

Bowel Management: A Guide for Patients

Cancer, and the therapies to treat cancer, may change the way your bowel works. These changes can affect how you feel and your ability to go about your daily activities. If you have bowel problems, this guide can help. It explains how your bowel works and what you can do to feel more comfortable.

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Digestion and the Gastrointestinal (GI) Tract

The organs in your body that help you digest food are found in the GI tract, see Figure 1.

Mouth

Digestion begins with the parts of the mouth - the teeth, tongue, lips and jaws - all working together. Chewing and the moisture from saliva break down the foods we eat, especially starches, into smaller, more digestible pieces.

Esophagus

The esophagus, a 10-inch muscular tube, carries food from the mouth to the stomach. Solids reach the stomach in about four to eight seconds.

Stomach

The walls of the stomach are made of muscles that churn and break down food into small particles. The stomach stretches to adjust to the amount of food we eat. Starches may remain in the stomach for one hour while digestive juices continue to break them down.

Small Intestine or Small Bowel

The small intestine, a 21-foot long tube, is responsible for the chemical breakdown of food and the absorption of nutrients into the bloodstream. The contents of the small intestine are liquid.

Gallbladder, Liver and Pancreas

These organs produce secretions that enter the small intestine to help digest food.

Large Intestine or Colon

The large intestine – also called colon – is a 4-foot long tube where water is absorbed into the system for use in the body. Body waste – called stool – forms here. The longer the stool stays in the colon, the more water the stool loses and the harder it becomes.

Rectum

The rectum is like a pouch where stool is stored until a bowel movement occurs. When about ½ cup of stool enters the rectum, you feel an urge to have a bowel movement. If you do not find a bathroom immediately, this urge disappears – a normal built in reflex. As more stool moves down into the rectum, however, the urge to have a bowel movement returns.

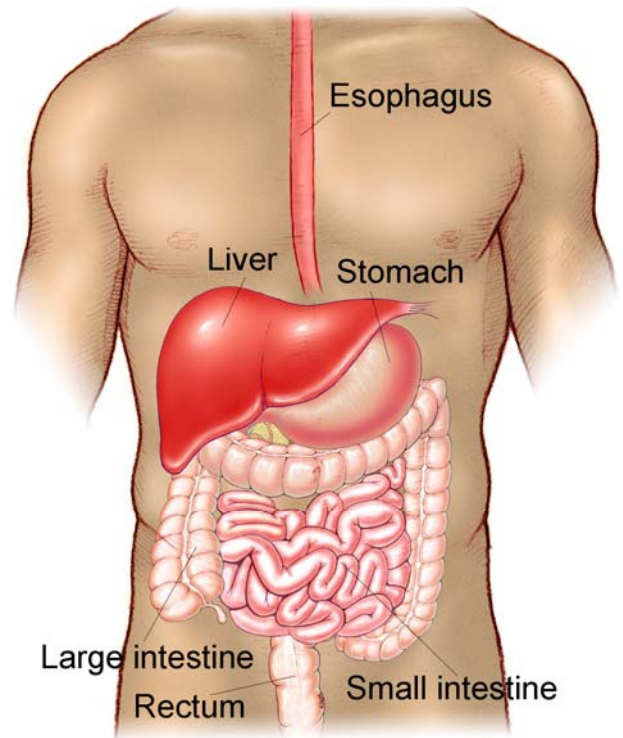


Figure 1
Organs in the
Gastrointestinal (GI) Tract

Anus

Stool leaves the body through an opening called the anus. This 1 inch-long tube helps you control bowel movements. Muscles in the anus – called anal sphincter muscles – help hold stool in the rectum until you are ready to have a bowel movement.

What is a normal bowel movement?

Stool is usually medium brown with a soft and formed consistency. The frequency of bowel movements can range from three a day to three a week. Bowel movements usually happen after a big meal, when a massive push down of contents in the GI tract makes room for incoming food. Drinking a hot liquid or exercising can also bring on the urge to have a bowel movement. Some people feel an urge to have a bowel movement when they become anxious.

It is very important to have normal bowel movements while you are on chemotherapy. Otherwise, your blood counts will drop below normal, and this may cause bleeding if the stool becomes hard. Do not use enemas and suppositories if your platelets are below 50,000.



What is constipation?

Constipation is the infrequent or difficult passing of hard, dry stool. Causes of constipation include:

- Not drinking enough fluid.
- A decrease of nutritional or medicinal fiber. Fiber softens stool by holding fluid in the intestine.
- Lack of physical activity. Being physically active increases the circulation and wave-like movement of the GI tract. These movements – called peristalsis – decrease when a person remains at rest.



Report the following symptoms immediately to your doctor or nurse:

- No bowel movement or passage of gas for more than five days.
- Abdominal pain, cramping, fever and/or nausea and vomiting.

Medicines That Can Cause Constipation

- Opioid pain medicines slow down the movement of the stool through the GI tract and will cause the stool to become hard.
- Anti-nausea drugs such as ondansetron (Zofran[®])
- Some anti-depressants
- Antihistamines
- Calcium channel blockers
- Diuretics – also called water pills – can cause fluid to escape through the kidneys rather than remain in the GI tract.
- Iron supplements can make some people constipated.

- Muscle relaxants
- Parkinson's disease medicines
- Calcium-based antacids make some people constipated. Magnesium-based products may cause loose stools. Read the ingredient label on the antacid to determine if it contains calcium, magnesium or both. If the product is a combination of both, it will not effect bowel elimination.

Whenever you take pain medicine or other constipating medicine, you need to take stool softeners and stimulant laxatives to offset the effects of these medicines. This can prevent constipation and impactions. Combination stool softeners and stimulant laxatives can be purchased without a prescription at drug and grocery stores. See Figure 2.



Figure 2
Combination stool softener
and stimulant laxative

Always read the label on over-the-counter drugs and understand what you need to take and why. If you need more information, ask the pharmacist. Ask your nurse or doctor about other medicines that can cause bowel elimination changes. Once the cause of your bowel problem is identified, action can be taken to help you.

What is an impaction?

Sometimes, a large amount of hard or soft stool collects in the colon. This condition is called an impaction. It is caused by:

- Eating very little
- Lack of fluids and/or fiber in the diet
- Lack of physical activity
- Taking opioid pain medicine and other constipating medicine without taking a stimulant laxative and stool softener.

Two types of impaction occur. A low impaction occurs down in the lower end of the colon near the rectum. See Figure 3. A high impaction occurs up high in the colon.

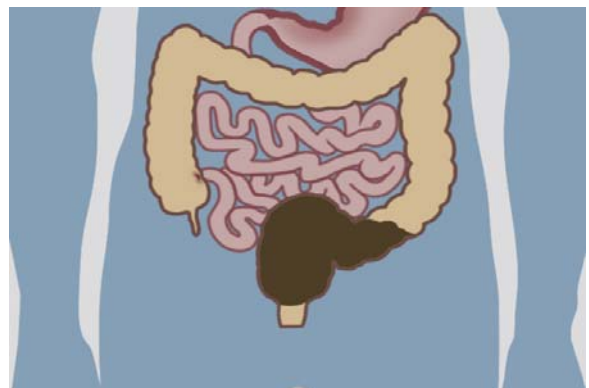


Figure 3, Low Impaction

Low Impaction

Symptoms

- Feeling the need to have a bowel movement without being able to pass stool.
- Discomfort while sitting because you feel like you are sitting on something.

- Cramping in the stomach area.
- Diarrhea (Liquid stool in the small intestine has leaked around impacted stool.)

Treatment

- **Do not** drink hot liquids or eat a big meal. This will increase the wave-like movement in the colon and cause discomfort.
- Lie down.
- Call for professional help.
- Have a trained person manually break up the impaction, followed by an enema.

High Impaction

A high impaction occurs when stool collects in the transverse and ascending colon, which is in the upper part of the colon. See Figure 4. A high impaction can occur when:

- A person does not eat three good-size meals a day
- A person is not able to drink adequate amounts of fluids and
- The body is not naturally moving the food down through the GI tract with wave-like motions called peristalsis.

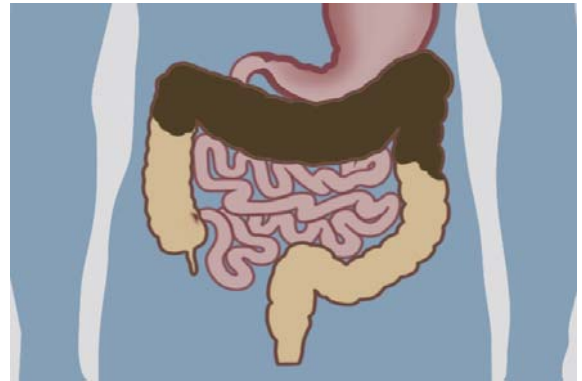


Figure 4, High Impaction

Symptoms

- No bowel movement for five or more days, which can cause nausea and vomiting
- Eating very little
- Pain in the belly
- The belly becoming swollen and possibly hard

Treatment

- If your doctor recommends an enema, give yourself a milk and molasses enema. See the recipe on page 6.
- In addition to the enema, it is important to take a laxative by mouth (orally) to help push the stool down from the top. Ask your health care provider which laxative you should take.
- Take the enema four times a day **and** an oral laxative as prescribed, until all the stool you pass becomes liquid.
- For more information, ask for a copy of “Self Help for Severe Constipation.”
- After your impacted stool is passes, begin a bowel maintenance program. See “What is bowel management?” on page 9 for more information. Use the following guidelines to set a goal for frequency of bowel movements.
 - If you eat your regular amount of food per day, expect to have a bowel movement every day.

- If you eat one-half your regular amount of food, expect to have a bowel movement every other day.
- If you eat one-third your regular amount of food, expect to have a bowel movement every third day.
- If you do not have a bowel movement by 4 p.m. on the day you expect a stool, try drinking 4 ounces of prune juice followed by a hot liquid.
- If you do not have a bowel movement by bedtime, take 2 tablespoons of milk of magnesia (if you do not have kidney problems).
- If you do not have a bowel movement after breakfast the next day, repeat the milk of magnesia every six hours until you have a bowel movement.

Milk and Molasses Enema

6 ounces (oz) warm water

3 oz powdered milk

4.5 oz molasses

1. Put the water and powdered milk in a jar. Close the jar and shake it until the water and milk look fully mixed.
2. Add the molasses. Shake the jar again until the mixture appears to have an even color throughout.
3. Pour the mixture into an enema bag. Be sure to get the enema bag from the hospital. The type found in a pharmacy may not have the long soft tube.
4. While lying on your left side, gently insert the tube into your rectum, about 12 inches. Stop pushing when you feel resistance.
5. Turn over on your right side and then release the solution. Clamp the enema tube and stay on your right side for 20 minutes.
6. Remove the enema tube.

You may repeat the enema four times a day until you no longer expel formed stool.

If you have a large amount of stool in your bowel, you may need to take a laxative by mouth as prescribed by your doctor or nurse. It will help push the stool down from above. Be sure to drink at least 2 quarts of fluid per day.

What is diarrhea?

Diarrhea refers to frequent bowel movements with liquid stool. There are many causes of diarrhea. These include:

- Surgery that removes part of the GI tract, causing the contents to move through faster than before surgery.
- Food allergies or food intolerance, such as lactose intolerance. There are different levels of lactose intolerance. Some people have problems only with milk, while soft cheese, hard cheese, yogurt or ice cream causes diarrhea for others.

- Adding a large amount of fiber to your diet. This can cause cramping, bloating and diarrhea.
- Taking certain types of antibiotics which can kill normal healthy bacteria in the colon.
- Radiation treatment delivered to the abdomen which changes the cells that line the intestines. The intestines become “slick,” causing the contents to move through very quickly.
- Gastrointestinal infections such as clostridium difficile, also called “c-diff” and other organisms in the GI tract.
- Impaction

Medicines That Can Cause Diarrhea

- Antibiotics
- Laxatives
- Magnesium-based antacids
- Some chemotherapy medicines

Ask your nurse if the medicines you are taking for your cancer treatment will cause any side effects in your bowels.

How do fluids affect bowel function?

You can usually tell how much fluid you need by how thirsty you are. Most people require about two quarts (eight, 8-ounce glasses) of fluid per day. Fluid includes liquid or anything that breaks down into liquid, such as ice cream and gelatin (such as Jell-O[®]). You can measure your fluid balance by noting the difference between the amount of fluid you drink and the amount of urine you release. If this difference is large, talk to your doctor.

Factors that Change the Normal Amount of Fluid in Your GI Tract

- Exposure to hot weather can cause you to sweat, which decreases the amount of fluid in your GI tract. People in this situation require more than 2 quarts of fluid per day.
- If a high fever causes you to sweat, you lose fluid from your GI tract.
- Diuretics – also called water pills – can cause you to urinate more often. This affects the normal amount of fluid in your body.
- The amount of fluid you drink with meals. If you have frequent stools, limit your fluids to 8 ounces with a meal. If you are constipated, you may drink as much liquid with meals as you like.

To Increase the Normal Amount of Fluid in Your Stool:

- Stay in air conditioned areas during hot weather.
- If you have a fever, take medicine to reduce fevers, such as Tylenol[®].
- Use stool softeners (such as docusate sodium 100 mg capsules/Colace[®]). You may take up to five per day or 500 mg per day.
- If needed, take in more than 2 quarts of fluid a day.

How does fiber affect bowel function?

Just as bran absorbs milk in a bowl of cereal, water clings to fiber in the GI tract. This is how fiber keeps your stool soft. Fiber also affects the movement in the GI tract. Fiber can speed up or slow down this movement, depending on the amount of fluid you take it with. For more information, ask for a copy of “Medicinal Fiber.”

You need an average of 30 to 40 grams of fiber per day, unless you are receiving a cancer treatment that doesn’t allow you to take high fiber. Most Americans eat about half this amount. **Gradually** increase your intake, however, because the sudden intake of extra fiber in the GI tract may cause severe cramping and diarrhea. Fiber cereal and most fruits and vegetables are good sources of fiber. For example, 1 cup of General Mills Fiber One Cereal with fruit on top will meet your daily requirement of nutritional fiber.

Types of Fiber

The two types of fiber needed daily are soluble fiber and bulk-forming fiber available in food and medicine.

Soluble Fiber

Soluble fiber nourishes the normal bacteria in the bowel and causes fermentation, which pushes the stool down. The inside of an apple and other fruits are examples of soluble fiber. When taken medicinally, it dissolves in water. Benefiber[®] and Fiber Choice[®] are brand names of medicinal soluble fiber.

Bulk-forming Fiber

When you need to treat constipation or diarrhea, by either speeding up or slowing the movement in the GI system, it is important to take medicinal **bulk-forming fiber every day** because the amount of fiber from our diets varies day to day. Metamucil[®] and Citrucel[®] are brand names of medicinal bulk-forming fiber. See Figure 5.



Figure 5
Brands of bulk-forming fiber

The amount of water taken with the fiber will either speed up or slow down how fast food moves through the GI system. Bulk-forming fiber absorbs the liquid and expands the stool, just as cereal absorbs milk in a cereal bowl.

Treating Constipation with Fiber

You can take fiber as a medicine to control stool consistency and frequency. For example, take 1 tablespoon of psyllium (Metamucil) or methylcellulose (Citrucel) in 8 ounces of water, followed by 8 more ounces of water once a day.

Treating Diarrhea with Fiber

Take 1 teaspoon of fiber – or 3.4 grams – in 2 ounces of water after a meal. No fluid should be taken for one hour after. This will form a food bolus with your meal and slow the movement of food in the GI tract.

Fiber Capsules or Caplets

If you need medicinal fiber for therapeutic reasons, caplets and capsules may not provide the outcome you need. By the time fiber capsules break down in the GI tract, the fiber – for example - may have lost some of the water you took in at the time you swallowed the pills and affect your GI tract in the opposite way you desired. However, two Metamucil wafers are an acceptable substitute for 3.4 grams of powdered fiber and are convenient when you eat out or when you're away from home.

For more information, refer to the patient education handout “Medicinal Fiber.”

How do I balance my intake of food and fluids?

Size of Meals

A big meal causes wave-like motions in the GI tract, called peristalsis. These movements help bring on a bowel movement. Certain foods increase the action, such as prune juice and pineapple and other fruits.

If you tend to have diarrhea, eat small frequent meals which will help slow the action in the GI tract. Also, certain foods slow the action. For some people, the banana, rice, applesauce and toast (BRAT) diet helps decrease diarrhea.

To help determine the affect of certain foods on your digestive system, make a list of the foods that you eat to refer back to when you have a problem. Eliminate foods from your diet that cause problems for you.

Fluids

If you have diarrhea, drink no more than 8 ounces of fluids with meals. Instead, drink fluids between meals. Avoid hot liquids.

A Reminder

Each person responds differently to the same amount of food, fiber, fluid and medicine. Once you know how your own body works, you can learn how to manage your bowels. Try keeping a record of your food intake and bowel movements to see if there is a pattern. Your nurse or dietitian can help you with this.

What is titration?

In bowel management, we use a method called titration. In terms of regular bowel maintenance,

titration means that you add or take away quantities to achieve a balance of food, fluid, fiber and medicines within your body. These are balanced to promote healthy bowel elimination.

What is bowel management?

Bowel management is a method to manage your bowels. First, it is helpful to know how frequently you need to have a bowel movement. Everyone is different, but a general guideline to follow is:

- If you eat three meals a day, expect a bowel movement every day.
- If you eat half your normal amount of food, you should expect a bowel movement every other day.
- If you eat one third of the amount, expect a bowel movement every third day.

If you are unable to control when you have a bowel movement – called fecal incontinence – or if you have a neurological problem and are unable to have a bowel movement on your own, a Bowel Training Program can help you. This type of program will train your bowel to empty each day at the same time. This program will work only if you:

- Are not receiving chemotherapy treatment
- Can eat three good-sized meals a day and
- Can drink two quarts of fluid a day

The outcome is a regular bowel movement at an expected time every day. Ask your nurse if you need a bowel-training program.

How do I regain normal bowel function?

- Set a goal. This way you can track your progress. If you do not reach your goal, then you know you need to adjust something.
- Follow a bowel management program based on your current symptoms and history. Your nurse can help you with this. You need to have your own bowel management program because no two people are exactly alike.
- Use specific bowel management guidelines. For more information, ask for a copy of “Bowel Training for Constipation” and “Bowel Management for Frequent Stooling.”
- Ask for help. Your nurse can guide you through the next steps of a bowel management program that will work for you.

How do I manage fecal incontinence?

Many people have a problem with fecal incontinence during cancer treatment. If you have accidents and can't hold back a bowel movement, Kegel exercises may help you. Kegel exercises can help strengthen the muscles in the anus – called the anal sphincter muscles. If you have a temporary ileostomy, it is a good idea to practice Kegels, so that when your ileostomy is

reversed, you will have retained function of the anal sphincter muscle.

To do Kegels:

1. Tighten the buttock muscles that you use to hold back a bowel movement. Hold this position for five to ten seconds. Count: one–1000, two–1000, three–1000 and so on, up to ten–1000.
2. Relax to the same count. Notice the difference between tension and relaxation.
3. Repeat this exercise ten times, four times per day.
4. Practice this exercise while you are sitting, standing and walking so you learn how to combine activity with holding the muscles tight.

It is important to contract and release the muscles for the same amount of time. The sustained contraction and sustained relaxation strengthens the muscles. It is not a pumping motion.

This exercise will strengthen the muscles and will help you hold back stool until you get to a toilet.

Your goal is to count up to 10 each time. Do this 10 times, four times a day to keep the anal sphincter muscles strong. For more information, refer to “Bowel Management for Frequent Stooling.”

What causes gas?

Gas is a byproduct of food digestion. Some foods such as beans, broccoli and cauliflower, produce more gas than others. Additional causes of gas include carbonated beverages, chewing gum and a lack of enzymes to digest particular foods.

It is normal to pass gas 15 times a day. A specific food or beverage may be producing the excess gas. Digestion varies from person to person because foods affect people differently.

Treatment of Gas

- Keep a food diary. Write down what you eat to determine what causes gas. Also, avoid foods that produce gas. Ask your dietitian for a list of foods to avoid.
- Try taking gas-relief pills. Simethicone is the ingredient in gas-relief pills that breaks down large gas bubbles into smaller bubbles and this will help decrease pain from gas. Gas-relief pills with simethicone can be purchased without a prescription in most drug and grocery stores.
- Beans and some other foods require an enzyme for digestion. Beano[®] can provide this enzyme. However, Beano is ineffective in people who are allergic to penicillin. Beano can be purchased without a prescription in most drug and grocery stores.
- To help push the gas out, drink a hot liquid and then lie on your belly over two pillows. You should pass the gas soon.
- Practice anal sphincter exercises – called Kegels – to help control the passing of gas. For more information, refer to “Bowel Management for Frequent Stooling.”

M. D. Anderson Resources

Videos

MDA-TV offers “on-demand” patient education videos that your health care team recommends. Videos can be viewed 24 hours a day, and step-by-step instructions are available on Channel 75 and in the “Patient Education Guide.” Videos can be viewed on campus, including locations in the hospital, The Learning Centers and the Rotary House Hotel.

Understanding and Managing Your Bowel Function - #115

Understanding and Managing Your Bowel Function (Spanish) - #319

In this video, a nurse explains the different organs of the GI tract – the esophagus, stomach, small intestine, colon and anus. She talks about the effects of cancer treatment and about why patients get constipation and diarrhea. Learn ways to solve problems and more information about:

- Symptoms, causes and treatment of constipation, impaction and diarrhea
- How fluid and fiber change bowel movements
- Incontinence and benefits of a bowel training program
- Causes of gas and how to have less gas

Living With an Ostomy Series

These videos provide three real-life examples of people living with ostomies.

Living with a Colostomy - #162

Living with a Ileostomy - #163

Living with a Urostomy - #164

Bowel Management Class

- Main Building – Held every Wednesday at 11 a.m.- noon in the Patient Education Classroom, Main Building, Floor 4, near Elevator A, through The Learning Center in Room R4.1121.
- Mays Clinic – Held the second and fourth Tuesday of every month at 1:30 – 2:30 p.m. in the Mays Clinic Patient Education Classroom, Floor 2 near the Tree Sculpture, behind the Learning Center, in Room ACB2.1049.

The Learning Center

The Learning Center is a consumer health library with the latest information on cancer care, support, prevention and general health and wellness issues. Learning Center locations:

713-745-8063, Theodore N. Law Learning Center, Main Building, Floor 4

713-563-8010, Levit Family Learning Center, Mays Clinic, Floor 2

713-745-0007, Holden Foundation Learning Center, Jesse H. Jones Rotary House International

M. D. Anderson Cancer Center Colorectal Page

www.mdanderson.org/diseases/colorectal

This site provides information on treatment, research, clinical trials and more.