

Rural Spinal Cord Injury Project

A collaborative project between:

Prince Henry & Prince of Wales Hospital

Royal North Shore Hospital

Royal Rehabilitation Centre Sydney

Spinal Cord Injuries Australia

Paraplegic & Quadriplegic Association of NSW

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Management of the **NEUROPATHIC BOWEL** for adults with spinal cord injuries



Targeting Health Professionals

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INTRODUCTION

An effective and regular bowel program is an important determinant of quality of life in individuals after spinal cord injury (SCI). A suboptimal bowel program can have negative consequences on issues such as mood, self esteem/body image, vocational aspirations and relationships. Fear of bowel accidents prevents some people with SCI from participating in social activities, recreation and employment.

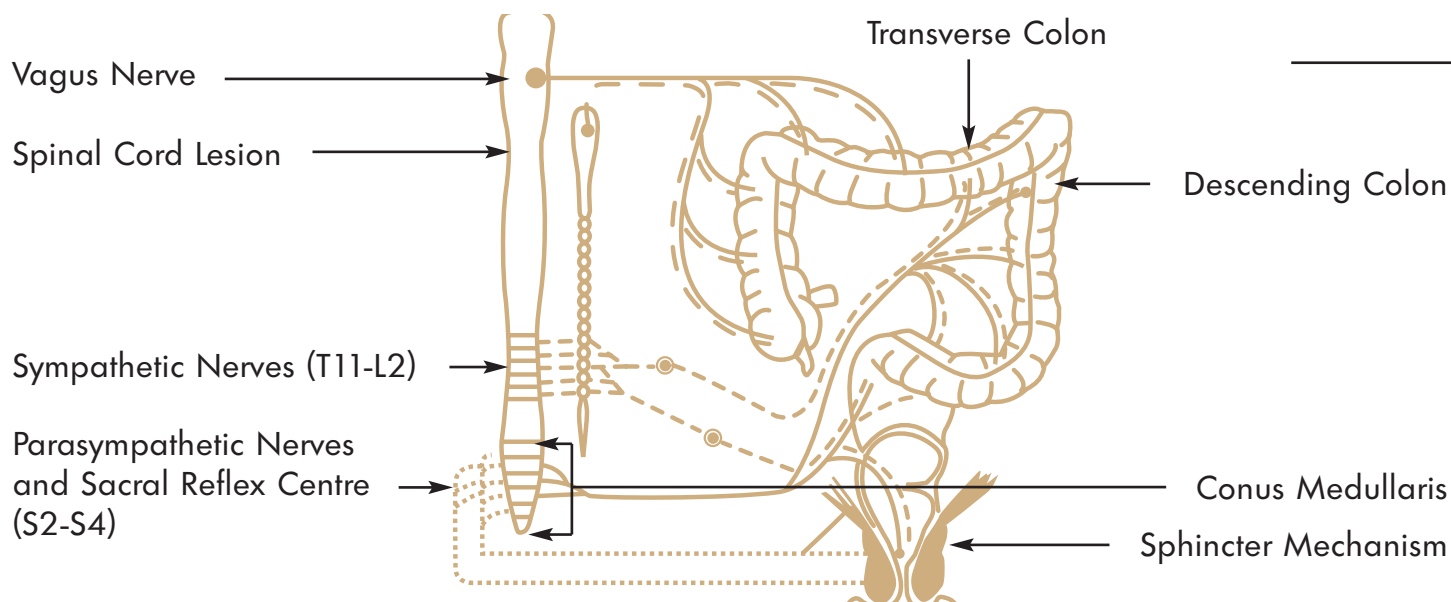
A review of the literature reveals that about 30-40% of individuals with SCI experience chronic gastrointestinal (GI) problems severe enough to significantly interfere with their lifestyle. Common problems which may adversely affect quality of life are chronic constipation with difficult bowel evacuation (requiring more than 60 minutes of bowel care per day), poorly localised abdominal pain, rectal bleeding from haemorrhoids and incontinence from overuse of laxatives. Some complications, such as Autonomic Dysreflexia (AD) and ventilatory insufficiency caused by significant abdominal distension, are unique to people with SCI and may be life threatening.

FUNCTIONAL ANATOMY OF THE COLON

The colon acts as a reservoir to store waste material, permitting growth of symbiotic bacteria, reabsorption of electrolytes, fatty acids and other metabolites, with mucus secretion for lubrication and propulsion of stool towards the anus for final elimination. Colonic activity is controlled mainly by the autonomic nervous system, with a significant contribution from GI peptide hormones, such as vasoactive intestinal peptide (VIP), which influence smooth muscle contractility and play an important role in the forward propulsive actions of the gut. The colon (and small intestine) has an enteric nervous system, generating intrinsic rhythmic activity which coordinates segmental motility and some propagated movements in response to mechanical (stretching) and chemical stimuli (Sarna, 1991). The parasympathetic output to the colon is almost exclusively stimulatory to the movement of faeces. This influence increases motility and peristalsis. The vagus nerve supplies the GI tract to the level of the transverse colon, with the lower bowel under the parasympathetic control of the pelvic sacral (S2-4) nerves. Sympathetic nervous system influence provides antagonistic control that is inhibitory to colonic propulsion and secretions.

MECHANICS OF TOILETING

In individuals that are neurologically intact, the bowel may be emptied once per day, usually in response to a gastro-colic reflex (where food in the stomach stimulates bowel activity 20-30 minutes later). Normally, when a person senses that the rectum is full he or she is able to suppress a defecation reflex by contracting the external anal sphincter EAS until it is convenient to access a toilet. At that time, the person will assume an optimal position for emptying the bowel with knees flexed and the upper body bending forward supported by elbows or hands on knees. The person can then easily increase intra-abdominal pressure, pushing the waste material towards the ano-rectal verge. With stretching of this area, the ano-rectal reflex is stimulated relaxing the proximal anal region. Voluntary contraction of EAS completes evacuation.



SCI interrupts motor and sensory pathways preventing normal control of bowel function.

AFTER SPINAL CORD INJURY

After SCI, an individual is profoundly disadvantaged at all points of the defecation process. Stool transit can be significantly slower and the gastro-colic reflex may be attenuated or absent. Sensation of a full rectum may be altered or absent. Obtaining an appropriate flexed position for defecation and the optimal anorectal angle may not be possible due to a combination of poor balance and commode chair forcing a recumbent position without sufficient forward flexion. In persons with higher level paraplegia and tetraplegia, lack of voluntary abdominal muscle control impacts upon correct positioning over the toilet and ability to adequately increase intra-abdominal pressure during defecation. Individuals with lower level lesions may suffer incontinence due to poor anal tone and absence of a defecation reflex.

PARALYTIC ILEUS

During the first few days following SCI the patient must be observed for the onset of paralytic ileus. The signs of an ileus may be clinically evident within minutes of cord injury or may be delayed for up to 48 hours. Unrecognised ileus can have serious consequences, particularly in a patient with tetraplegia where decreased cough may lead to aspiration of gastric contents. Progressive abdominal distension may contribute to ventilatory insufficiency by compressing the diaphragm and limiting its excursion. The paralytic ileus generally lasts 48-72 hours, during which time the person is kept nil by mouth with a nasogastric tube inserted to decompress the stomach and intravenous fluid therapy to maintain hydration. For the duration of the ileus it is important to check the rectum for the presence of stool on a daily basis and if present gently remove manually using a water-based lubricant. When bowel sounds have returned and flatus has been passed after resolution of ileus, it is time to gradually introduce fluids and food and to commence a suitable bowel program.

The term neurogenic or neuropathic bowel is used to describe a variety of bowel complications after SCI. This term may overemphasise the importance of extrinsic influences over the lower GI tract and down plays the significant amount of reflex and intrinsic control that remains even in individuals with profound neurologic deficits. Knowledge of naturally occurring reflex mechanisms including the gastro-colic and defecation reflexes and how they can be manipulated provides a key to successful bowel management.

BOWEL IMPAIRMENT FOLLOWING SCI

Fundamentally, there are **two different types of bowel impairment** caused by damage to the spinal cord or nerve roots, which are summarised below in Table 1.

An **upper motor neurone type** of bowel impairment occurs with damage from injury or disease involving the cord above the conus medullaris, leaving the sacral reflex defecation centre intact. *This may also be referred to as suprasacral, reflex or spastic type.*

A **lower motor neurone type** of bowel impairment occurs with damage due to injury or disease directly involving the conus medullaris or the sacral nerve roots of the cauda equina, thereby interrupting nerve pathways responsible for the defecation reflex centre. *This may also be referred to as infrasacral, areflexic or flaccid type.*

Table 1 - Types of Neuropathic Bowel Impairment

Reflexic/Spastic Bowel (lesions above T12)

An **Upper Motor Neurone (UMN) lesion** with loss of voluntary control over the sacral defecation reflexes results in:

- loss of voluntary control over defecation
- loss of voluntary control of external anal sphincter EAS
- hypertonic EAS with anorectal dyssynergia
- positive anocutaneous and bulbocavernosus reflexes after spinal shock has resolved
- intact defecation reflex after spinal shock has resolved

Areflexic/Flaccid Bowel

A **Lower Motor Neurone (LMN) lesion** with destruction of the sacral reflex defecation centre results in:

- loss of voluntary control over defecation
- loss of voluntary control of EAS
- poor or absent EAS tone
- loss of sacral reflexes including anocutaneous and bulbocavernosus reflexes
- loss of defecation reflex

EXAMINATION TO DETERMINE TYPE OF NEUROPATHIC BOWEL

It is **most important** that healthcare workers, involved in designing and reviewing a bowel program, interpret the neurological level of injury to determine whether an individual has an **UMN or LMN** type of neuropathic bowel. This will then guide the **principles** used in developing an appropriate bowel program.

- During physical examination any sparing of spinothalamic (pin prick) sensation in the sacral dermatomes or corticospinal (motor) function to the external anal sphincter EAS may indicate that some voluntary control exists. Ability to sense the urge to defecate may help in restabilising voluntary bowel control.
- In lesions where there is no sacral sparing, regardless of whether the defecation reflex is lost or spared, voluntary control of bowel function will be lost due to a lack of central command.

- In a SCI above the conus, the sacral reflexes are often the first reflexes to return when the individual is recovering from spinal shock.

A **bulbocavernosus reflex is present** if, after applying pressure to the glans penis or clitoris, a palpable and visible contraction of the anal sphincter occurs. Applying a gentle tug to the urethral catheter can also elicit a palpable anal response. This test determines that the sacral reflexes have been spared. The anal reflex, if positive, will also indicate sparing of the sacral reflexes, when a visible contraction of the anal sphincter is initiated in response to a pinprick applied to the buttock just lateral to the anus. If these reflexes are intact, an **UMN bowel** exists, with spastic contraction usually preventing any leakage of stool. However, ano-rectal dyssynergia may occur where rectal contractions to expel stool are impeded by the EAS contracting at the same time.

Typically, in a **LMN bowel** the *bulbocavernosus and anal reflexes will be absent*, resulting in a patulous EAS with loss of the ano-rectal angle. These are the two most important factors for maintaining continence.

A rectal (PR) examination will help to assess anal tone. *In people with a LMN bowel, anal tone will be noted to be poor or absent and the anal sphincter may remain open following PR examination.*

NEUROPATHIC BOWEL MANAGEMENT

An individualised program will be developed with *goals for bowel management* to:

- Provide regular and reliable bowel emptying
- Maintain continence
- Prevent constipation/impaction
- Avoid overdistension of the colon and rectum
- Promote individual problem solving skills
- Prevent long term complications

DESIGNING AN APPROPRIATE BOWEL PROGRAM

Every effort must be made to achieve continence and minimise complications in individuals with a neuropathic bowel. By instituting a bowel program using a set time and day schedule, and monitoring results closely, a significant difference to quality of life for people with SCI can be achieved. Careful consideration of factors such as appropriate positioning over toilet and encouragement of regular physical activity may improve motility and facilitate more effective emptying of the rectum.

ASSESSMENT OF FUNCTION

An assessment of knowledge, cognition and function should be conducted to determine the ability of the individual to complete bowel care or direct a carer assertively to complete the procedure safely and effectively.

IMPORTANT CONSIDERATIONS

- Willingness to learn
- Problem solving skills
- Ability to direct others appropriately (assertively not aggressively)
- Sitting tolerance, balance and posture
- Upper limb strength
- Hand & arm function
- Anthropometric (body size, arm reach) characteristics
- Spasticity/contractures
- Transfer skills

IMPORTANT COMPONENTS

- Take a detailed past history
- Encourage appropriate balanced diet, fluids and fibre intake
- Choose an appropriate rectal stimulant
- Select optimal positioning
- Select appropriate assistive techniques
 - Abdominal massage or binder
 - Valsalva manoeuvre
 - Deep breathing
 - Ingestion of food and warm fluids (to utilise gastro-colic reflex)
 - Seated or forward leaning position (to utilise defecation reflex)
- Stool characteristics – consistency, amount, colour, mucus and presence of blood
- Encourage physical activity

HELPFUL HINT

Although it is important to take a past history of bowel habits, previous habits should not be overemphasised in the individual after SCI. Some individuals after discharge from hospital may strive to return to their pre-injury bowel pattern, leading to overuse or abuse of oral aperients and rectal stimulants. The goal of returning to a pre-injury bowel habit is often unrealistic, as the function of the neuropathic bowel may have changed significantly with slower bowel transit times and alterations in ano-rectal function.

MECHANICAL METHODS

- A manual evacuation and/or digital stimulation can be used alone or in conjunction with chemical (suppository/enema) rectal stimulants.
- Using chemical rectal stimulants alone is generally not as successful as when used in combination with mechanical and chemical techniques.
- In the **UMN bowel** program, digital stimulation may trigger a defecation reflex and also relax the EAS, which is crucial to success in the UMN program.
- In the **LMN bowel**, a defecation reflex will not be triggered by digital stimulation.

Digital stimulation can be performed by gently inserting a gloved lubricated finger into the rectum and slowly rotating the finger in a circular motion. Rotation is continued until flatus or stool passes or the internal sphincter relaxes. In practice, digital stimulation takes 15-20 seconds, and stimulation longer than 1 minute is seldom necessary. Digital stimulation is repeated approximately every 5-10 minutes until stool evacuation is complete.

A *manual evacuation* can also be important prior to administering the rectal chemical stimulant to ensure the stimulant comes into contact with the rectal mucosa. In the LMN bowel a manual evacuation performed on a daily basis may be the optimal program if suppositories are unsuccessful. To reduce the risk of incontinence and to ensure easier removal of the stool from the rectal vault the stool should be maintained, where possible, in a firm consistency.

PSYCHOLOGICAL ASPECTS

It is very important that counselling and support are provided when establishing a bowel program. Establishing an effective and reliable bowel program requires great patience. The fact that a person after SCI often requires assistance with bowel emptying, either in the form of direct assistance or by chemical assistance from a suppository or enema, may cause some people to feel confronted and quite disillusioned at this time. Even a single episode of faecal incontinence may significantly reduce self-confidence.

Caregivers need to maintain a sensitive and supportive approach when providing care of such a personal nature. It is not unusual for individuals to react in a negative way when it is not possible to perform this usually private and personal activity without assistance. This is a time when understanding, support and education are necessary.

PRINCIPLES TO FOLLOW WHEN ESTABLISHING AN UMN BOWEL PROGRAM

- Food and/or a hot drink should be ingested approximately 30 minutes prior to bowel care (i.e. prior to the insertion of any enema or suppository) to facilitate a gastro-colic response.
- Bowel care for UMN bowel consists of administering a chemical rectal stimulant onto the rectal mucosa, waiting an appropriate time, assuming an upright position or side lying position and performing digital stimulation and/or other assistive techniques.
- A water soluble lubricant is used with a suppository or microenema and digital stimulation to stimulate a defecation reflex and to gently stretch the EAS.
- Bowel care should be performed at the same time of day and scheduled at least every second day over the long term to avoid overdistension of the colon and rectum.
- A number of oral bowel preparations can be prescribed including gentle laxatives, softeners and stool bulking agents with the aim, in the UMN bowel regime, being to maintain a soft, yet well-formed stool consistency. Oral preparations often need to be given 8-12 hours prior to administering a rectal stimulant with or without additional anal stimulation.
- ***It is important to monitor any techniques that may trigger Autonomic Dysreflexia and avoid where possible or administer anaesthetic gel (2% Lignocaine) 5 minutes prior to performing any digital stimulation (Refer to Factsheet on Autonomic Dysreflexia).***

HELPFUL HINTS IN ESTABLISHING UMN BOWEL PROGRAM

Summary:

- Avoid highly processed and spicy foods
- Ensure adequate fluid intake
- Administer oral aperients for appropriate consistency and transit time for every other day bowel program
- Manually remove any waste material in rectal vault prior to administration of rectal stimulant to ensure contact with mucosa
- Schedule enema or suppository about 30 minutes after food and/or warm fluid
- Attend to program over toilet
- Perform anal stimulation for 15-20 seconds every 5-10 minutes until rectum is empty
- Monitor stool consistency
- Monitor symptoms of Autonomic Dysreflexia (e.g. headache, sweating, flushing or blotchy rash) and abdominal spasm

PRINCIPLES TO FOLLOW WHEN ESTABLISHING A LMN BOWEL PROGRAM

- In the areflexic bowel regime the main goal is to encourage a firm, formed stool that can be retained between daily (or twice daily) bowel care sessions and easily manually evacuated.
- A well balanced diet with adequate fibre and fluid intake and/or fibre supplements (Normafibe, Fybogel, Metamucil or Normacol) can assist in maintaining a firm, bulky stool
- Due to poor or non-existent EAS tone and loss of ano-rectal angle, a chemical stimulant is often not retained if administered while sitting up. It may be worth inserting a suppository in the lying position and waiting for up to 15-30 minutes in the lying position before sitting a person up over the toilet and performing gentle valsalva manoeuvres.
- The bladder should be emptied prior to avoid vesico-ureteric reflux.
- In the areflexic bowel, it is pivotal to monitor stool consistency and if possible avoid foods that may cause flatulence or loose or hard formed stools.
- Often rectal stimulants in the LMN bowel are ineffective and a post-prandial (20-30 mins after meal) manual evacuation of the rectum is performed alone with a better result.

HELPFUL HINTS IN ESTABLISHING LMN BOWEL PROGRAM

Summary

- Avoid highly processed/spicy foods
- Ensure diet is appropriate
- Avoid strong colonic stimulants
- Ensure adequate fluid intake
- Try suppository 30 minutes post-prandial (after meal)
- Due to poor anal tone it may be helpful to administer suppository in side lying position
- After approximately 20-30 minutes position patient flexed over toilet
- If suppository is unsuccessful, perform manual evacuation using plenty of lubricant
- In LMN bowel firm stool consistency is the key factor to maintaining continence

INDIVIDUALS WITH AN INCOMPLETE SPINAL CORD LESION

- Individuals with sacral sparing and in particular with voluntary control over the EAS may in time re-establish voluntary control over bowel function. A trial of a stool bulking agent may be helpful in conjunction with daily post-prandial toileting. A trial of voluntary bowel function should only take place when the individual has commenced regular physical activity.
- If the bowel is not emptied well for 2 days, a suppository or microlax enema can then be administered. Careful monitoring and recording of diet, fluid intake and stool consistency is important. Any constipation should be rectified prior to attempting voluntary bowel emptying. If self-catheterisation is being performed, this should be done prior to the bowel program.

BOWEL MEDICATIONS AND DIET AND FLUIDS AFTER SPINAL CORD INJURY

- Regardless of the level of SCI, a healthy diet with an adequate fibre and fluid intake is important when establishing a bowel program and this should be encouraged in the long term (refer to RSCIP Nutrition Factsheet). A fibre intake of no less than 15-30mg per day is adequate when commencing a bowel program. A large intake of dietary fibre may increase the amount of gas in the colon and necessitate more frequent bowel care, as it will increase the amount of stool. Foods that are shown to cause flatulence or loose stools should be avoided.
- A combination of a healthy diet and oral medication should facilitate the formation of a normal column of stool in the colon. Strong rectal stimulants should be avoided as they are more likely to cause faecal incontinence and in the long term may produce abnormal intestinal motor function. It is better to recommend taking less irritant bowel medication consistently rather than encouraging constipation for a number of days and then over-medicating with strong colonic stimulants to empty the rectum. The lowest effective dose of oral and/or rectal medications should be used. Encouraging constipation will only have short-term benefit at best in maintaining continence, however, in the long-term put the patient at considerable risk of chronic bowel problems.

Examples of Bowel Medications

Bulking Agents	<ul style="list-style-type: none">• Metamucil, Fybogel, Normafibe• Normacol also bulking agent with gentle laxative
Softeners	<ul style="list-style-type: none">• Coloxyl• Duphulac• Sorbitol• Medications may increase gas
Other	<ul style="list-style-type: none">• Movicol <i>(Movicol may be useful as a second line treatment of constipation if more gentle bowel medications have failed. Movicol contains Macrogol 3350 and acts by virtue of its osmotic effect in the gut, which induces a laxative effect. The electrolytes also present in the formulation ensure there is no net loss of sodium, potassium or water. Movicol is packaged in individual sachets and each sachet is administered with 125 mls of water). [Norgine product information]</i>

Irritants

(should be avoided or only used sparingly)

- Duro lax
- Senekot granules
- Coloxyl & Senna
- Bisalax enemas
- Travaad enemas
- Agarol (paraffin)
- Other oils such as castor etc

HELPFUL HINTS

- Rectal irritants may contribute to a number of problems particularly in people who have been using them for a long time. Mucous discharge some hours after completion of the bowel program may be a complaint. Generally, individuals will describe a liquid discharge that may or may not have faecal staining. The discharge may be from the chemical irritation of the mucosal membrane in the rectum.
- If the person is having daily enemas with strong irritants it may be better to change to every other day enemas. More gentle rectal stimulants such as glycerine suppositories or microlax enemas may work just as effectively as the stronger product when they are combined with mechanical methods, taking advantage of the naturally occurring reflexes.
- Reducing irritant medications successfully (i.e. replacement with less irritating rectal medications) will usually require consultation with a specialist nurse or doctor from a spinal cord injury unit to prevent further complications during the change over period.
- Any change implemented needs to be carefully monitored and is achieved by changing only one element at a time and evaluating at 2nd daily intervals before making any further changes.
- Also be aware of possible shortcuts that an individual may take in his or her bowel program because it may be the very important mechanical methods that are often omitted. This can have a significant negative effect on the success of a bowel program.
- Rectal irritants may also contribute to the triggering of Autonomic Dysreflexia and then a sudden drop of blood pressure if the rectum is emptied suddenly.

MANAGING COMMON COMPLICATIONS OF THE NEUROPATHIC BOWEL

Individuals with a spinal cord injury at the **T6 level or higher** with intercostal paralysis and severe abdominal distension may experience **life threatening Autonomic Dysreflexia** and respiratory insufficiency from limitation of diaphragmatic excursion. Problems like incontinence as a result of loose stools may be misinterpreted as a gastrointestinal illness or as over-medication with oral aperients, however, this may be indicative of high faecal impaction (with spurious diarrhoea). **Prompt treatment of impaction** is necessary to prevent the already mentioned complications as well as colorectal over-distension.

CHRONIC CONSTIPATION

A common complaint in individuals with SCI suffering from constipation is anorexia. Pain and/or bloating may or may not be a presenting complaint. When pain is present it may be dull, poorly localised, or oppressive. Reflex sweating or other symptoms of Autonomic Dysreflexia may occur during bowel care procedures, as a result of constipation causing rectal distension. It is important to be aware that Autonomic Dysreflexia may also indicate underlying abdominal or other pathology.

The basis of all bowel programs in individuals with SCI should be the establishment of a balanced diet, adequate fluid and fibre intake, and appropriate physical activity. To the extent possible, reduction or elimination of medication/s contributing to constipation is advisable. Where constipation is present, an urgent review and appropriate adjustment in bowel regime should be performed as soon as possible.

If evacuation of stool has not occurred within 24 hours of scheduled evacuation or if stool is hard formed and difficult to pass, a trial is warranted of one of the following categories of laxative agents, lubricants, osmotics and stimulant cathartics. These agents should be ingested at least 8 hours before planned bowel care. Frequency of symptomatic bowel dysfunction has been noted to be greater in persons with SCI injured more than 5 years.

FAECAL IMPACTION

If constipation is not identified and remedied promptly faecal impaction may occur. This can be confirmed with colonic palpation, rectal examination and/or abdominal x-ray. Abdominal x-ray is also important to rule out bowel obstruction.

If faecal matter is palpable on rectal examination, a manual evacuation should be attempted. In individuals that are vulnerable to Autonomic Dysreflexia, topical anaesthetic gel (2% Lignocaine) can be inserted into the rectum 5 minutes prior to the manual evacuation. After manual evacuation a rectal chemical stimulant (enema or suppository) may be administered to attempt further emptying of the rectum.

If the impaction is suspected to be more proximal, Movicol may be a safer alternative compared to more traditional colonic stimulants. Movicol is designed to cause less fluid and electrolyte disturbance by allowing zero net transfer of electrolytes between the lumen of the gut and plasma. Up to 8 sachets of Movicol solution (1 litre) daily may be given for 1, 2 or 3 days according to the individuals response. The response should be evaluated by volume passed, frequency, stool consistency and ease of evacuation. Once the colon is cleared, a thorough review of the patient should be undertaken with the aim being to maintain a more regular and effective bowel program preventing recurrent overdistension of the colon.

Further tests may need to be performed to identify the cause of a change in bowel routine. Colorectal cancer should be excluded. Colonoscopy may be better tolerated in tetraplegic individuals, particularly those that are ventilator dependent, compared to tests that contain Barium. It should be noted that if a Barium contrast enema is performed an increase in oral laxatives and a daily bowel program should be scheduled for a few days post procedure to facilitate the removal of contrast and prevent constipation. Colonic transit in the neuropathic bowel can be simply assessed by swallowing radiopaque markers and performing a series of abdominal x-rays.

HAEMORRHOIDS

Haemorrhoids usually become more symptomatic as they increase in size and may be exacerbated by physical interventions such as suppositories/enemas and digital stimulation. Rectal irritants like Bisacodyl may exacerbate the problem more with a greater risk of triggering Autonomic Dysreflexia.

Minimising the physical trauma and changing to a gentler rectal stimulant may be a short term way of minimising the symptoms of haemorrhoids. A significant complication in the individual with a spinal cord lesion above the T6 level is haemorrhoids acting as a trigger for Autonomic Dysreflexia. Topical anaesthetic gel (2% Lignocaine) may be administered into the rectum 5 minutes prior to the commencement of any bowel care in order to reduce the onset/severity of Autonomic Dysreflexia.

Persistent bleeding and triggering of Autonomic Dysreflexia from routine bowel procedures indicates a need to consider haemorrhoidectomy. Recurrent Autonomic Dysreflexia as a result of the irritating effects of haemorrhoids may require the individual to be prescribed a slow release antihypertensive agent to reduce severity of the Autonomic Dysreflexia until surgical intervention can be performed.

PRESSURE ULCERS AND FALLS DURING BOWEL CARE

Since the bowel care procedure can be prolonged it is important to consider the comfort and safety of the individual. The seating position should be such that any areas that are vulnerable to skin break down are evenly distributed on the chair and posture carefully considered. A commode RoHo cushion may be helpful in evenly distributing and reducing pressures particularly in those individuals where the bowel program is prolonged. No seat seams should come into contact with the skin. Also consider seat size as smaller framed individuals can sit too low in the chair and still manage to come into contact with the seat seam. It may be necessary to seek specialist advice about appropriate seating. Spinal Injury Units can refer you to this service.

There is a risk of falling if balance is poor or spasms disturb position. Falls can generally occur when bending to access perianal area or to reach supplies or when performing pressure relief (Zekdlik, 1992). Research has revealed that approximately one-third of individuals with SCI who use commodes have experienced one or more falls.

POINTS TO CONSIDER TO PREVENT SKIN PROBLEMS AND FALLS

- Time taken to complete bowel program
- Is toilet seat appropriate size for individual
- Is toilet seat padded appropriately
- Are there splits in seat
- Is extra cushioning for commode (e.g. Roho cushion) necessary
- Is bowel care performed from side or front of chair
- Posture in chair
- Does individual require restraining belt to prevent falls

LONG TERM MANAGEMENT

Maintaining a bowel program that is **effective** and **safe** is the **main goal of management**. A bowel program that is poorly regulated can have significant impact on quality of life and psychosocial well being. More serious medical consequences can occur if there is a delay in the diagnosis and treatment of severe gastrointestinal problems.

Incidence of rectal bleeding may result from local trauma of routine bowel care or from the presence of haemorrhoids, however if the bleeding is not thought to be from these sources the individual should be promptly referred for colonoscopy. *Peptic ulceration may present as abdominal bloating or nausea and if the spinal cord injury is above T6, Autonomic Dysreflexia. It is important to note that individuals with SCI above T6 will always be challenging to diagnose intra-abdominal pathology due to altered visceral sensation and signs.*

The importance of lifestyle factors and their impact on effective bowel management cannot be underestimated. In fact, many bowel problems can be solved by a change in lifestyle factors rather than an increase or introduction of medications

WHERE TO OBTAIN SUPPLIES

Some bowel preparations are available free if the individual is a ParaQuad member (Ph 02 9647 1966 or free call outside metro area 1300 788 855 or Fax 1300 788 811). Microenemas, suppositories and Normacol are free and there is no membership fee for the first year after injury and a small fee annually thereafter. Supplies can also be obtained through the local hospital Provision of Appliances for Disabled People (PADP) providing the person is on a pension and meets the eligibility requirements. Contact the nearest major hospital PADP Dept to where the person will be residing for further information. The Continence Aids Assistance Scheme (CAAS Ph 1300 366455 Fax 073 8586411) also provides continence supplies if they are on a Disability Support Pension.

WHO TO CONTACT FOR ADVICE

- Local community health nurses
- Local continence advisors
- National continence helpline: 1800 330 066
- ParaQuad Association Spinal Nurse Advisors: 02 8741 5674 (free call outside Metro Area: 1800 424 096)
- Spinal Outreach Service: 02 9808 9666
- Clinical Nurse Consultant RNSH Spinal Injuries Unit: 02 9926 7111
- Clinical Nurse Consultant POWH Spinal Injuries Unit: 02 938 2222

READING

Clinical Practise Guidelines

Spinal Cord Medicine

Neurogenic Bowel Management In Adults with Spinal Cord Injury

1998 Paralyzed Veterans of America

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Spinal Cord Injury; Gastrointestinal

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This document was published as a fact sheet for the Rural Spinal Cord Injury Project (RSCIP), a pilot healthcare program for people with spinal cord injuries (SCI) conducted within New South Wales. It is not a stand alone resource but part of a series of eight fact sheets produced by specialists to fulfil the educational components of the project.

All recommendations are for spinal patients as a group. Individual therapeutic decisions must be made by combining the recommendations with clinical judgement, including a detailed knowledge of the individual patient's unique risks and medical history, as well as the resources available. This document is published as a guide only and does not take the place of advice from your regular health professional and /or medical practitioner.

