CPNI
Cyprus Paediatric Neurology Institute
Παιδονευρολογικό Ινστιτούτο Κύπρου

LEAFLET FOR PARENTS AND PATIENTS

Epilepsy in children: seizure types, syndromes and treatment

Epilepsy is one of the most common neurological conditions in childhood, affecting about 1 in 200 children. It means having a tendency to have seizures that are not caused by a temporary trigger such as fever. Epilepsy is not a single condition: there are many different types of seizures and many different epilepsies, which is why doctors often speak of "the epilepsies". Knowing which one your child has helps us choose the right tests and treatment and tells us what to expect. Many children with epilepsy grow out of it.

What is a seizure?

A seizure is a sudden burst of electrical activity in the brain that temporarily changes how the brain works. Depending on where it starts and how it spreads, it can change movement, sensation, behaviour or awareness. Most seizures last less than 2 minutes and stop on their own.

When is it called epilepsy?

- Two or more seizures, more than 24 hours apart, with no obvious trigger such as fever or low blood sugar
- Or one seizure, when tests such as the EEG or MRI show a high chance of more seizures
- Or when a child has a recognised epilepsy syndrome
- A single seizure does not always mean epilepsy: many children have one seizure and never have another

Focal seizures

Focal seizures start in one part of the brain. What happens depends on which part is involved:

- Focal aware seizures: your child stays aware and may feel tingling, a strange feeling in the tummy, déjà vu, or have twitching of one side of the face, an arm or a leg
- Focal impaired awareness seizures: your child is not fully aware, may stare, not respond, and make movements such as chewing, lip smacking or fumbling
- A focal seizure can spread to both sides of the brain and become a tonic-clonic (convulsive) seizure

Generalised seizures

Generalised seizures involve both sides of the brain from the start:

- Tonic-clonic: stiffening, then rhythmic jerking of the whole body, often with loss of consciousness, followed by sleepiness
- Absence: brief staring spells of a few seconds, sometimes with eyelid flickering, that can happen many times a day and are easily mistaken for daydreaming
- Myoclonic: sudden, brief jerks of the arms or body, often soon after waking
- Atonic: sudden loss of muscle tone, causing a head nod or a fall ("drop attack")
- Tonic: sudden stiffening of the body, often during sleep

Epileptic spasms in babies

Epileptic (infantile) spasms are brief, sudden stiffenings or bends of the body, arms and legs, often in clusters on waking. They may be mistaken for colic or a startle. They need urgent assessment, because early treatment matters for development. If you are worried, film the episodes and contact us or your doctor the same day.

Causes of epilepsy

In many children no single cause is found. Known causes include:

- Genetic: a change in one or more genes, sometimes inherited, often new in the child
- Structural: differences in how the brain formed, or injury from lack of oxygen, stroke, infection or head injury
- Metabolic, immune or infection-related causes, which are rarer
- Finding the cause can guide treatment and helps us explain the likely outlook

Common childhood epilepsy syndromes

An epilepsy syndrome is a recognised pattern of seizure types, age at onset, EEG findings and outlook. Some of the most common are:

- Self-limited epilepsy with centrotemporal spikes (previously "benign rolandic epilepsy"): starts at about 4 to 10 years, seizures often in sleep with twitching of the face or mouth and drooling; usually outgrown by the teenage years
- Self-limited epilepsy with autonomic seizures (Panayiotopoulos syndrome): young children, seizures often in sleep with vomiting, pallor and unresponsiveness; usually a very good outlook
- Childhood absence epilepsy: starts at about 4 to 10 years, with many absence seizures a day; most children respond well to treatment and outgrow it
- Juvenile myoclonic epilepsy: starts in the teenage years, with morning jerks and sometimes tonic-clonic or absence seizures; usually well controlled but often needs long-term treatment, and lack of sleep is a strong trigger
- Infantile epileptic spasms syndrome (West syndrome): spasms in the first year of life, often with a typical EEG pattern; needs urgent treatment
- Dravet syndrome and Lennox-Gastaut syndrome: rarer, more severe epilepsies that begin in early childhood and need specialist care. Dravet syndrome is usually caused by a change in the SCN1A gene and is confirmed by genetic testing. An early diagnosis matters, because some epilepsy medicines can make seizures worse in Dravet syndrome

How epilepsy is diagnosed

- A detailed description of the episodes: what happened before, during and after
- A video of the episodes on your phone, which is often the most helpful information of all
- EEG: routine, sleep or ambulatory, recorded in our own laboratory
- Brain MRI, to look for structural causes
- Blood tests and genetic testing in selected children
- Some episodes that look like seizures are not epilepsy, for example faints, breath-holding spells, night terrors or reflux in babies; careful assessment avoids unnecessary treatment

Treatment

- Most children are treated with anti-seizure medicine; about 7 in 10 become seizure-free on medicine
- The medicine is chosen for your child's seizure type or syndrome; some medicines can make certain seizure types worse
- Give the medicine regularly and never stop it suddenly: this can trigger seizures
- Tell us about side effects such as sleepiness or changes in mood or behaviour
- Children are usually prescribed a rescue medicine for long seizures, with a written care plan
- If seizures continue after two suitable medicines (drug-resistant epilepsy), other options include the ketogenic diet, epilepsy surgery, vagus nerve stimulation and newer treatments; we work with specialist centres when these are needed
- Many children can stop medicine after being seizure-free for about two years; this is always planned together with you

Safety and outlook

- Most children with epilepsy go to school, play sport and live full lives
- Simple safety measures help: showers rather than baths, supervision when swimming, and a helmet for cycling
- Good sleep and taking medicine on time reduce seizures
- Injuries during seizures, for example from a fall, are not uncommon, which is why the safety measures above matter. Very rarely, epilepsy can lead to death, through sudden unexpected death in epilepsy (SUDEP); the best way to reduce the risk is good seizure control. Please ask us if you would like to talk about this
- See also our leaflets on seizure first aid, epilepsy and everyday life, and the school epilepsy care plan

When to call 112

Call 112 for an ambulance if:

- The seizure lasts more than 5 minutes and your child has no rescue medicine, or it continues 5 to 10 minutes after rescue medicine is given (as in their care plan)
- It is your child's first ever seizure
- Seizures follow one another without your child waking up in between
- Your child is injured, has trouble breathing, or their lips stay blue after the seizure
- The seizure happened in water
- You are worried, or this seizure is very different from usual

Seizure record

Recording each seizure, and a short phone video if it is safe to film, is one of the most helpful things you can bring to clinic.

Date and time	What happened	How long	Rescue medicine given?	Recovery

Contact CPNI

If you have questions or would like an appointment, please call our office on +357 22 476 627 or email cpni2007@gmail.com.

More leaflets and information: www.cpni.com.cy

This leaflet gives general information. It does not replace advice from your child's doctor.

Reviewed by Dr Paola Nicolaides, Consultant Paediatric Neurologist, November 2026.

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