

# Porphyryns (Urine)



## Does this test have other names?

Mauzerall-Granick test

## What is this test?

This test looks for chemicals called porphyrins in your urine. If you have high levels of these chemicals, you may have porphyria.

Porphyria refers to a group of inherited or acquired diseases that prevent your body from correctly making heme, the pigment in red blood cells that contains iron. Heme is made in the bone marrow and liver. A large amount of heme is present as hemoglobin in red blood cells and bone marrow. Hemoglobin carries oxygen throughout the body. Eight enzymes are needed to create heme, and if any are lacking, the result can be a type of porphyria. Porphyria is rare and is often inherited. Acquired porphyria may result from iron or lead toxicity, alcohol use, hepatitis C, HIV, and some medicines.

Porphyrins and related chemicals are made in your body as part of the process of making heme. Certain types of porphyria cause these chemicals to pass into your urine.

## Why do I need this test?

You may need this test if your healthcare provider believes that you have porphyria. Porphyria can affect the nervous system or skin. Sometimes both are affected. The condition may or may not cause symptoms. Symptoms may develop over hours or days and last for days or weeks. Symptoms may be brought on by various medicines, smoking, drinking alcohol, weight loss, pregnancy, infections, or major surgery. Symptoms include:

- Skin problems after sun exposure
- Pain, especially belly pain
- Numbness and tingling
- Digestive upset
- Personality changes
- Mental disorders
- Fast heart rate and high blood pressure
- Painful urination

If your first test shows an abnormal level of porphyrin or its precursors, you may need a second test to confirm the results.

Lead can also show up in urine, so this test may be used if your healthcare provider suspects you have lead poisoning.

This test may also be ordered to keep track of your response to treatment for porphyria.

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

You might also need a DNA test or blood or stool tests to diagnose porphyria.

## 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.

Different substances can be present at different levels in your urine, depending on the type of porphyria you have. For instance, you may have elevated levels in your urine of a porphyrin precursor called porphobilinogen. This may mean acute intermittent porphyria, variegate porphyria, or hereditary coproporphyria.

## How is this test done?

This test is done with a urine sample. Your healthcare provider may advise a spot urine sample or a 24-hour sample. For a 24-hour 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. Exactly 24 hours after you start your collection, end it by emptying your bladder for the last time.

Follow your healthcare provider's directions for collecting and storing the urine. Keep it out of bright light and store it in a cool place, like the refrigerator.

## What might affect my test results?

The test results may be affected if the urine sample is contaminated in any way.

## How do I get ready for this test?

You don't need to get ready for this 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.

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