

Simple partial seizures can take many different forms, depending on which area of the brain is affected. They include:

- motor seizures, involving a change in muscle activity (such as jerking or twitching)
- sensory seizures, involving a change in sensation (such as tingling, numbness, or prickling in a body part, or seeing or hearing things that are not there)
- autonomic seizures, involving a change in the autonomic functions of the body (so that the child may blush, sweat, or feel nausea or a “rising” sensation in her stomach)
- psychic seizures, involving a change in thinking, feeling (such as fear or sadness), or experience (such as déjà vu)

Simple partial seizures sometimes spread to other areas of the brain. If they spread to the entire brain, this is known as a secondarily generalized seizure; the child may have a tonic-clonic seizure.

## What are other terms for simple partial seizures?

Other terms for simple partial seizures that you may come across include:

- focal seizures
- localized onset seizures
- motor seizures: focal motor seizures
- sensory seizures involving numbness or pins and needles in a body part: tactile seizures, somatosensory seizures

## How can you tell if your child has simple partial seizures?

### Simple Partial (Focal) Seizures

A doctor will diagnose simple partial seizures by looking at the child’s medical history, her physical and neurological exam, and sometimes her EEG.

Simple partial seizures appear different from person to person, depending on the seizure focus (the affected area of the brain). However, an individual child will usually have the same seizure pattern every time. A common feature of simple partial seizures is that the child remains conscious and alert and can remember what happened.

It can be hard to identify simple partial seizures in a baby or a young child up to five or six years old, because their nervous systems are less developed than those of older children and adults. A child of this age may suddenly stop what she is doing; her hand or arm may jerk rhythmically, and holding the arm will not stop the jerking; she may raise one or both arms or move her head to one side; in rare cases, her eyes may look to one side.

## Motor seizures

A child having a motor seizure will have brief muscle contractions (twitching, jerking, or stiffening), often beginning in the face, finger, or toe on one side of the body. This twitching or jerking then spreads to other parts of the body on the same side, near the initial site. This is called motor march or Jacksonian march, and it happens because the seizure spreads out to neighbouring parts of the motor strip of the brain.

Alternatively, the child's head may turn to one side and she may raise one arm. This is called posturing.

The seizure begins in the same way each time. When the seizure is over, the child may feel weakness or paralysis in the affected body part, usually for less than two hours, although it may last for up to 24 hours. This is called Todd paralysis.

Simple motor seizures often progress to generalized or complex partial seizures.

## Sensory seizures

Possible symptoms of a sensory seizure include:

- a feeling of pins and needles or numbness in part of the body (these may spread to nearby parts of the body in the same way that motor seizures do)
- hearing ringing, buzzing, or voices that are not there, or experiencing normal sounds as muffled or distorted
- seeing lights or objects that are not there, seeing distortions or movement in objects that are there, or seeing objects as smaller or larger than they really are
- smelling or tasting something that is not there (often something unpleasant)

## Autonomic seizures

A child having an autonomic seizure may experience any of the following:

- changes in heart rate
- changes in breathing
- sweating
- goose bumps
- flushing or pallor
- a strange or unpleasant sensation in the stomach, chest, or head

## Psychic seizures

A child having a psychic seizure may experience problems with memory or garbled speech. She may feel as though she is outside her own body, or have feelings of déjà vu, jamais vu, or knowledge of the future. She may feel sudden emotions, such as fear, depression, or happiness, for no apparent reason. Children who are not old enough to talk may run to a parent and hold on.

## Secondarily generalized seizures

A secondarily generalized seizure begins as a simple partial seizure, then spreads to the whole brain to result in a generalized tonic-clonic or clonic seizure. This can happen very quickly, so that it is not always obvious the child is having a simple partial seizure.

## How many other children have simple partial seizures?

Simple partial seizures are quite common. Between 2% and 12% of all children with epilepsy have simple partial seizures.

## What causes simple partial seizures?

Simple partial seizures are often symptomatic, caused by an injury, tumour, or congenital malformation in a part of the brain. The source of the seizures may be very small, so that it is not always possible to find the cause.

## How are simple partial seizures treated?

The treatment for simple partial seizures depends on the underlying cause. In some cases, such as a brain tumour, surgery may be advised as the first course of treatment. In other cases, the doctor will prescribe an anti-epileptic drug. If the child continues to have seizures while taking medication, it may be possible to surgically remove the affected area of the brain. This option depends on how close the seizure focus is to essential areas of the brain, such as the speech and language areas.

With benign epilepsy of childhood with centrotemporal spikes (BECTS), in which seizures usually happen at night, it may not be necessary to treat the seizures. This syndrome usually goes away on its own when the child is older.

## What should I do when my child has a simple partial seizure?

A simple partial seizure affects only part of the brain, and the child is usually conscious and aware the whole time. If your child is having a simple partial seizure, keep her safe; no other intervention is usually needed.

## What is the outlook for a child with simple partial seizures?

As with most seizure types, the outlook for a child with simple partial seizures depends on the underlying cause. BECTS usually disappears between the ages of 12 and 15.

If the child has surgery, the outlook is often good. The outcome of surgery depends on the cause of the seizures (for example, surgery for low-grade tumours may be more successful than for malformations), how successful the surgery is, and whether the surgeon was able to remove the entire seizure focus. Anti-epileptic drugs may control seizures better after a child has had surgery.