TEST

Anorectal manometry

Anorectal manometry measures how the rectum and anal muscles work during bowel control and emptying.

WHAT IT MEASURES
Anal pressures, rectal sensation, reflexes, and bowel-emptying coordination

SAMPLE
None; a thin catheter records pressure

FASTING NEEDED?
Sometimes, according to your center's preparation instructions

HOW LONG IT TAKES
About 30 to 60 minutes

RESULTS IN
Same day to several days; varies by laboratory

USED FOR
Diagnosing bowel-emptying and bowel-control problems

MAIN LIMITATION
Simulated bowel movements may not reflect normal toileting

Overview

Anorectal manometry tests the muscles and nerves involved in bowel control and emptying. "Anorectal" refers to the rectum, where stool is stored, and the anus, where it leaves the body.

A thin, flexible catheter records how strongly the anal muscles tighten and whether they relax when you try to pass stool. A small balloon may be inflated inside the rectum to test sensation and reflexes.

Results are interpreted alongside your symptoms, medical history, examination, and other tests.

Why the test is ordered

The test is most often used to investigate difficulty emptying the bowel or controlling stool and gas. It can assess:

In some children, the test checks for a normal rectal reflex when Hirschsprung disease is

suspected. Manometry cannot confirm the condition; a rectal biopsy may be needed.

- Long-term constipation, particularly straining or incomplete emptying
- Pelvic floor dyssynergia, in which muscles do not coordinate during a bowel movement
- Accidental stool leakage, called fecal incontinence
- Reduced awareness of stool in the rectum
- Anal muscle function before or after certain operations
- Whether pelvic floor biofeedback may help

Who should have the test

You may be offered anorectal manometry when symptoms continue despite basic treatment or their cause remains unclear. For constipation, it is useful when stool reaches the rectum but is difficult to pass. For bowel leakage, it can identify reduced or poorly coordinated pressure, sensation, or reflexes.

Testing may need to be delayed if you have severe anal pain, significant active rectal bleeding, or have recently had certain anorectal procedures.

How to prepare

Follow your testing center's instructions because protocols vary. The rectum usually needs to be empty, and you may be asked to use an enema several hours before the appointment.

Fasting is not always required. Some centers allow normal food and drinks; others ask you not to eat for a short period. Follow the instructions you receive.

Tell the center about:

Do not stop important medicines or regular laxatives unless specifically instructed. Wear comfortable clothing. Sedation is not usually needed, so most people can travel home and resume normal activities afterward.

- Prescription medicines, laxatives, suppositories, and enemas
- Previous rectal, anal, pelvic, or bowel surgery
- Current anal pain, bleeding, or a suspected fissure
- Pregnancy or recent childbirth

- Allergies, including sensitivity to latex or lubricants

What happens during the test

You will usually change from the waist down and lie on your side. Some testing may be done while you sit on a private toilet-like chair.

A clinician may first perform a gentle rectal examination with a gloved finger to check for stool, pain, blockage, and your ability to squeeze or relax.

The lubricated catheter is passed a short distance into the rectum without an incision. You may feel pressure or an urge to have a bowel movement. You will be asked to rest, squeeze, cough, and bear down as if passing stool.

A small balloon may be inflated gradually. You will report when you first feel it, when you feel an urge to pass stool, and when it becomes uncomfortable. This also tests whether the internal anal muscle relaxes when the rectum fills.

You may also have a balloon expulsion test, in which you try to pass a water-filled balloon in private. The catheter or balloon is then removed.

Understanding your results

There is no single universal normal range. Results depend on the equipment, method, age, sex, pregnancy or postpartum status, medicines, previous procedures, and clinical circumstances. The report should use the laboratory's reference values.

It may describe:

An unusual result does not identify one cause. Low pressure, for example, may reflect muscle injury, nerve problems, previous surgery, testing effort, or the reference values used.

- Resting pressure: Mainly reflects the internal anal sphincter
- Squeeze pressure: Shows how strongly and how long you can voluntarily tighten the external sphincter
- Push coordination: Assesses whether the rectum generates pressure while the anal muscles relax
- Rectal sensation: Records when balloon filling, urgency, and discomfort are noticed
- Rectoanal inhibitory reflex: Automatic relaxation of the internal sphincter when the rectum stretches

- Balloon expulsion: Tests whether you can pass a simulated piece of stool

What affects the results

Anxiety, embarrassment, pain, or unclear instructions can affect how strongly you squeeze or push. Coaching or repeating a measurement may improve reliability.

Position also matters. Passing stool while lying on your side is less natural than using a toilet, so some people show poor coordination during testing despite emptying normally at home.

Other influences include:

Coffee, meals, and exercise may affect bowel activity or comfort. Follow your center's instructions.

- Stool remaining in the rectum
- Recent enemas, suppositories, or laxatives
- Medicines that affect bowel or muscle function
- Recent anorectal surgery, childbirth injury, pelvic radiation, or neurological illness
- Catheter design, balloon size, protocol, and reference values
- Age, sex, pregnancy, and the postpartum period

Accuracy and limitations

Anorectal manometry measures pressure and sensation but does not directly show muscle structure or an ordinary bowel movement.

It may suggest a coordination problem that is not consistently present because the position is unfamiliar, the catheter causes discomfort, or you cannot reproduce your usual technique. Some healthy people also have an abnormal pushing pattern in the laboratory. Conversely, a short test may miss intermittent problems.

A defecation disorder is therefore not usually diagnosed from manometry alone. Balloon expulsion testing adds practical information. Defecography, which provides imaging while you empty the rectum, may help when rectal prolapse or another structural problem is suspected.

For bowel leakage, anal ultrasound or magnetic resonance imaging may be needed to identify damaged muscle. An absent rectal reflex may support concern about Hirschsprung disease, but tissue testing confirms the diagnosis.

Risks and complications

The test is generally low risk. Temporary pressure, cramping, embarrassment, mild soreness, or a small amount of bleeding may occur, especially if the anal area is irritated.

Serious complications are uncommon. Contact the testing center promptly if pain or bleeding is more than mild or does not settle. Seek urgent medical care for heavy bleeding, severe or worsening abdominal or rectal pain, fainting, or fever after the procedure.

What happens next

You can usually resume normal food, activity, and medicines immediately unless instructed otherwise.

A clinician will interpret the results with your symptoms, examination, and balloon expulsion findings. Follow-up may include changes to constipation or continence treatment, pelvic floor biofeedback, or further testing.

Biofeedback teaches coordination of the abdominal and pelvic floor muscles. It may be recommended when the overall assessment supports a coordination problem.

Common questions

Can I drink coffee before anorectal manometry?

Possibly, but follow your center's instructions. Coffee can stimulate the bowel. If fasting is required, it may not be allowed.

Does the time of day matter?

There is no standard requirement for morning testing. Preparation and an empty rectum are usually more important.

Can I exercise beforehand?

Light activity is unlikely to affect the test. Avoid exercise that causes pelvic or anal discomfort immediately beforehand.

Will the test hurt?

Most people feel pressure, fullness, or an urge to pass stool rather than sharp pain. Tell the clinician immediately if insertion or balloon inflation hurts so testing can be paused or adjusted.

Will I be sedated, and can I drive home?

Sedation is not usually used because you must follow instructions and report sensations. Most people can drive and resume normal activities afterward.

Can I take my laxatives before the test?

Do not change them without instructions. Centers differ on whether laxatives, suppositories, or enemas should be continued or adjusted.

Sources

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