Carbamazepine (TEGRETOL®)

**Used for:**
- Simple partial and complex partial (psychomotor, temporal lobe) seizures.
- Tonic-clonic (grand mal) seizures.
- Not effective in controlling absence, myoclonic, or atonic seizures.

**Side effects:**
Depending on the individual, side effects may occur at varying degrees or not at all, including. Check with your doctor if any of the following side effects continue or are bothersome:
- Double vision
- Dizziness
- Drowsiness
- Skin rash (if you notice a rash seek immediate medical help)
- Worsening of certain seizures (especially myoclonic)
- Chronic-leukopenia (decreased white blood cell count)
- Behavioural changes such as agitation or confusion
- Cardian Conduction Disturbances (rare) (SIADH)
- Headaches
- Fatigue
- Loss of Coordination
- Tremor
- Nausea/vomiting
- Cognitive Impairement
- Movement disorders (rare)
- Sodium deficiency in the blood

**Forms:**
- Tablets – 200 mg
- Chewtabs – 100 and 200 mg
- Controlled-Release Tablets – 200 and 400 mg
- Suspension – 20 mg/ml

**Drug Interactions:**
- Alcohol tolerance may be reduced by carbamazepine.
- Oral contraceptives and cyclosporin may be less effective when used with carbamazepine.
- Oral anticoagulants like Warfarin, tricyclic antidepressants, clozapine, haloperidol (Haldol®), theophylline, doxycycline, ethosuximide, lamotrigine and other antiepileptic drugs are affected.
- Erythromycin (and other macrolide antibiotics), cimetidine (Tagamet®), lithium, propoxyphene (Darvon®), terfenadine, isoniazid, fluoxetine or calcium channel blockers may increase the effect and possible toxicity of carbamazepine.
- Phenobarbital, phenytoin or primidone may reduce the levels of carbamazepine.
- Monoamine oxidase (MAO) inhibitors should not be used with carbamazepine.
Clobazam (FRISIUM®)

**Used for:**
- Tonic clonic seizures.
- Partial seizures.
- Lennox-Gastaut syndrome.
- Catamenial (menstrual cycle) seizures.
- Typically used in combination with other anti-epileptic medications.
- Some patients may develop tolerance to clobazam over time.

**Side effects:**
Depending on the individual, side effects may occur at varying degrees or not at all, including. Check with your doctor if any of the following side effects continue or are bothersome:
- Drowsiness
- Fatigue
- Lack of coordination
- Occasional Behavioural Side-effects
- Dry or watery mouth.
- Can worsen seizures, especially simple partial seizures (auras).

**Forms:**
- Tablets – 10 mg

**Drug Interactions:**
- Alcohol and cimetidine (Tagamet®) may increase blood levels of clobazam.
- Alcohol and other drugs that slow down the nervous system (CNS depressants) may interact with clobazam to increase CNS depressant effects.
- Clobazam’s interaction with other anti-epileptic drugs is variable.
Clonazepam (RIVOTRIL®)

**Used for:**
- Myoclonic seizures.
- Akinetic seizures.
- Absence seizures.
- Lennox Gastaut syndrome.
- Used with some success in partial seizures, infantile spasms, tonic-clonic seizures.
- Tolerance may develop during the first 3 months or more of treatment and you may cease to respond to clonazepam.

**Side effects:**
Depending on the individual, side effects may occur at varying degrees or not at all, including. Check with your doctor if any of the following side effects continue or are bothersome:
- Drowsiness
- Loss of coordination.
- Behavioural and personality changes, such as aggressiveness, irritability, agitation, hyperactivity.
- Forgetfulness or confusion.
- Increased seizures/appearance of other seizure types.
- Respiratory problems.
- Increased salivation.
- Sedation (but may diminish over time).
- Swelling of the face and eyelids (should be evaluated by a physician).

**Forms:**
- Tablets – 0.5 and 2 mg.
- Liquid Suspension – 0.1 mg/ml.

**Drug Interactions:**
- Alcohol or other drugs that slow down the nervous system (CNS depressants) may increase the depressant effects of clonazepam, as may using multiple anti-epilepsy drugs.
- Carbamazepine, phenytoin, phenobarbital and primidone may lower the concentration of clonazepam.
- Valproic acid with clonazepam may produce continuous absence seizures.

Inform your doctor of any other medicines (prescription and non-prescription) or substances you are taking.
Diazepam Rectal Gel (Diastat®)

Used for:
- Intermittent bouts of distinctive seizure clusters in selected patients ages two years and older who are not controlled on their anti-epileptic medication regimen.
- Adjunctive therapy only.
- Seizure clusters must be identifiably different from the patient’s ordinary seizure activity.

Side effects:
Depending on the individual, side effects may occur at varying degrees or not at all, including. Check with your doctor if any of the following side effects continue or are bothersome:
- Sleepiness.
- Dizziness.
- Nervousness.
- Diarrhea.
- Weakness.
- Euphoria, impaired judgment.
- Inflamed nasal membranes.
- Respiratory depression (rare).
- Headaches.
- Pain, abdominal pain.
- Blood vessel dilation.
- Incoordination, impaired motor skills.
- Hiccups.
- Asthma.
- Rash.

Forms:
- Rectal Delivery System-Plastic applicator (with flexible tip available in Pediatric or Adult length) containing prefilled, unit-doses of either 2.5 mg, 5 mg, 10 mg, 15 mg or 20 mg.

Drug Interactions:
Ages 2-5 years: 0.5mg/kg.
Ages 6-11 years: 0.3 mg/kg.
Ages 12 and older: 0.2 mg/kg.

Diastat is provided in fixed-dose units. The prescribed dose is determined by rounding up to the next available dosage form. However, for the elderly and debilitated patients, the dosage should be adjusted downward to reduce possible side effects.

A second dose, when required, may be given 4-12 hours after the first dose if so prescribed. Diastat should be used to treat no more than five episodes per month and no more than one episode every five days.
Ethosuximide (ZARONTIN®)

Used for:
- Absence seizures. (Typical absence seizures respond better than atypical absence seizures).

Side effects:
Depending on the individual, side effects may occur at varying degrees or not at all, including. Check with your doctor if any of the following side effects continue or are bothersome:
- Drowsiness.
- Headache.
- Nausea/vomiting.
- Weight loss.
- Diarrhea.
- Irritability.
- Sleep disturbances.
- Aggressiveness.
- Lupus-like syndrome
- Fatigue.
- Hiccups.
- Epigastric and abdominal pain.
- Anorexia.
- Loss of coordination.
- Hyperactivity.
- Inability to concentrate.
- Depression.
- Blood cell disorder.

Forms:
- Capsules – 250 mg.
- Syrup – 50 mg/ml.

Drug Interactions:
Ethosuximide may enhance the effects of central nervous system (CNS) medications or alcohol. No interactions with oral contraceptives.
**Gabapentin (NEURONTIN®)**

**Used for:**
- Partial seizures.
- Tonic clonic (grand mal) seizures following partial seizures.
- Not effective for absence seizures.
- Add-on to current anti-epileptic drug therapy.

**Side effects:**
Depending on the individual, side effects may occur at varying degrees or not at all, including. Check with your doctor if any of the following side effects continue or are bothersome:
- Drowsiness.
- Dizziness.
- Loss of coordination.
- Fatigue.
- Tremor.
- Visual disturbances.
- Nausea and/or vomiting.
- Headache.
- Depression.
- Weight gain.

**Forms:**
- Capsules – 100, 300 and 400 mg.

**Drug Interactions:**
- Alcohol drinking increases drowsiness.
- Antacids may decrease the effectiveness of gabapentin.
- Gabapentin does not interact with other anti-epileptic drugs like phenytoin, valproic acid, carbamazepine, or phenobarbital.
- Does not affect oral contraceptives.
- Inform your doctor and pharmacist of any other medicines (prescription and nonprescription).
**Levetiracetam (KEPPRA®)**

**Used for:**
- Adjunctive therapy in the management of patients with epilepsy who are not satisfactorily controlled by conventional therapy. Levetiracetam is not commonly prescribed to children.

**Side effects:**
Depending on the individual, side effects may occur at varying degrees or not at all, including. Check with your doctor if any of the following side effects continue or are bothersome:
- Extreme sleepiness, tiredness, and weakness.
- Problems with muscle coordination (problems walking and moving)
- Mood and behaviour changes, such as aggression, anger, anxiety, apathy, depression, hostility and irritability.
- Some people may get psychotic symptoms such as hallucinations.
- Some people may get thoughts of suicide.
- The most common side effects with KEPPRA® are: sleepiness, weakness, dizziness and infection (common cold).
- Side effects can happen at any time, but occur most often within the first four weeks of taking the drug.

**Forms:**
- Tablets – 250 mg, 500 mg, 750 mg.

**Drug Interactions:**
- Levetiracetam is chemically unrelated to existing antiepileptic drugs. No interactions with other AEDs have been found.
- Levetiracetam was not found to influence the pharmacokinetics of other AEDs.
- Check with your doctor about possible interactions with oral contraceptives.
- Inform your doctor of any other medicines (prescription and non-prescription) or substances you are taking.
Phenobarbital

Used for:
- Tonic-clonic (grand mal) seizures.
- Partial seizures.
- Neonatal seizures.

Side effects:
Depending on the individual, side effects may occur at varying degrees or not at all, including. Check with your doctor if any of the following side effects continue or are bothersome:
- Sleep disturbances.
- Excitement, confusion in the elderly.
- Mental dullness.
- Bone pain, tenderness or aching (usually with long-term use).
- Blurred Vision
- Anemia.
- Withdrawal symptoms if discontinued abruptly.
- Dizziness.
- Headaches.
- Stomach upset.
- Depression.
- Hyperactivity in children.
- Drowsiness
- Loss of Coordination
- Fatigue
- Vertigo
- Breathing difficulties.

Forms:
- Elixir - 4 mg/ml.
- Tablets - 15, 30, 60, and 100 mg.
- Injection - 30 and 120 mg/ml.

Drug Interactions:
- Alcohol should be avoided by patients on phenobarbital.
- Phenobarbital may decrease the effectiveness of anticoagulants, corticosteroids (potentially exascer-bating asthma), some antibiotics (griseofulvin, doxycycline), some antidepressants, acetaminophen, cyclosporin, lamotrigine, and verapamil.
- Antihistamines, narcotic pain killers, tranquilizers and medication for seizures acid may increase the action of phenobarbital and result in oversedation.
- Administration with valproic acid can lead to increased levels of phenobarbital.
- Monoamine oxidase (MAO) inhibitors may cause increased levels of phenobarbital.
- Phenytoin (Dilantin) interacts with phenobarbital in variable ways.
- Oral contraceptives may be made less effective by phenobarbital, leading potentially to breakthrough bleeding and contraceptive failure.
Phenytoin (Dilantin®)

**Used for:**
- Tonic-clonic (grand mal) seizures.
- Simple partial seizures.
- Complex partial (temporal lobe or psychomotor) seizures.
- Not effective for absence (petit mal) seizures.

**Side effects:**
Depending on the individual, side effects may occur at varying degrees or not at all, including. Check with your doctor if any of the following side effects continue or are bothersome:

- Rapid movement of the eye ball.  
- Slurred speech.  
- Drowsiness.  
- Chronic side effects:  
  - Impaired concentration.  
  - Insomnia.  
  - Constipation.  
  - Headaches.  
- Increased coordination.  
- Mental confusion.  
- Fatigue.  
- Connective tissue damage.  
- Dizziness.  
- Motor twitching, tremor.  
- Nausea and vomiting.  
- Transient nervousness.

**Forms:**
- Capsules – 30 and 100 mg.
- Liquid Suspension – 30 mg/5 ml and 125 mg/5 ml.
- Tablets – 50 mg

**Drug Interactions:**
- Alcohol use may affect level of phenytoin in bloodstream.
- Antacids (containing calcium), and folic acid may decrease the effects of phenytoin.
- Valproic acid, carbamazepine (Tegretol®) may affect phenytoin.
- Phenytoin may reduce the effectiveness of Tylenol (acetaminophen), oral contraceptives, steroids, some antibiotics and vitamin D.
- Cimetidine (Tagamet®) may increase the effects of phenytoin.
- Inform your doctor of any other medicines (prescription and non-prescription) or substances you are taking.
Primidone (MYSOLINE®)

Used for:
- Simple and complex partial (psychomotor, temporal lobe) seizures
- Tonic-clonic (grand mal)
- Myoclonic seizures occasionally.

Side effects:
Depending on the individual, side effects may occur at varying degrees or not at all, including. Check with your doctor if any of the following side effects continue or are bothersome:
- Drowsiness.
- Dizziness, vertigo.
- Loss of muscle coordination.
- Fatigue.
- Cognitive impairment.
- Loss of appetite.
- Nausea.
- Mood or mental change.
- Hyperirritability and hyperactivity, especially in children.
- Sexual problems.
- Connective tissue disorder.
- Long term use of high doses may lead to lower calcium levels in the body, rickets or bone pain

Forms:
- Tablets – 125 and 250 mg.

Drug Interactions:
- Primidone is gradually reduced to phenobarbital by the body, so may lead to increased levels of phenobarbital if taken with it.
- May reduce the effectiveness of oral contraceptives and steroids.
- May decrease the effects of phenytoin (Dilantin®), carbamazepine (Tegretol®), tricyclic anti-depressants, and oral anticoagulants like warfarin.
- Carbamazepine may lower primidone levels as well.
- Valproate may increase primidone levels.
- Monoamine oxidase (MAO) inhibitors may lead to an increase of primidone levels.
- Inform your doctor and pharmacist of any other medicines (prescription and nonprescription) or substances you are taking.
Topiramate (TOPAMAX®)

Used for:
- Combined with other medications for treatment of partial seizures with or without secondarily generalized seizures.
- Being studied for primary generalized seizures and Lennox-Gastaut syndrome.

Side effects:
Depending on the individual, side effects may occur at varying degrees or not at all, including. Check with your doctor if any of the following side effects continue or are bothersome:
- Loss of coordination.
- Confusion.
- Mood disturbances.
- Agitation.
- Vision disorders.
- Drowsiness.
- Tremor.
- Speech/language disturbances
- Nausea.
- Chronic - weight loss common.
- Glaucoma
- Difficulty concentrating.
- Abnormal thinking.
- Depression.
- Memory problems.
- Dizziness.
- Fatigue.
- Abnormal sensations like tingling.
- Anorexia.
- Diarrhea.
- Kidney stones in 1.5% of patients

Forms:
- Tablets – 25, 50, 100 and 200 mg.

Drug Interactions:
- Inform your doctor of your usual alcohol consumption and if you’re taking other medicines that slow down the nervous system (CNS depressants).
- Carbamazepine, phenytoin or phenobarbital may reduce the effects of topiramate.
- Topiramate may decrease the effects of valproic acid and increase the effects of phenytoin.
- Topiramate may decrease the effectiveness of low dose oral contraceptives.
- Avoid other drugs predisposing to kidney stones.
- Tell your doctor if you are taking digoxin.
- Inform your doctor of any other medicines (prescription and nonprescription) or substances you are taking.
Valproic Acid (DEPAKENE®/DEPAKOTE®/EPIVAL®)

Used for:
- Absence seizures.
- Tonic-clonic (grand mal), myoclonic, atonic, tonic seizures.
- Partial seizures.
- Photosensitive seizures.
- Lennox-Gastaut syndrome.

Side effects:
Depending on the individual, side effects may occur at varying degrees or not at all, including. Check with your doctor if any of the following side effects continue or are bothersome:
- Nausea/Vomiting.
- Drowsiness.
- Emotional and behavioural disturbances.
- Menstrual irregularities.
- Tremor (rare).
- Loss of coordination (rare).
- Indigestion.
- Fatigue.
- Weight gain.
- Transient hair loss.
- Dizziness (rare).
- Visual disturbances (rare).

Forms:
Syrup - 50 mg/ml.
Tablets - 125, 250, and 500 mg.
Capsules – 250, 500 mg capsules.

Drug Interactions:
- Alcohol and other drugs that slow down the nervous system (CNS depressants) may interact with valproic acid to increase CNS depressant effects.
- Phenobarbital and primidone may interact with valproic acid to produce severe CNS depression.
- Clonazepam may interact with valproic acid to produce continuous absence seizures in people with a history of absence seizures.
- Phenytoin interaction is complex; there have been reports of break-through seizures.
- Carbamazepine concentrations may increase while valproic acid may decrease.
- Lamotrigine metabolism is inhibited by valproic acid.
- Aspirin and warfarin affect blood clotting and should be used with caution while taking valproic acid.
- Some anti-depressants may interact with valproic acid.
- Oral contraceptives’ efficacy not affected.
Vigabatrin (SABRIL®)

Used for:
- Add-on medication for partial seizures with or without secondary generalization.
- Infantile spasms (West Syndrome).

Side effects:
Depending on the individual, side effects may occur at varying degrees or not at all, including. Check with your doctor if any of the following side effects continue or are bothersome:
- Fatigue.
- Drowsiness.
- Headache.
- Loss of coordination.
- Dizziness.
- Chronic
- Weight gain.
- May aggravate primary generalized seizures like myoclonic and absence.

Forms:
- Tablets - 500 mg.
- Sachets of oral powder - 500 mg.

Drug Interactions:
- Vigabatrin may slightly decrease the blood concentrations of phenytoin, phenobarbital, and primidone.
- No interaction with oral contraceptives.
- Inform your doctor and pharmacist of any other medicines (prescription and nonprescription) or substances you are taking.