



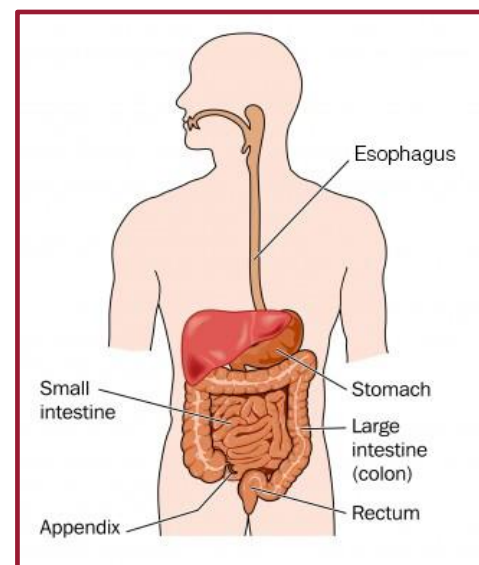
This fact sheet tells you about why a bowel program can make your quality of life better.

What you need to know

- Your spinal cord injury may affect your ability to move waste through your Colon (large intestine)
- You may not be able to control your bowel movements. It may be hard to pass a stool, or you may pass a stool when you don't want to.
- This can cause pain in your abdomen and feeling full sooner than normal or after eating less than usual.
- Bowel problems can also contribute to depression or anxiety and cause concern that you'll have an accident in public. They can limit your ability to do the things you enjoy outside of your home.
- A bowel program can help people with spinal cord injury regain control over their bowel movements.
- Following a bowel program can help you avoid complications (autonomic dysreflexia, stool blockage and/or leakage, pressure sores) and bowel surgery.

Understanding your body

Your body takes the food you eat and pulls nutrients from it to keep you strong and full of energy; this is done mostly through the stomach and small intestine. The rest becomes waste that your body works to remove from your body. The waste forms into a stool through your bowel (also called "colon") and then your rectum and leaves your body through your anus. The passing of the stool through and out of your body is called a "bowel movement" or "defecation" (pronounced "def-ah-KAY-shun"). A person with spinal cord injury may have difficulty getting stools to move through the bowel or rectum; this is called "constipation." Sometimes a person with spinal cord injury has unplanned bowel movements, called "stool incontinence," which may be associated with abdominal discomfort, fullness, and distension. The level and completeness of the spinal cord injury to the bowel may cause tightness (spasticity) or looseness (flaccidity) in the muscles of the rectum, sphincters, and pelvic floor, which in turn affect the pattern of an individual's bowel difficulties. Typically, people with injuries above T12 have tightness in their pelvic floor and sphincter muscles which leads to constipation. On the other hand, those with injuries from T12 and below have looseness in their pelvic floor and sphincter muscles which results to fecal incontinence. People who have incomplete injuries and therefore have more muscle strength and sensation tend to have less bowel problems compared to those who have complete injuries.



The Spinal Cord Injury Model System is sponsored by the National Institute on Disability and Rehabilitation Research, Office of Special Education and Rehabilitative Services, U.S. Department of Education. (See <http://www.msctc.org/sci/model-system-centers> for more information).

What is a bowel program?

A bowel program is a personal plan to retrain your body to have regular bowel movements. The program uses diet, fluids, medicine, practices/techniques, and timing that have to be designed for every individual because everyone is unique, responds differently, and has distinct needs. To determine the most appropriate bowel program for an individual, a bowel evaluation by a physician or a nurse includes the patient's history (level and completeness of spinal cord injury, description and pattern of bowel difficulties, past and present medical problems, diet, fluid intake, activity, need for or availability of resources, home environment, lifestyle, preferences, gastrointestinal testing completed, etc.) and a physical examination.

The goals of a bowel program are:

- Passing a stool on a daily or every-other-day basis
- Preventing unplanned bowel movements
- Emptying your bowel at around the same time during the day (a.m. or p.m.)
- Having a medium (approximately 2 cups of stool) to large stool pass every time you have a bowel movement
- Emptying all or most of your rectum each day
- Having stools that are soft, formed, and bulky
- Emptying your bowel completely within half an hour (or within 1 hour, at most)

What is involved in a bowel program?

The bowel program is best done daily or every other day. A daily bowel program involves:

- Eating a proper diet and drinking plenty of fluids
- Using bowel medications as recommended by your doctor.
- Practicing techniques that activate the reflex to empty your rectum
- Using methods to clean out stools

Diet and fluids

Eating a good diet and drinking plenty of fluids are very important to bowel health.

- Natural fiber from vegetables and fruit increases stool bulk, making it easier to move through the colon (38g for males and 25g for females is recommended).
- Having plenty of fluids (water is best) is critical when eating a high-fiber diet because not getting enough fluids can lead to constipation. You should drink at least 2–3 liters (a little over 2–3 quarts) of fluid every day, unless directed otherwise by your doctor.
- Limit liquids with caffeine, such as coffee, tea, or energy drinks. These drinks actually remove liquid from your body.

Oral and rectal medications

Your doctor may have you take one or more of these medicines:

- Stool softeners make stools soft and easier to move.
- Stimulant laxatives stimulate the colon to move your stools.
- Bulking laxatives add shape and form to stools and prevent diarrhea (watery stools).
- Rectal laxatives help with rectal movement and emptying.

Techniques that can be done at home*

One or more of the following techniques can be used to help you have a bowel movement and to empty your rectum: These techniques can also be done with the assistance of a caregiver or nursing aid.

- Digital rectal stimulation—Small gentle circular movements around the rectum–anus area using your finger (nails cut short to avoid trauma) to stimulate the reflex to defecate This should be done for 20 seconds and repeated every 5-10 minutes until the bowel program is completed and the rectal vault is emptied. Digital removal of stool—using your finger to remove a stool from the rectum --- will speed up defecation.
- Enemas—Flushing warm water into your rectum will help empty it of stool (catheter enemas, cone enemas, or the new FDA-approved peristeen enema device may be used).

Medicines that cause constipation

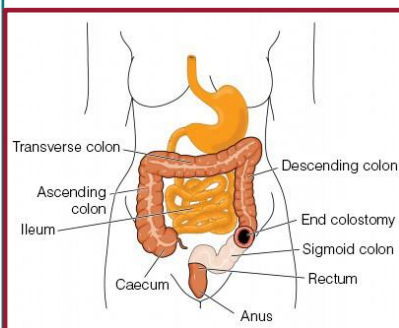
Some medicines that you may be taking for pain, to reduce muscle spasms, or to treat depression can also cause constipation. You may benefit from minimizing the following drugs, if possible:

- Pain medications (such as hydrocodone, oxycodone, morphine, fentanyl, gabapentin, pregabalin, carbamazepine)
- Medicines that treat bladder spasms but slow down intestinal motility (such as oxybutynin, tolterodine)
- Medicines that stop muscle spasms all over the body (such as lioresal, tizanidine, diazepam)
- Medicines for depression (such as cymbalta, sertraline, citalopram)

What if I am unable to do a bowel program or it doesn't work?

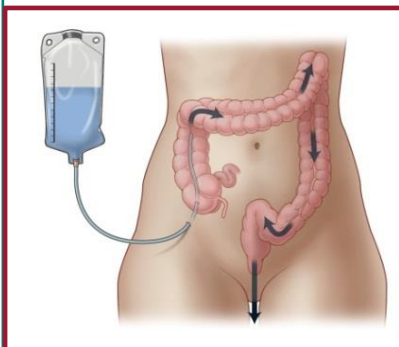
For some people, the seriousness of their injury may make it difficult for them to carry out a bowel program. Even after following a bowel program, other people may not be successful for a variety of reasons. Every person is different. In cases where regular, complete bowel movements are not achieved leading to recurrent severe constipation (associated with frequent hospital admissions for fecal loading and obstruction, chronic abdominal pain, prolonged >1 hour, difficult bowel programs, severe autonomic dysreflexia), and in cases of frequent fecal incontinence (associated with pressure sores, lack of caregiver support) which contributes to very poor quality of life and confinement in the home, surgery may be the best way to help their waste systems remain healthy.

Two kinds of surgery may be used:



Colostomy

The colon is brought to the outside of the abdomen through a hole that is created (called a "stoma"). A removal bag is attached to the stoma (the end of colostomy as shown in the image) so that stools can pass without going to the rectum. The bag is emptied or changed regularly. In people with spinal cord injury, the colostomy is typically a permanent procedure. The colostomy is found to facilitate good bowel movements and can be easier to manage personally or by a caregiver. Emptying and discarding stool into a bag prevents fecal incontinence and unplanned bowel movements decreasing emotional and psychological burden related to this. Therefore, it can encourage more activities outside the home with family and friends.



Antegrade Continence Enema

A stoma (opening) is created in the abdominal wall creating a tract either to the first part of the colon (ascending colon) or the last part of the colon (descending colon/sigmoid).

An enema catheter is placed through the stoma daily to flush the stool out of the colon with 500-1000mL tap water, which is usually completed within 30-60 minutes. By cleansing the colon on a daily regular basis, this prevents unplanned bowel movements and fecal incontinence.

Why is maintaining bowel function so important?

Worsening and untreated bowel function can lead to many additional health problems and reduce your quality of life, including:

- Partial paralysis of the stomach
- Chronic heartburn
- Gas pain
- Stomach or intestinal ulcers
- Hemorrhoids
- Abdominal discomfort/pain
- Nausea
- Bloating
- Change in weight (related to inability to eat properly, decrease in appetite)
- Autonomic dysreflexia
 - (pronounced aw-to-nom-ik dis-ree-FLEKS-ee-ah)
 - This is a serious condition where a dangerous elevation in blood pressure is associated with a drop in heart rate in people with spinal cord injury at levels T6 and above. It may cause heavy sweating, flushing, headaches, and blurry vision. If left untreated, it may lead to stroke, bleeding in the eyes, swelling of the heart or lungs, and other severe health problems.
- Worsening pain and/or spasticity
- Decreased sense of well being

You can help avoid these problems by following a bowel program every day and talking to your doctor about how things are going.

Following a bowel program can help you avoid serious health problems. Your doctor or nurse can help you and will check in with you to see how you are doing. Ask questions, and let your health care professional know about any difficulties you are having.

Authorship

Bowel Function Problems After Spinal Cord Injury was developed by Gianna M. Rodriguez, M.D., in collaboration with the Model Systems Knowledge Translation Center

Disclaimer: This information is not meant to replace the advice of a medical professional. You should consult your health care provider regarding specific medical concerns or treatment. The contents of this fact sheet were developed under a grant from the Department of Education, NIDRR grant number H133A110004. However, those contents do not necessarily represent the policy of the Department of Education, and you should not assume endorsement by the Federal Government.

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