



Antiepileptic drugs can cause a number of side-effects. However many people experience only a few, predominantly when they start the medication. This guide explains some unwanted effects and when you should call a doctor.

Most people with epilepsy obtain seizure control with only one drug. But some may need more than one. Choice will depend on factors like seizure type, age, lifestyle, employment and tolerance. It is important to have clear instructions from your doctor or neurologist and pharmacist on how and when to take the drug and what unwanted effects may occur.

Unwanted side effects should lessen or disappear in the first few weeks of treatment. Please contact your doctor if side-effects persist and are intolerable, or are listed as serious.

Carbamazepine

Brand Name: Tegretol (Novartis Pharmaceuticals)
Tegretol CR (Controlled Release)
Tegretol Liquid
Teril (Alphapharm Pty Ltd)

Used for: Partial or generalised seizures

Some unwanted effects: Drowsiness, dizziness, unsteadiness, upset stomach, vomiting, headache, anxiety, memory problems, diarrhoea, constipation, heartburn, dry mouth or back pain. *Tell your doctor if any of these symptoms are severe or do not go away.*

The following symptoms are uncommon, but serious. If you experience any of these, call your doctor immediately: rash, confusion, loss of contact with reality, depression, thinking about killing yourself or planning or trying to do so, chest pain, yellowing of the skin or eyes (jaundice), vision problems, blood disorders (watch for symptoms including sore throat, fever, chills or other signs of infection; unusual bleeding or bruising; tiny purple dots or spots on the skin; mouth sores, rash).

Note: The antibiotic Erythromycin as well as grapefruit juice may alter the metabolism of Carbamazepine. Interactions may occur with other antiepileptic drugs and oral contraceptives.

Clobazam

Brand Name: Frisium (Aventis Pharma Pty Ltd)

Used for: Partial or generalised seizures

Some unwanted effects: Sedation, drowsiness, and tiredness are the most common. Dizziness can also occur; plus fatigue, loss of coordination, nausea; anxiety, confusion (may be more common in the elderly); fast, pounding, or irregular heartbeat; mental depression.

Note: Interacts with Sodium Valproate

Clonazepam

Brand Name: Paxam
Rivotril (Roche Products Pty Ltd)
Rivotril paediatric oral drops

Used for: Partial or generalised seizures

Some unwanted effects: Drowsiness, dizziness, tiredness, weakness, dry mouth, diarrhoea, upset stomach, changes in appetite. Others include: restlessness or excitement, constipation, difficulty urinating, frequent urination, blurred vision and changes in sex drive or ability. *Tell your doctor if any of these symptoms are severe or do not go away.*

Ethosuximide

Brand Name: Zarontin (Pfizer Pty Ltd)
Zarontin Liquid

Used for: Absence seizures only

Some unwanted effects: Drowsiness, upset stomach, vomiting, constipation, diarrhoea, stomach pain, loss of taste and appetite, weight loss, irritability, mental confusion, depression, insomnia, nervousness, headache.

If you experience any of the following serious symptoms, call your doctor immediately: difficulty coordinating movements; joint pain; red, itchy skin rash; easy bruising; tiny purple-coloured skin spots; bloody nose; unusual bleeding; yellowing of the skin or eyes; dark urine; fever; or sore throat.

Felbamate

** Because severe side effects have occurred in some people with the use of Felbamate, it should be used only in people with severe epilepsy and only after careful consideration.*

Some unwanted effects: Constipation; diarrhoea; difficulty sleeping; dizziness; drowsiness; headache; itching; loss of appetite; nausea; tiredness; upset stomach; vomiting.

Note: Interacts with Carbamazepine, Phenytoin and Gabapentin

Gabapentin

Brand Name: Neurontin (Pfizer Pty Ltd)
Gantin (Arrow)
Pendine (Alphapharm Pty Ltd)

Used for: Partial seizures

Some unwanted effects: Drowsiness, headache, fatigue, blurred vision, tremor, anxiety, irregular eye movements.

If you experience any of the following serious symptoms, call your doctor immediately: skin rash, itching; difficulty moving or breathing, clumsiness; fever, flu-like symptoms; irregular, pounding, or fast heartbeat; seizures.

Lacosamide (Vimpat)**Used for:** Partial seizures**Some unwanted effects:** Blurred or double vision, uncontrollable eye movements, dizziness, drowsiness, headache, irritability, nausea, vomiting, diarrhoea, tiredness, tremor, weakness, problems with coordination, balance, or walking, itching. *Tell your doctor if any of these symptoms are severe or do not go away.***If you experience any of the following serious symptoms, call your doctor immediately:** Fast or pounding heartbeat or pulse, shortness of breath, slow heartbeat, fainting, fever, rash, tiredness, yellowing of the skin or eyes (jaundice), dark urine.**Lamotrigine****Brand Name:** Lamictal (GlaxoSmithKline GSK)**Used for:** Partial or generalised seizures**Some unwanted effects:** Loss of balance or coordination, double vision, blurred vision, crossed eyes, difficulty thinking, concentrating or speaking, drowsiness, dizziness, vomiting, diarrhoea, constipation, heartburn, irritability, nervousness, mood changes, difficulty falling asleep or staying asleep, stomach, back, or joint pain, runny nose, cough, missed or painful menstrual periods, swelling, itching, or irritation of the vagina, dry mouth. *Tell your doctor if any of these symptoms are severe or do not go away.***If you experience any of the following serious symptoms, call your doctor immediately:** skin rash, seizures that happen more often, last longer, or are different than the seizures you had in the past, chest pain, swelling of the hands, feet, ankles, or lower legs, depression.**Note:** Interactions may occur with Sodium Valproate, Phenytoin and Carbamazepine.**Levetiracetam****Brand Name:** Keppra (UCB Pharma)**Used for:** Partial and generalised seizures**Some unwanted effects:** Drowsiness, muscle weakness, unsteady walking, coordination problems, headache, pain, loss of appetite, forgetfulness, anxiety, dizziness, moodiness, nervousness, painful, burning, or tingling feeling in the hands or feet, sore throat, runny nose, sinus pain. *Tell your doctor if any of these symptoms are severe or do not go away.***If you experience any of these serious but uncommon symptoms, call your doctor immediately:** depression, anxiety, hearing voices or seeing visions of things that do not exist (hallucinations), hostility, thoughts of killing yourself, fever, sore throat, other signs of infection, double vision.**Pregabalin (Lyrica)****Used for:** Partial seizures and neuropathic pain**Some unwanted effects:** Dizziness, drowsiness, headache, dry mouth, swelling of the arms, hands, feet, ankles, or lower legs (oedema), blurred vision, weight gain, nausea, vomiting, constipation, difficulty concentrating, speech problems, confusion, forgetfulness, anxiety, elevated mood, poor balance and coordination, muscle twitching, weakness, tiredness. *Tell your doctor if any of these symptoms are severe or do not go away.*

If you experience any of the following serious symptoms, call your doctor immediately: blurred vision, double vision, or other changes in eyesight, hives, rash, itching, blisters, swelling of the eyes face, throat, mouth, lips, gums, tongue, head or neck, shortness of breath, wheezing, muscle pain, tenderness, soreness, or weakness, especially if it comes along with fever, chest pain.

Oxcarbazepine

Brand Name: Trileptal (Novartis Pharmaceuticals)
Used for: Partial or generalised tonic clonic seizures

Some unwanted effects: Dizziness, drowsiness; vision changes, double vision, fast, repetitive eye movements that you cannot control; diarrhoea, constipation, heartburn, stomach pain, loss of appetite, changes in the way food tastes, dry mouth, weight gain; shaking of a part of the body that you cannot control, difficulty coordinating movements, falling down; slowed movements or thoughts, speech problems, forgetfulness, difficulty concentrating, nervousness, mood swings, back pain, muscle weakness or sudden tightness, acne, toothache, earache, hot flushes, increased sweating; cold symptoms, nosebleeds, swelling, redness, irritation, burning, or itching of the vagina, white vaginal discharge. *Tell your doctor if any of these symptoms are severe or do not go away.*

Note: Interactions may occur with Phenytoin, Carbamazepine, Phenobarbitone and oral contraceptives.

Phenytoin

Brand Name: Dilantin (Pfizer Pty Ltd)
 Paediatric suspension
 Forte suspension
Used for: Partial or generalised seizures

Some unwanted effects: Those most commonly reported include drowsiness; redness, irritation, bleeding, and swelling of the gums; upset stomach, vomiting, constipation, stomach pain, loss of taste and appetite, weight loss, difficulty swallowing; mental confusion, blurred or double vision; insomnia, nervousness, muscle twitching; headache; increased hair growth. *Tell your doctor if any of these symptoms are severe or do not go away.*

If you experience any of the following serious symptoms, call your doctor immediately: difficulty coordinating movements, skin rash, easy bruising, tiny purple-coloured skin spots, bloody nose, slurred speech, unusual bleeding, yellowing of the skin or eyes, dark urine, swollen glands, fever, sore throat.

Rufinamide (Banzel)

Used specifically to treat Lennox Gastaut Syndrome

Some unwanted effects: Dizziness, drowsiness, headache, loss of appetite, nausea, vomiting, sleepiness, loss of coordination, excessive movement or activity, uncontrollable movements of the eyes, difficulty paying attention, back pain, stomach pain. Tell your doctor if any of these symptoms are severe or do not go away.

If you experience any of the following serious symptoms, call your doctor immediately: Fever, rash, hives, itching, swelling of the face, decreased ability to respond to others, seizures, blurred or double vision, yellowing of the skin or eyes (jaundice), dark urine.

Interactions: Sodium Valproate, Carbamazepine, Phenobarbital, Phenytoin, Lamotrigine

Sodium Valproate

Brand Name: Epilim (Sanofi-Synthelabo Aust Pty Ltd) Epilim syrup
Valpro (Alphapharm Pty Ltd)

Used for: Partial and generalised seizures

Some unwanted effects: Sedation, drowsiness, dizziness, headache, tremor, blurred or double vision, mood swings, indigestion, nausea, diarrhoea, changes in appetite, weight gain, temporary hair loss, polycystic ovaries, loss of coordination, ringing in the ears, runny nose and sore throat. *Tell your doctor if any of these symptoms are severe or do not go away.*

If you experience any of the following serious symptoms, call your doctor immediately: Skin rash, easy bruising, tiny purple-coloured skin spots, bloody nose, unusual bleeding, dark urine, fever, sore throat, recurring seizures after they have been controlled by medication, stomach pain, upset stomach, loss of appetite, vomiting, dark urine, weakness, tiredness, lack of energy, facial swelling, and yellowing of the skin or eyes (jaundice).

Sulthiame

Brand Name: Ospolot (Pharmalab)

Used for: Partial and generalised seizures, behavioural disorders associated with epilepsy

Some unwanted effects: Those most commonly reported include poor balance and coordination, tingling, burning or numbness of the face and extremities, rapid over-breathing, shortness of breath, dizziness, weight loss.

If you experience any of these serious but uncommon symptoms, call your doctor immediately: skin rash, Stevens-Johnson syndrome, nausea, abdominal pain, weight loss, blood disorders, headache, psychic changes, depression, drooling, increased frequency of seizures, insomnia, and prolonged seizures.

Note: Alcohol should not be consumed while taking Sulthiame. Use with Primidone may cause severe side-effects. May raise the blood levels of Dilantin and Phenobarbitone and possibly barbiturates.

Tiagabine

Brand Name: Gabitril (Sanofi-Synthelabo Pty Ltd)

Used for: Partial seizures (add-on therapy)

Some unwanted effects: Dizziness, drowsiness, lack of energy or weakness, unsteadiness, or lack of coordination causing difficulty walking, depression, hostility or anger, irritability, confusion, difficulty concentrating or paying attention, abnormal thinking, speech or language problems, increased appetite, upset stomach, stomach pain, nervousness, difficulty falling asleep or staying asleep, itching, bruising, painful or frequent urination. *Tell your doctor if any of these symptoms are severe or do not go away.*

If you experience any of these serious but uncommon symptoms, call your doctor immediately: rash, sores on the inside of your mouth, nose, eyes or throat; flu-like symptoms, changes in vision, severe weakness, shaking hands you cannot control, numbness, pain, burning, or tingling in the hands or feet, seizures, prolonged seizures.

Note: Interactions may occur with Phenytoin, Carbamazepine and Phenobarbitone.

Topiramate

Brand Name: Topamax (Janssen-Cilag Pty Ltd)
Used for: Partial seizures and as add-on therapy in generalised seizures

Some unwanted effects: Slow thinking or movements, difficulty concentrating, speech problems, especially difficulty thinking of specific words, memory problems, lack of coordination, trouble walking, confusion, nervousness, aggressive behaviour, irritability, mood swings, depression, headache, extreme tiredness, drowsiness, weakness, extreme thirst, weight loss, constipation, diarrhoea, gas, heartburn, taste changes, swelling of the tongue, overgrowth of the gums, dry mouth, increased saliva, trouble swallowing, nosebleeds, teary or dry eyes; back, muscle, or bone pain; menstrual changes, skin problems or changes in skin colour, dandruff, hair loss, growth of hair in unusual places, runny nose, difficulty falling or staying asleep. Tell your doctor if any of these symptoms are severe or do not go away.

Other unwanted effects: Topiramate can cause low blood sugar (hypoglycaemia), especially in children. Eat or drink a food or beverage with sugar in it, such as hard candy or fruit juice, and call your doctor immediately if you have any of the symptoms: shakiness, dizziness or light-headedness, sweating, confusion, nervousness or irritability, sudden changes in behaviour or mood, headache, numbness or tingling around the mouth, weakness, pale skin, sudden hunger, clumsy or jerky movements, seizures.

Note: Interactions may occur with Phenytoin, Carbamazepine, Phenobarbitone and oral contraceptives. Topiramate may cause osteoporosis in adults and rickets in children. Topiramate may also slow the growth of children. These conditions can be caught early and prevented through regular laboratory tests.

Vigabatrin

Brand Name: Sabril (Aventis Pharma Pty Ltd)
Used for: Partial and generalised seizures as add-on therapy and infantile spasms

Some unwanted effects: Drowsiness and fatigue, dizziness, nervousness, irritability, depression, headache, uncontrolled eye movements, tremor, numbness, impaired or decreased concentration or alertness, behavioural disturbances including impaired alertness, increased seizure frequency, visual field defects, weight gain, oedema (extra fluid in the tissues causing swollen hands and feet), mild stomach upsets.

Note: Regular tests may be needed to determine if there are any changes in visual fields.

Zonisamide

Brand Name: Zonegran (Elan Pharmaceuticals)
Used for: Partial seizures in adults

Some unwanted effects: Drowsiness, loss of appetite, upset stomach, vomiting, weight loss, changes in taste, dizziness, constipation, dry mouth, headache, confusion, irritability, difficulty falling asleep or staying asleep, difficulty with memory, pain, burning, or tingling in the hands or feet, difficulty focusing eyes, double vision, sneezing, runny nose. *Tell your doctor if any of these symptoms are severe or do not go away.*

If you experience any of these serious but uncommon symptoms, call your doctor immediately: rash, worsening or longer-lasting seizures, sudden back pain, stomach pain, pain when urinating, bloody or dark urine, fever, sore throat, sores in mouth, easy bruising, depression, unusual thoughts, difficulty thinking of words or trouble speaking, difficulty thinking or concentrating, lack of coordination, difficulty walking.

The Barbiturates

Names: Phenobarbitone (Sigma Pharmaceuticals Pty Ltd)
Primidone or Mysoline (AstraZeneca Pty Ltd)
Methylphenobarbitone or Prominal (Sanofi-Synthelabo Aust Pty Ltd)

Used for: Partial or generalised seizures

Some unwanted effects: Severe sedation, clumsiness or unsteadiness; dizziness or lightheadedness, drowsiness, hangover effect; hyperactivity in children; impaired concentration, memory and alertness.

Medications used in emergency (Benzodiazepines)

Diazepam

Brand Name: Valium

Used for: Emergency treatment of prolonged or clusters of seizures

Some unwanted effects: Those most commonly reported are fatigue, drowsiness, muscle weakness and poor coordination.

Midazolam

Brand Name: Hypnovel

Used for: Emergency treatment of prolonged or clusters of seizures

Some unwanted effects: Those most commonly reported are fatigue, drowsiness, muscle weakness, poor coordination and memory loss.

Although it's uncommon, these medications may also cause breathing difficulties when given in high doses.

New drugs still under investigation

Retigabine

Used for: Partial seizures

Some unwanted effects: dizziness, sleepiness, fatigue, confusion, slurred speech, loss of coordination, blurred vision, tremor, nausea.

Stiripentol

Used for: Severe myoclonic seizures in infancy (SMEI or Dravet's syndrome), atypical absence seizures and partial seizures.

Some unwanted effects: drowsiness, loss of appetite, nausea and vomiting.

Note: Stiripentol can interact with many other anticonvulsant drugs and increase their levels in the bloodstream, consequently increasing the unwanted effects of these other drugs.

Other drugs also used in the treatment of epilepsy

Bumetanide (diuretic for water retention)

Acetazolamide (for glaucoma and water retention)

Taking medications

- ◆ Read the manufacturer's information before starting the drug.
- ◆ Take the drug as prescribed. Altering dosage or daily routine may provoke unexpected seizures.
- ◆ Usually the drug is introduced slowly and the dose is gradually increased until it is effective in controlling seizures, or unwanted side-effects occur.
- ◆ If the drug is not effective or the side-effects are unsatisfactory, a second drug may be added and the first slowly withdrawn.
- ◆ Once seizures are stabilised with medication avoid changing brands.

When medication is prescribed

- ◆ Ask the doctor what other medications may interfere or interact with the drug.
- ◆ Ask the doctor what to do if a dose is missed.
- ◆ Ensure that a continuous supply of the drug is on hand, especially when travelling.
- ◆ Store medications in original containers, clearly labelled and in a cool dry place out of reach of children.
- ◆ Avoid alcohol unless discussed with the doctor.

Unwanted effects

All medications have side-effects and some people experience them in the first few weeks after starting a drug but they tend to lessen or disappear. Sometimes the side-effects are related to dose and can often be resolved if the dose is changed. The drug may need to be changed if an allergic reaction occurs.

Duration of therapy

Some people may have lifelong therapy, while others may discontinue the medication. This depends on the type of seizures or epilepsy syndrome, drug response and the length of time the person is seizure-free. Social factors like education, driving and employment are also considered.

Withdrawal of medication

Withdrawal from drugs for seizures should be done slowly and under medical supervision. Suddenly stopping these drugs can provoke seizures.

Blood level monitoring

If seizures are well controlled, blood tests are seldom necessary. The indications for monitoring blood levels include:

- ◆ Use of Phenytoin (Dilantin)
- ◆ Poor seizure control
- ◆ Use of more than one drug with unwanted side-effects
- ◆ Epilepsy in the very young, elderly or disabled persons

For further information on medications speak to an Epilepsy Nurse Educator at Epilepsy Action Australia 1300374537 or Medicines line on 1300 888 763.

This information is given to provide accurate, general information about epilepsy. Medical information and knowledge changes rapidly and you should consult your doctor for more detailed information. This is not medical advice and you should not make any medication or treatment changes without consulting your doctor.