

Neurogenic Bowel Dysfunction

The practical management of a bowel care programme for the spinal cord injured population



**National
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Hospital**

An tOspidéal Náisiúnta Athshlánúcháin



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National Rehabilitation Hospital, Rochestown Avenue, Dún Laoghaire, Co. Dublin, Ireland



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These procedures are recommended for individuals with a spinal cord injury. All decisions must be based on clinical judgement, as each individual may have unique requirements. If you would like any further information or to give us feedback, please contact scsc@nrh.ie

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The practical management of a bowel care programme for the spinal cord injured population

Introduction

This booklet is intended as a guide to accompany our animated training video on the practical aspect of neurogenic bowel management for spinal cord injured (SCI) individuals.

There will be times during this animation where you will need to 'pause' the video to read and comprehend the full text.

This is not a stand-alone module but will assist in the following procedures:

- Insertion of suppository
- Digital rectal stimulation (DRS)
- Digital removal of faeces (DRF)

Health Care Professionals: viewing this video does not deem an individual competent to perform the procedures. These procedures should be undertaken only after approved training, which should be carried out in accordance with the national guidelines and evidence based practice as appropriate to your organisation.

Individuals with a Spinal Cord Injury: the procedures shown in this video should only be carried out under the guidance of a Health Care Professional.

Autonomic Dysreflexia: this is a medical emergency specific to individuals with SCI at the neurological level of T6 or above (Khastgir J, et al 2007). If an individual experiences symptoms of Autonomic Dysreflexia, refer to the educational material prescribed. If necessary, contact your local Health Care Professional.

What is a Neurogenic Bowel?

Neurogenic Bowel is the term used to describe dysfunction of the colon (constipation, faecal incontinence and disordered defecation) due to loss of normal sensory and or motor control or both.

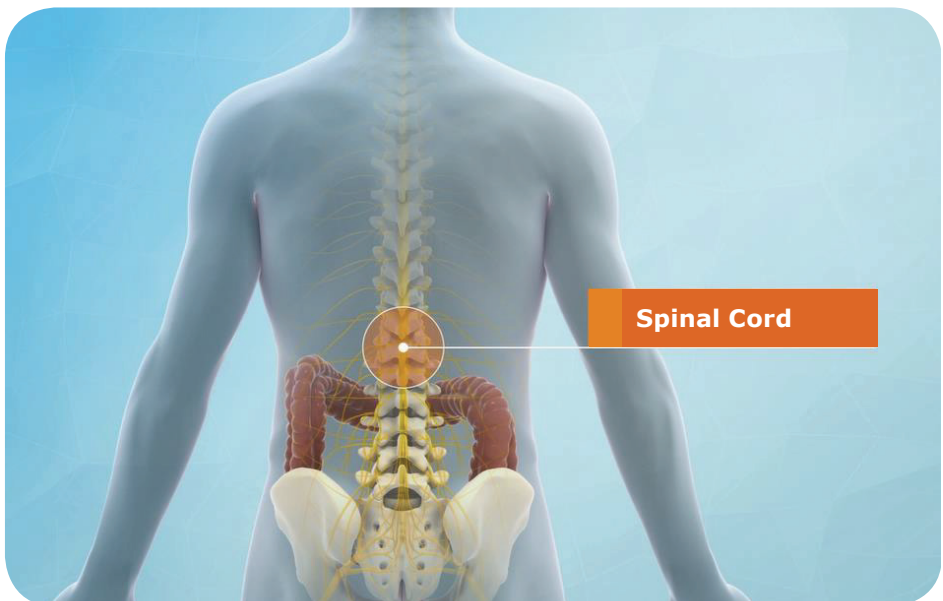
(Chung and Emmanuel 2006).

What are the aims of a Bowel Care Programme?

- To complete the programme within one hour
- To have a regular predictable bowel motion at a time and place that is socially acceptable
- To avoid complications
- To maintain quality of life

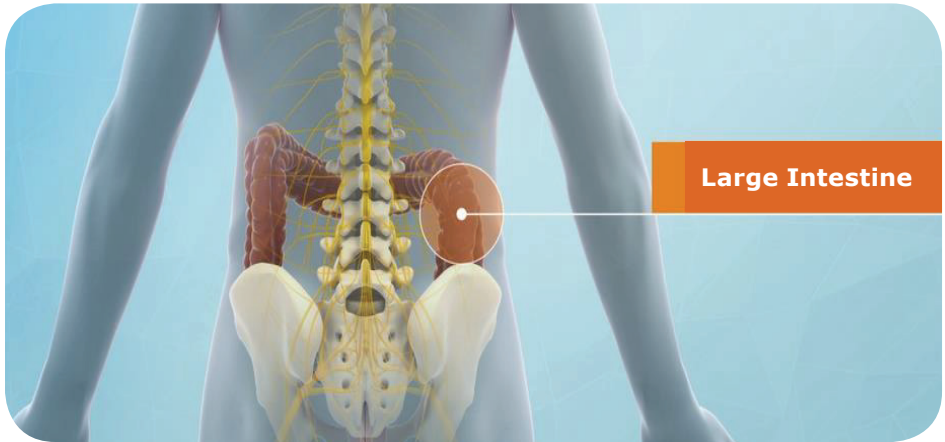
What is the function of the spinal cord?

The spinal cord is the pathway for communication between the brain and the body. Any damage to the spinal cord may disrupt this communication.



What is the main function of the large intestine?

The main function of the large intestine is to absorb water and remove waste from the body.



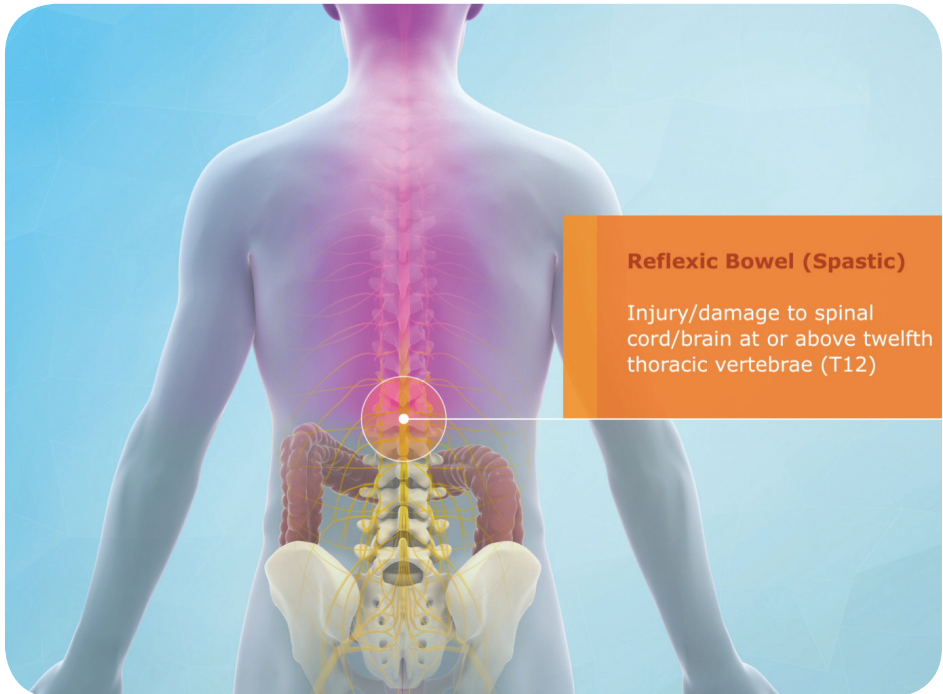
What are the different types of bowel programmes?

There are two distinct bowel programmes, reflexic or areflexic. However some SCI individuals may need an alternative programme such as those with a mixed lesion, cauda equina or conus medullaris injuries.

- **Mixed lesion:** An individual with a SCI between the twelfth thoracic vertebrae (T12) and the second lumbar vertebrae (L2) may show some aspects of both reflexic and areflexic bowel dysfunction.
- **Cauda Equina:** In individuals with Conus Medullaris Injuries the bowel may be areflexic immediately and in the long term, but mixed dysfunction is also possible.

What is a reflexic bowel?

A reflexic bowel is also known as a spastic bowel. This usually refers to injury or damage to the spinal cord or the brain at or above the twelfth thoracic vertebrae (T12).



Outline plan for a Reflexic Bowel Programme

Aim: Bristol stool type 4, daily or alternate day programme at a regular time. Attention to diet




What is the outline plan for a Reflexic Bowel Programme?

Stimulant laxative: 8-12 hours prior to bowel management if required



Gastrocolic reflex: Plan bowel programme 20-30 mins after food or drink to stimulate the reflex



Abdominal massage: Can aid bowel evacuation refer to health care provider




Digital rectal examination (DRE)
Insert rectal stimulant: Suppository / micro-enema



Digital rectal stimulation (DRS)



Digital removal of faeces (DRF) if reflex evacuation is incomplete



Digital rectal examination (DRE) 5-10 minutes after last stool passed to ensure rectum is empty

What is an areflexic bowel?

An areflexic bowel is also known as a flaccid bowel. This usually refers to injury or damage to the conus medullaris or cauda equina at or below the first lumbar vertebrae (L1).



What is the outline plan of an Areflexic Bowel Programme?

Outline plan for Areflexic Bowel Programme

Aim: Bristol stool type 2-3. Once or more daily at regular time.
Attention to diet



Stimulant laxative: 8-12 hours prior to bowel management if required



Gastrocolic reflex: Plan bowel programme 20-30 mins after food or drink to stimulate the reflex



Abdominal massage: Can aid bowel evacuation refer to health care provider



Digital removal of faeces (DRF)



Digital Rectal Examination (DRE) 5 - 10 minutes after last stool has passed to ensure rectum is empty

What is the preparation before each procedure?

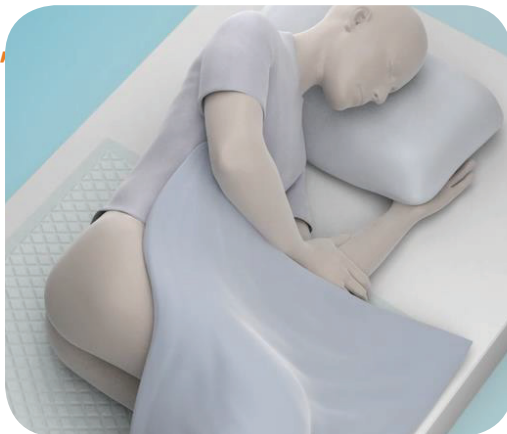
Explain the procedure and gain consent as per your national guidelines:

- Identify type of bowel programme prescribed; Reflexic or Areflexic
- Check for any allergies or contraindications
- Ensure privacy and dignity is observed throughout the procedure
- Collect all the relevant supplies for the procedures

What is the necessary pre-procedure?

- Perform hand hygiene (maintain nail care to prevent damage to the rectal mucosa)
- Apply disposable gloves during the procedures
- Health Care professionals should use personal protective equipment (PPE)

What is the recommended position of the individual for these procedures?

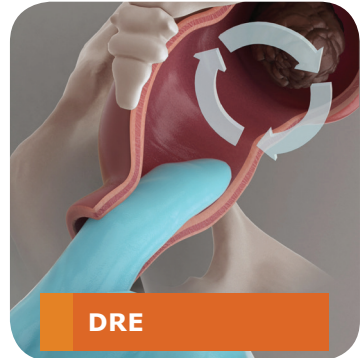


For training purposes, these procedures are demonstrated with the individual in bed lying on the left side, also known as the left lateral position. However, these procedures may also be performed over the toilet. Please obtain advice from your Health Care Professional.

What is digital rectal examination (DRE)?

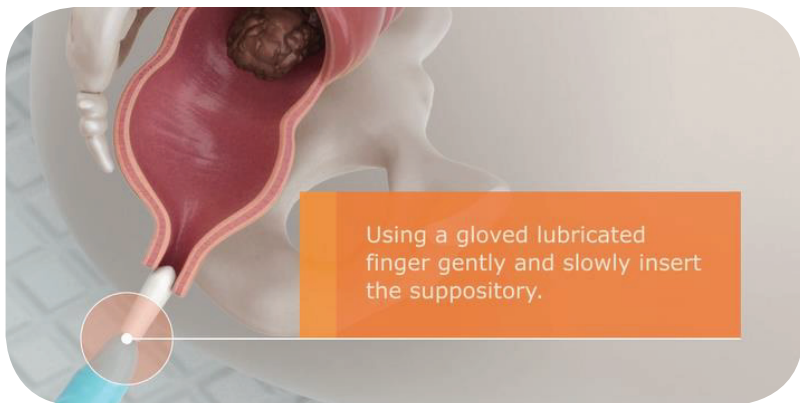
DRE is required before commencing any rectal intervention. This involves examining the rectum with a gloved lubricated finger to assess:

- Presence of faeces in the rectum
- Consistency of stool if present (recommended to use the Bristol stool scale)
- Sphincter tone and sensation
- Check for any abnormalities



PROCEDURE 1: Insertion of rectal suppository.

This procedure may be performed in bed or on the toilet as advised by your Health Care Professional



- Separate the buttocks to identify the anus
- Using a gloved lubricated finger gently and slowly insert the suppository
- Ensure the suppository is resting against the rectal wall
- Insert a second suppository if required
- The suppository begins to melt which stimulates the colon walls to contract
- Wait for the rectum to empty.

(Suppositories usually take effect within 15-30 minutes; follow the manufacturer's guidelines)

PROCEDURE 2: Digital Rectal Stimulation

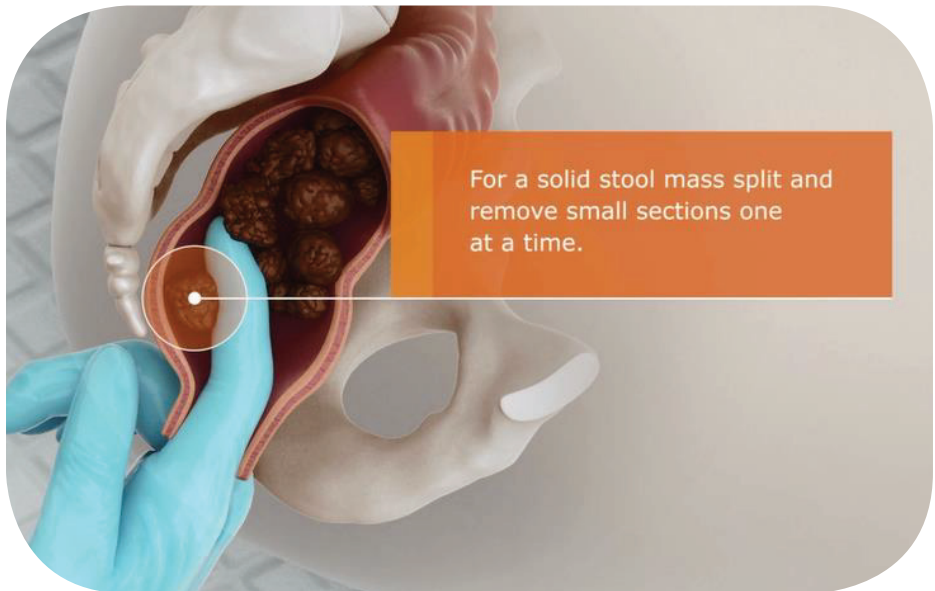
This involves inserting a gloved lubricated finger gently and slowly into the rectum.

- Rotate lubricated finger in a clockwise direction for at least 10 seconds while maintaining contact with the bowel wall
- Withdraw finger slowly and wait for bowel to empty which results in a reflex evacuation of faeces from the colon.
- Stimulation may be repeated every 5-10 minutes until the rectum is empty or reflex activity ceases. The normal range would be between 3-6 stimulation episodes. If no reflex activity occurs following 3 episodes of stimulation, do not continue
- Use digital removal of faeces if stool is still present in the rectum








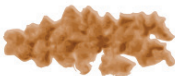

PROCEDURE 3: Digital removal of faeces

- This involves inserting a gloved lubricated finger gently and slowly into the rectum
- For a solid stool mass split and remove small sections of faeces, one at a time
- Repeat process until the bowel is empty of faeces



What should be done when the procedure is completed?

- Wash and dry the anal area. Reposition the patient as appropriate
- Perform hand hygiene
- Document the results of the bowel programme using the Bristol Stool Scale

Bristol Stool Chart		
Type 1		Separate hard lumps, like nuts (hard to pass)
Type 2		Sausage-shaped but lumpy
Type 3		Like a sausage but with cracks on the surface
Type 4		Like a sausage or snake, smooth and soft
Type 5		Soft blobs with clear-cut edges
Type 6		Fluffy pieces with ragged edges, a mushy stool
Type 7		Watery, no solid pieces. Entirely Liquid

Who to contact when you have any questions?

Always contact your Health Care Professional for any further questions or concerns.

Contact details:

The Spinal Cord System of Care Programme,
National Rehabilitation Hospital,
Rochestown Avenue,
Dún Laoghaire
Co Dublin
Ireland A96 P235.
Email: scsc@nrh.ie



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Glossary of terms:

Abdominal massage: 'Pressure is applied intermittently to the abdomen following the usual lie of the colon in a clockwise direction; using the back or heel of the hand or a tennis ball or similar, pressure is applied and released firmly but gently in a continuous progression around the abdomen' (Coggrave 2005).

'Abdominal massage significantly shortens total colonic transit times, reduces abdominal distension and increases frequency of bowel movement. 15 mins a day for SCI individuals can reduce transit times' (Ayas et al 2006 Coggrave 2014).

Areflexic bowel: is also known as a flaccid bowel. This refers to injury or damage to the conus medullaris or cauda equina at or below the first lumbar vertebrae.

Autonomic Dysreflexia: 'This is a potentially life-threatening hypertensive medical emergency that occurs most often in spinal cord injured individuals with spinal lesions at or above the 6th thoracic vertebrae' (Khastgir J, et al 2007).

Bowel care: Activity undertaken to regularly evacuate stool from the rectum and sigmoid colon.

Bowel Management: Regular, pre-emptive individually developed and prescribed series of interventions carried out by the patient/nurse/attendant/carer to prevent faecal incontinence and constipation, usually in individuals with neurogenic bowel dysfunction.

Bowel programme: A combination of interventions in a given order conducted to achieve the predictable evacuation of stool from the bowel.

Bristol stool form scale: Evidence-based objective descriptors of stool consistency, reproduced by kind permission of Dr S J Lewis.

Cauda Equina Syndrome: '(CES) is caused by compression of the nerves of the cauda equina, causing one or more of the following: bladder and/or bowel dysfunction, reduced sensation in the saddle (perineal) area, and sexual dysfunction, with possible neurological deficits in the lower limbs (motor/sensory loss, reflex change).' Fraser et al 2009

Conus Medullaris Injuries: This occurs at the conical end of the spinal cord around the level of the lower end of the first lumbar vertebrae.

Digital rectal stimulation: The insertion of a gloved, lubricated finger through the anus into the rectum followed by a gentle circular motion of the finger for at least 10 seconds to stimulate reflex evacuation of stool from the bowel.

Digital rectal examination: Examination of the rectum by inserting a gloved, lubricated finger into the rectum.

Digital removal of faeces: Removal of stool from the rectum using a gloved lubricated finger.

Gastrocolic Reflex: A reflex response to the introduction of food or drink into the stomach, resulting in an increase in muscular activity throughout the gut, which can result in movement of stool into the rectum ready for evacuation. It can be utilised by planning bowel evacuation 15-30 minutes after a meal – it is thought to be strongest in response to breakfast. Patients are advised to make use of the gastrocolic reflex by eating or drinking 15-30 minutes before attempting to empty their bowels. (Kumar et al 2016)

Neurogenic bowel: is the term used to describe dysfunction of the colon (constipation, faecal incontinence and disordered defecation) due to loss of sensory and motor control or both as a result of central neurological disease or damage. Neurogenic bowel dysfunction may be reflex, areflexic or mixed. (Chung and Emmanuel 2006)

Reflexic bowel: A reflexic bowel is also known as a spastic bowel. This refers to injury or damage to the spinal cord or the brain at or above the twelfth thoracic vertebrae.

Rectal stimulant: These are pharmacology agents used, such as a suppository or enemas, which is inserted into the rectum to stimulate reflex evacuation of stool. Not usually used in individuals with areflexic bowel function.

Stimulant laxative: Directly stimulates peristalsis which pushes the stool along in the bowel / large intestine. This medication is taken 8-12 hours prior to a planned bowel evacuation, as recommended by your Health Care Professional.

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Bristol stool scale reproduced by kind permission of Dr S J Lewis, Nuffield Health Plymouth Hospital, Derriford Rd, Derriford, Plymouth, PL6 8BG (April 2016)

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An tOspidéal Náisiúnta Athshlánúcháin

Rochestown Avenue,
Dún Laoghaire
Co Dublin
Ireland A96 P235

Tel: +353 1 235 5000
Fax: +353 1 285 1053
Email: scsc@nrh.ie
www.nrh.ie