

# 24-Hour Urine Cortisol



## Does this test have other names?

Cortisol urine test

## What is this test?

This test measures the level of the hormone cortisol in your urine. Hormones are chemical messengers that travel through your blood. Cortisol helps your body use proteins, fats, and carbohydrates. It helps maintain blood pressure, control blood sugar (glucose) levels, and regulate the immune system. It's made and released by the adrenal glands, which sit atop the kidneys.

Another hormone, adrenocorticotrophic hormone (ACTH), controls the release of cortisol. ACTH is made and released by the pituitary gland, which is at the base of your brain.

Cortisol is released at different times during the day, so the best way to measure it is to collect all the urine you produce over a 24-hour period.

## Why do I need this test?

You may need this test if your healthcare provider suspects a problem with your pituitary gland or your adrenal glands.

Too much cortisol (Cushing syndrome) causes symptoms such as:

- Weight gain in the upper part of your body
- High blood pressure
- High blood sugar
- Fragile skin
- Osteoporosis
- A round face
- Bruising and stretch marks on your skin
- Weakness and fatigue

Too little cortisol (adrenal insufficiency or Addison disease) causes symptoms such as:

- Weight loss
- Weakness and fatigue
- Low blood pressure
- Darkening of your skin
- Belly (abdominal) pain
- Vomiting and diarrhea. This can cause dehydration.

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

Your provider may also order an ACTH blood test. By comparing the results of both tests, your doctor will be better able to diagnose a problem with your adrenal glands or your pituitary gland.

## What do my test results mean?

Many things may affect your lab test results. These include the method each lab uses to do the test. Even if your test results are different from the normal value, you may not have a problem. To learn what the results mean for you, talk with your healthcare provider.

Urinary cortisol is measured in micrograms per 24 hours (mcg/24h). The normal range varies between labs. Your provider can give you normal reference values.

When cortisol and ACTH are measured together:

- High ACTH with high cortisol may mean a problem in your pituitary gland.
- High ACTH with low cortisol may mean a problem with your adrenal gland.
- Low ACTH with high cortisol may mean a problem in your adrenal glands.
- Low ACTH with low cortisol may mean a problem in your pituitary gland.

## How is this test done?

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

Your healthcare provider will probably give you specific instructions. Follow them carefully.

## Does this test pose any risks?

This test poses no known risks.

## What might affect my test results?

ACTH and cortisol levels may be affected by many factors, including:

- Stress
- Pregnancy
- Certain medicines

## How do I get ready for this test?

Ask your provider whether you need to restrict food, medicine, or activity before this test. Plan to be home for the 24 hours you do the test so you can store the urine sample properly. 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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