Patient information: Constipation

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INTRODUCTION — You are not alone if you suffer from chronic constipation. Constipation is the most common complaint that patients have about their digestive systems. Each year more than 2.5 million Americans visit their physicians seeking relief from this problem.

WHAT IS CONSTIPATION? — Constipation refers to a disturbance in a person's regular bowel habits. This can mean different things to different people. For some, it means that their stools are lumpy and hard. For others it means that their stools are difficult to pass or come infrequently. In the past, physicians have defined constipation as passing less than three stools per week. However, newer criteria have been developed to define constipation. These criteria include two or more of the following:

- Straining with at least 25 percent of bowel movements
- A feeling of incomplete emptying after 25 percent of bowel movements
- A sense of blockage with at least 25 percent of bowel movements
- Use of manual maneuvers to help complete passing of at least 25 percent of bowel movements
- Hard or lumpy stools with at least 25 percent of bowel movements
- Passing fewer than three stools per week

WHAT CAUSES CONSTIPATION? — There are many causes of constipation. In general, constipation occurs more frequently as people get older. As many as one-third of all individuals over the age of 65 suffer from constipation. The higher frequency of constipation in older people is due to many reasons. Older people may:

- Consume a diet low on roughage
- Not drink enough fluids or eat enough calories
- Not exercise enough
• Take drugs that can cause constipation

Many different medical conditions can also cause constipation. Examples include hypothyroidism (an underactive thyroid), pregnancy, irritable bowel syndrome, diabetes, multiple sclerosis, Parkinson’s disease, spinal cord injuries, and colon cancer. In addition, medications used for pain, muscle spasms, depression, mineral deficiencies, high blood pressure, and heart disease can often be associated with constipation.

Sometimes doctors don’t know why some patients become constipated. If there is no apparent reason for the constipation it is termed "idiopathic." Other individuals may think that they are constipated when in fact their bowel function is completely normal.

HOW IS CONSTIPATION DIAGNOSED? — Initially, a doctor will want to know the nature of your bowel habits. In many cases, a diary of stool frequency and character is helpful. It is important for you to discuss with your doctor any medications that you have been taking.

Your doctor may need to perform a rectal examination as part of the physical examination. A rectal examination is a simple procedure in which a physician inserts a gloved finger inside the rectum to feel for any lumps or abnormalities. This test can also check for blood in the stool.

If, after asking questions and examining you, it is still unclear what is causing the constipation, your doctor may need to order some tests. The following tests are commonly used:

• Flexible sigmoidoscopy — This diagnostic procedure involves placing a flexible tube inside the rectum and slowly advancing it into the left colon. The left colon is the last portion of the colon. This test takes about 10 minutes and requires the patient to prepare the bowel at home by taking a laxative and an enema prior to the test. If the physician sees any abnormalities during the examination, small pieces of the abnormal regions can be taken out to look at under a microscope after the test.

• Colonoscopy — This test is very similar to the flexible sigmoidoscopy, except that the tube used is much longer and can visualize the entire length of the colon. As with flexible sigmoidoscopy, colonoscopy requires the patient to prepare the bowel by taking laxatives prior to the test. In addition, during this procedure patients receive medications to make them feel sleepy and to reduce discomfort. These medications are placed directly into the patient’s vein through an intravenous line. Once again, if the physician sees any abnormalities during the examination, small pieces of the abnormal regions can be taken out to look at under a microscope.

• Barium enema — This test takes a series of x-rays of the abdomen after a thick contrast material called barium has been placed into the rectum. Prior to this test, the physician usually requests that the patient prepare the bowel at home by taking a laxative and performing an enema.

Several additional tests are also available, which are mostly used in specialized circumstances. An example is "anorectal motility" testing, which examines the motor
function of the lower part of the colon. Your doctor will decide if any specialized tests are required.

**WHAT ARE THE COMPLICATIONS OF CONSTIPATION?** — Constipation is uncomfortable and can interfere with the quality of life. In addition, chronic constipation can be associated with other problems, including:

- Aggravation of hemorrhoids
- Rectal prolapse (in which the lining of the rectum descends below the anus)
- Fecal impaction (which can cause abdominal pain, nausea, vomiting, urinary retention, and ulcers in the rectum)
- Anal fissures (painful tears in the anal canal that can be caused by passing a hard stool)

**HOW IS CONSTIPATION TREATED?** — The most important issues for treating constipation include understanding normal bowel function, eating foods high in fiber, and using laxatives or enemas in an appropriate fashion.

**Paying attention to your body’s signals** — The colon is a sensitive organ and it is important to pay attention to its signals. Usually the bowels move most rapidly following meals, and this is often the time when stools will pass most readily. When a person ignores his or her body’s signals to defecate, the signals become weaker and weaker over time. By paying close attention to these signals, an individual can strengthen them.

**Diet** — Eating a diet high in fiber (such as wheat bran) is important. The recommended amount of dietary fiber is 20 to 35 grams of fiber per day. Many of the breakfast cereals available at the supermarket are excellent sources of dietary fiber. By reading the product information panel on the side of the box, you can determine the number of grams of fiber per serving (show table 1A-1C).

Many different fruits and vegetables can be particularly helpful in preventing and treating constipation. This is especially true of citrus fruits, prunes, and prune juice. If it is too difficult to regularly consume enough of the foods necessary to prevent constipation, you can eat two to six tablespoons of raw wheat bran with each meal, followed by a glass of water. Initially, this regimen can cause gas and bloating, so it may be necessary to start with a lesser amount and slowly increase the amount of bran over time.

A number of fiber supplements are available that can help ensure adequate fiber intake for people who do not take in enough fiber from their diet alone. Examples include **psyllium** and **methylcellulose** (see below). The dose of fiber supplements (particularly psyllium) should be increased slowly to prevent gas and cramping, and they should always be taken with an extra glass of water.

Caffeine-containing beverages taken in the morning can also be helpful for stimulating bowel action.
**Exercise** — Exercise can promote healthy bowel function, and is also beneficial for your overall health.

**Review your medications** — You and your doctor should review the medications you are taking to see if they can cause constipation.

**LAXATIVES** — A variety of drugs and natural products are available for treating constipation. Because of the large number of options, most have not been directly compared in clinical studies. Thus, the choice between them is based upon their mechanism of action, safety, and experience.

In general, laxatives can be categorized into the following groups:

- **Bulk forming** — These include natural fiber and commercial fiber preparations such as *psyllium* (Effer-Syllium®; Fiberall®; Hydrocil®; Konsyl®; Konsyl-D®; Metamucil®; Metamucil®; Modane® Bulk; Peridiem® Plain; Reguloid®; Serutan®; Syllact®; V-Lax®), *methylcellulose* (Citrucel®), and calcium *polycarbophil* (Equalactin®; Fiberall®; FiberCon®; Fiber-Lax®; Mitrolan®). These work by increasing the water content and bulk of stool, which tends to decrease the time needed to pass through the colon.

- **Emollient** — Emollient laxatives, principally *mineral oil*, soften stools by moisturizing them. They are particularly effective when used as enemas in patients who have become impacted with stool. Mineral oil should not be taken orally, particularly in the elderly and in patients with swallowing difficulties, since it can enter the lungs where it will cause a pneumonia. Another problem with mineral oil is that it tends to cause anal seepage of stool.

- **Hyperosmolar** — Hyperosmolar laxatives such as *polyethylene glycol* (MiraLax®), *lactulose* (Cephulac®; Cholac®; Chronulac®; Constilac®; Constulose®; Duphalac®; Enulose®; Evalose®; Heptalac®; Lactulose PSE®), glycerine (Babylax®, Sani-Supp®) and *sorbitol* reduce water absorption from the colon, thereby wetting the stool. Stools usually become soft, but they are still formed. Lactulose and sorbitol are also digested by bacteria in the colon, which can produce gas and bloating. Sorbitol works as well as lactulose and is much less expensive.

- **Saline laxatives** — Saline laxatives such as *magnesium hydroxide* (Milk of Magnesia®) and *magnesium citrate* (Evac-Q-Mag®) act similarly to the hyperosmolar laxatives (ie, they draw water into the colon).

- **Stimulant laxatives** — Stimulant laxatives include *cascara sagrada*, *senna* (eg, Black Draught®; Senexon®; Senna-Gen®; Senokot®), *bisacodyl* (Bisac-Evac®; Bisacodyl Uniserts®; Bisco-Lax®; Carter's Little Pills®; Clysdраст®; Dacodyl®; Deficol®; Dulcolax®; Feen-A-Mint®), *castor oil*, and aloe. Commercial preparations of aloe (casanthrol) usually also contain *docusate* (Dialose® Plus Capsule; Diocto C®; Diocto-K Plus®; Dioctolose Plus®; Disanthrol®; DSMC Plus®; Genasoft® Plus; Peri-Colace®; Pro-Sof® Plus; Regulace®; Silace-C®).

The precise mechanism of action of stimulant laxatives is not completely understood, but they are known to cause fluid accumulation in the intestines. Because of their effectiveness, these laxatives tend to be overused. Serious side-effects can occur in patients who use higher than the recommended dose of these laxatives or use them...
for long periods of time (months to years). These side-effects include severe diarrhea and damage to the nerves of the intestines. We do not usually recommend aloe-containing preparations, since they almost always produce cramps.

- **Docusate** — Agents containing docusate (Colace®; DC 240® Softgels®; Dialose®; Diocto®; Diocto-K®; Dioeze®; Disonate®; DOK®; DOS® Softgel®; DS-S®; Kasof®; Modane® Soft; Pro-Cal-Sof®; Regulax SS®; Sulfalax®; Surfak®) work, in theory, by reducing the surface tension of the stool, thereby permitting penetration with intestinal fluids. However, their effectiveness in patients with chronic constipation is questionable.

- **Natural products** — A wide variety of natural products have been used for treating constipation. Some of them contain the active ingredients found in commercially available laxatives. However, their dose and purity may not be carefully controlled. Thus, we generally recommend that these types of substances should be avoided in favor of laxatives that are made by reputable companies in which the contents are more precise.

**Pills, suppositories or enemas** — Laxative preparations are available as pills that are taken by mouth, suppository, or enema. In general, suppositories and enemas work more quickly and have a shorter length of activity compared to pills, but are not favored by all.

A variety of homemade enema preparations have been used throughout the years, such as soap suds, hydrogen peroxide, and household detergents. These can be extremely irritating to the lining of the intestine and should not be used. We occasionally recommend tap water enemas every three to four days in patients who have not responded to oral laxatives. However, even tap water enemas can cause excessive absorption of water, potentially leading to dangerous problems with the concentration of blood salts. Small-volume prepackaged enema kits containing sodium phosphate/biphosphate (Fleets®) are convenient and safe when used as directed, provided that patients do not have problems with their heart or kidneys.

**Our recommendations regarding laxatives** — In general, laxatives (other than fiber) should not be used unless dietary changes and fiber are ineffective. We usually recommend daily polyethylene glycol or sorbitol for patients who do not tolerate or respond to dietary fiber of the bulking agents described above. For patients who do not respond, we recommend short periods (weeks to months) of the stimulant laxatives such as senna or bisacodyl no more than two to three times per week. Patients who depend upon stimulant laxatives may require specialized testing or treatment.

**WHEN TO SEEK HELP** — If you have not already seen your doctor, you should consider seeking help if you are depending upon laxatives despite eating ample fiber or if your symptoms are:

- New (ie, represent a change in your normal pattern)
- Have lasted longer than three weeks
- Severe
• Associated with any other concerning symptoms such as blood on the toilet paper, weight loss, fevers, or weakness

WHERE TO GET MORE INFORMATION — Your doctor is the best resource for finding out important information related to your particular case. Not all patients with constipation are alike, and it is important that your situation is evaluated by someone who knows you as a whole person.

This discussion will be updated as needed every four months on our web site (www.uptodate.com). Additional topics as well as selected discussions written for health care professionals are also available for those who would like more detailed information.

A number of other sites on the internet have information about constipation. Information provided by the National Institutes of Health, national medical societies, and some other well-established organizations are often reliable sources of information, although the frequency with which their information is updated is variable.

• National Library of Medicine
  (http://www.nlm.nih.gov/medlineplus)

• National Institute on Diabetes and Digestive and Kidney Diseases
  (http://www.niddk.nih.gov)

• The American Gastroenterological Association
  (http://www.gastro.org/)

• The American College of Gastroenterology
  (http://www.acg.gi.org/)

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REFERENCES


Because the range of bowel habits and stool types in the community is unknown we questioned 838 men and 1059 women, comprising 72.2% of a random stratified sample of the East Bristol population. Most of them kept records of three consecutive defecations, including stool form on a validated six point scale ranging from hard, round lumps to mushy. Questionnaire responses agreed moderately well with recorded data. Although the most common bowel habit was once daily this was a minority practice in both sexes; a regular 24 hour cycle was apparent in only 40% of men and 33% of women. Another 7% of men and 4% of women seemed to have a regular twice or thrice daily bowel habit. Thus most people had irregular bowels. A third of women defecated less often than daily and 1% once a week or less. Stools at the constipated end of the scale were passed more often by women than men. In women of child bearing age bowel habit and the spectrum of stool types were shifted towards constipation and irregularity compared with older women and three cases of severe slow transit constipation were discovered in young women. Otherwise age had little effect on bowel habit or stool type. Normal stool types, defined as those least likely to evoke symptoms, accounted for only 56% of all stools in women and 61% in men. Most defecations occurred in the early morning and earlier in men than in women. We conclude that conventionally normal bowel function is enjoyed by less than half the population and that, in this aspect of human physiology, younger women are especially disadvantaged.

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