



If you or someone you know is in crisis, please call 911 and/or the toll-free National Suicide Prevention Lifeline at 800-273-TALK (8255) to speak with a trained crisis counselor 24/7. A help line and other resources are also available through the National Alliance on Mental Illness at nami.org.

• **Lithium**

- Tablets: 300 mg
- Capsules: 150 mg, 300 mg, 600 mg
- Extended-release tablets: 300 mg, 450 mg
- Oral lithium citrate solution (liquid): 8 mEq/5 mL

• **Lithobid®**

- Extended-release tablets: 300 mg, 450 mg

• **Eskalith®, Eskalith CR®**: discontinued

What is lithium and what does it treat?

Lithium is a mood stabilizer medication that works in the brain. It is approved for the treatment of bipolar disorder (also known as manic depression). Bipolar disorder involves episodes of depression and/or mania.

Symptoms of depression include:

- Depressed mood – feeling sad, empty, or tearful
- Feeling worthless, guilty, hopeless, or helpless
- Loss of interest or pleasure in normal activities
- Sleep and eat more or less than usual (for most people it is less)
- Low energy, trouble concentrating, or thoughts of death (suicidal thinking)
- Psychomotor agitation ('nervous energy')
- Psychomotor retardation (feeling like you are moving in slow motion)

Symptoms of mania include:

- Feeling irritable or "high"
- Having increased self esteem
- Feeling like you don't need to sleep
- Feeling the need to continue to talk
- Feeling like your thoughts are too quick (racing thoughts)
- Feeling distracted
- Getting involved in activities that are risky or could have bad consequences (e.g., excessive spending)

Lithium may also be helpful when prescribed "off-label" for depression, especially when combined with antidepressant medications. "Off-label" means that it hasn't been approved by the Food and Drug Administration for this condition. Your mental health provider should justify his or her thinking in recommending an "off-label" treatment. They should be clear about the limits of the research around that medication and if there are any other options.

All FDA warnings are at the end of this fact sheet. Please consult them before taking this medication.

What is the most important information I should know about lithium?

Bipolar disorder requires long-term treatment. Do not stop taking lithium, even when you feel better. With input from you, your health care provider will assess how long you will need to take the medication. Missing doses of lithium may increase your risk for a relapse in your mood symptoms.

Do not stop taking lithium or change your dose without talking to with your health care provider first.

In order for lithium to work properly, it should be taken every day as ordered by your health care provider.

Periodically, your health care 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 cell counts or kidney function.

Are there specific concerns about lithium and pregnancy?

If you are planning on becoming pregnant, notify your health care provider so that he/she can best manage your medications. People living with bipolar disorder who wish to become pregnant face important decisions. It is important to discuss the risks and benefits of treatment with your doctor and caregivers.

Lithium has been associated with an increased risk of Ebstein's anomaly, a heart valve defect. Even though data suggest that the risk of Ebstein's anomaly from first trimester use of lithium is very low, an ultrasound of the heart is recommended at 16 to 20 weeks of gestation. Lithium levels should be monitored monthly in early pregnancy and weekly near delivery. Do not stop taking lithium without first speaking to your health care provider. Discontinuing mood stabilizer medications during pregnancy has been associated with a significant increase in symptom relapse.

Regarding breastfeeding, caution is advised since lithium does pass into breast milk. In general, breastfeeding is not recommended while taking lithium.

What should I discuss with my health care provider before taking lithium?

- Symptoms of your condition that bother you the most
- If you have thoughts of suicide or harming yourself
- Medications you have taken in the past for your condition, whether they were effective or caused any adverse effects
- If you experience side effects from your medications, discuss them with your provider. Some side effects may pass with time, but others may require changes in the medication.
- Any other psychiatric or medical problems you have
- All other medications you are currently taking (including over the counter products, herbal and nutritional supplements) and any medication allergies you have
- Other non-medication treatment you are receiving, such as talk therapy or substance abuse treatment. Your provider can explain how these different treatments work with the medication.
- If you are pregnant, plan to become pregnant, or are breastfeeding
- If you drink alcohol or use illegal drugs

How should I take lithium?

Lithium is usually taken 1-3 times per day with or without food.

Typically patients begin at a low dose of medication and the dose is increased slowly over several weeks.

The dose usually ranges from 600 mg to 1200 mg daily, but some people may require higher doses depending on weight or symptoms. Only your health care provider can determine the correct dose for you.

Extended release tablets: Swallow the tablet whole. Do not crush or chew extended release tablets.

Liquid: Measure with a dosing spoon or oral syringe, which you can get from your pharmacy.

Use a calendar, pillbox, alarm clock, or cell phone alert to help you remember to take your medication. You may also ask a family member a friend to remind you or check in with you to be sure you are taking your medication.

What happens if I miss a dose of lithium?

If you miss a dose of lithium, take it as soon as you remember, unless it is closer to the time of your next dose. Discuss this with your health care provider. Do not double your dose or take more than what is prescribed.

What should I avoid while taking lithium?

Avoid drinking alcohol or using illegal drugs while you are taking lithium. They may decrease the benefits (e.g., worsen your condition) and increase adverse effects (e.g., sedation) of the medication.

Avoid low sodium diets and dehydration because this can increase the risk of lithium toxicity.

Avoid over the counter and prescription pain medications that contain nonsteroidal anti-inflammatory medications (NSAIDs) such as ibuprofen (Motrin[®], Advil[®]) or naproxen (Aleve[®], Naprosyn[®]) because these medications can increase the risk of toxicity from lithium.

Avoid excessive intake of caffeinated beverages, such as coffee, tea, cola or energy drinks, since these may decrease levels of lithium and decrease effectiveness of the medication. Discontinuing caffeine use may increase lithium levels. Consult your health care provider before reducing or stopping caffeine use.

What happens if I overdose with lithium?

If an overdose occurs call your doctor or 911. You may need urgent medical care. You may also contact the poison control center at 1-800-222-1222.

A specific treatment to reverse the effects of lithium does not exist, but there are treatments to decrease the effects of the medication. Only a doctor can determine if you require treatment.

What are the possible side effects of lithium?

Common side effects

- Headache
- Nausea or vomiting
- Diarrhea
- Dizziness or drowsiness
- Changes in appetite
- Hand tremors
- Dry mouth
- Increased thirst
- Increased urination
- Thinning of hair or hair loss
- Acne-like rash

Rare/Serious side effects

Signs of lithium toxicity include severe nausea and vomiting, severe hand tremors, confusion, vision changes, and unsteadiness while standing or walking. These symptoms need to be addressed immediately with a medical doctor to ensure your lithium level is not dangerously high.

In rare cases, lithium may lead to a reversible condition known as diabetes insipidus. If this occurs you would notice a significant increase in thirst and how much fluid you drink and how much you urinate. Talk to your doctor if you notice you are urinating more frequently than usual.

Are there any risks for taking lithium for long periods of time?

Hypothyroidism (low levels of thyroid hormone) may occur with long-term lithium use.

Rare kidney problems have been associated with long-term use of lithium. The risk increases with high levels of lithium. Your doctor will monitor your kidney function at routine check-ups to ensure this does not occur.

What other medications may interact with lithium?

The following medications can **increase** the levels and effects of lithium:

- Diuretics, such as: hydrochlorothiazide (Microzide®), furosemide (Lasix®), bumetanide (Bumex®), torsemide (Demadex®), acetazolamide (Diamox®), chlorthiazide (Diuril®), and chlorthalidone (Thalitone®)
- Non-steroidal anti-inflammatory medications (NSAIDs) including: Ibuprofen (Advil®, Motrin®), naproxen (Naprosyn®), celecoxib (Celebrex®), diclofenac (Voltaren®), and nabumetone (Relafen®)
- Certain blood pressure medications, called angiotensin receptor blockers or angiotensin converting enzyme inhibitors.
 - Angiotensin receptor blockers (ARBs): valsartan (Diovan®), olmesartan (Benicar®), candesartan (Atacand®), losartan (Cozaar®)
 - Angiotensin converting enzyme (ACE) inhibitors: enalapril (Vasotec®), captopril (Capoten®), benazepril (Lotensin®), fosinopril (Monopril®)
- Certain antidepressants, known as monoamine oxidase inhibitors (MAOIs). Examples include phenelzine (Nardil®), tranylcypromine (Parnate®), selegiline (Eldepryl®, Emsam®), and isocarboxazid (Marplan®)

The following medications may **decrease** the levels and effect of lithium:

- Caffeine
- Sodium chloride (table salt)
- A medication used to treat breathing problems called theophylline (Theo-Dur®, Slo-Bid®)

How long does it take for lithium to work?

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

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

Summary of Black Box Warnings

Lithium Toxicity

Lithium toxicity is closely related to lithium blood levels and can occur at doses close to therapeutic levels; lithium levels should be monitored closely when starting the medication or if individuals experience side effects of the medication.

Important Disclosure: This information is being provided as a community outreach effort of the American Association of Psychiatric Pharmacists. This information is for educational and informational purposes only and is not medical advice. This information contains a summary of important points and is not an exhaustive review of information about the medication. Always seek the advice of a physician or other qualified medical professional with any questions you may have regarding medications or medical conditions. Never delay seeking professional medical advice or disregard medical professional advice as a result of any information provided herein. The American Association of Psychiatric Pharmacists disclaims any and all liability alleged as a result of the information provided herein.