

Osmolality (Stool)



Does this test have other names?

Stool osmolality

What is this test?

This test measures the concentration (osmolality) of certain particles in a sample of your watery stool. The amount of sodium, potassium, and other substances in your stool can affect its consistency. The test is used to find out why your stool isn't solid.

Short-term (acute) diarrhea often clears up on its own within a few days. But it's considered long-term (chronic) diarrhea when the loose, watery bowel movements last more than 4 weeks. A large number of disorders and medicines can cause chronic diarrhea:

- Infections from parasites, bacteria, or viruses
- Intestinal diseases like Crohn's disease, ulcerative colitis, and celiac disease
- Irritable bowel syndrome
- Endocrine diseases like diabetes and thyroid disease
- Weak immune system from cancer or HIV/AIDS
- Previous abdominal surgery or radiation to the abdomen
- Allergies
- Medicines, such as antibiotics, chemotherapy medicines, and laxatives

Some people may secretly abuse laxatives. This can cause chronic, watery diarrhea. Watery diarrhea caused by laxative abuse is called factitious diarrhea. This condition may have a mental health component.

This test also is used to find out whether your diarrhea is osmotic or secretory. Osmotic diarrhea results from something drawing water into your bowel. Secretory diarrhea happens when your body releases water into the bowel when it shouldn't.

Why do I need this test?

This test may be helpful when the cause of diarrhea is unclear.

What other tests might I have along with this test?

Your healthcare provider may also order other tests to help find the cause of your diarrhea. Which tests you have depend on your symptoms and what your provider suspects may be the cause. These tests may include:

- Complete blood count, or CBC, and differential
- Thyroid function
- Serum electrolytes
- Total protein

- Albumin
- Stool occult blood
- Stool test to look for the active ingredients in laxatives
- Sigmoidoscopy or colonoscopy (a camera is used to look inside your colon)

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.

Stool osmolality is measured in milliosmoles per kilogram (mOsm/kg). It normally ranges from 275 to 295 mOsm/kg. Stool osmolality less than 250 mOsm/kg may suggest factitious diarrhea.

How is this test done?

This test is done with a stool sample. You will likely be asked to give a random or a timed liquid stool sample. A timed stool sample is collected over a period of time. This is commonly 24 hours. The period of time may also be 48 or 72 hours.

Your healthcare provider will tell you how to collect a sample into a disposable specimen container with a lid. Don't collect fecal material from the toilet bowl, put toilet paper into the specimen container, or let the specimen contain urine.

In some cases, your provider may need to collect the sample using a rectal swab.

Does this test pose any risks?

This test poses no known risks.

What might affect my test results?

A sample contaminated with urine or toilet paper will not be accurate. Certain medicines can also affect your results.

How do I prepare for this test?

If your healthcare provider suspects that a certain food is causing your diarrhea, you may need to fast before the test. 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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