

SPINAL CORD MEDICINE

HANDBOOK FOR PATIENT AND FAMILY



BOWEL CARE



Frazier Rehab Institute

A service of Jewish Hospital & St. Mary's HealthCare

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THE PATIENT AND FAMILY HANDBOOK

This Handbook is designed to give you the information to better understand spinal cord injury and the tools needed to manage your health care needs successfully. Information is intended for you and your family because, those who love you, will often be involved in assisting you with your care needs while in the hospital, and in the home environment. As you read through the Handbook, your rehab team at Frazier is available to address your questions and provide you more information pertinent to your needs.

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A BRIEF NOTE ABOUT THE FOUNDER OF FRAZIER REHAB INSTITUTE

In her early 20's, Amelia Brown of Louisville sustained a spinal injury in a car accident in the 1940's. With no rehabilitation services in Louisville, she traveled to New York for treatment. After returning to Louisville, she married a physician, Dr. Harry Frazier. Believing Louisville needed its own rehabilitation facility, Mrs. Frazier founded the Frazier Institute of Physical Medicine and Rehabilitation in the early 1950s. Her son, Owsley Brown Frazier, served as Chairman of the Fund Raising Committee for Frazier's new building, named the Frazier Rehab and Neuroscience Center, which opened in 2006.

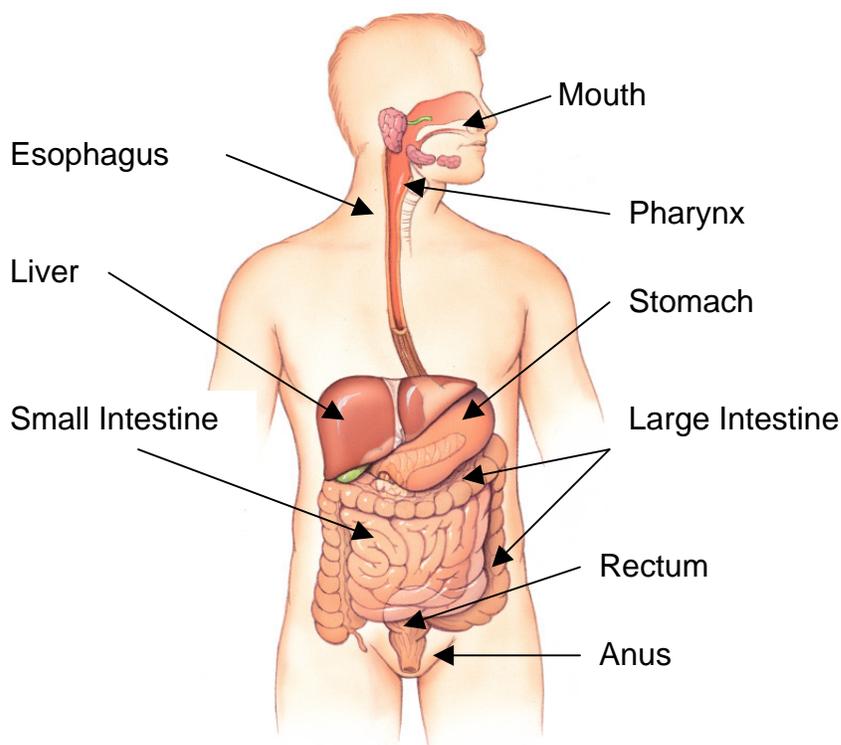
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The information contained herein is intended to be used in accordance with the treatment plan prescribed by your physician and with the prior approval of your physician. You should not begin using any of the methods described in this publication until you have consulted your physician. Jewish Hospital & St. Mary's HealthCare, Inc. D.B.A. Frazier Rehab Institute, its affiliates, associates, successors and assigns, as well as its trustees, officers, directors, agents and employees are not liable for any damages resulting from the use of this publication.

NOTE: Words *italicized* in the text below are defined in the Glossary at the end of this Chapter.

BOWEL CARE

The digestive system consists of the mouth, pharynx, esophagus, stomach, small and large intestines, rectum and anus. The digestive system provides two major functions. One, food is broken down by mechanical (muscle activity) and chemical action allowing it and fluids to be absorbed as nutrients by the body. Two, undigested and unabsorbed material and bacteria (waste products) are passed through the digestive system and eventually excreted from the body. These waste products move into the bowel which is last portion of the digestive system which consists of the small and large intestines, rectum and anus.



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As the bowel fills with stool, it stretches, and normally triggers messages to the body. One message stimulates muscles to move the stool down through the bowel. Other messages let you know it is time to go to the bathroom. The muscle at the opening of the *rectum*, called *sphincter*, allows you to control the bowel movement.

BOWEL MOVEMENT AFTER SPINAL CORD INJURY

Spinal cord injury can damage the nerves that allow you to control bowel movements. There are generally two types of neurogenic bowel dysfunction that occur. These are related to the level of spinal cord injury.

- **Upper Motor Neuron Injury.** An *upper motor neuron injury* occurs above the L₁₋₂ level and

results in a reflexic bowel. In this type of injury, you do not receive messages telling you the bowel is full. The muscle that controls the opening and closing of the anus stays tight. As the bowel becomes full, it triggers a reflex, which automatically empties the bowel.

- **Lower Motor Neuron Injury.** A *lower motor neuron injury* occurs below the L₁₋₂. With a lower motor neuron injury the messages do not get to the spinal cord. Your reflexes do not function properly and the anal muscle remains relaxed. It is called a *flaccid bowel*.

BOWEL MANAGEMENT PROGRAM

The goals of an effective bowel program are to:

- Achieve control on a regular basis
- Eliminate or minimize accidents
- Decrease the complication associated with diarrhea, constipation impaction, autonomic dysreflexia. See chapter on Medical Concerns for more on autonomic dysreflexia.
- Provides the person with a sense of control and dignity around the sensitive issues of elimination.

There are certain things that you can do to make your bowel program successful. They include timing, regular physical activity, a balanced diet with an adequate fluid intake and *digital stimulation*. Your doctor may prescribe a medication to keep your stool soft and moving through your intestines. A suppository and digital stimulation may be needed to start your bowel program on a routine basis. The use of an enema is not advised as it can lead to bowel complications. However, when certain tests are ordered, you may be given enemas in preparation.

Timing of the Bowel Program. Frequency of the bowel program varies with each person. Your doctor may recommend a program be done every day or every other day. Never go longer than three days. After three days, fluid is absorbed from the fecal mass causing hard stool. The result is *constipation* or impaction.

It is important to consider a program that will meet the demands of your lifestyle. You may choose to do a morning or evening program after you return home. No matter which schedule is chosen, it is important to remember that the bowel program must be done at the same time each program day. Clinical experience shows that to have a bowel movement within 30 minutes of stimulation, the program must be done at the same time each program day.

For many, the best time to schedule a program is 15 to 30 minutes after the morning or evening meal. Eating stimulates *peristalsis*, a reflex that helps to move food through the digestive tract. Peristalsis begins with your first bite of food and its wave-like action continues to push food through your mouth, esophagus, stomach, small intestine, large intestine and into your colon. If the program cannot begin after a meal, a hot cup of coffee, tea or an evening snack may also cause this reflex.

Upper Motor Neuron Injuries. For *upper motor neuron injuries*, or injuries above the L₁₋₂ level, bowel programs usually involve taking daily stool softeners and using a suppository with digital stimulation. *Stool softeners* are medicines that help prevent the stool from becoming too hard. A suppository is a bullet-shaped medicine that is placed in the rectum. This helps to trigger the muscles and nerves in

the bowel to stimulate a bowel movement. Generally, Dulcolax suppositories are used first, with a progression to glycerin suppositories. You will learn what medicines work best for you. Some people will eventually not need to use suppositories (preferred, if possible) and stool softeners, and will only use digital stimulation. Digital stimulation is described below.

Performing Digital Stimulation. Digital stimulation is performed when a well-lubricated gloved finger is gently placed approximately 1/2 to 1 inch into the rectum and gently rotated in a circular motion against the anal sphincter. This helps to relax the muscle and create an opening through which stool can pass. This relaxation will help increase peristalsis, the wave-like contractions that help move stool through the bowel.

Do this for about 30 seconds to one minute or longer if needed. Digital stimulation can be performed if a suppository has not been effective in emptying the bowel. You should wait approximately 30 minutes to see if the suppository will work. If the suppository is not working, perform digital stimulation. Digital stimulation can also be used without suppositories. Digital stimulation can be repeated about every 10 – 15 minutes up to a maximum of 4 times. The total time for a bowel program should not exceed one hour.

Placement of Suppositories. Always wash your hands first and instruct others to do the same. Insert a well-lubricated gloved finger, and remove any stool near the rectum before inserting the suppository. This is called *manual disimpaction*. After all stool is removed, insert the suppository through the anus and place it against the wall of the rectum. Be as gentle as possible when placing suppositories, removing stool, or performing distal stimulation as the tissue in and around the rectum and colon are delicate.

Lower Motor Neuron Injuries. For *lower motor neuron injuries*, or injuries below the L_{1,2} level, bowel programs generally involve digital stimulation and manual removal (disimpaction) of the stool. Management of this type of bowel program may require more frequent attempts to empty the bowel.

Each person's bowel program should be individualized to fit his or her needs. You and the rehab team will decide which bowel program works best, based on the type of spinal cord injury you have.

Successful Bowel Program Management. There are several key components to a successful bowel program. They are as follows:

- **Keep a Regular Schedule.** You can train your bowels by following a routine schedule, and coordinate your bowel program with prior bowel habits and current life-style. Perform bowel programs at the same time every day. The best time to schedule a bowel program is 15-30 minutes after a meal. This stimulates a natural reflex in the body that will assist in emptying the bowel.
- **Try Performing Your Bowel Program in an Upright Position.** If possible, transfer to a padded toilet or bedside commode. Gravity helps move the stool down into the rectum for easier evacuation. Avoid the use of a bedpan; it may cause damage to your skin. If you cannot tolerate an upright position, lay on your left side because the bowel ends on the left side. If the program cannot begin after a meal, a warm beverage, or snack can cause this reflex.

- **Keep the Stool Well Formed.** Your stool should not be too soft or too hard. You may need to adjust your stool softness and diet. You should try to maintain a well balanced diet that is high in fiber. This will help maintain a formed stool consistency that allows for a successful bowel program. Fiber is found in fresh fruits, vegetables, and whole grain breads and cereals. Try to limit spicy foods and junk foods. Try to drink 8 – 10 glasses of water each day. Following these suggestions will help keep his will help keep your stool from becoming too hard which will help avoid constipation.
- **Stay Active and Exercise as Much as Possible.** Being active promotes better digestion of food and allows for better management of your bowel program.
- **Provide for Privacy.** Privacy will help you relax, allowing for a more successful bowel program.

COMPLICATIONS ASSOCIATED WITH A BOWEL PROGRAM

Constipation. *Constipation* is hard and infrequent stool that is difficult to pass. Constipation can be caused by prolonged bed rest, not drinking enough fluids or not eating a well balanced diet that is rich in fiber. Some medication can cause constipation such as pain medications, iron and antacids. To prevent constipation, your doctor may recommend you take a stool softener on a regular basis. Lastly, not doing your bowel program on schedule may increase your chance of being constipated.

Signs and symptoms of constipation include:

- Straining to move bowels
- Hard, loose, or watery stools
- Irregular bowel movements
- Swollen or hard stomach
- Loss of appetite
- Nausea and vomiting

Suggestions/solutions for constipation include:

- Adequate fluid intake of at least 8 to 10 glasses of water
- Eating a well-balanced diet which is high in fiber
- Exercise and staying active
- Maintain a scheduled bowel program
- Take stool softeners as needed

Diarrhea. *Diarrhea* is the increase in the frequency of bowl movements where stools are usually loose and watery with bowel movements at least a couple times a day and usually more.

Causes of diarrhea include:

- Eating foods that are spicy, high in fat content, or contain caffeine (poor diet)
- Certain medications, such as antibiotics
- Over use of stool softeners or laxatives
- Stress
- Medical problems, like the flu

Suggestions/Solutions for Diarrhea include:

- Not taking any laxatives or routine stool softeners until the diarrhea stops. Adjust your stool softener dose after an episode of diarrhea is over.
- Stop eating foods that upset your stomach or that disagree with you.
- Drink plenty of fluids. Diarrhea can cause you to become dehydrated.
- If diarrhea lasts longer than 24 hours, consult your physician.

Autonomic Dysreflexia. *Autonomic dysreflexia* is a medical emergency that can be caused by the body's response to a painful stimulus. Autonomic dysreflexia can occur in persons with spinal cord injury at, or above the T₆ level. The painful stimulus causes an over-reaction of the sympathetic nervous system, which is characterized by an immediate rise in blood pressure.

Autonomic dysreflexia can be triggered by hemorrhoids, rough digital stimulation, pressure on the skin, or a full bowel can trigger autonomic dysreflexia. It is important to maintain a regular bowel program as you attempt to prevent triggering autonomic dysreflexia. Your doctor may suggest you try anesthetic ointments when performing digital stimulation. See chapter on Medical Concerns for more on autonomic dysreflexia.

Conclusion. In conclusion, bowel dysfunction after spinal cord injury should not prevent you from leading a healthy, active life. With a proper bowel management program, you should be able to achieve control of your bowels without the use of laxatives and enemas. The goal is to eliminate or minimize accidents and avoid the complications associated with constipation, impaction, diarrhea, and autonomic dysreflexia. This should, in turn, provide you with a sense of control and dignity around the sensitive issues of elimination.

RESOURCES AND REFERENCES

<http://www.spinalcord.uab.edu/show.asp?durki=21482> - Bowel care

<http://ww.mageerhab.org> - Bowel care

GLOSSARY

AUTONOMIC DYSREFLEXIA - An emergent, potentially dangerous condition associated with a spinal cord injury patient whose level of injury is T₆ or above. This condition is usually related to a noxious stimulus that is not sensed or felt by the individual due to the neural impulses blocked in the spinal cord due to the injury. During an episode of autonomic dysreflexia, the blood pressure can become very high and can cause stroke if not treated appropriately.

CONSTIPATION - Difficulty having a bowel movement, typically related to inactivity, dehydration and/or narcotic medications. It is important to maintain regular bowel movements to prevent

constipation. Routine use of stool softeners and/or suppositories can also help prevent constipation.

DIARRHEA - Loose and watery stool usually associated with multiple bowel movements.

DIGITAL STIMULATION - Rotating a finger in the rectal vault to assist with bowel elimination by gently stretching the “ring” of anal muscle.

FLACCID BOWEL - The result of reflexes not working properly. The anal muscles remain relaxed and do not normally push stool out through the anus.

LOWER MOTOR NEURON INJURY - Injury to nerves that originate in the spinal cord and travel out to the body (nerves below L_{1,2}) and can cause non-reflexic or flaccid bowel and bladder, and, for males, loss of reflexogenic erection.

MANUAL DISIMPACTATION - Using a finger to manually remove stool from the rectum.

PERISTALSIS - Wave-like muscle contractions that helps move food through the digestive tract.

RECTUM - Area between the end of the colon and the anus.

REFLEXIC BOWEL - When the bowel becomes full, it triggers a reflex that automatically empties the bowel.

SPHINCTER - Round, donut shaped muscle that constricts an opening. For example, the sphincter when closed, keeps stool in the rectum; when the sphincter is relaxed, stool can be passed.

STOOL SOFTENERS - Medications that are used to keep the stool soft as it moves through the digestive tract making elimination easier.

UPPER MOTOR NEURON INJURY - Injury to long nerve cells in the spinal cord that communicate with the brain. Reflexes usually remain functional and allow for reflexic bowel, bladder and reflexogenic erections for males.