

# Lithium



## Does this test have other names?

Lithium levels, serum lithium levels, lithium blood test

## What is this test?

This test measures and checks the amount of lithium in your blood.

Lithium is a medicine used to treat psychiatric illnesses, such as bipolar disorders, acute mania, and other mood disorders. This test is used to find out the right dose for you if you're just starting lithium treatment. The test is also used to make sure you continue to get the right amount for as long as you take this medicine.

If you take too much lithium, it can cause more side effects. If you take too little, the medicine might not help your condition.

## Why do I need this test?

You may need this test once or twice a week when you first start taking lithium to help your healthcare provider figure out the best dose for you.

You may also have this test after you've been taking lithium for a while to see whether your dose needs to be changed. You may have this test again 5 to 7 days after your dosage is changed.

You may also have this test if you have symptoms, such as tremor, nausea, vomiting, or diarrhea. This will let your healthcare provider know if your symptoms are because your lithium level is too high or if you have other conditions that need to be treated.

## What other tests might I have along with this test?

Your healthcare provider may also order tests that check how well your kidneys and other organs are working. This is because lithium is excreted through your kidneys. It is not metabolized. These tests may include:

- Urinalysis
- Blood urea nitrogen (BUN)
- Creatinine
- Calcium
- Complete blood count
- Thyroid function
- Electrocardiogram

Your provider may also order a pregnancy test because you shouldn't take lithium during the first 3 months of pregnancy.

Your provider may also order other tests while you're taking lithium, to watch how your kidneys and thyroid are working. These may include:

- BUN
- Creatinine

- Urinalysis
- Thyroid function

## What do my test results mean?

Test results may vary depending on your age, gender, health history, and other things. Your test results may be different depending on the lab used. They may not mean you have a problem. Ask your healthcare provider what your test results mean for you.

Results are given in milliequivalents per liter (mEq/L). For lithium to be effective, your level should be between 0.6 and 1.2 mEq/L, but not more than 1.2 mEq/L.

Lithium has a very narrow range where it is effective and nontoxic. At a level of 1.2 mEq/L, lithium can start to cause problems.

If your levels are too high, you could get lithium poisoning and need treatment right away. Too much lithium can be fatal. If your levels are too low, the medicine may not help your condition. Keep a diary of your lithium levels and the blood-level range that provides you with the best protection and fewest side effects. Bring this information with you to your appointments. This information can help your healthcare provider adjust your dose.

Levels that are higher or lower may also mean you have problems with your heart or kidneys.

## How is this test done?

The test is done with a blood sample. A needle is used to draw blood from a vein in your arm or hand.

## Does this test pose any risks?

Having a blood test with a needle carries some risks. These include bleeding, infection, bruising, and feeling lightheaded. When the needle pricks your arm or hand, you may feel a slight sting or pain. Afterward, the site may be sore.

## What might affect my test results?

Timing is important. Having the test 8 to 12 hours after your last dose of lithium gives the best results.

Certain medicines can affect your results. These include:

- Antibiotics
- Arthritis medicines
- Phenytoin, for epilepsy
- Water pills (diuretics)
- Nonsteroidal anti-inflammatory drugs (NSAIDs), except aspirin
- Cardiovascular medicines. These include angiotensin converting enzyme (ACE) inhibitors and calcium channel blockers

Being dehydrated, such as losing lots of fluid with sweating or not drinking enough fluids, or a diet too high or low in salt can also affect your results.

## How do I get ready for this test?

You don't need to prepare for this test but note the time you took your last dose of lithium. Be sure your healthcare provider knows about all medicines, herbs, vitamins, and supplements you are taking. This includes medicines that don't need a prescription and any illegal drugs you may use.

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