Understanding urinary tract infections

A basic guide to help with bladder management





About this booklet

Since our founding in 1957, we have worked closely together with healthcare professionals and users to create products and solutions that are sensitive to their needs. This journey has given us a deep understanding of continence issues and we know that urinary tract infections (UTIs) are particularly concerning for catheter users. In this booklet, we will answer some of the most common questions about UTIs and provide facts and advice that can help you develop a bladder management routine that may reduce the risk of UTIs.

Coloplast develops products and services that make life easier for people with very personal and private medical conditions. At Coloplast, we try to understand what you are going through, because we've helped hundreds of thousands of people living with an intimate healthcare condition. Our goal is to help you find the right products and solutions to lead an active, rewarding life.

The materials and resources presented are intended to be an educational resource and presented for general information purposes only. They are not intended to constitute medical or business advice or in any way replace the independent medical judgment of a trained and licensed physician with respect to any patient needs or circumstances.

All icons are for illustration purpose only



Consumers, Clinicians and Coloplast. Stronger together.

Concerned about UTIs? You're not alone

The precise cause of UTIs is unclear, and while there are several practical steps you can take to help reduce your risk of developing one, you should always consult a healthcare professional if you get one or have questions.

On the following pages you will find clinician-validated advice grouped into three areas:

- · Hygiene
- · Routine and compliance
- Catheter options

UTIs are a common issue for many catheter users. If you have worries or feel uncertain about how to reduce your risk of UTIs, you're not alone. Many catheter users experience two or more UTIs every year, which is a significant concern.

81%

say not having UTIs would represent good bladder health



Users have an average of

2.7

UTIs per year



UTIs are a daily concern for

41%

of all intermittent catheter users

45%

consider UTIs one of the greatest issues in their life

 $^{1.\,}Source:\,IC\,user\,survey\,(Countries:\,US,\,UK,\,DE,\,NL,\,FR,\,IT),\,January\,2016\,\,(n=2942)$

What is a UTI?

A urinary tract infection (UTI) is diagnosed when there is excessive bacteria in the urine and one or more clinical symptoms (mentioned on the next page) is present.1

The presence of some bacteria in the urinary tract does not always mean that you have a UTI. If, however, the bacteria grow and multiply excessively and you are experiencing symptoms, you could have a urinary tract infection that may need to be treated.

Anybody can get a UTI, but there is a higher risk if you are a catheter user because you are introducing a catheter into the bladder multiple times throughout the day to drain it. Women tend to get more UTIs due to their comparatively shorter urethra (the tube that removes urine from the body) which makes it easier for bacteria from the vagina and anus to enter the bladder. There is also a risk of developing a UTI if the bladder is not emptied completely or frequently enough, since stagnant urine in the bladder creates an environment where bacteria can grow.²





It is important to seek and follow the advice of your healthcare provider to diagnose and treat a UTI.

- 1. Marting Franz, Walter H. Hörl, Common errors in diagnosis and management of uringry tract infection, I: Pathophysiology and diagnostic techniques, Nephrology Dialysis Transplantation, Volume 14, Issue 11, November 1999, Pages 2746-2753, https://doi.org/10.1093/ndt/14.11.2746
- 2. Kennelly M, Thiruchelvam N., et al. Adult Neurogenic Lower Urinary Tract Dysfunction and Intermittent Catheterisation in a Community Setting: Risk Factors Model for Urinary Tract Infections. Advances in Urology. Sponsored by Coloplast. 2019

How can I tell if I have a UTI?

The signs and symptoms below indicate the possibility of an infection.¹ However, it's possible to have a UTI without feeling pain or bladder irritation if you have an underlying medical condition. Remember, a UTI will only be diagnosed when there are also bacteria in the urine. You should always consult your healthcare provider to confirm the diagnosis and get the appropriate treatment:



Fever/sweating



Pain when urinating



Increased frequency of urination



Increased urge to urinate



Lower back pain (area below the ribs and above the pelvis)



Shivering and increased muscle spasms in the body and bladder



Dark-colored and strong-smelling urine



Cloudy/ bloody urine

^{1.} Grabe, M., et al. Guidelines on urological infections. EAU. 2015.

How does the bladder work?

Understanding how a healthy bladder functions is helpful because it is the process healthcare professionals try to reproduce using intermittent catheters

The bladder stores urine until the urethra carries it out of the body. The bladder is situated in the lower urinary tract near the urethral sphincters (urine flow "control" muscles) and the urethra (the tube that urine flows through to exit the body).

When the bladder is working optimally, the urge to go to the bathroom is triggered when the bladder is partially full. The person can then decide if it's an appropriate time to urinate, since voiding is ideally a controlled and voluntary activity. Emptying the bladder regularly and completely is an important bladder management activity.

Bladder activity is regulated by the brain and nervous system. The network of muscles in the bladder has stretch receptors, which respond as the bladder begins to fill with urine. All the stretch receptors are connected to nerves, which send signals through the spine to the brain indicating that it's time to urinate.









When the bladder is functioning correctly and there's an urge to urinate, the body's first reaction is to squeeze the sphincter muscles. This lifts the pelvic floor to hold the urine inside the body until it's appropriate to urinate. When it's a convenient time and place to urinate, the brain sends a message to the sphincter muscles to release the urine.

Emptying the bladder completely can help reduce the risk of developing a UTI, since urine left in the bladder can result in excessive bacterial growth.1

If you can't empty your bladder naturally, it's important to empty it using a catheter. If you use an intermittent catheter, you should catheterize as often as your healthcare provider recommends – which is typically 4 to 6 times per day.2

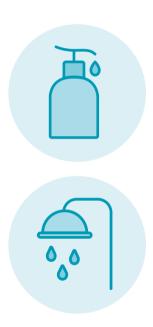
- 1. Kennelly M, Thiruchelvam N., et al. Adult Neurogenic Lower Urinary Tract Dysfunction and Intermittent Catheterisation in a Community Setting: Risk Factors Model for Urinary Tract Infections. Advances in Urology. Sponsored by Coloplast. 2019
- 2. European Association of Urology Nurses. (2013) Catheterisation Urethral Intermittent in adults. https://nurses.uroweb.org/wp-content/uploads/2013 EAUN Guideline Milan 2013-Lr DEF.pdf. (Reports 4-6 catheterization per day for an adult patient. Assuming 5 times a day for an average adult, it is calculated to be 1825 catheterization/ vear)

Maintain good personal hygiene

UTIs may develop when bacteria – perhaps from the exterior urethral opening or left behind after improper hand washing – are introduced into the urinary tract during catheterization.

That's why it's important to wash your hands with soap and water or use an alcohol-based hand sanitizer before carefully cleaning around the urethral opening before inserting an intermittent catheter.

It's also important to be mindful about how you clean yourself after urinating or after a bowel movement. Wipe from front to back so that bacteria from your anal region aren't pushed into the urethra. It is a good idea to discuss optimal bowel emptying habits with your healthcare provider.



Hygiene

Regularly empty your bladder completely

Each time you catheterize, you remove urine in the bladder along with any bacteria that might be present. That's why it's important to regularly empty the bladder and "flush" out any bacteria.

Maintaining a catheterization schedule may help reduce the risk of developing UTIs. You should empty your bladder completely and as often as your healthcare provider recommends – which is typically 4 to 6 times per day.





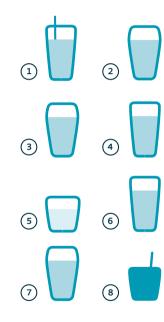


Routine and compliance

Drink 6-8 glasses of fluid every day

Every person needs daily fluids to maintain their health. The recommended daily amount for most people is 6 to 8 glasses of water per day. If you are in doubt about the amount that is best for you based on your medical condition(s), consult your healthcare provider.

Water is the ideal fluid choice. Beverages containing caffeine (cola, coffee, tea and some energy drinks) and artificial sweeteners are known bladder irritants and may need to be kept to a minimum.

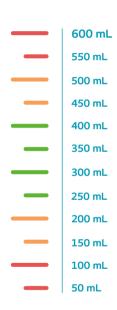


Routine and compliance

Check if you empty often enough

Every once in a while, measure the amount of urine you release. Your goal should be to empty between 250 and 400 mL of urine at a time to help avoid overfilling the bladder and prevent leaking. If you empty more than 400 mL or less than 150 mL on a regular basis, you should consult vour healthcare provider.1

If the amount of urine you release is in the orange or red areas, you should consult your healthcare provider.



Routine and compliance

^{1.} Böthig, Ralf & Geng, V. & Kurze, Ines. (2017). Management and implementation of intermittent catheterization in neurogenic lower urinary tract dysfunction: Guideline of the German Society of Urology. International Journal of Urological Nursing. 11. 10.1111/ijun.12145.

Out and about

It is important to maintain your catheterization schedule when you are out and about. However, being in an environment you're not used to might make it difficult to stick to your usual routine. Being fully prepared for any event can help you overcome that.

Plan ahead and be prepared for when you may need to catheterize away from home. Consider pre-packing a kit so you have all the supplies you might need. The checklist on this page can help you prepare.

There are also catheters developed specifically for use outside the home, including catheters with sleeves or catheters with drainage bags.

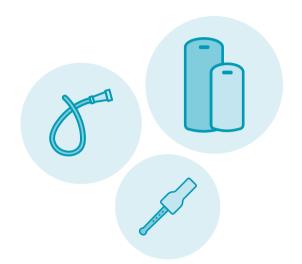


Routine and compliance

Use a sterile catheter every time you catheterize

To help maintain a healthy bladder, we recommend using a new, sterile, well-lubricated catheter every time you catheterize.1

A coated catheter (hydrophilic-coated or pre-lubricated) can help reduce friction as you insert and remove the catheter. It makes catheterization more comfortable and convenient. Studies also link hydrophilic catheters to lower rates of infection^{2,3} and less urethral damage^{2,4,5} compared with uncoated catheters.



- 1. Newman, DK. (2021), Intermittent self-cathetersization patient education checklist. Urologic Nursing, 41(2), 97-109. https://doi.org/10.7257/1053-816X.2021.41.2.97
- 2. Cardenas DD, Moore KN, Dannels-McClure A, Scelza WM, Graves DE, Brooks M, Busch AK. Intermittent catheterization with a hydrophilic-coated catheter delays urinary tract infections in acute spinal cord injury: a prospective, randomized, multicenter trial. PM R. 2011 May;3(5):408-17. doi: 10.1016/j.pmrj.2011.01.001. PMID: 21570027.
- 3. De Ridder DJ, Everaert K, Fernández LG, Valero JV, Durán AB, Abrisqueta ML, Ventura MG, Sotillo AR. Intermittent catheterisation with hydrophilic-coated catheters (SpeediCath) reduces the risk of clinical urinary tract infection in spinal cord injured patients: a prospective randomised parallel comparative trial. Eur Urol. 2005 Dec;48(6):991-5. doi: 10.1016/j.eururo.2005.07.018. Epub 2005 Aug 15. PMID: 16137822.
- 4. Stensballe I, Looms D, Nielsen PN, Tvede M. Hydrophilic-coated catheters for intermittent catheterisation reduce urethral micro trauma: a prospective, randomised, participantblinded, crossover study of three different types of catheters, Eur Urol. 2005 Dec;48(6):978-83. doi: 10.1016/j.eururo.2005.07.009. Epub 2005 Aug 2. PMID: 16126331.
- 5. Sutherland RS, Kogan BA, Baskin LS, Mevorach RA. Clean intermittent catheterization in boys using the LoFric catheter. J Urol. 1996 Dec;156(6):2041-3. PMID: 8911385.

Choose a catheter that fits your lifestyle

Different lifestyles or everyday activities sometimes require customized intermittent catheterization solutions. Catheters come in many styles, like standard-length catheters, compact catheters that can fit into your purse or pocket, and closed-systems with a urine bag attached.

Finding the right catheter is a personal choice, and the best one for you might not be the first one you try. Research shows that being satisfied with your catheter solution is an important component of maintaining your schedule and ensuring good bladder health.¹ That's why it's important to find the catheter solution that best meets your unique needs. You might need to try different intermittent catheter options to find one that fits you the best.

Consult your healthcare provider to help select the best solution for your individual needs.





1. Wyndaele JJ. Intermittent catheterization: which is the optimal technique? Spinal Cord. 2002 Sep;40(9):432-7. doi: 10.1038/sj.sc.3101312. PMID: 12185603

Remember, your overall health is important too

The advice in this booklet is intended to answer some of the most common questions you may have about UTIs and to help minimize your risk of developing one. It is also important to remember the importance of maintaining good overall health. By getting enough sleep, eating a healthy diet, drinking the right amount of fluids, exercising on a regular basis, and adhering to a catheterization schedule, you may be able to help prevent UTIs.



You should always follow specific instructions from your healthcare provider and those included with your intermittent catheterization solution. If you still suffer from frequent UTIs despite all these precautions, talk to your healthcare provider for more advice.





Delivering personalized care solutions for you.

Adjusting to using an intermittent catheter can take time. No matter how far you are on your journey, we're here to help. Coloplast Care is a product and lifestyle support program that offers help and education when you need it. Whether it's through our online educational articles or by phone with your personal Advisor, we're here to help you live a better life using catheters.

For more information about how we can help with your bladder management, please:

- · Visit bladder.coloplastcare.us
- Email us at care-us@coloplast.com
- Call your Coloplast Care Advisor at 1-866-226-6362

Information from Coloplast Care is for educational purposes only. It is not intended to substitute for professional medical advice and should not be interpreted to contain treatment recommendations. You should rely on the healthcare professional who knows your individual history for personal medical advice and diagnosis.

