

Catecholamines (Urine)



Does this test have other names?

urine metanephrines, epinephrine, norepinephrine, dopamine

What is this test?

This test measures the levels of catecholamines in your urine.

Catecholamines are hormones made by your adrenal glands. They are released when you have physical or emotional stress. These hormones include epinephrine (also called adrenalin), norepinephrine, and dopamine. They do many things in your body. They send nerve impulses in your brain, narrow blood vessels, and raise your heart rate.

People who have a rare type of tumor called a pheochromocytoma have high levels of catecholamines in their urine. These tumors cause high blood pressure. The high blood pressure often goes away if the tumor is taken out. About 95% of these tumors are found in the belly.

Why do I need this test?

You may need this test if your healthcare provider thinks you have pheochromocytoma. Symptoms may include:

- Headaches
- Sweating
- Rapid heart rate (palpitations)
- Trouble breathing
- Panic attack
- High blood pressure

Not everyone with this type of tumor has high blood pressure. Up to 3 in 20 people with this type of tumor have normal blood pressure.

Other symptoms may include anxiety, weakness, and symptoms similar to those of a panic attack. Less common symptoms include blurry vision, pale skin, increased thirst and urination, constipation, belly pain, and weight loss.

You might also have this test if you have high blood pressure that doesn't get better with other treatment.

What other tests might I have along with this test?

Your healthcare provider may also order other tests, including:

- Blood tests
- CT scan or MRI of your belly and pelvis
- Iodine-123-metaiodobenzylguanidine (MIBG) scintigraphy

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 micrograms per 24 hours (mcg/24 hours). Normal results are:

- Norepinephrine: less than 100 mcg/24 hours
- Epinephrine: 0 to 20 mcg/24 hours
- Dopamine: 65 to 400 mcg/24 hours
- Normetanephrine: 105 to 354 mcg/24 hour, or metanephrine: 74 to 297 mcg/24 hours
- Total catecholamines: less than 100 mcg/24 hours

Higher levels of these hormones may mean you have a pheochromocytoma tumor.

How is this test done?

This test needs a 24-hour urine sample. For this sample, you must collect all of your urine for 24 hours. Empty your bladder completely first thing in the morning without collecting it. Note the time. Then collect your urine every time you go to the bathroom for the next 24 hours.

Does this test pose any risks?

The test poses no known risks.

What might affect my test results?

Certain medicines can affect your results. Check with your healthcare provider to see if any of the medicines you take may affect the test results. Some of these medicines are tricyclic antidepressants and cold and allergy medicines.

These foods can also affect your results:

- Coffee, including decaffeinated coffee
- Tea
- Chocolate
- Vanilla, including foods and drinks that contain vanilla
- Bananas
- Oranges and other citrus fruits
- Walnuts
- Avocados
- Fava beans
- Cheese
- Beer and red wine
- Licorice

Having your period on the day of the test can also affect your results.

How do I get ready for this test?

Your healthcare provider may ask you to stop taking tricyclic antidepressant medicine at least 2 weeks before the test. Never suddenly stop your medicines before talking with your healthcare provider. They may advise slowly decreasing the amount of medicine you take.

Don't have any of the foods listed above for several days before or during the test. Try to stay away from stressful situations. Don't do vigorous exercise or get cold before the test. Don't use tobacco before the test. If you have your period on the day of the test, tell the lab person doing the collection.

Be sure your healthcare provider knows about all other 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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