Epilepsy in children

Summary

- Epilepsy is commonly diagnosed in children and can be confused with other conditions. An accurate diagnosis is essential.
- Seizures usually respond well to medication and most children with epilepsy will enjoy a normal and active childhood.
- The impact of epilepsy will vary for each child. Try to keep epilepsy in perspective for your child and your family.
- Remember to keep a balance between protecting your child and encouraging their independence.

Epilepsy can begin at any time of life, but it is most commonly diagnosed in children, and people over the age of 65.

A large number of children with epilepsy will outgrow their seizures or gain full seizure control as they mature. Some may have seizures that continue into adulthood.

Recognising epilepsy in children

Seizures may not always be recognised in children when they first occur. This will depend on the seizure type.

People often think of seizures as convulsive, but some seizures can be subtle and very brief, such as an ‘absence seizure’ in which the child has brief episodes of loss of awareness and responsiveness.

There are many ‘non-epileptic’ episodes that can mimic seizures, and epileptic seizures often do not look the way people expect them to. This can sometimes make diagnosis complicated.

Some childhood events that may be confused with seizures are:

- fainting spells
- breath-holding spells
- normal sleep jerks
- daydreaming
- night terrors
- migraine
- heart and stomach problems
- psychological problems.

Epilepsy syndromes

Some types of epilepsy are classified as syndromes, because they have specific signs and symptoms, such as:

- the type of seizures
- the age at which they start
- the specific pattern they show on EEG (electroencephalogram) (a medical test used to measure the electrical activity of the brain).

If the epilepsy fits a particular pattern or syndrome, this can help the doctor to select the best medication for that syndrome. It can also help to predict whether the seizures are likely to be easily controlled, limited to childhood, or whether the condition may be more persistent.

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Some more common types or epilepsy or epilepsy syndromes include:

- **childhood absence epilepsy** – these seizures usually start between ages two to 12. Absence seizures are very brief: the child will suddenly stop what they are doing and stare blankly, like they are daydreaming. Just as suddenly they stop and continue with the previous activity. Absence seizures can happen numerous times a day. They are usually well controlled with medication, and stop by puberty.

- **juvenile absence epilepsy** – these seizures usually start between ages eight to 20. The seizures are similar to childhood absence seizures but may be longer and can include movements such as eyelid fluttering or chewing. They can occur several times a day, but are not as frequent as childhood absence epilepsy seizures. Up to 80 per cent of children with this type of epilepsy will also have tonic-clonic seizures. The seizures often are well controlled with medication but the syndrome is considered lifelong.

- **childhood epilepsy with centrocortical spikes or benign rolandic epilepsy** – these seizures are seen in children in their early school years. They are infrequent and typically involve twitching, numbness, or tingling of the child's face or tongue. The child may drool and not be able to speak. These are a type of focal seizure and last no more than two minutes. The child remains fully aware. Seizures are mostly associated with sleep and sometimes tonic-clonic seizures can occur. The seizures stop around puberty.

- **juvenile myoclonic epilepsy** – this syndrome can be diagnosed anywhere between eight and 25 years. It typically starts with myoclonic seizures that occur on awakening from sleep either in the morning or from a nap. They are sudden, irregular muscle jerks of both arms. Sometimes these movements are not obvious, and make the person seem clumsy or prone to dropping things. Tonic-clonic seizures are also seen. Seizures can be well controlled with medication but lifestyle changes. This syndrome runs in families.

- **West syndrome or infantile spasms** – onset of this syndrome is typically seen during the first year of life. The very brief spasms (seizures) cause the baby to stiffen suddenly. Often the arms are flung out as the knees are pulled up and the body bends forward ('jack-knife seizures'). The baby will cry. The spasms usually occur in clusters. Sometimes they are mistaken for colic, but the cramps of colic do not occur in clusters. Most children with infantile spasms will have developmental disabilities later in life and develop other kinds of seizures or epilepsy.

- **Lennox-Gastaut syndrome** – this complex syndrome has the onset of seizures from age one to seven years. It can include multiple seizure types and is often difficult to manage. Developmental delay is seen in 90 per cent of people with this syndrome.

- **focal epilepsies** – seizure activity in the brain remains in a limited ‘focal’ area. Focal seizures will have different features according to what part of the brain is involved. The most common focal epilepsies are temporal lobe epilepsy and frontal lobe epilepsy.

### Treatment of epilepsy

The decision whether to treat a child with antiepileptic medication after they have been diagnosed with epilepsy is made depending on the child’s situation. The risk of further seizures is weighed against the potential risks and benefits of antiepileptic medication. This decision also incorporates the family’s values and preferences.

Medication is the first line of treatment for epilepsy, and is intended to lessen or control the seizures, preferably with few or no side-effects. Medications are not a cure and are not always prescribed for every child who has a seizure.

Starting a child on medication can be a difficult choice for parents. Most parents worry about side effects and any long-term effects of taking medications. The doctor will consider the risks of having seizures versus the risks and benefits of taking medication for the child.

Whether or not to prescribe medication, and what type of medication, will depend on:

- the likelihood of further seizures
- the type of seizures the child has, and how often they occur
- the risks the seizures may pose
- the age of the child
- the presence of developmental or behavioural problems
- the wishes or willingness of the child and family to start medication.
If several medications fail to control seizures adequately, other options for treatment may be considered such as:

- surgery
- vagus nerve stimulation
- dietary management.

**General information about medications**

Medications used to control seizures are called antiepileptic medications. Most antiepileptic medications are started at a low dose and slowly increased until seizures no longer occur. The dose may need to be adjusted as the child grows and their weight increases, or if new medications are added for other problems.

A second antiepileptic medication may be added or substituted if the first medication was only partially effective in stopping seizures, or if it caused unwanted side effects.

Many antiepileptic medications mix with other medications, causing unwanted reactions or reducing their effectiveness. Speak to your doctor or pharmacist before giving your child any other medication or supplement, even over-the-counter medicines for coughs and colds.

Never stop antiepileptic medications suddenly. This can cause seizures – sometimes seizures that are more severe than usual. Instead, under the guidance of your doctor, wean your child off these medications slowly to avoid withdrawal side effects.

Antiepileptic medication is not prescribed long term for seizures that aren’t considered epilepsy, such as febrile convulsions.

**Febrile convulsions**

Febrile convulsions are seizures brought on by fever during times of illness. One in 25 children has a febrile convolution at some time, usually between the ages of six months and six years.

One third of children who experience febrile convulsions will have further convulsions with consecutive fevers. This does not mean they have epilepsy and 97 per cent of all children with simple febrile convulsions have no higher risk of developing epilepsy later on.

Febrile convulsions tend to occur in families. If a child has had a febrile convolution, the risk for a sibling of that child to have a febrile convolution is about 10 per cent, or almost 50 per cent if a parent has febrile seizures as well.

**Epilepsy and learning**

It is easy to see the physical effects of epilepsy if someone falls and has a seizure. The effects on other aspects of functioning such as learning and behaviour tend to be overlooked.

Most children with epilepsy have the same range of intelligence and abilities as other children. However, some children with epilepsy will have learning difficulties. This may be due to:

- a co-existing condition
- seizure-related factors, such as tiredness
- medication side effects
- the underlying cause of the epilepsy
- emotional or social issues.

When a learning difficulty is identified in a child with epilepsy, there are supports available to help them develop to their full potential. Talk to your doctor or someone at your child’s place of learning for advice on assessments and supports for learning difficulties.

**Epilepsy – sport and play**

Children with epilepsy should be allowed to take part in usual childhood activities, including sporting activities. Exercise can lead to improved physical and emotional health, including positive effects on seizure control.
It is uncommon for seizures to be triggered by exercise or sports. Most sporting activities are suitable as long as the child avoids overexertion, dehydration, and low blood sugar (hypoglycaemia). Take special care with activities such as water sports, or activities from heights.

Striking a safe balance between epilepsy, its treatment, and appropriate exercise recommendations can bring children important health benefits.

**Epilepsy and genetics**

Some types of epilepsy can run in families. Even if your family has a genetic form of epilepsy, the chances of passing it on are relatively low. For instance:

- A sibling of a child with epilepsy may have a slightly higher risk of developing epilepsy if there is a genetic tendency in the family for seizures and epilepsy. Even so, most siblings will not develop epilepsy.
- The risk for children whose father has epilepsy is only slightly higher.
- If the mother has epilepsy and the father does not, the risk is still less than 5 in 100.
- If both parents have epilepsy, the risk is a bit higher. Most children will not inherit epilepsy from a parent, but the chance of inheriting some types of epilepsy is higher.

If you are planning on having a baby in the future and you are concerned about the potential risks of epilepsy, ask your doctor to explain the risks or refer you to a genetic counsellor for genetic testing. Genetic risks do not apply to all epilepsies.

**Epilepsy support and information**

If your child is diagnosed with epilepsy, it’s a good idea to learn as much as you can. Some suggestions that may help include:

- There are many types of epilepsy. Seek out the information that is specific to your child.
- Choose a doctor with whom you and your child can discuss your epilepsy questions freely.
- Your child will have questions. Answer these clearly. Your epilepsy organisation will have age-appropriate material you can use.
- Your child will sense any fear and embarrassment you may have about epilepsy. If you can adopt a positive approach to the condition, your child will have a positive model to follow.
- Make sure that anyone who cares for your child is informed and knows how to help your child if a seizure occurs.
- As your child gets older, it is important to help them take responsibility for their epilepsy – for example, remembering to take their medication at the right times without you prompting them.
- Remember to keep a balance between protecting your child and fostering independence.
- **Epilepsy Parents Australia** is an active Facebook support group for parents of children with epilepsy.

**Where to get help**

- Your GP (doctor)
- Your Paediatrician
- Your Paediatric neurologist
- NURSE-ON-CALL Tel. 1300 60 60 24
- Epilepsy Action Australia Tel. 1300 37 45 37
- Paediatric Epilepsy Network
- Epilepsy Foundation Victoria. Information Line: 1300 761 487 or (03) 8809 0600