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Dr. Lani's Directions for the 24-hour Urine Calcium Test

This test measures the amount of calcium in urine. All cells in the body require calcium in order to work. We need calcium for strong bones and teeth. Having enough calcium on board allow our heart to function, helps with muscle contraction, nerve signaling, and blood clotting.

Directions – no alcohol or calcium supplements for 48 hours before starting urine collection and light exercise only for 24 hours preceding the test and the 24 hours of the test day. If you are a female patient make sure they give you the collection container along with the storage container.

If you think your urine output will fill more that one container ask for two containers just in case.

You should try to collect every drop of urine during each 24-hour period. It does not matter how much or little urine is passed each time, as long as it is collected.

Directions Day one: Label the container with your name and date. It is best to keep the container capped in the refrigerator or a cool place.

- When you wake up in the morning urinate (empty the bladder) for the first time and flush it down the toilet. Note the exact time (eg, 6:15 AM). You will begin the urine collection at this time.
- Collect all urine during the day and night and store in the provided collection bottle. Store the bottle in a cool location or in the refrigerator. If you are unable to take the bottle to the lab immediately upon completing the collection store it in the refrigerator.

Day two:

- Finish by collecting the first urine passed the next morning, adding it to the collection bottle. This should be within ten minutes before or after the time of the first morning void on the first day (which was flushed). In this example, you would try to void between 6:05 and 6:25 on the second day.

IMPORTANT NOTES about collection: If you need to have a bowel movement, any urine passed with the bowel movement should be collected. Try not to include feces with the urine collection. If feces does get mixed in, do not try to remove the feces from the urine collection bottle.

If you need to urinate one hour before the final collection time, drink a full glass of water so that you can void again at the appropriate time. If you have to urinate 20 minutes before, try to hold the urine until the proper time.

Note the exact time of the final collection, even if it is not the same time as when collection began on day 1.

DOCTOR RECOMMENDATIONS FOR THIS TEST MAY VARY: The amount of time to stop calcium supplements can vary depending on what your doctor is trying to sort out. My first preferred first 24-hour urine test is to stop calcium supplements for 48 hours prior to testing. If urinary output of calcium is elevated then a second test is ordered and calcium supplementation is stopped for 7-10 days. I may run this test several times before I am satisfied with the results. If the patient consumes a lot of dairy I may also ask the patient to decrease the amount of dairy that they consume for the next test. Keep in mind that other lab tests are also important when assessing bone health. Additional lab testing may include: serum calcium, phosphorus, magnesium RBC, potassium, 25-hydroxy-vitamin D, 1,25 dihydroxy-vitamin D, PTH-intact with calcium, ionized calcium and bone markers and other tests depending on your individual needs.

Medications can interfere with test results.

- Find out from your health care provider if any medications you are taking will interfere with this test.
- Do not stop or change your medications without talking to your doctor first.

Urine calcium levels can help your doctor:

- Decide on the best treatment for the most common type of [kidney stone](#), which is made of calcium. This type of stone may occur when the kidney leaks too much calcium into the urine.
- Diagnose and monitor someone who has a problem with the [parathyroid gland](#), which helps control calcium levels in the blood and urine.
- Help diagnose whether or not the kidneys may be leaking calcium.
- Help diagnose the cause of problems with your blood calcium level or bones.

Normal Results

If you are eating a normal diet, the expected amount of calcium in the urine is 100 to 250 mg/day.

Normal value ranges may vary slightly among different laboratories. Talk to your doctor about the meaning of your specific test results.

The examples above show the common measurements for results for these tests. Some laboratories use different measurements or may test different specimens.

Note: mg/day = milligrams per day

What Abnormal Results Mean

High levels of urine calcium (above 300 mg/day) may be due to:

- Chronic kidney disease
- High [vitamin D](#) levels
- Leaking of calcium from the kidneys into the urine
- [Sarcoidosis](#)
- Ingesting too much calcium
- Too much production of parathyroid hormone (PTH) by the parathyroid glands in the neck (hyperparathyroidism)

- Use of some diuretics ("water pills")

Low levels of urine calcium may be due to:

- Disorders in which the body does not absorb nutrients from food well
- Disorders in which the kidney handles calcium abnormally
- Parathyroid glands in the neck do not produce enough PTH (hypoparathyroidism)
- Use of a water pill called a thiazide diuretic
- Very low levels of [vitamin D](#)

What you do not want to experience from your doctor: If your lab test comes back elevated and the doctor immediately assumes that you need a medication to treat the high urinary calcium output without additional testing is a red flag. What should happen is additional testing and further evaluation.

Resources:

Labtestsonline

Questdiagnostics

<http://www.nlm.nih.gov/medlineplus/ency/article/003603.htm>