



Understanding Constipation



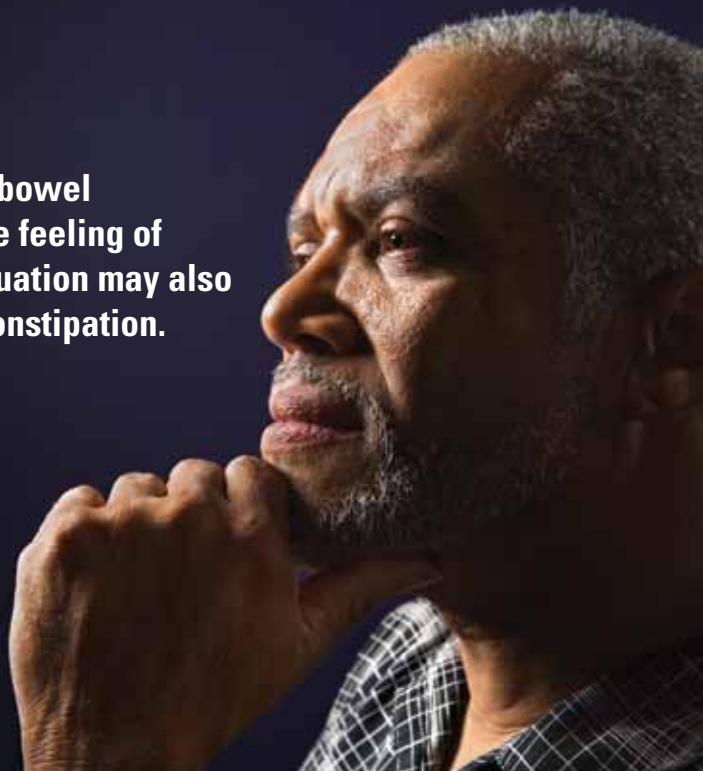
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Constipation Basics

- ▶ Constipation has different definitions, and individuals define it based on family and cultural influence and personal experience.
- ▶ The frequency of bowel movements among healthy people varies from three movements a day to three a week.
- ▶ Patients usually report constipation when there are changes to harder stool consistency, the presence of pellets, straining or feelings of incomplete evacuation, infrequent bowel movements and a sensation of “want to but can’t.”
- ▶ Individuals must determine what is normal for them.
- ▶ As a rule, constipation should be suspected if more than three days pass between bowel movements or if there is difficulty or pain when passing a hardened stool.
- ▶ Constipation is usually a variation of the functioning of colonic muscles, so movement of stools is slower than usual or the muscles contract to hold back stool. It is not a disease and usually can be treated medically.
- ▶ Your doctor will determine when diagnostic studies are needed to identify medical causes of constipation or physiologic testing is needed to evaluate the type and degree of constipation.
- ▶ Most people experience occasional short bouts of constipation. If a laxative is necessary for longer than three weeks, check with a doctor.
- ▶ Prevention is the best approach to constipation. While there is no way to ensure never experiencing constipation, the following guidelines should help:
 - Know what is normal for you and do not rely unnecessarily on laxatives.
 - Eat a well-balanced diet that includes unprocessed bran, whole wheat grains, fresh fruits and vegetables.
 - Drink plenty of fluids.
 - Exercise regularly.
 - Set aside time after breakfast or dinner for undisturbed visits to the toilet.
 - Don’t ignore the urge to have a bowel movement.
 - Whenever there is a significant or prolonged change in bowel habits, check with a doctor.

To help you understand and manage your condition, the AGA Institute provides you with the following information, designed to give you some basic facts, to help you better understand your condition and to serve as a starting point for discussions with your doctor.

Straining during bowel movements or the feeling of incomplete evacuation may also be reported as constipation.



Constipation

The frequency of bowel movements among healthy people varies greatly, ranging from three movements a day to three a week. Generally, stools should be passed without excess effort, straining or discomfort with passage. Constipation is the infrequent and/or difficult passage of stool. Because the function of the large intestine or colon is to absorb water, delayed transit through the colon leads to constipation with hardening of the stools and infrequent bowel movements.

As a rule, if more than three days pass without a bowel movement, the intestinal contents may harden to the point that the person may have difficulty or even pain during elimination. Straining during bowel movements or the feeling of incomplete evacuation may also be reported as constipation. However, the presence of these symptoms with normal frequency of stool passage may require further physiological testing for related conditions of pelvic floor dysfunction. This is a type of constipation where the muscles in the rectal area don't properly relax and they may hold back stool or lead to difficult passage.

Common Misconceptions About Constipation

Many false beliefs exist concerning proper bowel habits. One of these is that a bowel movement every day is necessary. Another common fallacy is that wastes stored in the body are absorbed and are dangerous to health, produce medical diseases or shorten life span.

These misconceptions have led to a marked overuse and abuse of laxatives and procedures such as colonic irrigation. Every year, Americans spend hundreds of millions of dollars on laxatives. Many are not needed — routine use of some stimulant laxatives can cause dependency and frequent use of colonic flushes may lead to complications.

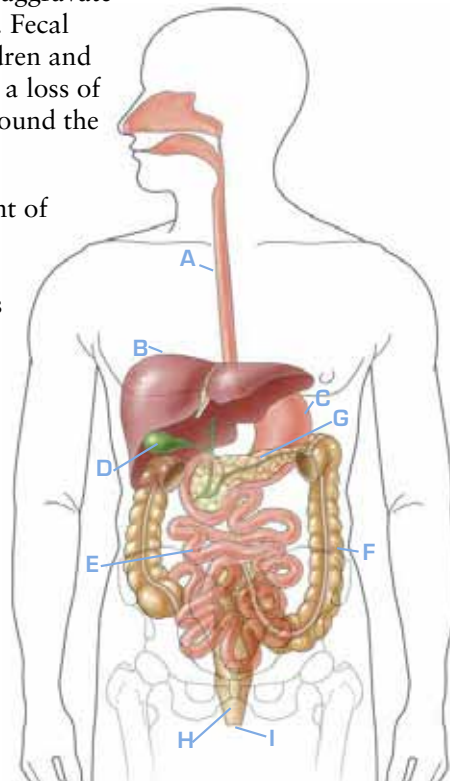
Is Constipation Serious?

Although it may be extremely bothersome, constipation itself usually is not serious. However, particularly if it occurs over a short period of time, it may signal and be the only noticeable symptom of a serious underlying disorder such as cancer. Constipation can lead to complications, such as hemorrhoids caused by extreme straining or fissures caused by the hard stool stretching the sphincters. Bleeding can occur for either of these reasons and appears as bright red streaks on the surface of the stool. Fissures may be quite painful and can aggravate the constipation that originally caused them. Fecal impactions tend to occur in very young children and in older adults, and may be accompanied by a loss of control of stool, with liquid stool flowing around the hard impaction.

Occasionally, straining causes a small amount of intestinal lining to push out from the rectal opening. This condition is known as rectal prolapse and may lead to secretion of mucus that may stain underpants. In children, mucus may be a feature of cystic fibrosis.

The Digestive System

- | | |
|--------------------|-------------------|
| A. Esophagus | F. Colon |
| B. Liver | (Large intestine) |
| C. Stomach | G. Pancreas |
| D. Gallbladder | H. Rectum |
| E. Small intestine | I. Anus |



Causes of Constipation

In most cases, constipation is a symptom, not a disease. Like a fever, constipation can be caused by many different conditions. Most people have experienced an occasional episode of constipation that has corrected itself over time and with proper diet. The following is a list of some of the most common causes of constipation:

Common Causes:

- ▶ **Poor Diet.** A main cause of constipation may be a diet high in animal fats (meats, dairy products, eggs) and refined sugar (rich desserts and other sweets), but low in fiber (vegetables, fruits, whole grains), especially insoluble dietary fiber, which helps move bulk through the intestines and promote bowel movements. Some studies have suggested that high-fiber diets result in larger stools, more frequent bowel movements and, therefore, less constipation.
- ▶ **Irritable Bowel Syndrome (IBS).** Also known as IBS with constipation or IBS-C, it is one of the most common causes of constipation in the U.S. Some people develop spasms of the colon that delay the speed with which the contents of the intestine move through the digestive tract, leading to constipation. IBS-C differs from usual constipation because it is associated with abdominal pain.
- ▶ **Poor Bowel Habits.** A person can initiate a cycle of constipation by ignoring the urge to have a bowel movement. Some people do this to avoid using public toilets, others because they are too busy. After a period of time, a person may stop feeling the urge. This leads to progressive constipation. Children may also suppress the urge during toilet training or when going to unfamiliar rest rooms, as in school, and this can progress to constipation later in life (see below). Studies show that suppressing the urge to have a bowel movement may slow down the transit through the colon or lead to incomplete relaxation of the pelvic floor muscles, thus holding back stool.
- ▶ **“Pseudo-Constipation.”** The false belief that one is constipated is very common and results from misunderstandings about what is normal and what is not. If recognized early enough, this type of constipation can be cured by the patient’s physician explaining that the frequency of his or her bowel movements is normal. One example is when a person has a bowel movement less frequently than once a day. While this is still normal, it is believed to be abnormal. Another example is when an individual feels abdominal discomfort and tries to have a bowel movement but can’t, however the stool has not yet reached the rectum to be properly eliminated.

- ▶ **Travel.** People often experience constipation when traveling long distances, which may relate to changes in lifestyle, schedule, diet and drinking water, or some evacuation difficulties when using other toilets.
- ▶ **Pregnancy.** Pregnancy is another common cause of constipation, which may be partly due to hormonal changes during pregnancy.
- ▶ **Fissures and Hemorrhoids.** Painful conditions of the anus can produce a spasm of the anal sphincter muscle, which can delay a bowel movement.
- ▶ **Medications.** Many medications can cause constipation. These include pain medications (especially narcotics), antacids that contain aluminum or calcium, antispasmodic drugs, antidepressant drugs, tranquilizers, iron supplements, anticonvulsants for epilepsy, antiparkinson drugs and calcium channel blockers for high blood pressure and heart conditions.
- ▶ **Colonic Motility Disorders.** The peristaltic activity of the intestine may be ineffective, resulting in colonic inertia or outlet obstruction.
 - **Colonic Inertia.** With this condition, the transit through the large intestine is very slow, leading to buildup of stool in the large intestine and even enlargement of the colon. Individuals with this condition may not have a bowel movement for weeks at a time. Treatment involves vigorous oral flushes of fluid (see below) or sometimes surgery. This is a relatively rare cause of constipation.
 - **Pelvic Floor Dysfunction.** Some individuals may develop spasms or an inability to properly evacuate the stool. This can be due to structural changes, such as a tumor, that will require specific treatment. It may also be a functional problem where the muscles in the pelvic floor (levator muscles) don't properly relax to allow easy passage. This is treated by biofeedback of these muscles.





Certain hormonal disturbances, such as an underactive thyroid gland, can produce constipation.

Less Common Causes:

- ▶ **Laxative Abuse.** People who habitually take large dosages of stimulant laxatives become dependent upon them and may require increasing dosages until, finally, the intestine becomes insensitive and fails to work properly.
- ▶ **Hormonal Disturbances.** Certain hormonal disturbances, such as an underactive thyroid gland, can produce constipation.
- ▶ **Specific Diseases.** Many diseases that affect the body tissues, such as scleroderma or lupus, and certain neurological or muscular diseases, such as multiple sclerosis, Parkinson's disease and stroke, can be responsible for constipation.
- ▶ **Loss of Body Salts.** The loss of body salts through the kidneys or through vomiting or diarrhea is another cause of constipation.
- ▶ **Mechanical Compression.** Scarring, inflammation around diverticula (pouches in the intestine), tumors and cancer can produce mechanical compression of the intestine and result in constipation.
- ▶ **Nerve Damage.** Injuries to the spinal cord and tumors pressing on the spinal cord can produce constipation by affecting the nerves that lead to the intestine.



Constipation in Children

Constipation is common in children and may be related to any of the causes noted in the previous section. In a small number of children, constipation may be the result of physical problems. For example, children with such defects as the absence of normal nerve endings in portions of the bowel (Hirschprung's disease) or thyroid deficiency often suffer symptoms of constipation. Constipation in children, however, is usually due to poor bowel habits.

Studies show that many older children who suffer from constipation have a history of passing stools that are firmer than average in their early weeks of life. Because this occurs before there are significant variations in diet, habits or attitudes, it suggests that many children who develop constipation tend to have firmer stools. This tendency usually doesn't cause problems unless aggravated by poor bowel habits or poor diet.

Constipation may result in pain when the child has bowel movements. Cracks in the skin, called fissures, may develop in the anus. These fissures can bleed or increase pain, causing a child to withhold his or her stool, thus leading to or aggravating the constipation.

Children may withhold their stools for other reasons as well. Some find it inconvenient to use toilets outside the home. Also, severe emotional stress caused by family crises or difficulties at school may cause children to withhold their stools. In these instances, the periods between bowel movements may become quite long, sometimes lasting longer than one or two weeks. These children may develop fecal impactions, a situation in which the stool is packed so tightly in the bowel that the normal pushing action of the bowel is not enough to expel the stool spontaneously.

Constipation in Older Adults

Older adults are five times more likely than younger adults to report problems with constipation. Poor diet, insufficient intake of fluids, lack of exercise, the use of certain drugs to treat other conditions, and poor bowel habits can result in constipation. Experts agree, however, that too often, older people become overly concerned with having a bowel movement. They are instead experiencing “pseudo-constipation” rather than a true problem that requires treatment.

Diet and dietary habits can play a role in developing constipation. Lack of interest in eating — a problem common to many single or widowed older people — may lead to heavy use of convenience foods, which tend to be low in fiber. In addition, loss of teeth may force older people to choose soft, processed foods, which also tend to be low in fiber.

Older people sometimes cut back on fluids, especially if they are not eating regular or balanced meals or to avoid urinating, if they experience stress incontinence. Water and other fluids add bulk to stools, making bowel movements softer and easier to pass.

Prolonged bed rest — when in a nursing home, after an accident or during an illness — and lack of exercise may contribute to constipation. Also, drugs prescribed for other conditions, such as antidepressants, antacids containing aluminum or calcium, antihistamines, diuretics and antiparkinson drugs, can produce constipation in some people.

The preoccupation with bowel movements sometimes leads older people to depend heavily on stimulant laxatives, which can be habit forming. The bowel begins to rely on laxatives to bring on bowel movements, and over time, the natural mechanisms fail to work without the help of drugs. Habitual use of enemas can also lead to a loss of normal function.



When to Seek Medical Attention

Your doctor should be notified when symptoms occur over a brief period of time, are severe, are associated with weight loss or abdominal pain, last longer than three weeks or are disabling, and when any of the complications listed above occur. The doctor should be informed whenever a significant and prolonged change of usual bowel habits occurs.

The historical features can help your physician determine a diagnosis and treatment.



In addition, a full record of prescription and over-the-counter medications should be provided to the doctor.

Diagnostic Tests

Constipation may be caused by abnormalities or obstructions of the digestive system in some people. A doctor can perform tests to determine if constipation is the symptom of an underlying disorder.

In addition to routine blood, urine and stool tests, several other tests may be considered by your gastroenterologist.

- ▶ An abdominal X-ray can be helpful to determine if there is a large amount of stool present due to constipation. When a very large amount is present, your doctor may ask you to take a flush, much like what is used to prepare for a colonoscopy to empty your colon. This may help restore more normal functioning or allow proper treatment to begin.
- ▶ A colonoscopy or sigmoidoscopy may help detect diseases like colon cancer or diverticular disease in the rectum and colon. With this procedure, the bowel is first prepped with a solution that is drunk the day before or several hours earlier. Then the doctor inserts a flexible, lighted instrument through the anus to examine the rectum and intestine. The doctor will usually perform a colonoscopy to inspect the entire colon, but in younger individuals, a more limited sigmoidoscopy using a shorter instrument may be sufficient. To learn more about colonoscopy, read the AGA Institute brochure on that topic in your gastroenterologist's office or visit **www.gastro.org/patient**.
- ▶ A radio-opaque marker ("Sitzmark") study can be done to determine how severe the constipation is. The patient swallows capsules, each containing about 24 tiny pellets or markers that disperse in the large intestine. After several days, an X-ray is taken to determine how many pellets have not been evacuated and their location. There are several ways to do this test and your physician will determine which is best for you.
- ▶ When there is evidence for pelvic floor dysfunction (excessive straining, incomplete evacuation or a Sitzmark study showing retained markers in the rectum), an anorectal motility study is done. This study is used to evaluate the contraction and relaxation of the pelvic floor muscles. For this test, a small tube is placed in the rectum and the patient is asked to contract and relax the muscles while the technician records the pressures on a computer. If this condition is identified, your physician may prescribe biofeedback treatment of the pelvic floor muscles.

Treatment

The first step in treating constipation is to understand that normal frequency varies widely, from three bowel movements a day to three a week. Each person must determine what is normal to avoid becoming dependent on laxatives.

For most people, dietary and lifestyle improvements can lessen the chances of constipation. A well-balanced diet that includes fiber-rich foods, such as unprocessed bran, wholegrain bread, and fresh fruits and vegetables, is recommended. Drinking plenty of fluids and exercising regularly will help to stimulate intestinal activity. Special exercises may be necessary to tone up abdominal muscles after pregnancy or whenever abdominal muscles are lax.

Bowel habits are also important. Sufficient time should be set aside to allow for undisturbed visits to the bathroom. In addition, the urge to have a bowel movement should not be ignored.

If an underlying disorder is causing constipation, treatment will be directed toward the specific cause. For example, if an underactive thyroid is causing constipation, the doctor may prescribe thyroid hormone replacement therapy.

In most cases, stimulant laxatives should be the last resort and taken only under a doctor's supervision. A doctor is best qualified to determine when a laxative is needed and which type is best. There are various types of laxatives and they work in different ways. (See list of laxatives.)

Above all, it is necessary to recognize that a successful treatment program requires persistent effort and time. Constipation does not occur overnight and it is not reasonable to expect that constipation can be relieved overnight.



Laxative Types

*Adapted from NIH Publication No. 072759; July 2007:
www.digestive.niddk.nih.gov*

- ▶ **Bulk Forming.** These need to be taken with water. Also known as fiber supplements, they act by holding water content in the intestine, thus forming a softer and bulkier stool that is easier to evacuate. Generally, the safest form of laxative bulk formers may interfere with absorption of some medicines. They can also produce some bloating and abdominal pain because the fiber may be digested by bacteria in the colon producing gas.

Many people who report little to no relief after taking bulk-forming laxatives may experience more bloating and abdominal pain. This occurs because if the constipation is severe enough, the bulk tends to move slowly, leading to fermentation by the bacteria-producing gas.

- ▶ **Stimulants.** Cause rhythmic muscle contractions in the intestines. Stimulant laxatives like bisacodyl (Dulcolax®), senna or cascara will act more quickly than other laxatives due to their muscle-contracting effects. However, they can also produce abdominal cramping, can be habit forming and potentially may adversely affect the intestines' functioning. They should only be used on occasion rather than on a continuous basis.
- ▶ **Osmotics.** Cause fluids to flow in a special way through the colon, resulting in bowel distention. These may be used as bowel preps for procedures (e.g., magnesium citrate) or as regular treatment for constipation (milk of magnesia, polyethylene glycol solution). This class of drugs is useful for people with idiopathic constipation (constipation with no known cause) and in large volumes for people with colonic inertia. People with diabetes should be monitored for electrolyte imbalances.
- ▶ **Stool softeners.** Moisten the stool and prevent dehydration. These laxatives, e.g., docusate sodium (Colace®), are often recommended for use after childbirth or surgery. Stool softeners are suggested for people who should avoid straining in order to pass a bowel movement, but are not very effective for more severe types of constipation. The prolonged use of this class of drugs may result in an electrolyte imbalance.
- ▶ **Lubricants.** Grease the stool, enabling it to move through the intestine more easily. Mineral oil or glycerin suppositories are the most common example. Lubricants typically stimulate a bowel movement within eight hours.



- ▶ **Saline laxatives.** These are osmotic laxatives as well (e.g., milk of magnesia, magnesium citrate, Fleets Phospho-Soda®) that draw water into the colon for easier passage of stool. Saline laxatives are used to treat acute constipation if there is no indication of bowel obstruction. Electrolyte imbalances have been reported with extended use, especially in small children and people with renal deficiency.
- ▶ **Prescription-only drugs.** These relatively new medications act by increasing the release of fluid into the intestine to help stool pass, thereby reducing the symptoms of constipation. Two of these drugs are lubiprostone and linaclotide. These medications are safe and effective, (linaclotide has not been approved for use in children by the FDA) but require a prescription; your doctor can assess whether they are needed for continued use.

For more information on constipation:

Go to **www.gastro.org/patient** for general information on digestive health and disorders, tests performed by gastroenterologists, and to find an AGA member physician in your area.

Go to **www.theromefoundation.org** for medical information about the diagnosis and management of constipation and other functional gastrointestinal disorders.

Go to **www.iffgd.org** for educational brochures and patient forums on constipation.

The American Gastroenterological Association is the trusted voice of the GI community. Founded in 1897, the AGA has grown to include 17,000 members from around the globe who are involved in all aspects of the science, practice and advancement of gastroenterology. The AGA Institute administers the practice, research and educational programs of the organization. **www.gastro.org**.

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