, rather than both sides. The seizure may last 15 minutes or longer and your child might still feel dazed or groggy an hour later.

This kind of seizure may need treatment. Call 999 for an ambulance if your child's seizure lasts more than five minutes or if you are worried at all. If your child has this kind of seizure you should take them to the doctor as soon as possible.
Febrile seizures

Febrile status epilepticus

Some children get a seizure that lasts a long time. But this is not common. A febrile seizure that lasts longer than 30 minutes is called febrile status epilepticus.

You should get medical help if a seizure lasts more than five minutes.

Children with this type of seizure need hospital treatment to stop the seizure. They may need to stay in hospital while the doctors work out why it has happened. Children with febrile status epilepticus will probably need to be treated in a specialist hospital and they may need intensive-care nursing.

What should I do if my child has a seizure?

Seeing your child have a febrile seizure can be frightening, especially if you haven't seen someone have a seizure before. But there are some simple things you can do to help.

Check the time

Check the time as soon as you can. It may feel as if the seizure is going on for ages. But most febrile seizures are very brief. They often last less than a couple of minutes.

It will be useful if you can tell your doctor how long your child's seizure lasted. If it goes on for more than five minutes, you should get medical help.

Put your child into the recovery position

This means rolling them onto their side so they can breathe easily. Make sure the space around them is clear and safe so that they can't hurt themselves. For very young children and babies, cradle them in your arms, on their side, with their feet slightly higher than their head.

Clear your child's mouth

If your child vomits, try to clear it away from their mouth so they don't choke. You may worry your child is going to stop breathing or that they'll bite their tongue. But you should never put anything in your child's mouth to try to keep it open.

Watch for twitching

If your child is twitching, try to keep an eye on whether one side of their body is jerking, or both sides. Most children having a febrile seizure go stiff and rigid. Or they may jerk both sides of their body. But if one side jerks more you'll need to tell your child's doctor. Try to remember which side of your child's body seemed to move more strongly.
When to get help

If it's the first time your child has had a seizure, take them to their doctor or to hospital, or call 999 for an ambulance.

If your child has had a febrile seizure before, you may know how to look after them yourself. But always get medical help for a seizure that lasts more than five minutes, or if you're at all worried about your child.

If your child has already had a febrile seizure within the last 24 hours, or if they have another within the next 24 hours, you should get medical help.

Glossary:

fever
If you have a fever, your body temperature is above 37 degrees Celsius (98.6 degrees Fahrenheit). With a fever you often get other symptoms, such as shivering, headache or sweating. A fever is usually caused by an infection.

infection
You get an infection when bacteria, a fungus, or a virus get into a part of your body where it shouldn't be. For example, an infection in your nose and airways causes the common cold. An infection in your skin can cause rashes such as athlete's foot. The organisms that cause infections are so tiny that you can't see them without a microscope.

viruses
Viruses are microbes (tiny organisms) that need the cells of humans or other animals to exist. They use the machinery of cells to reproduce. Then they spread to other cells in the body.

tonsillitis
Tonsillitis is when your tonsils become inflamed. It happens when your tonsils get infected with viruses or bacteria. Tonsillitis causes a number of symptoms, including a sore throat, pain when you swallow and a high temperature.

genes
Your genes are the parts of your cells that contain instructions for how your body works. Genes are found on chromosomes, structures that sit in the nucleus at the middle of each of your cells. You have 23 pairs of chromosomes in your normal cells, each of which has thousands of genes. You get one set of chromosomes, and all of the genes that are on them, from each of your parents.

antibiotics
These medicines are used to help your immune system fight infection. There are a number of different types of antibiotics that work in different ways to get rid of bacteria, parasites, and other infectious agents. Antibiotics do not work against viruses.

meningitis
Meningitis is a swelling in the thin layers of tissue that surround your brain and your spinal cord. It usually happens because of an infection with certain kinds of bacteria or viruses. Meningitis can give you a severe headache and a stiff neck. And you may find it difficult to keep your eyes open in the light. Meningitis is a life-threatening disease. If you have these symptoms, you should go to hospital straight away.

systematic reviews
A systematic review is a thorough look through published research on a particular topic. Only studies that have been carried out to a high standard are included. A systematic review may or may not include a meta-analysis, which is when the results from individual studies are put together.

asthma
Asthma is a disease of the lungs. It makes you wheeze, cough and feel short of breath. Asthma attacks are caused by inflammation and narrowing of your airways, which makes it hard for air to pass in and out of your lungs.

Epilepsy
Epilepsy is a condition that affects your brain. If you have epilepsy, the normal electrical activity in your brain gets disturbed from time to time. This leads to seizures (also called fits).

hyperactivity
Hyperactivity means having difficulty controlling your movements. Children with hyperactivity may 'wiggle', tap a pencil, tap their feet, talk a lot, or run unexpectedly around a room.
Febrile seizures

Sources for the information on this leaflet:


