



Stroke Network
Southwestern Ontario

Serving Erie St. Clair and South West LHINs

Stroke Rehabilitation Unit Orientation 2021

Module 4: Continence

Learning Objectives

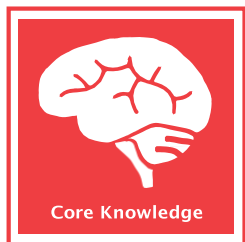
Upon completion of this module, nurses will be able to:

- Explain types and causes of bladder and bowel incontinence
- Discuss best practices for continence according to the Canadian Stroke Best Practice Recommendations and the Registered Nurses' Association of Ontario (RNAO)
- Identify components of a comprehensive assessment for continence
- Provide strategies for supporting bladder and bowel continence
- Describe their role in helping the patient to develop independence with bowel and bladder function

Please refer to the following content when reading this module:

1. Registered Nurses' Association of Ontario.
[A Proactive Approach to Bladder and Bowel Management in Adults](#)
2. Canadian Stroke Best Practice Recommendations: Acute Stroke Management
[Section 9.7](#)
3. Taking Action for Optimal Community and Long-Term Stroke Care:
A Resource for Healthcare Providers,
[Chapter 3 – Body Function \(Physical\): Bladder and Bowel Control](#)





One of the key roles of nursing in stroke rehabilitation is helping the patient to develop independence with bowel and bladder function.

Risk of Post-Stroke Urinary Incontinence


- 15% of stroke survivors will have incontinence at one year post-stroke (Southwestern Ontario Stroke Network [SWOSN] 2018).
- Urinary incontinence within 24 hours of a stroke is a predictor of functional disability.
- The prevalence of urinary incontinence post-stroke is thought to exceed 50% (Kolominsky-Rabas, Hilz, Neundoerfer, & Heuschmann, 2003) and can persist for up to 2 years (Patel, Coshall, Rudd, & Wolfe, 2001).
- The prevalence of urinary incontinence post-stroke is thought to exceed 50% (Kolominsky-Rabas, Hilz, Neundoerfer & Heuschmann, 2003) and can persist for up to 2 years (Patel, Coshall, Rudd & Wolfe, 2001).
- There is evidence that all stroke patients should be screened for urinary incontinence within 2 days of admission (Herr-Wilbert, Imhof, Hund-Georgiadis & Wilbert, 2010).
- Women have higher rates of post-stroke incontinence than men (Boulanger et al., 2018).

There are three major causes of incontinence after an acute stroke:

1. Disruption of neural pathways, resulting in bladder hyperreflexia and urge incontinence
2. Functional incontinence due to stroke-related cognitive, language and physical deficits, with normal bladder function
3. Concurrent neuropathy (a collection of disorders resulting from damage to the nervous system) or medication use, resulting in bladder hyporeflexia and overflow incontinence

Types of Urinary Incontinence Post-Stroke

	Urge Incontinence	Retention (Incomplete Emptying)	Functional Incontinence (Non-urological)	Stress Incontinence	Mixed Incontinence
Cause	Detrusor overactivity Bladder hyper-sensitivity Query etiology	Underactive detrusor Bladder outlet obstruction	Cognitive/sensory impairment Compromised mobility Environmental factors	Urethral hypermobility and/or sphincter incompetence	Combined forms of incontinence, i.e., mixed stress-urge
Symptoms	Urgency Frequency	Bladder distension Frequent to constant dribbling	Typically has loss of substantial amounts of urine	Leakage during increased intra-abdominal pressure	One symptom predominant Increases with age

 = Indicates most common post-stroke urinary incontinence types (Jordan et al., 2011)
(adapted from Specialized Geriatric Services and Stroke Rehab, Parkwood Hospital, 2012, slide 29)

Risk of Post-Stroke Bowel Incontinence

- Bowel incontinence occurs in 30% of stroke patients of which 97% regain control within one year
- Deficits that may increase risk for bowel incontinence include the following:
 - altered consciousness
 - cognitive deficits
 - impaired communication
 - neurogenic bowel without sensation or control
 - functional (impaired ability to access toilet, manage clothing)
 - lifestyle (diet, hydration, inactivity)

(SWOSN, 2018)

Best Practice Recommendations for Continence

The Canadian Stroke Best Practice Recommendations (Boulanger et al., 2018) state the following related to continence:

- The use of indwelling catheters should be avoided due to the risk of urinary tract infection. If used, indwelling catheters should be assessed daily and removed as soon as possible. Excellent pericare and infection prevention strategies should be implemented to minimize risk of infections.
- All stroke patients should be screened for urinary incontinence and retention (with or without overflow), fecal incontinence, and constipation.
- The use of a portable ultrasound machine is recommended as the preferred noninvasive painless method for assessing post-void residual.
- Stroke patients with urinary incontinence should be assessed by trained personnel using a structured functional assessment to determine cause and develop an individualized management plan.
- A bladder-training program should be implemented in patients who are incontinent of urine, including timed and prompted toileting on a consistent schedule.
- Appropriate intermittent catheterization schedules should be established based on amount of post-void residual.
- A bowel management program should be implemented for stroke patients with persistent constipation or bowel incontinence.



Bowel and Bladder Continence Assessment

A comprehensive bladder and bowel continence assessment should include the following:

- Incontinence history
- 3-day voiding record to collect accurate details on voiding frequency, amount and severity of incontinence
- Bowel record to assess frequency, timing, and stool consistency, as well as the onset, duration and severity of symptoms – to understand the type of fecal incontinence (RNAO, 2020)
- Assess urinary urgency
- Diet history (fluid, foods and fibre intake)
- Medical history including comorbid conditions to determine possible underlying causes
- Medication review
- Functional ability and activity level
- Cognitive ability
- Level of consciousness
- Environmental barriers to successful toileting e.g. accessibility of commode/nearest toilet
- Communication
- Post-void residual volume (assessed using portable ultrasound)
- Rectal examination
- Signs of skin breakdown in the perineal area
- Urine culture testing should only be done when urinary tract infection (UTI) symptoms—such as urinary discomfort, frequency, urgency, supra-pubic pain, flank pain or fever—are present. (RNAO, 2020).

(SWOSN, 2018)

Strategies for Managing Urinary Incontinence

To assist management of urinary incontinence, nurses can do the following:

- Ensure adequate fluid intake (1500-2000 mls/day)
- Assess post-void residuals (normal is 50-100 mls)
- Review medications. Drugs commonly used to treat urinary incontinence include:
 - estrogen supplements
 - anticholinergics
 - tricyclic antidepressants
 - antibiotics
 - analgesics
- Introduce a regular toileting routine
- Implement a bladder training program
 - prompted voiding (protocol RNAO 2020 p. 139-141)
 - routine scheduled toileting
 - lifestyle modifications (e.g., eliminating bladder irritants from diet, managing fluid intake, weight control, bowel regulation and smoking cessation)
- Encourage patient to use commode or toilet rather than adapted toileting (includes using pads or briefs, using a bedpan or urinal or bedside commode)



- Teach patient to do Pelvic muscle exercises - Kegel's ([step-by-step guide to performing Kegel exercises](#))
- Promote self-management strategies (see details in Self-Management section page 6).
- Limit use of dietary bladder irritants
- Indwelling catheter use should be avoided due to the risk of urinary tract infection
- If needed, appropriate intermittent catheterization schedule should be established based on the amount of post-void residual volume (as per physician recommendation or program/unit guidelines)
- **Consult a Urologist, Physiotherapist, Dietitian and or Nurse with specialized training in continence as needed**
- Monitor for urinary tract infection

(RNAO 2011, 2020)

While these adapted methods might be necessary at times, risks associated with their use include impact on self-esteem, skin integrity and infection and loss of independence. Whenever safe and possible, efforts should be made to allow toileting and avoid use of adaptive techniques (Krulish & Gaskell, 2005).

Refer to [Appendix: Continence Assessment and Management Flowsheet](#) for further information.

Strategies for Managing Bowel Incontinence

To assist management of bowel incontinence, nurses can do the following:

- Establish a bowel program
- Encourage adequate fluid intake (1500-2000 mls) and minimize caffeine (not included in fluid count) (RNAO, 2020)
- Encourage appropriate diet e.g., fibre intake: 21-25 g per day; increase gradually as fluid intake exceeds 1500 mls; fruits, vegetable, grains, etc. (RNAO, 2020)
- A squat position should be used to facilitate bowel elimination (either upright or left side lying in bed with knees bent towards abdomen)
- Encourage physical activity (RNAO, 2020):
 - walking 15-20 minutes (at least 50 feet) 1-2 times per day increasing to 30-60 min daily 3-5 times per week
 - **OR** for persons unable to walk, exercises such as pelvic tilt, lower trunk rotation, single leg lifts
- Choose an appropriate rectal stimulant as needed (refer to bowel protocols at designated facility)
- Select optimal scheduling, positioning, assistive techniques and devices (SW0SN, 2018)
- Evaluate medications that promote or inhibit bowel function (SW0SN, 2018)
- **Consult a Dietitian as needed**



Promoting Self-Management Techniques/Strategies related to Continence

The nurse should promote skill development aimed at increasing patients' confidence / self-efficacy in managing the significant impact of the stroke on their bowel and bladder function.

Gaskell (2005) recommended the following protocol for **controlling urinary urge**:

- Purpose- to minimize the habit of frequent urination, improve bladder resiliency ultimately reducing urinary urgency and incontinence
- Goal- urinate every 3 to 4 hours
- When the patient experiences the urge to urinate and it is not a scheduled time- encourage these options:
 - deep breathing
 - mental distraction
 - quick flicks:
 - » stop what you are doing
 - » sit or lie down
 - » quickly and forcefully tighten your pelvic muscles 8-10 times in a row
 - » rest the muscles for a slow count to 10
 - » repeat until the urge is reduced

Impact: The risk of incontinence often reduces an individual's tendency to socialize, limiting outings and travel because of fear of accidents or the need to ask for assistance to toilet. Stroke survivors are often devastated by loss of bladder or bowel control. **Incontinence is a major factor for a stroke survivor and family members in considering admission to a long-term care facility versus remaining at home.**

Remind the patient about other important strategies:

- Avoid urination before the urge or "just in case"
- Walk slowly to the bathroom, running or rushing will increase the urge to urinate and increase the likelihood of leaking
- Ensure complete emptying of bladder
- Regularly practice pelvic floor strengthening/control exercises (i.e., Kegel's)
- Ensure appropriate diet
- Ensure appropriate fluid intake
- Ensure adequate levels of activity
- Use appropriate positioning and devices
- Plan properly for outings
- Adhere to medications
- Access community services if appropriate

Monitor for signs of urinary tract infection and prevention:

The nurse should encourage the patient to speak to the *Physician* if the following signs and symptoms are noted:

- Pain with urinating
- Blood in the urine
- Feeling of not being able to completely empty the bladder after urinating
- Continuous leakage of urine
- Decreased sensation of urinating

(Holroyd-Leduc et al., 2011)

Can you think back to a patient who had a bladder and/or bowel incontinence?

How did the patient present?

What challenges did the patient face and which strategies were put in place?

Would you do anything differently now?



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