

Electrolytes



Does this test have other names?

Electrolyte panel, Lytes, sodium (Na), potassium (K), chloride (Cl), bicarbonate (HCO₃)

What is this test?

This test measures the main electrolytes in your body. These are sodium, chloride, potassium, and carbon dioxide.

The cells in your body carefully balance fluids and electrolytes. Electrolytes are electrically-charged minerals. Electrolytes move fluid in and out of your cells. They carry nutrients into the cells and waste products back out. They help keep your water level normal and your pH level stable. They help the acids and bases in your blood stay in balance.

Electrolytes in blood and tissues are in the form of salts. You get electrolytes from the food you eat and fluids you drink.

Why do I need this test?

You may need this test if you feel confused, nauseated, and weak. These are often signs that your body's electrolytes may be out of balance.

If you are in the hospital, your healthcare provider may order an electrolyte panel to help make a diagnosis or rule out other problems. You may also need this test if your healthcare provider wants to keep track of your treatment for another condition. For example, heart failure can cause an electrolyte imbalance. People in the hospital for heart failure may have this test to see if treatment is working.

You may also have this test if you have:

- Diarrhea
- Vomiting
- Fatigue
- Dizziness
- Weakness
- Diabetes
- Heart disease
- Nerve damage
- Muscle problems
- Cancer treatment
- Chronic kidney disease

You may also have your electrolytes tested if you're taking diuretics or other medicines that cause you to urinate more often.

You may also have this test if you collapse while playing sports or exercising, or if you are in the hospital for a heat-related illness. You lose electrolytes as you sweat. So if you are dehydrated from sports or heat, this can

lead to an unsafe electrolyte imbalance.

What other tests might I have along with this test?

You may also have a urine test for chloride, a blood test for glucose, or a basic urinalysis. If you've had a heart attack, you may have an electrocardiogram (ECG) along with an electrolyte test. You may have other blood tests to see how well your kidneys are working.

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.

Each part of an electrolyte panel checks for a different electrolyte. Results differ depending on your age and health.

Results are given in milliequivalents per liter (mEq/L). Here are the normal ranges for each type of electrolyte in blood:

Potassium (K)

- Adults: 3.5 to 5 mEq/L
- Children: 3.4 to 4.7 mEq/L
- Babies: 4.1 to 5.3 mEq/L
- Newborns (0-7 days old): 3.7 to 5.9 mEq/L

If your potassium levels are too high or too low, you may be in danger of shock or a dangerous heart rhythm.

Chloride (Cl)

- Adults: 96 to 106 mEq/L
- Newborns: 96 to 113 mEq/L

Sodium (Na)

- Adults: 136 to 145 mEq/L
- Children: 136 to 145 mEq/L
- Premature babies: 132 to 140 mEq/L
- Full-term babies: 133 to 142 mEq/L

Bicarbonate (HCO₃)

- Adults: 23 to 28 mEq/L
- Children (2-10 years): 17 to 30 mEq/L

How is this test done?

Your electrolytes can be checked with either a blood or urine test. The blood test is done with a blood sample. A needle is used to draw blood from a vein in your arm or hand. For a urine test, you provide a urine sample in a specimen container.

Does this test pose any risks?

Having a blood test with a needle has 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.

A urine test has no known risks.

What might affect my test results?

The amount of fluid you drink or lose can affect your test results. Results can also be affected by vomiting, diarrhea, or sweating a lot from exercise.

Some medicines, such as those used to lower high blood pressure or reduce stomach acid, can cause electrolyte problems.

How do I get ready for this test?

Ask your healthcare provider if you need to stop eating certain foods or taking certain medicines before this test. Tell your healthcare provider 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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