

What is urinary incontinence?

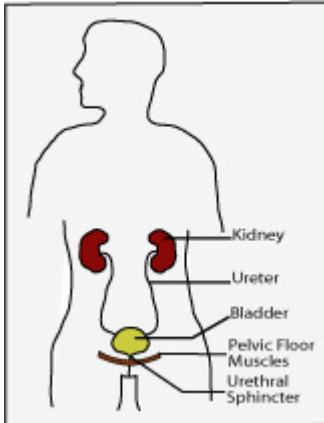
Urinary incontinence (UI) is the loss of the ability to hold in urine. This can make it difficult to get to the bathroom on time.

How does urination work?

When we eat or drink, liquid is absorbed into the bloodstream. The kidneys then filter the blood and get rid of liquid waste by way of urine. Special tubes called “ureters” bring this waste to the bladder.

The bladder is a muscular sac that serves as a reservoir for urine. When the bladder becomes full, your brain triggers the urge to void. Once you make it to the bathroom, your brain does two things to allow urination:

- 1- It tells the bladder muscles to squeeze the urine out.
- 2- It tells the muscles of the urethral sphincter to relax.



You can think of the urethral sphincter and pelvic floor muscles as a faucet that controls urination. Together the urethral sphincter and the pelvic floor muscles tighten around the urethra to hold urine. These muscles loosen to let it flow out, just like a faucet.

UI occurs if the bladder muscles contract uncontrollably or if the sphincter and pelvic floor muscles relax before you reach a bathroom.

How frequent is urinary incontinence after a stroke?

UI following a stroke is a common problem. 37%-79% of individuals have UI during the days and weeks after a stroke. Many people with UI after stroke regain control of their bladder. However, as many as 30% of individuals still have UI one year after the stroke.

What causes urinary incontinence after a stroke?

There are multiple causes for UI after a stroke:

- UI may result directly from the stroke. The stroke can affect the part of the brain that controls the urge to pass urine. The voluntary control of continence (ability to hold in urine) is then lost.
- Functional difficulties using the arm and leg affected by the stroke may make it hard to get to the bathroom, undress, sit on the toilet, and urinate, even if you have normal bladder function.
- Having to wait for someone to assist you may make it harder to get to the bathroom on time.
- Speech problems may make it difficult to express the need to go to the bathroom.
- Your level of consciousness or cognitive problems from the stroke may make it difficult to get to the bathroom.
- Having nerve damage caused by diabetes (diabetic neuropathies) before the stroke could also cause UI.
- Certain medications and constipation may also make it difficult to hold in urine.
- Coughing from dysphagia (difficulty swallowing) after a stroke can contribute to UI.
- Finally, your environment, for example the distance to the bathroom and specific bathroom features such as the height of the toilet seat may make toileting difficult.

Can urinary incontinence after a stroke be treated?

In most cases, UI can be treated. Different techniques are used for UI, depending on the cause of the problem. These include behavioural interventions (described below), use of special devices such as pads or catheters, medications, and surgery.

The information provided here is specific to rehabilitation, and does not include a discussion of surgery or medications. Medications may be used to treat a specific bladder problem and you should discuss this with your physician.

If your UI is not related to a bladder problem but rather to your capacity to walk, stand up or communicate your need to go to the bathroom, specific functional

interventions are needed. For example, someone with communication difficulty may benefit from a picture of a toilet that they can show to the nurse or therapist when they need to go to the bathroom.

It is important to know that UI can be treated or controlled no matter the cause. Don't keep this problem to yourself or hidden within the family. Talk to your doctor or nurse or have someone talk to him or her for you. They will be able to help you find the best treatment for your specific problem.

What are behavioural interventions?

Behavioural interventions for UI after a stroke include:

- **Timed voiding**: This is a set schedule for urinating that is determined by your habits. First you will need to write down when you urinate and when you have “accidents” over several days. Then, a customized program with fixed times for going to the bathroom can be used to help you avoid accidents.
- **Prompted voiding**: A family member or health professional, often a nurse, will remind (prompt) you to go to the bathroom at regular intervals and will encourage you to maintain bladder control in between.
- **Bladder retraining with urge suppression**: This has three parts:
 - Education by a health care professional about the causes of your incontinence;
 - Scheduled bathroom visits with gradually increasing time between visits;
 - Controlling the need to urinate using distractions and relaxation techniques (suppressing the urge to urinate).
- **Pelvic floor muscle exercises**: Pelvic floor muscle exercises are taught by a health care professional – typically a physical therapist. These exercises are designed to help strengthen weak muscles around the bladder. By strengthening muscles around the bladder, leaking of urine may be reduced or prevented.
- **Compensatory rehabilitation approaches to neurological impairment**: This treatment focuses on getting to the bathroom on time, and considers functional ways to help you do this. For example, you can use a urinal at your bedside if you are not able to get to a far-away bathroom. So, if you have physical problems caused by the stroke that make toileting difficult, the goal of this intervention is

to help you compensate for these with solutions that often an occupational therapist, physical therapist, or nurse can suggest.

Are behavioural interventions effective for urinary incontinence after a stroke?

Experts have done some research to see if the interventions described above help decrease UI in people who have had a stroke.

- **Timed voiding (urination):** There are no research studies that looked at the effect of timed voiding on UI in people with stroke. However, studies on individuals with UI caused by similar problems have shown success. So, experts suggest that timed voiding should be used for UI in people who have had a stroke and are somewhat mobile.
- **Prompted voiding:** There are no research studies that looked at the effect of prompted voiding on UI in individuals with stroke. However, studies on adults with UI caused by other problems had shown success using prompted voiding. So, experts suggest that this treatment should be used if the person who has had a stroke is somewhat mobile and is able to cooperate with the regime.
- **Bladder retraining with urge suppression:** No studies have looked at the effect of bladder retraining with urge suppression alone in people who have had a stroke. However studies in adults with UI showed successful results using a bladder-training program to manage urge UI. Urge UI is a specific type of UI that causes an uncontrollable urge to urinate that results in UI.
- **Bladder retraining with urge suppression in combination with pelvic floor exercises:** One study has looked at the benefit of bladder retraining with urge suppression in combination with pelvic floor exercises on UI in men following stroke. The results suggest that this intervention may be helpful in reducing UI in males after stroke.
- **Pelvic floor exercises:** No high quality research study has looked at the effect of using only pelvic floor exercises to reduce UI in people with stroke.
- **Compensatory rehabilitation approaches to neurological impairment:** One study has looked at the effect of using a compensatory rehabilitation approach for UI after stroke. There is some evidence that this approach results in less UI than the usual approach used in people with stroke.

As you can see from this review, UI after a stroke is a complex condition that needs expert advice. There are many possible treatments that may work well for you so speak up about the problem so that solutions can be found to meet your needs.

Information on this web site is provided for informational purposes only and is not a substitute for professional medical advice. If you have or suspect you have a medical problem, promptly contact your professional healthcare provider.