

COLON AND RECTAL SURGICAL ASSOCIATES

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Fecal Incontinence

Common. Embarrassing. Treatable.

Fecal incontinence refers to the involuntary loss of solid or liquid stool, or flatus. Affecting more than 18 million Americans, fecal incontinence can undermine self-confidence, create anxiety, and lead to social isolation. Women are almost twice as likely as men to report incontinence to solid stool as are men. Out of embarrassment, many patients are hesitant to discuss this problem with a healthcare provider. However, fecal incontinence is treatable. Treatment can lessen symptoms in most cases and may possibly provide a cure. Several recent breakthroughs hold significant promise.

CAUSES

Continence requires the normal functioning of both the lower digestive tract and the nervous system. In most cases, incontinence results from a combination of causes. The internal and external anal sphincters surround the distal rectum and anal canal. The sphincters and the surrounding pelvic musculature effectively hold the anorectum closed and prevent the involuntary escape of feces. Any damage to, or loss of control over these muscles can lead to incontinence. The damage most commonly occurs during vaginal childbirth or anal surgery.

Neurologic disorders such as diabetes, multiple sclerosis, or spinal cord injury can decrease anorectal sensation and control over the lower digestive tract. Nerve damage to the pudendal or inferior rectal nerves during vaginal childbirth can also decrease anal sphincter function.

Decreased distensibility of the rectum, as in inflammatory bowel disease such as Crohn's disease or ulcerative colitis may impair the rectum's ability to expand or to store fecal matter. Radiation-induced inflammation of the rectum may lead to radiation proctitis

and urgency. The radiation may have been used to treat prostatic cancer, rectal cancer or various gynecologic malignancies.

In a fecal impaction, large masses of hardened or even soft feces accumulate in the rectum and cause rectal over-distention. The anal sphincters reflexively relax and allow liquid stool to escape around the blockage. Fecal impaction is a common cause of transient incontinence in older adults. Factors that make impaction more likely include certain mental health conditions, Parkinson's disease, Alzheimer's disease, the use of narcotics and immobility.

Diarrhea caused by irritable bowel syndrome, active inflammatory bowel disease, or acute gastroenteritis, can lead to the involuntary, uncontrollable and embarrassing loss of liquid stool.

Often, the cause of fecal incontinence cannot be identified. This idiopathic incontinence most commonly occurs in middle-aged and older women.

HOW TO INVESTIGATE INCONTINENCE

The underlying cause of fecal incontinence often can be established with a combination of medical history, physical examination, and diagnostic testing. A physical exam may reveal decreased sphincter tone, a patulous sphincter, a sphincter defect or an atrophied perineal body.

Direct examination is the first step in the testing process. Anoscopy, sigmoidoscopy or colonoscopy may be recommended. These can help identify inflammation, tumors, or other disorders that can cause incontinence.

Diagnostic tests are particularly useful in

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pinpointing the cause and ensuring correct treatment. Stool cultures may be obtained to determine if there is an underlying reason for diarrhea, especially if an infectious cause is suspected. A history of any recent foreign travel should be obtained.

Anorectal manometry measures internal anorectal pressures under different conditions. Manometry can identify several of the different causes of incontinence and may be particularly useful in revealing poor anal sphincter tone. Manometry can also be used to determine if rectal sensation and rectal reflexes are impaired.

An anal or rectal ultrasound examination can reveal abnormalities of the anal sphincters, the rectal wall, and the pelvic muscles that help maintain continence. These structures may have been previously damaged during childbirth or elective operations on the anorectum. Ultrasound is the safest and most reliable test for identifying structural abnormalities of both anal sphincters.

HOW CAN THE PHYSICIAN HELP?

Three classes of treatment are commonly used to ameliorate or cure fecal incontinence. Depending on the underlying cause of the incontinence, treatment may include medical therapy, biofeedback or operative intervention.

NONSURGICAL THERAPY

Medical therapy includes medications that can firm the stool, and reduce or eliminate episodes of fecal leakage. Often, basic measures will improve minor incontinence, but more aggressive measures may be needed to control frequent or severe episodes of leakage.

Bulking agents promote larger stools and may help control diarrhea and leakage by thickening the stools. Methylcellulose is a form of fiber that is commonly used. Increasing natural dietary fiber may also help to bulk stools.

Medications that reduce stool frequency are usually prescribed for diarrhea, and may help to control incontinence. Loperamide (Imodium®) and diphenoxylate (Lomotil®) are two such medications. Loperamide can also increase anal sphincter tone, thus helping to control the egress of anal contents.

When taken before meals, anticholinergic medications such as hyoscyamine can decrease the incontinence that occurs after meals in some people. Anticholinergic medications reduce colonic contractions in part by reversibly blocking the binding of the neurotransmitter acetylcholine to receptor sites in cells of the parasympathetic nervous system.

Patients who have become impacted with large amounts of soft or hard stool may require an initial manual disimpaction. A fecal impaction allows the uncontrollable leakage of liquid around the impaction. After disimpaction, one or more medications are prescribed to keep the intestinal contents moving on a regular basis. This will prevent the continued leakage.

When incontinence is related to a disability or a mental health condition, a clinician will often recommend a scheduled toileting program. Incontinence is less likely to occur in those on a toilet regimen. Enemas may be necessary to promote evacuation, but should be used only as a last resort.

Kegel exercises may be prescribed to strengthen the perineal muscles but these exercises are of unproven benefit.

PROCEDURES: WHEN A SPECIALIST CAN HELP.

Biofeedback is a safe and noninvasive way of retraining anorectal muscles. During biofeedback training, sensors are used to help patients identify anal sensations and contract the anal sphincter muscles, which, in turn help maintain continence. However, biofeedback is of limited usefulness as results are not consistently successful.

Anal **electrical stimulation** uses a mild electrical current applied next to the anal sphincter to strengthen the anal muscles. The electrical current is applied using a small probe, which is inserted inside the rectum for a few minutes every day for 8 to 12 weeks. Although often prescribed, anal electrical stimulation is of limited usefulness as results are not consistently successful.

Solesta® injections into the submucosa of the anal canal may physically narrow and tighten the anal canal. Solesta® is a gel composed of the natural substances dextranomer and sodium hyaluronate. Solesta® injections are performed in the office and do not require anesthesia. With few drawbacks, these injections are a promising intermediate step before surgical options are considered. The injections should be given by a specialist in order to minimize the risk of complications.

The **SECCA procedure** is an outpatient procedure that delivers carefully placed radio-frequency energy into the anal sphincter mechanism. It is performed under regional or general anesthesia. Over time, scar tissue develops which then tightens the anal sphincter. The procedure has shown excellent results in lifestyle improvement for the majority of patients. However, it is not commonly performed.

Recently FDA approved, **InterStim® sacral nerve stimulation** has demonstrated excellent results in reducing or eliminating fecal incontinence. It achieves the ideal balance of a high success rate with limited side-effects, and is relatively non-invasive. The electrical stimulation can eliminate leakage in 40 to 75 percent of people whose anal sphincters are intact. Even those without normally functioning sphincters are finding symptomatic improvement. Under fluoroscopic control, electrodes, which are connected to a temporary test generator are placed into the third sacral foramina and when actuated, influence the behavior of the pelvic floor muscles and bowel. If the symptoms improve, a permanent subcutaneous battery-generator is placed two weeks later. Results to date have been excellent.

Surgical sphincter reconstruction can reduce or resolve incontinence, specifically in women who develop a tear in the external anal sphincter during childbirth, or in patients with a surgical injury to the sphincter. An **overlapping sphincteroplasty** cures fecal incontinence in 80 percent of women with childbirth-related sphincter tears. However, continence may diminish over time.

In those who have irreparable sphincter damage, muscles can be transferred from other areas of the body and positioned as a new anal sphincter. Muscles from the thigh, buttock or perineum are wrapped around the anal canal. These muscles mimic the action of the damaged sphincters. **Muscle transfer procedures** can restore continence in up to 73 percent of patients. However, these procedures are performed only by specialists, and postoperative complications are not uncommon. **Artificial sphincters**, while available in a few institutions, are fraught with problems and are used only in a small, carefully selected group of patients.

Colostomy creation is a surgical procedure in which the colon is surgically brought to the abdominal wall. Stool is collected in a deodorized bag which fits snugly against the skin. This eliminates leakage of stool from the rectum. A colostomy is used as a last resort after other treatments have failed. It may also be considered for people with intolerable symptoms who are not candidates for any other therapy. Although extreme, in those who are candidates for a colostomy to control incontinence, the quality of life is improved.

Great strides have been made in the treatment of fecal incontinence. Embarrassment and social isolation need not be the natural results of this awkward problem. A specialist will be able to tailor the correct treatment for each patient and offer hope to those afflicted with incontinence.