

## Febrile Convulsion in Children

**A febrile convulsion is a fit or seizure that occurs in some children when they are febrile, that is have a high temperature (fever). The vast majority of febrile convulsions are not serious. Full recovery with no permanent damage is the rule.**

### Who has a febrile convulsion and what causes them?

About 1 in 30 children have a febrile convulsion sometime before their 6th birthday. Febrile convulsions most frequently occur between the ages of 18 months and three years; they are rare before six months and after six years.

### What does a febrile convulsion look like?

The child may look hot and flushed, and their eyes may roll backwards. They may appear dazed and then become unconscious. Parts of the body may stiffen, then twitch or shake. It may last from a few seconds to several minutes (usually less 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?

- Lay the child on their side with their head level or slightly lower than the body (the recovery position).
- Do not put your fingers into their mouth as you could push their tongue back and make the breathing worse.
- Estimate the time it started.

- You do not need to call an ambulance/999 unless;
  - it lasts longer than 5 minutes
  - the child does not improve quickly once a short convulsion is over.
  - another convulsion starts soon after the first one stops.
  - the child has difficulty breathing.
- You should seek medical advice/see your doctor that day to make sure the fever is not due to a serious illness.

### Can febrile convulsions be prevented?

No.

It may seem logical that keeping a child's temperature down during an illness may prevent a febrile convulsion. (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 makes them more comfortable and **but it does not** prevent a febrile convulsion. If a child is hot, then the following will help to reduce the temperature and make them feel more comfortable;

- 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.
- Offer cool drinks.

## Will it happen again?

Usually not. Of all the children who have one febrile convulsion about 1 in 3 will have a second one. Of those who have two, about 1 in 3 will have a third, and so on. A future febrile convulsion is more likely if the first occurs before 15 months of age, or if there is a family history of febrile convulsions in close relatives (father, mother, sister, brother). After the age of three, the chance of further fits reduces.

## Is a febrile convulsion dangerous?

Not usually. It is almost unheard of for a child to come to harm from a febrile convulsion. Complete recovery is expected, even after fits lasting longer than average. Most illnesses which cause fever and febrile convulsions are the common coughs, colds, and virus infections which are not usually serious. However, the illness causing the fever is sometimes serious, for example pneumonia or meningitis.

The child should be seen by a doctor as soon as possible after a convulsion for a check over to rule out serious illness.

## Is treatment needed?

No treatment is needed for a convulsion which stops within a few minutes.

If a convulsion lasts longer a doctor may give a medicine to stop it. For example, midazolam liquid may be put into the mouth 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 use if a further convulsion occurs.

## Does a febrile convulsion cause permanent damage?

Almost never. Full recovery with no after effects is expected in virtually every case. Sometimes the infection causing the convulsion causes complications, but the convulsion itself rarely causes any damage even if very prolonged.

## 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 and a few of these will have a febrile convulsion. However this is extremely unlikely to cause any permanent harm and is unlikely to happen again after a future immunisation. By contrast a child who is not immunised is at greater risk of developing illnesses which themselves carry a significant risk of fever and/or permanent damage e.g. measles, whooping cough, meningitis, polio.

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