

5-Hydroxyindoleacetic Acid (Urine)



Does this test have other names?

5-hydroxyindoleacetic acid urine, 5-HIAA, HIAA

What is this test?

This test finds out how much 5-hydroxyindoleacetic acid (5-HIAA) is in your urine. This acid is a waste product that comes from the breakdown of serotonin by the liver. Serotonin is a hormone that plays a role in transmitting nerve impulses. It also affects your sleep and mood. Your body normally gets rid of 5-HIAA in your urine.

You may have higher levels of 5-HIAA in your urine if you have a carcinoid tumor. These tumors secrete serotonin. With more serotonin in your body, more is broken down. This leads to more 5-HIAA in your urine. Because serotonin in the blood is broken down very quickly, the amount of 5-HIAA collected in the urine over a full day more accurately reflects the rate at which serotonin is being made than the blood level at a particular time.

Why do I need this test?

You may need this test if you have symptoms of a carcinoid tumor. Carcinoid tumors can occur anywhere, such as the intestinal tract, the lungs, appendix, and other body tissues. But most start in the small bowel. Signs and symptoms include:

- Flushing in your face and neck
- Diarrhea and abdominal cramps
- Nausea and vomiting
- Low blood pressure
- Unexplained weight loss
- Irregular heartbeat
- Watery eyes
- Asthma-like respiratory symptoms (wheezing)
- Sexual dysfunction in men

What other tests might I have along with this test?

Your healthcare provider may also order imaging studies and a biopsy to help diagnose a tumor. A tumor marker protein, chromogranin A, may be ordered as a blood test. Your provider may also order a liver scan if they suspect that the tumors have spread.

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.

Normal results are 2 to 9 milligrams (mg) of 5-HIAA over 24 hours. Women generally have lower levels than men.

Higher levels of 5-HIAA may mean you have:

- Carcinoid tumors
- Noncarcinoid tumors
- Cystic fibrosis
- Malabsorption

Lower levels of 5-HIAA may mean you have:

- Depression
- Migraines

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 over the next 24 hours. Be sure to keep the sample in a cool, dark place while you are collecting your urine.

Does this test pose any risks?

This test poses no known risks.

What might affect my test results?

Eating certain foods containing serotonin can raise 5-HIAA levels. These foods include:

- Fruit in general
- Bananas
- Pineapple and its juice
- Kiwi
- Plums
- Tomatoes and all tomato products
- Eggplant
- Avocados
- Certain nuts, including walnuts and pecans

Certain medicines can raise or lower your 5-HIAA levels. These include:

- Acetaminophen
- Ethyl alcohol
- Some antidepressants
- Cough medicines or antihistamines
- Medicines to relax muscles

Strenuous exercise can also raise your 5-HIAA levels.

How do I get ready for this test?

Don't eat foods containing serotonin for at least 3 days before the test or during the testing period. You may also need to stop taking certain medicines before the test. 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.

If you are doing a 24-hour test, make sure you understand how to collect the sample. Ask if there are any foods you should not eat before or during the test.

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