

BOWEL AND BLADDER MANAGEMENT FOR ATHLETES WITH SCI DURING TRAVEL



Constipation and urinary tract infections can affect your athletic performance.

Don't let your performance be undone by something you can prevent.

1. Complete pre-participation physical (Paralympic specific) by team physician or primary care provider prior to travel for competition.
2. Do you have an established scheduled bowel elimination program? See Appendix A for sample bowel elimination programs.
3. Do you have an established bladder management program?

Timeline for Travel:

2 weeks before:

- Start probiotics - preferably one that is tested for banned substances.
- Plan timing of bowel program according to flight schedule and pre-boarding times.
- Be aware of signs and symptoms of urinary tract infection.
- Order adequate bladder and bowel management supplies and medications (in original packets / bottles) for travel, competition and spares.
- Consider taking a dietary source of fiber with you that is easily portable and you know works effectively to relieve constipation (e.g. prunes, dried fruit, chia or flax seeds).
- Consider potential use of incontinence products during flight for accidental leaking
- For flights longer than your regularly scheduled catheterization timeframe, consult your physician regarding alternate options (i.e. use of an indwelling foley catheter for travel period).

2 days before:

- Increase fiber intake (focus on sources of insoluble fiber – refer to list at end).
- Increase fluid intake to ensure optimally hydrated (clear urine most of the day).
- Avoid foods that you know irritate your bowel or result in constipation.

1 day before:

- Full evacuation of bowel.
- Continue more aggressive fluid intake than normal.
- Avoid foods that you know irritate your bowel or result in constipation.

Day of travel:

- Do not fluid restrict – consume fluid WITH food or use electrolytes. If concerned about bladder management please consult your medical staff.
- Consider bowel evacuation check before you leave the house (i.e. T11 and below SCI athletes)
- If using a foley catheter, insert this before leaving the house.
- Avoid caffeine and any bowel stimulants.
- Empty bladder immediately before going onto plane. LEAVE YOURSELF ENOUGH TIME TO DO THIS!

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Period of actual travel:

- Focus on consuming higher fiber food options wherever possible.
- Consume fluid regularly – minimum 1 cup fluid every 3 hours, using electrolytes where possible and avoiding caffeinated and alcoholic beverages.
- Avoid foods you know irritate your bowels or result in constipation.
- Utilize layover for personal needs.
- If you suspect you have any unusual symptoms notify your medical staff immediately.
- Options for voiding during flight:
 - Continue usual intermittent catheterization program
 - Catheterize in a bag or bottle in your seat
 - ****NOTE:** there is an aisle chair available in flight to assist to bathroom

On arrival:

- Monitor hydration status with urine specific gravity for minimum first 2 days post arrival.
- If you don't have a bowel movement within 2 days of arrival then see medical staff.
- Mobilize edema – leg elevation, compression stockings/shrinkers, massage, normatech.
- Adjust fluid intake to environmental conditions.
- Ensure your diet continues to contain sufficient dietary fiber.

****The goal of having an optimal bowel and bladder management program is to optimize sports performance by minimizing the risk of:**

- Skin breakdown
- Urinary tract infection
- Bowel impaction
- Temperature control issues

****For athletes with T6 and above spinal injury, the consequence of some of these issues is autonomic dysreflexia or 'boosting' which is banned by WADA as a performance enhancing method.**

We wish to thank and acknowledge the hard work of Dr. Suzy Kim and Kiko Van Zandt on the development of this document.

Sample 1 Bowel Program Recommendations for Athletes with T10 and Above SCI

1. Scheduled evacuation after a meal (i.e. daily or every other day after dinner)
2. Adequate hydration (clear urine most of the day. i.e. minimum urine output every 4-6 hours with 300-400 ml per catheterization)
3. Diet: Achieve dietary fiber intake recommendations (see Table)
 - a. It may be helpful to trial various fiber sources at home prior to periods of travel. Integrating them slowly will help identify their effects on individual bowel function.

**If no bowel movement in 2 days with above program, consult your health care provider for treatment of constipation. Consider discussing the following options

- Oral laxatives/stool softeners (available over the counter): senna (Senokot), psyllium (i.e. Metamucil), bisacodyl (Dulcolax), polyethylene glycol (Miralax), magnesium citrate, lactulose, docusate (Colace)
- Rectal stimulants: bisacodyl suppository (Magic Bullet), Enemeez mini-enema
- Manual disimpaction (with or without digital stimulation)

Sample 2 Bowel Program Recommendations for Athletes with T11 or lower SCI

1. Scheduled evacuation daily or every other day.
2. Adequate hydration (clear urine most of the day. i.e. minimum urine output every 4-6 hours with 300-400 ml per void)
3. Diet: Achieve dietary fiber intake recommendations (see Table)
 - a. It may be helpful to trial various fiber sources at home prior to periods of travel. Integrating them slowly will help identify their effects on individual bowel function.

**If no bowel movement in 2 days with above program, consult your health care provider for treatment of constipation. Consider discussing the following options

- Oral laxatives/stool softeners (available over the counter): senna (Senokot), psyllium (i.e. Metamucil), bisacodyl (Dulcolax), polyethylene glycol (Miralax), magnesium citrate, lactulose, docusate (Colace)
- Manual disimpaction (with or without glycerin suppository)

FIBER CONTENT OF FOODS



The dietary guidelines recommend achieving 25-30g dietary fiber / day from a range of food sources. There are 2 primary forms: soluble and insoluble. Both forms have different functions and are valuable for good health. Insoluble fiber has a strong role in the bulk and softness of stools, therefore it is important to ensure you have enough. The most common sources of dietary fiber are listed below.

Food (serve size)	Insoluble Fiber (g/serve)	Soluble Fiber (g/serve)
All bran original (0.5 cup)	9	0.8
Fiber One cereal (1 cup)	26	1
Granola (1/2 cup)	2.8	1.3
Oatmeal (1 cup)	2.1	1.9
Almonds (1/2 cup)	7.1	0.8
Peanuts (1/2 cup)	5.1	1.4
Peanut / almond butter (2 Tbsp.)	1.0	0.2
Granola bar (1 average)	0.8	0.2
Chia seeds (2 Tbsp.)	4.3	1.4
Flax seeds (2 Tbsp.)	2.8	2.8
Apple (1 small)	2.7	1.0
Dried apricot (6)	4.0	
Prunes (6)	2.0	2.0
Fruit leather / rolls (1 oz.)	0.3	0.2
Banana	2.1	0.7
Whole wheat bread (1 slice)	1.2	0.2
Oatbran bagel (1)	1.0	1.0
Brown rice (1 cup cooked)	3.1	0.4
Quinoa (1 cup cooked)	8.1	1.2
Black beans (1/2 cup cooked)	2	0.7
Baked beans (1 cup)	7.8	4.8
Sweet potato (1 cup cooked)	4.8	2.8
Kale (1 cup cooked)	1.2	1.4
Broccoli (1/2 cup cooked)	1.2	1.2
Beets, canned (1 cup)	1.5	1.4
Baby spinach (1 cup)	0.6	0.2
Green peas (1/2 cup cooked)	3.1	1.3
Corn on the cob (1 medium)	2.3	0.5