

**Polyethylene Glycol (PEG)** is a type of osmotic laxative that is not absorbed into the body. It is available commercially as Miralax® or Glycolax®.

**Stimulant laxatives** usually contain senna, cascara or aloe, which are often called “natural laxatives” because they are derived from plants. Other commercial products include bisacodyl (Ducolax®). These are effective laxatives that act to stimulate the colon to contract and help evacuation. These can be helpful when used occasionally, but some people feel they stop working over time or require higher dosages. Senna and cascara when used over long periods of time may produce a dark pigmentatin in the large intestine (melanosis coli). Although this is relatively harmless, it often means that the person is using too much laxative.

**Chloride Channel Activators** is a relatively new class of laxative that causes the intestines to secrete chloride into the bowel and this leads to increased water secretion thus forming a soft stool. Only one product, Lubiprostone (Amitiza®) is commercially available although similar medications of this class of action may be released in the next year or two.

**Biofeedback** is used primarily to treat pelvic floor dyssynergia (dyssynergic defecation) by teaching people to properly relax the sphincter muscles and avoid straining with an easier passage of stool. The method involves measuring pressures or EMG activity from the anal canal and providing the patient with feedback to help them learn to relax their sphincter muscles when trying to have a bowel movement. Studies done at our Center have shown very good benefit for persons with these conditions. Biofeedback usually requires several treatments to obtain maximal benefit.

**Surgery** is reserved only for very specific types of constipation. It is used when slow transit constipation has failed medical treatment. Here most of the large intestine is removed and the small intestine is connected to the rectum. Therefore the person does not require an ostomy. Surgery is also done for large rectoceles, enteroceles and rectal prolapse when these problems produce disabling symptoms or impaired quality of life, or cannot be managed medically. When someone with constipation strains too much, the support structures inside the abdomen can stretch or weaken. This can produce an outpouching of the rectum called a rectocele or bring part of the small intestine down toward the rectum called an enterocele. When the outpouching is large enough to impair normal defecation, surgery may be needed.

## HOW TO MAKE AN APPOINTMENT AT UNC

The Clinic offices for the UNC Center for Functional GI & Motility Disorders require a referral from your physician’s office prior to a patient visit.

If you would like further information on our services or to have your physician’s office schedule an appointment, please call Linda Miller at **(919) 966-0141**

For appointments in the Clinic with Dr Drossman, and Dr Scarlett, or Physician Assistants Dalton, Eckert and Maier, please call Linda Miller at **(919) 966-0141**

Those interested in biofeedback will need a diagnostic anorectal manometry to determine appropriateness of biofeedback for treating their symptoms. Referring physicians may obtain a referral form to schedule anorectal manometry and/or pelvic floor biofeedback from GI Procedures at **919-966-5563**.

## OTHER RESOURCES

**International Foundation for Functional Gastrointestinal Disorders:** [www.iffgd.org](http://www.iffgd.org) or call 888-964-2001

## THE UNC CENTER FOR FUNCTIONAL GI & MOTILITY DISORDERS

For further information about Chronic Constipation and other functional GI and motility disorders, please visit our website at [www.med.unc.edu/ibs](http://www.med.unc.edu/ibs).

*Our website also provides information regarding opportunities to participate in on-going research studies at UNC.*



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# CHRONIC CONSTIPATION



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SCHOOL OF MEDICINE



## WHAT IS CHRONIC CONSTIPATION?

Doctors diagnose chronic constipation in patients who have had at least two of the specific symptoms listed below for more than one quarter of the time for at least 6 months:

- Straining
- Lumpy or hard stools
- Feeling that your bowel movement is blocked by something
- Having to press around the anal opening
- Fewer than three bowel movements a week
- Incomplete evacuation

## WHAT CAUSES CHRONIC CONSTIPATION?

Constipation can be a result of either very slow movement of food residues through the colon (slow transit constipation) or difficulty passing bowel movements after they reach the rectum (outlet dysfunction)

## WHAT IS THE NORMAL FUNCTION OF THE COLON?

The GI tract is a muscular tube from the mouth to the anus. The colon (large intestine) connects the end of the small intestine to the anus. Most of the muscular contractions in the colon aid in the reabsorption of water used in the process of digestion. The remainder of the contractions move the food residue toward the rectum and anus.

## WHO HAS CHRONIC CONSTIPATION?

Three to ten percent of people say they are constipated, and a slightly higher number, about 30 percent, report that they take laxatives at least once a month. More women than men, and more African Americans than Caucasians have constipation. As people grow older, they report more constipation. Some surveys suggest that as people age they may have less frequent bowel movements, but in particular individuals have more trouble passing a bowel movement.

In addition, many of the drugs people take for pain, high blood pressure, or depression cause constipation. Talk with your doctor about your medications; he or she may be able to change the drugs you take to ones that are less constipating.

Because constipation is a very common problem and is usually mild and not life-threatening, it is routine for doctors to begin treatment (therapeutic trial) rather than do diagnostic testing. However, studies are performed when the constipation is more severe.

## WHAT ARE THE TYPES OF CONSTIPATION?

*Normal transit constipation* is the most common type of constipation where patients may have some reduction in bowel movement frequency and often straining may be experienced to help evacuate the stool. Importantly this type of constipation is easily treated often with fiber products or other over the counter preparations.

*Slow transit constipation (colonic inertia)* is less common and more difficult to treat. Here individuals may not have bowel movements for many days at a time and may not even have the urge to have a bowel movement. In these cases, diagnostic testing may be indicated and treatment involves various types of laxatives and possibly enemas.

Fiber may not be helpful and could be harmful with more severe types of slow transit constipation.

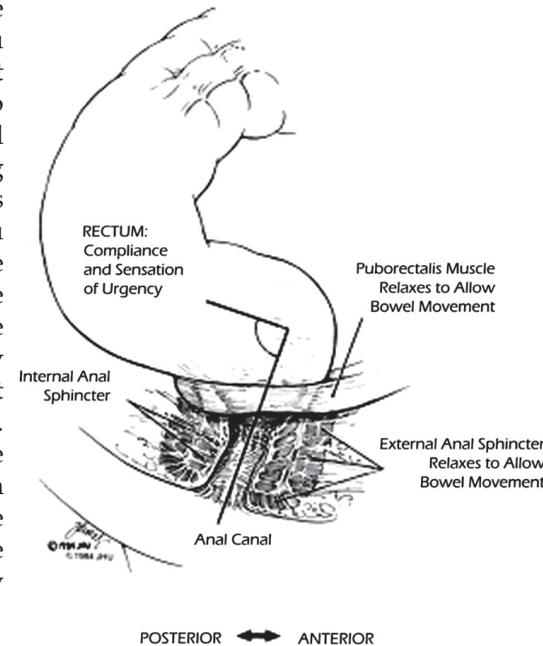
Outlet or Pelvic floor dysfunction may occur separately or in addition to normal or slow transit constipation. With this condition, the person experiences difficulty evacuating the stool and often has to strain or press the fingers into the vagina or in front of or into the rectum to help remove the stool. Outlet dysfunction can be caused by inappropriate or abnormal muscle contraction of the pelvic floor (called pelvic floor dyssynergia or dyssynergic defecation) which can respond to biofeedback. It may also be due to a rectocele or other structural changes in the pelvic floor that will require medical or at times, surgical treatment.

## HOW IS CONSTIPATION DIAGNOSED?

When constipation is more severe or due to slow transit, diagnostic studies are often indicated. These are safe tests that can help your physician plan proper treatment.

An X-Ray of the abdomen is commonly done when the physician is trying to determine if there is a large amount of stool being retained, or if there is an obstruction that may be causing the constipation. This can be done at the time of the clinic visit.

The **Sitzmark Study** is a helpful test to evaluate how long it takes the stool to travel through the large intestine or colon. It can determine whether or not you have slow transit constipation, or help decide how well you are responding to treatment. This is done by having you swallow a capsule each day for five days. Each capsule contains 24 tiny rubber rings about 1/4 inch across. An x-ray of the abdomen is taken on the 6th day to see how many rings are left and where they are located.



**The Anorectal manometry study** measures the pressure in your anal canal when you push during a bowel movement. It helps to determine if the anal sphincter and the pelvic floor muscles relax as they should. This test helps to diagnose pelvic floor dyssynergia. It is usually done with pelvic floor electromyography (EMG) and balloon defecography (see below).

**Pelvic floor electromyographic activity (EMG)** is a test where small electrical sensors are placed in the anal canal to record the electrical activity of your sphincter muscles when they squeeze and relax. This test is helpful to see if your sphincter muscles relax normally when you strain to have a bowel movement or whether they involuntarily contract instead, which is a sign of dyssynergic defecation.

**Balloon defecography** is a test where a small tube with a balloon at the tip is inserted into the rectum and inflated to about 50 cc (less than 2 ounces of water). The person is then asked to evacuate the balloon like a stool. Inability to do this suggests outlet dysfunction.

**Barium defecography** is an x-ray test where a thick paste containing barium is placed into the rectum. The consistency is similar to soft stool and the test determines whether there are any abnormalities in the pelvic floor causing outlet dysfunction or a sense of incomplete evacuation. Rectal prolapse, rectoceles and enteroceles can be diagnosed. The study results will help the physician determine if a surgical treatment is needed.

## HOW IS CONSTIPATION TREATED?

**Fiber products.** A diet high in fiber either in food or supplements, can reduce milder forms of constipation by making your bowel movements larger and softer. Insoluble fibers like bran products are helpful but may be associated with uncomfortable gaseousness. Some people think that soluble fibers like guar gum can reduce this. Breakfast cereals are often fortified with extra fiber. Prunes are natural laxatives. There are also a variety of commercial preparations that can be tried to suit one's preferences. Generally one should take about 20-25 mg of fiber a day. This treatment may not help people with slow transit constipation.

**Osmotic laxatives.** These are safe products that stimulate the small intestine to secrete more water to make bowel movements softer. Examples include milk of magnesia, magnesium citrate, or fleet's phospho soda. In some cases excess use can lead to abnormalities in blood chemicals due to absorption of magnesium, for example. This would not occur with osmotic laxatives like sorbitol or lactulose, but caution is needed not to take too much to cause diarrhea.