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Cortisol urine test

The cortisol urine test measures the level of cortisol in the urine. Cortisol is a glucocorticoid (steroid) hormone produced by the adrenal gland.

Cortisol can also be measured using a blood or saliva test.

How the Test is Performed

A 24-hour urine sample is needed. You will need to collect your urine over 24 hours in a container provided by the laboratory. Your health care provider will tell you how to do this. Follow instructions exactly.

Because cortisol production by the adrenal gland can vary, the test may need to be done three or more separate times over a few weeks to months to get a more accurate picture of average cortisol production.

How to Prepare for the Test

You may be asked not to do any vigorous exercise the day before the test.

You may also be told to temporarily stop taking medicines that can affect the test, including:

- Anti-seizure medicines
- Estrogen
- Human-made (synthetic) glucocorticoids, such as hydrocortisone, prednisone, and prednisolone
- Androgens

How the Test will Feel

The test involves only normal urination. There is no discomfort.

Why the Test is Performed

The test is done to check for increased or decreased cortisol production. Cortisol is a glucocorticoid (steroid) hormone released from the adrenal gland in response to adrenocorticotropic hormone (ACTH). This is a hormone released from the pituitary gland in the brain. Cortisol affects many different body systems. It plays a role in:

- Bone growth
- Blood pressure control

- Immune system function
- Metabolism of fats, carbohydrates, and protein
- Nervous system function
- Stress response

Different diseases, such as Cushing syndrome and Addison disease, can lead to either too much or too little production of cortisol. Measuring urine cortisol levels can help diagnose these conditions.

Normal Results

Normal range is less than 45 mcg/24 hours (124 nmol/24 hours) for women and less than 60 mcg/24 hours (165 nmol/24 hours).

Normal value ranges may vary slightly among different laboratories. Some labs use different measurements or may test different specimens. Talk to your provider about the meaning of your specific test results.

What Abnormal Results Mean

A higher than normal level may indicate:

- Cushing disease, in which the pituitary gland makes too much ACTH because of excess growth of the pituitary gland or a tumor in the pituitary gland
- Ectopic Cushing syndrome, in which a tumor outside the pituitary or adrenal glands makes too much ACTH
- Severe depression
- Tumor of the adrenal gland that is producing too much cortisol
- Severe stress
- Rare genetic disorders

A lower than normal level may indicate:

- Addison disease in which the adrenal glands do not produce enough cortisol
- Hypopituitarism in which the pituitary gland does not signal the adrenal gland to produce enough cortisol
- Suppression of normal pituitary or adrenal function by glucocorticoid medicines including pills, skin creams, eyedrops, inhalers, joint injections, chemotherapy

Risks

There are no risks with this test.

Alternative Names

24-hour urinary free cortisol (UFC)

References

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