Nutrition, Exercise and Therapeutic Intervention for **Bowel Management After SCI**

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Fluid intake

It is recommended to maintain fluid intake at approximately 2 liters/day (68 oz).¹ While manipulating fluid intake for bowel management may be beneficial, there is limited room for adjustment due to an individual's specific intake requirements for ideal bladder management. I am not sure what this means (CL).

Dietary intake

There is conflicting evidence that dietary fiber can improve colon motility in individuals with spinal cord injuries.^{1,2} However, anecdotally, manipulating dietary fiber may be beneficial in adjusting stool consistency, and thus affect colon transit time.^{1,3} There are two types of dietary fiber, insoluble and soluble. Insoluble fiber can be found in whole grains, such as rice or wheat, and typically increase stool weight and can decrease colon transit time (can we say speed up transport? more direct wording.).¹ Soluble fiber, which is beneficial in managing blood glucose and cholesterol levels, can be found in oats, fruits and vegetables.¹ General recommendations are to have 5 servings of fruits and vegetables daily. Fiber intake < 10g/day is considered low, $\sim 18g/day$ is moderate and >25g/day is considered a high

Could you perhaps add examples of fiber such as apple (4.4 grams), pear 5.5 grams), avocado (10 grams per cup), carrots (3.6 grams per cup), etc. https://www.healthline.com/nutrition/22-high-fiber-foods#section7 I do see that you have a couple below. Enough?

Prior to initiating dietary changes, one should keep track of current fluid and fiber intake. Changes should be made one a time and maintained for at least a week to assess the effectiveness.

- Stool too hard Ensure your water intake is regularly 2 liters/day, then consider increasing insoluble fiber intake. Additionally, one could consider adding stimulating/diuretic foods and liquids (alcohol, caffeine, prunes, figs, pure fruit juice) 1,3
- Stool too soft Consider reducing insoluble fiber intake. Then one may consider decreasing the intake of stimulating/diuretic foods and liquids¹

Recommendations among the general population indicate that regular physical activity may be beneficial in improving colon function and motility.¹ Participating in upright weight bearing activities such as standing in a standing frame or locomotor training may also help promote increased gastrointestinal

Abdominal massage

Nearly 30% of individuals with neurogenic bowel report using abdominal massage as part of their bowel management program to decrease colon transit time and improve the frequency of bowel movements.^{1,2} It has been reported to improve relaxation, decrease abdominal pain, facilitate bowel motility and increase quality of life in individuals with spinal cord injuries.

To perform abdominal massage:

- 1. Have the individual lie on their back or on their left side.
- 2. Using three fingers moving in small concentric circles, begin on the lower right side of the ascending colon and slowly massage upward to the transverse colon.
- 3. Begin massaging horizontally toward the left side.
- 4. Massage downward following the descending colon.



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References:

1. Coggrave M. Guidelines for the management of neurogenic bowel dysfunction in individuals with central neurologic conditions: Multidisciplinary association of spinal cord injured professionals, 2012.

2. Krassioukov A, Eng JJ, Claxton G, Sakakibara BM, Shum S. Neurogenic bowel management after spinal cord injury: a systematic review of the evidence. Spinal Cord 2010;48(10):718-33.

3. Sharma A, Rao S. Constipation: Pathophysiology and Current Therapeutic Approaches. Handb Exp Pharmacol 2017;239:59-74.