

Managing your Bowels

Below is a diagram of the different parts of the digestive system and what they do.

The Digestive System:

1. Mouth

When food is chewed, saliva starts digesting carbohydrates.

2. Oesophagus

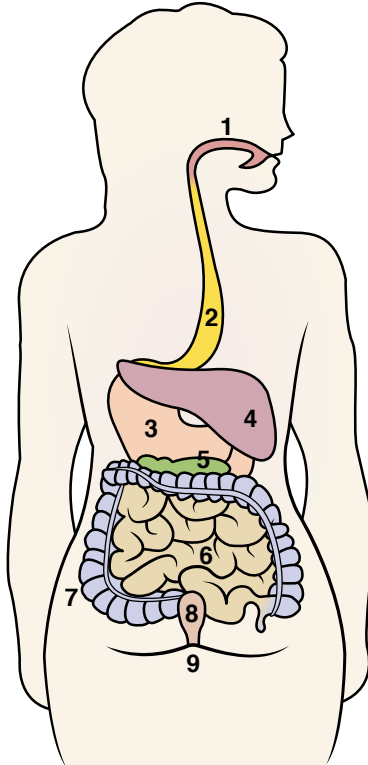
Muscles, in a process called peristalsis, push the food down into your stomach

3. Stomach

Everything is blended with digestive juices. Hydrochloric acid kills bacteria. Enzymes break down proteins.

4. Liver

A green liquid called bile which is stored in your liver, is secreted to break down fats.



5. Pancreas

Many kinds of digestive enzymes are made here.

6. Small Intestine

Food is mixed with bile from your liver and juices from your pancreas to be sent back to your liver for more processing.

7. Large Intestine

Indigestible food and water are processed, stored and dispersed.

8. Anus

Solid waste passes from the rectum in order to leave your body.

9. Sphincter Muscle

The external sphincter is a muscle near the anus that helps maintain continence

How the bowel worked before your Spinal Cord Injury (SCI)

The bowel is part of your digestive system, whose role is to break down what you eat and drink. After a meal is digested, peristalsis (an involuntary muscle movement) pushes chewed food through the digestive tract.

Peristalsis takes place several times each day, most frequently after meals (the gastrocolic reflex). This movement takes place without any input from the brain or spinal cord and is not affected by your spinal injury.

As the bowel fills with stool it stretches, triggering messages to bowel muscles to move the stool down to the end of the large bowel, and the rectum. Another message coming up to the brain lets it know when it's time to go to the bathroom, to open the anus, and pass a motion. When it's socially convenient we will control our abdominal and pelvic muscles to allow us to empty the rectum to pass a motion. This is often called a bowel movement.

The science bit!

The bowel is controlled mainly by nerves leaving the spinal cord at level of T6-T12 (lower thoracic vertebrae). These nerves control the movement of abdominal muscles.

The lower end of the bowel is controlled by nerves leaving the spinal cord lower down at level S3-S5 (sacral vertebrae). Some automatic (autonomic) control occurs within the bowel itself; this is the part that brings the urge to use the toilet when stressed or frightened.

How the bowel works after SCI?

After a spinal cord injury, the messages sent by the nerves located in your bowel are not able to reach your brain as before. This means you will not get the message that tells you when your bowel is full.

You may also lose control of the muscle at the opening from your back passage (sphincter).

Your degree of loss will depend upon your level of injury and the extent (completeness) of your spinal damage.

Upper Motor Neuron or reflex bowel

If your spinal cord injury is above T12, your bowel will continue to empty when stimulated - either chemical (suppositories) or mechanical (digital stimulation). This is explained later. However, you will lose the control you normally had from your brain. With this type of injury, the message telling you that the bowel is full is not received and the muscle controlling the opening and closing of the anus stays tight. When the bowel gets full it empties automatically. This is called an upper motor neuron type bowel or reflex bowel.

Lower Motor Neuron or flaccid hypotonic bowel

If the injury is at or below T12, your bowel will not fully empty, even when stimulated. This is because the damage to the cord has damaged the pathways from the bowel wall into the reflex centre in the spine. Therefore, there cannot be any reflex action. That means that the bowel muscles will not squeeze and anal sphincter muscle remains relaxed. This is called a lower motor neuron type bowel or flaccid hypotonic bowel.

If your injury is incomplete or is around T12, you may find that your bowel can take on mixed upper and lower motor neuron type functioning.

Bowel Routine

The aim of a bowel routine is to allow your bowel to empty at regular intervals, e.g. daily, alternate day, morning or night. We can time your bowel movement to suit you and take into account your lifestyle, care needs etc.

The two most important components of a good bowel routine are diet and timing.

Diet

How often you empty your bowels and your stool consistency is linked to the quantity and quality of food and drink you take.

A healthy diet including fibre in the form of bran cereals, fruits and vegetables can help keep the digestive process working. Foods high in fibre can absorb and retain liquid and make the stool softer and easier to pass.

Be aware of which foods work for you and which foods don't e.g. some vegetables are gas forming and could prove embarrassing.

Also some foods, alcohol and medicines can alter stool consistency and make bowel movements difficult. Food and drink that affected your stool consistency before your injury, will still affect it.

Make sure you take 2-3 litres of fluid each day to keep your stool soft.

Food diary

A good way to understand and learn how different foods affect your bowel is to keep a food record. For about three weeks, write down what you eat and drink each day and describe your bowel movements.

Coffee, Tea, Cocoa or Soft Drinks

Drinks like coffee, tea, cocoa, or soft drinks contain caffeine, a diuretic that may move the fluid out of your body. In fact, diuretics can cause you to lose more fluid than you drink. There is some evidence that caffeine stimulates peristalsis (involuntary muscle movement) in some people. You may want to avoid drinking caffeine drinks or limit how much caffeine you drink.

Alcohol

Alcohol affects bowel function. It can change bowel habits and reduce appetite, making it hard to stick with the diet part of your bowel routine. It can cause problems with continence and bloating. It may hinder your ability to cope and keep your routine regular. If you're having trouble following your bowel

routine because of alcohol use, please tell your healthcare professional so they can help you.

Timing

It is important to do your bowel routine around the same time every day or alternate day. It can take several weeks to establish a good routine. If things are not going right do not be tempted to change after a few days or even a week. You should choose a time when you will not be rushing to complete your routine.

Bowels empty more easily 30-60 minutes after a meal or warm drink (when the gastrocolic reflex is stimulated). You can time your routine to take this reflex into account to help you have a bowel movement.

Once your routine is established, stick to it. The bowel is a creature of habit and you may have 'accidents' if you change your routine frequently or change more than one part of your routine at a time.

Other factors

Gravity

When you are able to sit for four hours or more in your wheelchair, we will encourage you to get up to the toilet using a shower chair or commode. Gravity helps move the stool down into the rectum. We will offer you a variety of chairs to try. Check your skin regularly as some shower chairs or commodes can be a bit hard.

If you cannot use a shower chair e.g. you have a pressure sore, lie on the side that leaves your dominant hand free.

Exercise

Physical exercise stimulates bowel function; the more active you are the easier it is for the food to pass through the digestive system. You may find you become constipated during bed rest and you may have to change your bowel medication during this period.

Smoking

There is some evidence that smoking directly affects colonic function. It is thought that nicotine can stimulate peristalsis (involuntary muscle movement) in some occasional smokers and decrease it in some habitual smokers. For these reasons (and many others), you may want to consider stopping smoking.

Performing Bowel Care

Reflexic Bowel

Aim for soft, formed stool that you can pass easily with minimal rectal stimulation. The bowel routine usually starts with digital stimulation or a stimulant medication, e.g. suppositories or enema.

Digital stimulation involves inserting a lubricated gloved finger into the rectum and gently rotating it against the sphincter wall.

Procedure

- Always keep nails short and neat to avoid puncturing gloves and possibly tearing rectal membranes.
- Move your urinary drainage equipment away from the anal area to avoid stool contamination.
- If possible, sit up. Gravity helps empty your rectum.
- If you don't sit up, lie on your side. Lie on the side that leaves your dominant hand free.
- Check for stool by sliding a gloved well-lubricated finger into the rectum and remove any stool that would interfere with inserting the prescribed suppository or enema.
- If you have a reflex bowel use digital stimulation, insert a lubricated suppository or squirt a mini-enema high in your rectum. To keep stool coming, repeat digital stimulation every five to ten minutes as needed, until all stool has passed.
- To make sure the rectum is empty, do a final check with a lubricated gloved finger. You'll know that stool flow has stopped if
 - » no stool has come out after two digital stimulations at least ten minutes apart,
 - » mucus is coming out without stool
 - » the rectum is completely closed around the stimulating finger and you can feel the internal anal sphincter.

Flaccid Bowel

Aim for firm, formed stool that can be removed manually with ease and doesn't pass accidentally between bowel routines. Bowel care doesn't usually need chemical stimulants because the response would be very sluggish.

People with a flaccid bowel should perform a manual evacuation.

Manual Evacuation

Manual evacuation aims to empty the rectum with the fingers, this is usually described as 'the digital removal of faeces'. This procedure can be carried out either on the bed, commode or toilet.

We will teach you how to do this.

If you do this in bed it is better to lie on the side that leaves your dominant hand free with your uppermost knee bent up slightly and resting over your lower leg.

- Wash your hands.
- Make sure your finger nails are trimmed, as they can puncture the glove and damage the rectum.
- Put on gloves.
- By slowly and gently pushing against the anal sphincters, insert a well-lubricated gloved finger (e.g. K-Y jelly), one to two inches gently into the rectum toward the belly button.
- Use one finger to break up or hook stool and gently remove it from your rectum.
- Continue to remove the stool until you cannot feel or reach any stool in the bowel.

You can help this technique by using your abdominal muscles to bear down. This helps push the stool towards the rectum and is called the valsalva manoeuvre.

Bowel diary

A bowel diary is the recording of your daily bowel function. You can use it to collect information on your bowel habit. You may find this useful if you are having problems with your bowel routine.

You should record important details such as:

- Any assistive techniques (such as gastrocolic response, Valsalva).
- Stimulation method used (digital or chemical rectal stimulation).
- Exact timing and regularity of your bowel habit (from first stimulation to routine completion).
- Stool amount and consistency.
- Any problems with your bowel, such as unplanned bowel movements etc.
- Comments about your diet (fibre amount).
- Your daily fluid intake.
- Your activity level.
- Your current medication.

All this information will help you during your stay at the local spinal injuries unit and at home. However, when spinal cord injured people are admitted to general hospitals or when they go back to their local community, they can face problems maintaining their routine bowel care. Ward nurses or district nurses might refuse to perform manual evacuation or may want to change this part of your bowel care. A nurse unfamiliar with manual evacuation may need additional information and training.

Different issues that may need to be addressed:

- Only a trained person should perform a manual evacuation.
- If the nurse has never been shown how to do it, you may suggest that they consult their own nurse manager to get the opportunity to learn how to do it.

- If the nurse refuses to do a manual evacuation claiming it is illegal, you must explain that this procedure is not illegal and suggest that they should consult the Nursing and Midwifery Council for Nursing, Professional Code of Conduct or the Royal College of Nursing document entitled Digital rectal examination and removal of faeces.
- If the nurse prefers to change your bowel care, thinking manual evacuation is inappropriate, you should ask them to consult your GP or your local spinal injury unit first.
- You should tell them that inappropriate adjustment or avoidance of your established bowel management programme can have serious consequences for your health and lifestyle.

Ask your local spinal unit to write down the details of your bowel care. It is very important for you to recognise that the nurses believe they are acting in your best interests. You should be able to reassure the nurse that manual evacuation is acceptable and appropriate for your individual care needs. Suggesting a consultation or a phone call with someone with more experience in the field of spinal cord injury is helpful most of the time.

It's a good idea to always have the number of your local spinal unit to hand.

Medication

Stimulant Laxatives

These are taken orally and increase bowel contractions and we often use these in the initial stages of the bowel programme.

- Senna: two tablets on alternate days or 10 mls of syrup
- Bisacodyl: 10mgs on alternate days (two tablets).

You should take these drugs eight to ten hours before you want to empty your bowels.

Docosate Sodium: 100mgs up to 500mgs each day in divided doses.

Faecal Softeners or Bulk Formers

Taken orally these are substances which are undigested and absorb fluid thereby increasing bulk and making the faeces soft.

For example:

- Lactulose 10 -15mls once or twice each day
- Fybogel one sachet every day
- Bran
- Benefibre

Suppositories or Micro-Enemas

These are inserted into the rectum and stimulate the reflex action of the bowel. For example:

- Bisacodyl (irritant)
- Glycerine (lubricant)
- Microlax enema (softener)

N.B. You should not use large volume enemas regularly as they overstretch the bowel, causing it to lose its tone.

Osmotic Laxatives

Movicol:

For constipation, take 2-3 sachets daily in divided doses. Only take 1 sachet at a time to see if it helps. You can take this for up to 2 weeks.

For faecal impaction– you can take up to 8 sachets per day, for up to 3 days.

You should dissolve each sachet in 125mls water. You can add juice to sweeten the taste.

Bowel Cleansing Solutions

Picolax which you dissolve in water. You can take another sachet 8 hours later. Usually acts within three hours of the first dose.

Picolax is only used very occasionally and only under medical advice.

Complications

Anal fissure is a tear in the tissue around the anus as a result of passing hard stools or damage to the bowel lining caused by rough manual evacuation. These can be extremely painful; and can cause an increase in spasm and even autonomic dysreflexia. Autonomic dysreflexia is discussed in section 3.

Constipation can be caused by a change of diet and routine, low fluid intake, not eating and some drugs such as painkillers, antibiotics and depressants.

If you do not empty your bowel for a long time, the faeces become hard, dry and more difficult to move (impacted).

The symptoms are headaches, feeling sick and feeling full up, not being able to empty the bowel, sweating, increase in spasm, loss of appetite, and sometimes a brown, watery discharge from the anus.

Drinking pear juice may help or try yogurt with seeds or fruit.

With chronic constipation the bowel is blocked but some liquids manage to leak past the blockage, thought to be diarrhoea. This condition is often called 'overflow' and should be treated right away.

Haemorrhoids (piles) are varicose veins around or just inside the anus. You may be prone to develop these because of lack of mobility and poor circulation. They are caused or made worse by straining for long periods on the toilet and by rough manual evacuation. If the haemorrhoids are bad, it will complicate the process of bowel management, and can bring on autonomic dysreflexia, in tetraplegia or high paraplegia patients.

Haemorrhoids may also cause rectal bleeding. You should discuss these with your GP or liaison nurse. Surgery may be necessary but there are other treatments that you can try first e.g. haemorrhoid creams.

Diarrhoea is an unformed, loose stool, which may cause unplanned bowel movements or 'accidents'. It can cause discomfort, often in the form of abdominal cramps. Diarrhoea can also lead to skin breakdown through faecal burning of the skin by the liquid stool.

You may have to stop taking any laxatives until diarrhoea clears up. You may also have to put yourself on bed rest to try and reduce any skin breakdown from sitting in wet, soiled clothing.

Flatulence (wind) is just as embarrassing now as it was before your injury. Odour depends on what you have eaten. Your wind will probably smell bad after you eat food that's high in protein, such as meat, fish, or eggs. If you eat a vegetarian diet, your gas probably won't smell as bad, but you'll have a lot of it.

Excessive bacterial breakdown of bowel contents that is usual for you, or intolerance to dairy products (Lactose intolerance) can also cause bloating. Please discuss this with your GP as medications can help. To help avoid this embarrassing issue you may wish to consider the following points:

Your surroundings

Release gas at appropriate times and places. Good ventilation, deodorant spray and air fresheners can help mask odours.

Push-ups or leaning to the side might help release gas.

Think about how you eat

Excessive gas may be due to swallowing excessive air while you're eating or drinking. Eat your food slowly, chew with your mouth closed, try not to gulp your food and don't talk with food in your mouth.

Be aware of foods that can cause gas

Avoid specific foods from your diet, one at a time, do this until you've learned which, if any cause you to have gas, and then cut down on those foods.

Check your bowel programme

Increasing the frequency of bowel care may reduce the amount of stool you store in your colon that will produce gas.

Don't try too hard to hold in the gas, it can give you a stomach-ache or headache.

Remember: Passing wind means your digestive system is working. It was ok to pass wind before your injury; it's still ok to pass wind now!

Bowels

It took me a long time to get a bowel routine established while I was in hospital. It was one of the most difficult things about my rehab but once established I have had very few problems since.