

Febrile Convulsion

A febrile convulsion is a seizure (a 'fit') which occurs in some children when they have a fever (high temperature). The vast majority of febrile convulsions are not serious. Full recovery with no permanent damage is usual.

Who has a febrile convulsion and what causes them?

About 3 in 100 children have a febrile convulsion sometime before their 6th birthday. They most commonly occur between the ages of 18 months and three years. They are rare in children under six months old and over the age of six years.

Any illness which causes a fever (high temperature) can cause a febrile convulsion. Most occur with common illnesses such as ear infections, coughs, colds, flu, and other virus infections. Serious infections such as pneumonia, kidney infections, etc, are less common causes.

What does a febrile convulsion look like?

The child may look hot and flushed, and their eyes may appear to roll backwards. They may appear dazed and then become unconscious. Parts of the body may twitch or shake. It does not usually last long. It may only be a few seconds, and is unusual for it to last more than five minutes. The child may be sleepy for some time afterwards. An hour or so later the child often appears a lot better when their temperature has come down.

What first aid should I do for a febrile convulsion?

Note the time it started. Lie the child on their side with their head level or slightly lower than the body (the recovery position). Do not put anything into the mouth, but remove anything that could affect breathing (such as vomit or food). Do not shake the child. When the convulsion stops, try to lower the child's temperature to make them feel more comfortable. To do this take off their clothes, and give some paracetamol or ibuprofen as soon as they have recovered enough to swallow.

Can febrile convulsions be prevented?

It may seem logical that if you keep a child's temperature down during a feverish illness it may prevent a febrile convulsion. However, there is little scientific evidence to prove that this is so. (It is unclear what triggers the convulsion. It is possibly some body chemical that is released during certain feverish illnesses rather than the temperature itself. Most children with a high temperature do not have a convulsion.) However, it is common practice to keep a child cool when they have a feverish illness. This will make them feel more comfortable and *may possibly* prevent a febrile convulsion. If a child appears hot, then the following will help to reduce the temperature.

- Keep the child very lightly dressed, or take all their clothes off if the room is warm.
- Give paracetamol, (for example, Calpol, Disprol, etc) or ibuprofen.
- Give lots of cool drinks.

Will it happen again?

Only one convulsion occurs in most cases. In about 3 in 10 children who have a febrile convulsion, a second convulsion occurs with a future feverish illness. In less than 1 in 10 children who have a febrile convulsion, three or more further convulsions occur during future feverish illnesses. A future febrile convulsion is more likely if the first occurs in a child younger than 15 months, or if there is a family history of febrile convulsions in close relatives (father, mother, sister, brother). Once the child is past three years old, the chance of a recurrence becomes much less likely.

Therefore, recurrences are not common, but it is best to be prepared. For example, practice putting children into the recovery position. Also, be confident that you know how to bring a fever down in a child (see above). Always have some paracetamol or ibuprofen in the home.

Is a febrile convulsion dangerous?

Although alarming, a febrile convulsion is not usually dangerous. Full recovery is usual. Most illnesses which cause fever and febrile convulsions are the common coughs, colds, and virus infections which are not usually serious. However, the illness that causes the fever is sometimes serious, for example, pneumonia.

The child should be seen by a doctor as soon as possible after a convulsion for a check over to rule out serious illness. However, call a doctor or ambulance urgently if:

- the child does not improve quickly once a short convulsion is over.
- a convulsion lasts more than five minutes.
- another convulsion starts soon after the first one stops.
- the child has difficulty breathing.

Is treatment needed?

No treatment is usually needed for the convulsion itself if it stops within a few minutes. (However, treatment may be needed for the infection causing the fever.)

Sometimes the convulsion lasts longer, and a doctor may give a medicine to stop it. For example, a doctor may put diazepam liquid into the rectum (back passage) where it is absorbed quickly into the bloodstream and stops a convulsion. Sometimes the parents of children who are prone to recurrent febrile convulsions are taught how to use this medicine. They are then given a supply to have in case a further febrile convulsion occurs.

Does a febrile convulsion cause any permanent damage?

Usually not. Full recovery is usual with no after-effects. (Sometimes the infection causing the convulsion causes complications, but the convulsion itself does not usually cause any damage.) Rarely, a long convulsion which lasts 30 minutes or more may cause some injury to the brain.

Is a febrile convulsion a type of epilepsy?

No. The cause of a febrile convulsion is related to the feverish illness and is not due to any brain abnormality. Epilepsy causes convulsions (seizures or fits) without fever.

About 1 in 100 children who have two or more febrile convulsions develop epilepsy in later childhood. This is slightly higher than the chance of epilepsy developing in children who have not had a febrile convulsion. So, febrile convulsions and epilepsy are two separate conditions, but a very small number of children may be prone to develop both epilepsy and febrile convulsions.

Should a child who has had a febrile convulsion have immunisations?

Yes. Some children develop a fever following immunisation. A very small number of children develop a febrile convulsion following an immunisation. However, this is very unlikely to cause any permanent harm, or to happen again after a future immunisation.