

Tegretol® (carbamazepine)

WARNING

APLASTIC ANEMIA AND AGRANULOCYTOSIS HAVE BEEN REPORTED IN ASSOCIATION WITH THE USE OF TEGRETOL. DATA FROM A POPULATION-BASED CASE CONTROL STUDY DEMONSTRATE THAT THE RISK OF DEVELOPING THESE REACTIONS IS 5-8 TIMES GREATER THAN IN THE GENERAL POPULATION. HOWEVER, THE OVERALL RISK OF THESE REACTIONS IN THE UNTREATED GENERAL POPULATION IS LOW, APPROXIMATELY SIX PATIENTS PER ONE MILLION POPULATION PER YEAR FOR AGRANULOCYTOSIS AND TWO PATIENTS PER ONE MILLION POPULATION PER YEAR FOR APLASTIC ANEMIA.

ALTHOUGH REPORTS OF TRANSIENT OR PERSISTENT DECREASED PLATELET OR WHITE BLOOD CELL COUNTS ARE NOT UNCOMMON IN ASSOCIATION WITH THE USE OF TEGRETOL, DATA ARE NOT AVAILABLE TO ESTIMATE ACCURATELY THEIR INCIDENCE OR OUTCOME. HOWEVER, THE VAST MAJORITY OF THE CASES OF LEUKOPENIA HAVE NOT PROGRESSED TO THE MORE SERIOUS CONDITIONS OF APLASTIC ANEMIA OR AGRANULOCYTOSIS.

BECAUSE OF THE VERY LOW INCIDENCE OF AGRANULOCYTOSIS AND APLASTIC ANEMIA, THE VAST MAJORITY OF MINOR HEMATOLOGIC CHANGES OBSERVED IN MONITORING OF PATIENTS ON TEGRETOL ARE UNLIKELY TO SIGNAL THE OCCURRENCE OF EITHER ABNORMALITY. NONETHELESS, COMPLETE PRETREATMENT HEMATOLOGICAL TESTING SHOULD BE OBTAINED AS A BASELINE. IF A PATIENT IN THE COURSE OF TREATMENT EXHIBITS LOW OR DECREASED WHITE BLOOD CELL OR PLATELET COUNTS, THE PATIENT SHOULD BE MONITORED CLOSELY. DISCONTINUATION OF THE DRUG SHOULD BE CONSIDERED IF ANY EVIDENCE OF SIGNIFICANT BONE MARROW DEPRESSION DEVELOPS.

Brand and Generic Names:

Available forms...

Tegretol[®]

Tablet: 200mg

Chewable tablet: 100mg

Liquid suspension 100mg/5mL (citrus vanilla flavor)

Tegretol[®]-XR

Extended release tablet: 100mg, 200mg, 400mg

Carbatrol[®]

Extended release capsule: 100mg, 200mg, 300mg

Equetro[™]

Extended release capsule: 100mg, 200mg, 300mg

Epitol[®]

Tablet: 200mg

Generic name: carbamazepine

Liquid suspension: 100mg/5mL

What is Tegretol[®] and what does it treat?

Carbamazepine is an anticonvulsant medication that is most commonly used to treat seizures in patients with epilepsy. Although epilepsy is the only FDA approved indication, carbamazepine is also used to treat bipolar disorder and several pain syndromes. Carbamazepine evens out the "highs"(mania) and "lows"(depression) in mood associated with bipolar disorder. Carbamazepine is recommended to treat acute mania when lithium and/or valproate are ineffective or poorly tolerated. Sometimes carbamazepine is used in combination with other mood stabilizers like lithium or valproate. Another brand name product of carbamazepine, Equetro[®], has a FDA indication to treat acute manic and mixed episodes associated with bipolar I disorder.

A manic episode, or mania, is when a person experiences several of the following symptoms at the same time: "high" or irritable mood, very high self esteem, decreased

need for sleep, pressure to keep talking, racing thoughts, being easily distracted, frequently involved in activities with a large risk for bad consequences (for example, excessive buying sprees).

A depressive episode or depression occurs when a person experiences several of the following symptoms at the same time: "low" or depressed mood (for example, sad, empty, tearful); decreased interest in most or all activities; changes in appetite (usually decreased); changes in sleep (usually poor sleep); loss of energy; feeling worthless/guilty/hopeless/helpless; psychomotor agitation or retardation (i.e. thoughts/movements speeding up or slowing down); difficulty concentrating, and thoughts of death (suicidal thinking).

A mixed episode is one that has characteristics of both mania and depression present and occurs nearly everyday during at least one week. Symptoms may include inability to sleep, agitation, irritability, anxiety, impulsiveness, and pressured speech.

Bipolar disorder is a brain disorder (mental illness) that exposes people to these mood changes over the course of time. Bipolar disorder affects more than two million American each year, but patients with this disorder can lead fulfilling lives when they receive proper treatment. Unfortunately, many people with this illness do not receive treatment.

What is the most important information I should know about Tegretol®?

Bipolar disorder requires long-term treatment. Do not stop taking the carbamazepine, even when you feel better. Only your healthcare provider can determine the length of carbamazepine treatment that is right for you. Missing doses of carbamazepine may increase your risk for a relapse in your mood symptoms. It may also increase the possibilities of troublesome side effects such as seizures.

- Do not stop taking carbamazepine or change your dose without talking with your healthcare provider first.
- Carbamazepine may reduce the effectiveness of many medications. Make sure your healthcare provider knows what other medications you are taking.
- Tell your healthcare provider if you are taking birth control pills. Carbamazepine may reduce the effectiveness of these medications, putting you at risk of pregnancy. The dose of your birth control pills may need to be adjusted, or you may need to use an additional method of birth control while taking carbamazepine.
- Periodically, your healthcare provider may ask you to provide a blood sample to make sure the appropriate level of medication is in your body and to assess for side effects such as changes in blood counts.
- Carbamazepine may make you drowsy. Do not drive or operate machinery until you know how this medication affects you.
- You should not drink alcohol or use illegal drugs while taking carbamazepine.

In order for carbamazepine to work properly, it should be taken every day as ordered by your healthcare provider.

Are there specific concerns about Tegretol® and pregnancy?

If you are planning on becoming pregnant, notify your healthcare provider so that he/she can best manage your medications. People living with bipolar disorder who wish to become pregnant face important decisions, about the risks and benefits of the medications as they relate to the illness, and to the fetus. This is a complex decision as untreated bipolar disorder has risks to the fetus as well as the mother. There are many dimensions to these choices, so be sure to confer with your doctor and caregivers.

For example, exposure to carbamazepine during the first three months of pregnancy is associated with defects of the head and face (11%), fingernails (26%), and developmental delay (20%). The risk of birth defects is increased when carbamazepine is combined with other medications (in particular valproate) because the level of toxic metabolites is increased. In order to decrease this risk, exposure to carbamazepine during the first three months should be avoided if possible. Carbamazepine can also cause vitamin K deficiency in the baby, which will increase the risk of bleeding. If carbamazepine is used during pregnancy, close monitoring of fetal serum levels is recommended and a vitamin K supplement may be necessary.

Regarding breast-feeding, caution is advised since carbamazepine does pass into breast milk. The American Academy of Pediatrics committee on medications in breast-feeding lists carbamazepine as “compatible” with breast-feeding.

What should I discuss with my healthcare provider before taking Tegretol®?

- Tell your doctor if you have taken carbamazepine before. If you are allergic to it, tell your doctor and pharmacist exactly what the medication did to you before taking even one dose.
- Symptoms that are most bothersome to you about your condition
- If you have thoughts of suicide
- Medications you have taken in the past to treat bipolar disorder, whether they were effective or caused any adverse effects [\[v2\]](#)
- All other medications you are currently taking and any medication allergies you have.
- Any medication side effects that you may have experienced in the past, or are currently experiencing
- If you are pregnant, plan to become pregnant, or are breast-feeding
- If you smoke, drink alcohol, or use illegal drugs
- Any medical problems you have, especially thyroid, heart, kidney disease and liver disease

How should I take Tegretol®?

- Carbamazepine is available in many different forms (for example: liquid, tablet, capsule, long-acting). The recommended starting dose of Carbamazepine in adults is 200-400mg daily in 2-4 divided doses. While the usual effective dose of carbamazepine ranges from 200-2000mg/day, your healthcare provider will determine the dose that is right for you based upon your response.
- The initial dose for older patients is lower with a slower dose increase schedule since these patients may have trouble tolerating the side effects.
- Blood levels of carbamazepine are typically checked routinely to prevent toxicity and to ensure an adequate dose. However, an antimanic blood level of carbamazepine has not been well established at this point.
- Carbamazepine suspension and tablets can be taken with meals to lessen the chance of stomach upset (nausea and vomiting).
- The contents of carbamazepine extended-release capsules may be sprinkled over applesauce; however, the capsule or its contents should not be crushed or chewed.
- Grapefruit and grapefruit juice may increase the effects of carbamazepine by increasing the amount of this medicine in the body. You should not eat grapefruit or drink grapefruit juice while you are taking this medicine
- It is very important that you take this medicine exactly as directed by your doctor to get the best results and lessen the chance of serious side effects. Do not take more of it, do not take it more often, and do not take it for a longer time than your doctor ordered.
- Use a pillbox or calendar to help you remember to take your medication

What happens if I miss a dose?

If you miss a dose of carbamazepine, take it as soon as you remember unless it is close to when your next dose is due. If it is close to your next dose, wait until then to take the medication and skip the missed dose. Do not double your next dose or take more than your prescribed dose.

What should I avoid while taking Tegretol®?

- Carbamazepine may cause dizziness or drowsiness, especially when first starting the medication. Make sure you know how you react to the medication before you drive, operate machinery, or do other activities that may be dangerous if you are not alert.
- Avoid drinking alcohol or using illegal drugs while you are taking mood stabilizing medications because the beneficial effects of the medication may be decreased and adverse effects may be increased (e.g. sedation).
- Avoid the following natural medicines: evening primrose, valerian, St. John's Wort, and kava kava, since each may interact with carbamazepine.

What happens if I overdose?

If an overdose occurs, whether intentional or accidental, immediate medical attention may be necessary. Call your doctor or emergency medical service (911). You may also contact the poison control center (1-800-222-1222).

Symptoms that may occur in an overdose include: dizziness, poor coordination, drowsiness, nausea, vomiting, tremor, twitching, irregular heart beat, and muscle weakness. In severe cases people can develop seizures, respiratory difficulty, coma, and death.

What are the possible side effects of Tegretol®?

Common side effects of Carbamazepine include: dizziness, sedation, rash, upset stomach, dry mouth and constipation.

Less common, but potentially serious, side effects include: difficulty walking, fatigue, tremor, abnormal vision, vomiting, stomach pain, indigestion, concentration or memory difficulties and weight gain.

Carbamazepine can cause a decrease in the body's sodium level, especially at higher doses. Although low sodium levels may not cause observable symptoms, some signs of low sodium include nausea, drowsiness, impaired consciousness, or confusion.

Mild rash occurs in about 10-15% in those who take carbamazepine. In rare cases (<1%) a severe, spreading rash with blistering of the skin in patches over the entire body along with fever, headache and cough can occur (Stevens-Johnson Syndrome). Although this is rare with carbamazepine, discontinuation of this medication is necessary.

Talk with your healthcare provider if you experience side effects that are bothersome to you. Contact your healthcare provider immediately if you develop a skin reaction, fever, swelling, or shortness of breath.

Are there any risks for taking Tegretol® for long periods of time?

Thyroid dysfunction has occurred with carbamazepine use.

What other drugs may interact with Tegretol®?

Carbamazepine may decrease the effectiveness of several other medications by increasing their breakdown and elimination from the body. For example, individuals taking antipsychotic medications like haloperidol, quetiapine or others may require higher doses of these medications to get the same therapeutic effect. Similarly, the effectiveness of carbamazepine may be reduced by other anticonvulsants. People who are taking carbamazepine should consult their doctor before taking or discontinuing the following:

- Oral contraceptives (birth control pills)
- Anticonvulsants
 - Dilantin[®] (phenytoin)
 - Depakote[®] (valproic acid)
 - Luminal[®] (phenobarbital)
 - Lamictal[®] (lamotrigine)
 - Sabril[®] (vigabatrin)
- Calcium Channel Blockers
 - Norvasc[®] (amlodipine)
 - Calan[®], Covera-HS[®], Isoptin SR[®] (verapamil)
 - Cardizem[®], Tiazac[®] (diltiazem)
 - Plendil[®] (felodipine)
 - Procardia[®], Adalat[®] (nifedipine)
- Benzodiazepines
 - Xanax[®] (alprazolam)
 - Restoril[®] (triazolam)
 - Valium[®] (diazepam)
- Antibiotics
 - Biaxin[®] (clarithromycin)
 - Ery-Tab[®] (erythromycin)
 - Ketek[®] (telithromycin)
- Anticholesterol Agents
 - Lipitor[®] (atorvastatin)
 - Mevacor[®] (lovastatin)
 - Zocor[®] (simvastatin)
- HIV Medications
 - Protease Inhibitors—Crixivan[®] (indinavir), Norvir[®] (ritonavir), Fortovase[®], Invirase[®] (saquinavir), Kaletra[®] (lopinovir/ritonavir)
 - Delavirdine (Rescriptor[®])
- Other
 - Abilify[®] (aripiprazole)
 - Adenocard[®] (adenosine)
 - Buspar[®] (buspirone)
 - Clozaril[®] (clozapine)
 - Camptosar[®] (irinotecan)
 - Desyrel[®] (trazodone)
 - Viagra[®] (sildenafil)
 - Anticoagulants (blood thinners: e.g., warfarin, aspirin, clopidogrel)
 - Tagamet[®] (Cimetidine)
 - Corticosteroids
 - Luvox[®] (Fluvoxamine)
 - Tricyclic antidepressants: amitriptyline (Elavil[®]), amoxapine (Asendin[®]), clomipramine (Anafranil[®]), desipramine (Norpramin[®], Pertofrane[®]), doxepin (Sinequan[®]), imipramine (Tofranil[®]), nortriptyline (Pamelor[®], Aventyl[®]), protriptyline (Vivactil[®]), trimipramine (Surmontil[®])

- Monoamine oxidase (MAO) inhibitors: isocarboxazid (Marplan[®]), phenelzine (Nardil[®]), procarbazine (Matulane[®]), selegiline (Eldepryl[®]), tranylcypromine (Parnate[®])

How long does it take for Tegretol[®] to work?

Several weeks are often required for carbamazepine to reach its maximum effectiveness; however, improvement in some symptoms may occur sooner.

It is very important to tell your doctor how you feel things are going during the first few weeks after you start taking oxcarbazepine. It will probably take several weeks to see enough changes in your symptoms to decide if oxcarbazepine is helpful for you.

Mood stabilizer treatment is generally needed lifelong in persons with bipolar illness. Your doctor can best discuss the duration of treatment you need based on your symptoms and course of illness.

*Updated by Ching-Yi Liu Pharm.D.
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NAMI wishes to thank the College of Psychiatric and Neurological Pharmacists for producing this fact sheet.

For further information. Please contact the pharmaceutical company listed below.

Novartis Pharmaceuticals	PO Box 66556 St. Louis, MO 63166-6556	(800) 277- 2254	www.novartis.com
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Free or low-cost medications provided by pharmaceutical companies

Some pharmaceutical companies offer medication assistance programs to low-income individuals and families. These programs typically require a doctor's consent and proof of financial status. They may also require that you have either no health insurance, or no prescription drug benefit through your health insurance. Please contact the pharmaceutical company directly for specific eligibility requirements and application information.

Tegretol Rx Assistance Program: 1-800-277-2254