

Metanephrines (Blood)



Does this test have other names?

Metanephrine, plasma free, fractionated plasma free metanephrines

What is this test?

This test measures the substances metanephrine and normetanephrine in your blood. It helps find out if you have a tumor of the adrenal glands called pheochromocytoma.

The adrenal glands sit on top of your kidneys. They make the hormone adrenaline and other adrenaline-like chemicals called catecholamines. Adrenaline controls your blood pressure and helps you cope with stress. Metanephrine and normetanephrine are catecholamines that result when adrenaline breaks down.

Healthcare providers disagree on the best test for diagnosing adrenal gland tumors. Some providers believe a urine test to measure catecholamines is better than this blood test because it has fewer false-positive results.

Why do I need this test?

You may need this test if your healthcare provider believes that you have an adrenal gland tumor. Symptoms include:

- Fast heartbeat
- Headaches
- Sweating
- Rise and fall in blood pressure

You also may have fever, chest pain, stomach pain, nausea, vomiting, anxiety, tremors, heat intolerance, and weight loss.

Most pheochromocytomas are not cancer.

What other tests might I have along with this test?

You may also need a urine test to measure catecholamines. They may also order these tests:

- **Glucagon stimulation test.** This test needs you to be injected with the hormone glucagon. If you have an adrenal gland tumor and you are given glucagon, you may have symptoms.
- **Clonidine suppression test.** This test measures adrenaline and noradrenaline, as well as metanephrines in your blood.

You may also need a CT, MRI, or other scan to look for a tumor.

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 nanomoles per liter (nmol/L). Normal findings are:

- Normetanephrine: Less than 0.9 nmol/L
- Metanephrine: Less than 0.5 nmol/L

Higher levels of metanephrines may mean that you have an adrenal gland tumor. But false-positive results can happen.

Higher levels may also be caused by obstructive sleep apnea, stress, or other illnesses.

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?

Your results could be affected by:

- Having caffeinated drinks or alcohol
- Exercising vigorously
- Being under a great deal of stress
- Starving yourself

Certain medicines can also affect your results. These include epinephrine- and norepinephrine-containing medicines, tricyclic antidepressants (such as nortriptyline, imipramine, and doxepin), levodopa, lithium, nitroglycerin, and acetaminophen.

How do I get ready for this test?

Don't exercise vigorously or have caffeinated drinks or alcohol before your test. Don't take acetaminophen for at least 48 hours before the test. If you take a tricyclic antidepressant, your healthcare provider may slowly reduce your dosage and stop the medicine at least 2 weeks before your test. Try to stay away from stress. You may be asked to rest quietly for 15 to 30 minutes before your blood sample is collected.

Be sure your 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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