

Transition from Indwelling Catheter (Foley) to Intermittent Catheterization (SCI)

With intermittent catheterization, a small catheter (tube) is inserted into the bladder 4 to 6 times daily, draining the bladder regularly throughout the day. You will need adequate hand function to do the catheterization (or have a trained caregiver). Find out if intermittent catheterization is the best bladder management option for you.

- Consult your rehabilitation or urology provider.
- Learn how to insert the catheter, how to position yourself and the types of catheters available.
- Learn about scheduling catheterization throughout the day and night.

Before indwelling catheter (Foley) is removed:

- Control the intake of fluids to manage the bladder volume between catheterizations.
- Understand how to insert the catheter and the types of catheters available.
- Identify if adaptive devices will be needed. Occupational Therapy (OT) and Nursing can work together to customize devices and provide positioning solutions.
- A clean catheterization technique is reasonable for most people. If you have frequent urinary tract infections (UTI's or bladder infections), are pregnant or have a suppressed immune system, consider learning and using a sterile catheterization technique.

Individual preparation:

- The goal is to understand your body's pattern for managing fluids during the day and night. This will help identify when and how much fluid to drink, and still keep bladder volumes between 350-500 mL with each catheterization. Learning how much to drink and when to catheterize will help to prevent overstretching of the bladder, as well as damage to your upper urinary tract (ureters, kidneys).
 - Aim for urine output of 500 mL or less every 4 hours **before** the catheter is removed.
 - Usual frequency of catheterization is 4-6 times a day.
- Drink 6-8 oz of fluid an hour while awake, and limit or stop drinking fluids 2 hours before bedtime.
- Empty the urinary drainage bag every 4 hours during the day, before going to sleep, and when waking up in the morning.
- Keep a log of fluid intake and urine output for at least 2 days.

The indwelling catheter (Foley) can still be used on an as needed basis, such as during air travel, periods of greater fluid intake, or when you cannot regularly or effectively perform intermittent catheterization.

Common Problems Associated with Intermittent Catheterization

Bladder volumes consistently more than 500 mL throughout the day

- Review fluid intake. Reduce or modify intake as appropriate.
- Increase frequency of catheterization. Intervals between catheterizations do not have to be equal.
- If unable to reduce bladder volumes, you will need to use another type of bladder management, such as converting back to an indwelling catheter.

Bladder volumes are more than 500 mL at night ("dumping")

- Limit fluids before bed.
- Set an alarm to catheterize at night if nighttime urine output is more than 500mL.
- If leg edema (swelling) is present, wear compression garments such as hose, socks, wraps during the daytime. Leg edema can cause overfilling of the bladder at night as the fluid moves back into the circulatory system when lying down.

Bladder storage capacity is very low (<200 mL) or leaking between catheterizations

- This may happen due to spastic bladder. Anticholinergic (antispasticity) medication may be needed to increase bladder capacity and prevent incontinence (accidents/leaks) between catheterizations. Discuss your options with your Urologist or Rehabilitation provider. Examples of these types of medication include: oxybutynin, tolterodine, trospium, solifenacin, fesoterodine or $\beta 3$ adrenergic receptor agonists such as mirabegron.
- Limit caffeine intake, as it can cause bladder irritation.
- Consider Urology consultation if anticholinergic medications are not effective.
- Leaking between catheterizations can also be a sign of urinary tract infection (UTI).

Autonomic dysreflexia may occur with bladder overfilling, catheterization, UTI's and indwelling catheter changes

- Use Lidocaine 2% jelly for catheter lubrication.
- Use anticholinergic medication(s) if recommended by your provider.
- Consider Urology consultation for medications, Botox, or other options.
- See the health guide on this topic.

Difficulty passing the catheter (e.g., urethral spasm, bladder spasm, UTI, stricture or false passage)

- If resistance is felt, pause and breathe slowly for 1 to 2 minutes before trying to advance the catheter.
- Never force a catheter into the urethra as this may cause damage, bleeding and a false channel. A different catheter tip style may be helpful.
- Try increasing lubricant or changing to Lidocaine 2% jelly for lubrication.
- Additional medications (alpha-blockers) may be needed to decrease resistance at the bladder neck.
- If bleeding occurs and persists greater than 24 hours, or if bleeding is profuse, call your provider.

Frequent urinary tract infections

- Review technique, catheterization schedule, and bladder volumes with your provider.
- A trial of a different catheterization technique or supplies may help. Consult with your Urologist or Rehabilitation provider.
- Your provider may order a renal and bladder ultrasound to evaluate for urinary tract stones, or refer you to an urologist for special studies.

Resources:

For patients:

- Consortium for Spinal Cord Medicine. (2010). *Bladder Management Following Spinal Cord Injury: What you should know*. Washington, D.C.: Paralyzed Veterans of America. Retrieved from http://www.pva.org/media/pdf/Consumer_Guide_Bladder_071410.pdf

For health care providers:

- Consortium for Spinal Cord Medicine. (2006). *Bladder Management for Adults with Spinal Cord Injury: A Clinical Practice Guideline*. Washington, D.C.: Paralyzed Veterans of America. Retrieved from http://www.pva.org/media/pdf/CPGBladderManageme_1AC7B4.pdf

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Disclaimer: This information is not meant to replace the advice from a medical professional. You should consult your health care provider regarding specific medical concerns or treatment.

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