

A photograph of a person's hands resting on their abdomen, suggesting discomfort or a medical condition. The person is wearing a dark purple sweater. The text is overlaid on the left side of the image.

# Are you bothered by recurrent Urinary Tract Infections?

This material aims to help  
and guide you if you are an  
intermittent catheter user.





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# Understanding Urinary Tract Infections When Using Intermittent Catheterization

Do you often get bothersome urinary tract infections (UTIs) requiring antibiotics?

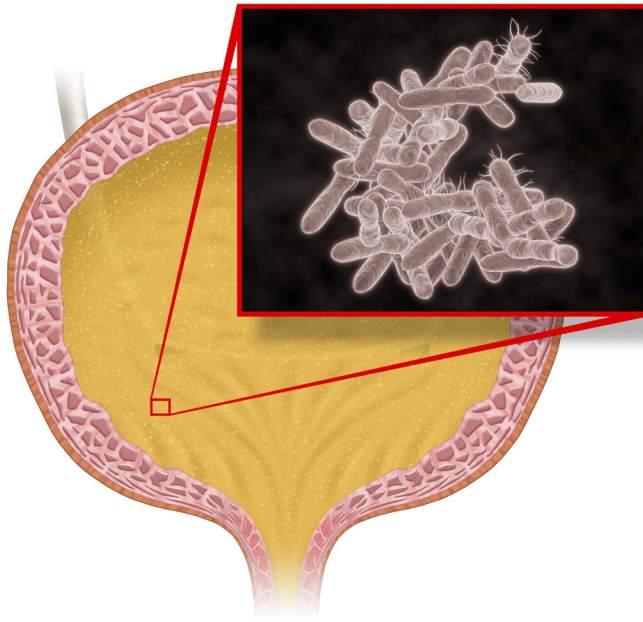
There are several strategies you can consider to reduce the risk of Recurring Urinary Tract Infections (rUTIs) and improve your health.

This guide can help you understand how to reduce risk of UTIs and improve your health. It's a checklist to help you learn about the important parts of managing rUTIs when using intermittent catheterization (IC). This information was created together with healthcare professionals, as well as IC users, and follows the latest guidelines from European Association Urology Nurses (EAUN), updated 2024. The material applies to people who get recurrent UTIs and use IC.

## **The material aims to help you:**

1. Identify if you have a UTI.
2. Highlight known risk factors for developing a UTI and minimize these risks by using this checklist.
3. Access available clinical studies and evidence regarding prophylactic methods against UTIs.





## What Are Recurrent UTIs?

If you're experiencing UTIs frequently, you might have what's called a recurrent UTI. This means you've had either three or more UTIs in the past 12 months, or two or more UTIs in the last six months<sup>1</sup>.

UTIs can be painful and burdensome, and also be costly for society and healthcare systems.

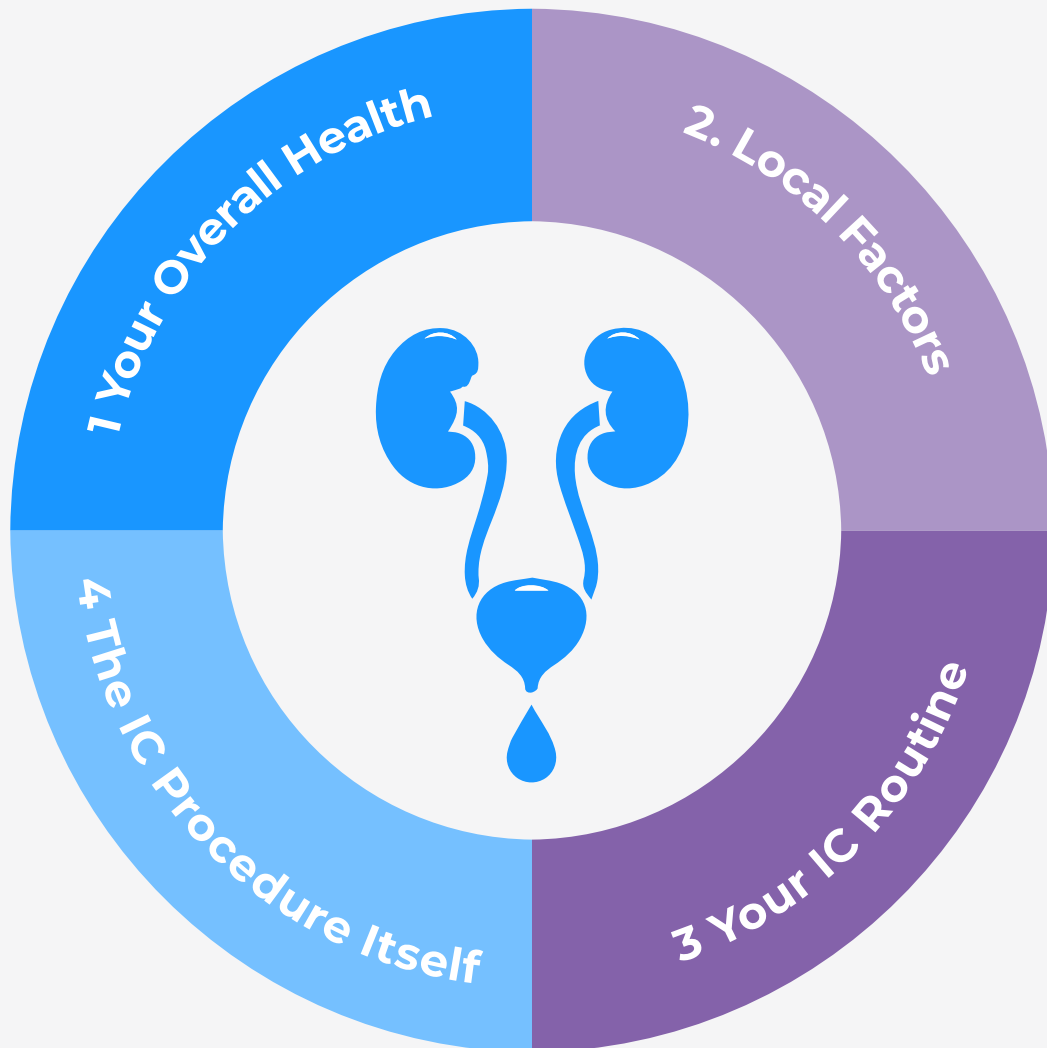
The increasing use of antibiotics has led to a rise in resistant bacteria, complicating treatment options.

This may require longer treatment durations and can introduce additional side effects through the use of broad spectrum antibiotics.

Repeated antibiotic use can also disrupt the balance of good bacteria in your body, making you more prone to UTIs.

This checklist may help you make changes to break that cycle and reduce your risk of UTIs.

## The Four Areas Of UTI Risk Factors:



<sup>2</sup>Kennelly et al., Advances in Urology, 2019

## Understanding Your UTI Risk Factors

UTIs can happen for many reasons, and when you use Intermittent Catheterization (IC) to empty your bladder, there are some specific risk factors to keep in mind.

We can break these down into four main areas<sup>2</sup>.

## 1. Your Overall Health:

**Your Immune System:** A weakened immune system or recent antibiotic use can affect the balance of good and bad bacteria in your body, making you more prone to UTIs.

**Bowel Problems:** Constipation can make it harder to empty your bladder completely, which can increase UTI risk.

**Age and Gender:** Older adults, especially women after menopause (due to lower estrogen), are at higher risk. Estrogen helps protect against UTIs.

Women in general are more likely to get UTIs than men because of their shorter urethra and the close proximity of the urethra and rectum.

**Nerve-Related Bladder Issues:** Conditions like spinal cord injury (SCI) or multiple sclerosis (MS) can affect bladder function and increase UTI risk.

**Assistance Needs:** If you need help with your IC routine due to physical or mental limitations, this can also be a factor.

**Diabetes:** People with diabetes are more prone to get UTIs.



## 2. Local Factors (Inside Your Body):

**Previous UTIs:** Having had UTIs before makes you more susceptible to future infections.

**Stones:** Bladder or kidney stones can increase UTI risk.

**Anatomical Issues:** If your bladder has a changed shape (prolapsed bladder) this may hinder the bladder to empty properly.



### 3. Your IC Routine:

**Fluid Intake:** Not drinking enough fluid is associated with increased risk of UTIs since the bacteria in the urine gets more concentrated. The intake should be at least 1.5L per day (but varies depending on individual factors, climate etc.)

**Hygiene:** Good hand- and genital hygiene during IC is essential. Follow your healthcare provider's instructions.

**IC Education:** To get a proper introduction and education to the IC procedure is crucial.

**Emptying Your Bladder Fully:** Residual urine left in the bladder after IC contain bacteria that may grow, multiply in number and cause a UTI. This can also be caused by incorrect catheterization technique or too short catheter length.



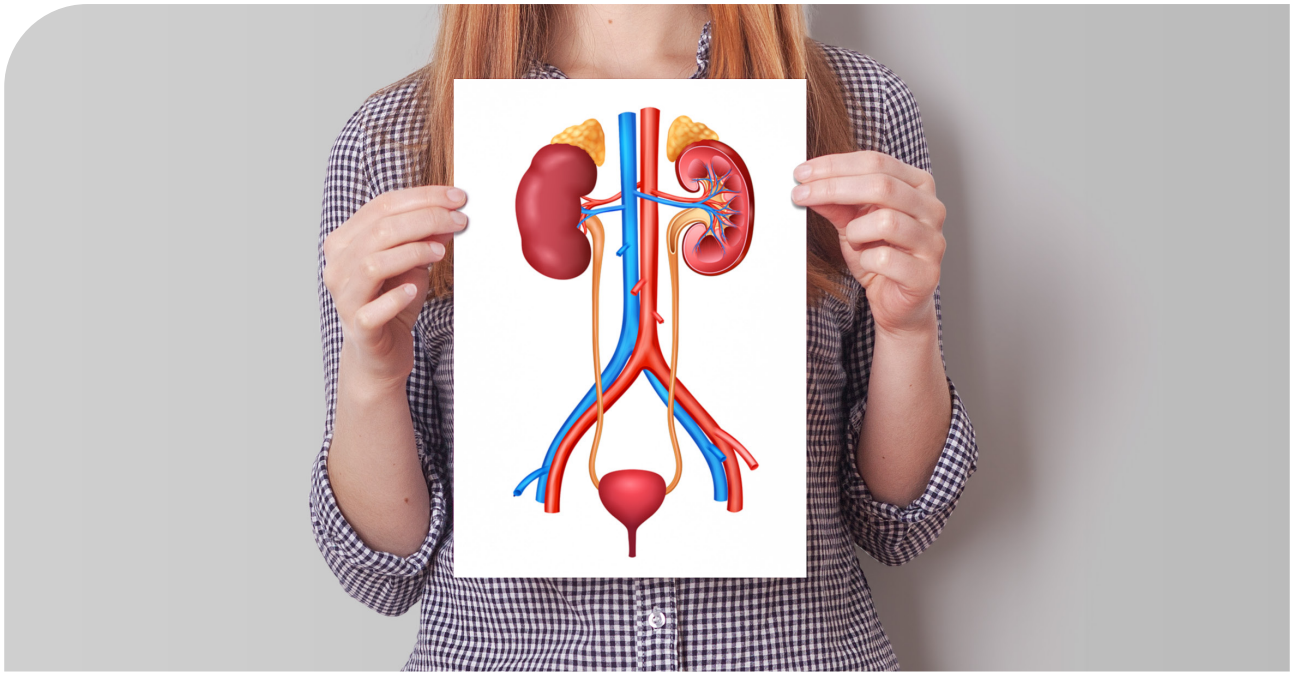


## 4. The IC Procedure Itself:

**Catheter Lubrication:** If the catheter isn't properly lubricated, it can cause small injuries (microtrauma) to the urethra, increasing the risk for bacteria to attach and cause a UTI.

**Incomplete Emptying:** Using a catheter that is too short or using incorrect technique can leave urine behind.

**Introducing Bacteria:** Introducing foreign bacteria via the catheter (e.g. from hands) into the urethra may cause an infection.



## Different Types of UTIs

A UTI occurs when bacteria get into your urinary system. This system includes your kidneys, bladder, and ureters (the tubes that connect them).

UTIs can affect different parts of this system, and they can vary in how serious they are.

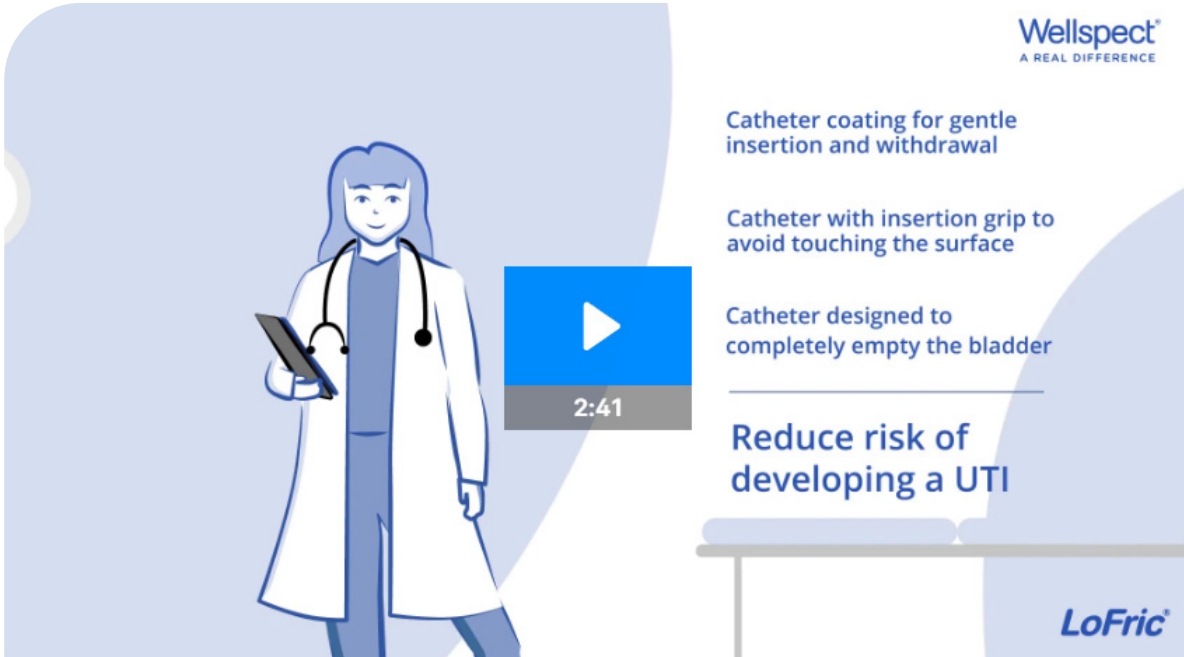
**Lower UTI:** This is the most common type of UTI. It's usually caused by E.Coli, bacteria normally present in the gut, when entering the urinary tract.

**Upper UTI:** This type is more serious and impact the kidneys. Your kidneys are responsible for filtering harmful toxins out of your bloodstream. If your kidneys are unable to function properly, bacteria may be able to enter the bloodstream.

They often cause flu-like symptoms that impact your whole body, including fever, a temperature of 38°C (100.4°F) or higher, chills, headache, nausea, and vomiting. It's worth noting that older adults might not always develop a fever, but can feel confused or similar, and it may still be a severe condition.



Watch this simple step-by-step animation to clearly see how a UTI happens.



**Wellspect®**  
A REAL DIFFERENCE

Catheter coating for gentle insertion and withdrawal

Catheter with insertion grip to avoid touching the surface

Catheter designed to completely empty the bladder

**Reduce risk of developing a UTI**

**LoFric®**





## UTIs and IC Users

Intermittent catheterization has many advantages and is associated to far less complications compared to indwelling catheterization.

However, when inserting something into the urethra, to empty the bladder, there is an increased risk for UTIs compared to natural bladder emptying.

When emptying the urine via a plastic tube we lack the flushing effect which occurs in natural voiding and may hinder bacteria to attach and cause a UTI.

But if you are aware of the risk factors for UTIs you may reduce them. This short, descriptive animation demonstrates how you as an IC user can reduce the risk of getting a UTI.

# Which Are Common Symptoms of UTIs?

If you have a UTI, you might notice changes in how you urinate. One of the most common signs is needing to go more often. You might also feel a burning or stinging sensation when you urinate, or you might feel like you can't empty your bladder completely.

## **Here are some other common symptoms to watch out for:**

- A burning or stinging feeling when you urinate.
- Leaking urine or having trouble holding it.
- Needing to urinate more frequently than usual.
- Urine that smells bad or looks cloudy.
- Increased leakage of urine.
- Pain in your lower abdomen or back.
- Feeling feverish or generally unwell.
- Increased muscle spasms (especially if you have nerve-related issues).
- Feeling confused (especially if you are older).
- Seeing blood in your urine.

If you're experiencing one or more of these symptoms, it's important to get checked. Please contact your Healthcare Professional (HCP) for a urine test and further investigation.



## Why Urine Tests Are Important

Urine culture should always be done when there is an indication for antibiotic treatment.

This test helps determine exactly which type of bacteria is causing the infection and which antibiotics will work best against it. This is especially important if you use IC and get frequent UTIs.

Here's how urine cultures are interpreted, and what other tests might be done:

### **Urine Culture (Counting Bacteria):**

If the test shows bacteria, and you're also experiencing UTI symptoms, it means you likely have a UTI.



# How To Collect a Urine Sample When Using IC

It's best to collect a urine sample when your urine has been in your bladder for a while, like first thing in the morning.

A urine sample collected via intermittent catheterization must be taken as a midstream sample. Perform the catheterization according to the recommended routine:

1. Empty the first bit of urine into the toilet.
2. Collect the middle part of your urine in a clean container.
3. Empty your bladder completely.
4. Remove the catheter.
5. Close the container.
6. Store the sample in a cool place, such as a refrigerator, prior to analysis.



# Catheterization Routines to Prevent UTIs

Using a catheter correctly is important for preventing UTIs. Here's a checklist to help you think about your catheter use:

**Catheter Length:** do you have the right catheter length to empty your bladder completely? The body position is important and doing the catheterization in the bathroom, either on the toilet or chair, is always preferred over laying down in bed.

**Complete Bladder Emptying:** Does your catheter help you empty your bladder completely each time, including also larger particles visible in the urine? Changing your body position may help empty the bladder more efficiently.

**Catheterization Technique:** Do you withdraw the catheter slowly enough to empty completely?

**Catheter Size and Tip:** Is the size (Charrière size) and type of catheter tip optimal for you?

**Catheter and Lifestyle:** Does your catheter fit your daily life and how easily you can use it?

**Catheterization Frequency:** Are you using your catheter often enough? The recommended frequency is 4-6 times/day.

**Urine Volume:** Is the amount of urine you drain each time less than 400ml?

**Catheter Safety:** Has the catheter you are using been shown to be safe for long term use? You may ask for clinical data on long-term use of the product.

If you answered “no” to any of these questions, or if you're unsure, please contact your HCP to make sure your catheter is right for you and help you lower your risk of UTIs.



## Using a Catheter Without Touching It: Non-Touch Technology

Some catheters are designed with a protective sleeve or a special handle, allowing you to avoid touching the part that goes into your urethra.

This is known as 'non-touch technology.'

The easy-to-grip handle makes it simpler to hold and guide the catheter, giving you more control and facilitating easier insertion.

Additionally, this design helps you avoid touching the catheter tubing, making the procedure more hygienic and reducing the risk of introducing foreign bacteria.





# Keeping a Clean Procedure During Catheter Use

Good hygiene is essential to prevent UTIs when using a catheter. Here's what you should keep in mind:

## **Washing Your Hands:**

Always wash your hands with soap and water before and after catheterization.

If you're in a public restroom and the sink is outside the toilet, or if you use a wheelchair, plan ahead to keep your hands clean before catheterization. This might mean using hand sanitizer after washing and before touching your wheelchair wheels.

Hand sanitizer is recommended to be used before catheterizing in a public toilet.

## **Genital Hygiene:**

Clean your genital area daily with plain, unscented soap (not antibacterial soap) or just lukewarm water. This helps prevent dryness and keeps your natural bacteria balanced.

Wash the area more thoroughly if needed, such as after a bowel movement or significant urine leakage.

For women, always wash from front to back.

For men, be sure to wash under the foreskin.

Important Note: Hygiene practices may vary slightly depending on local guidelines. Be sure to follow the advice given by your health care provider.





### **Frequency and Volume:**

- It's generally recommended to empty your bladder 4-6 times a day.
- Try not to let more than 400ml of urine collect in your bladder at one time (morning urine might be an exception).
- The total volume of urine per day is typically 1000-2000ml.
- Drink 1500-2000 ml fluids per day. Increase fluid intake when it's warm weather, after exercise and if you have fever or a UTI.

### **Using Your Micturition List:**

The micturition list can help you get an overview of how much you drink and urinate during the day.

It's often requested by the HCP as a tool during followup, and it is an excellent basis for discussion and further actions.





## How Bowel Health Affects UTI Risk

Your bladder and bowels are closely connected, and bowel issues can sometimes increase your risk of UTIs. While the exact reasons aren't fully understood, it's believed that a full bowel can make it harder for your bladder to empty completely. Additionally, loose stools or bowel leakage may make it easier for bacteria from your gut to reach your urinary tract.

Maintaining a regular bowel emptying routine is important, though it can be difficult to know what's considered "normal." Generally, bowel movements ranging from three times a day to three times a week are considered within a healthy range.

Proper toilet positioning is also crucial for successful bowel emptying. Using a footstool to raise your legs and change the angle can help the stool pass more easily.

If you suspect constipation is affecting your bladder emptying, or if bowel leakage is contributing to your UTIs, it's important to contact your HCP. They can help determine the cause of your bowel issues and recommend appropriate treatment.



## Factors to Consider If You Use Assistance to Perform IC

You should always be offered an individualized care plan where the lifestyle, and the impact on quality of life, is taken into account.

If there are many assistant carers, it needs to be ensured that everyone performs IC in the same way and has received adequate training on IC technique, procedure and hygiene.

The frequency of IC is extremely important to avoid distending the bladder. Are clear schedules and routines set up?

Since it's hard for many individuals in need of IC to know when the bladder is full, it's crucial to have set time points when to empty the bladder.

Contact your HCP if you feel any uncertainty about the above.

Wellspect has several training videos on how to teach IC that your HCP may pass on to the responsible nurse/assistant/care giver. Wellspect provides both products and educational material to reduce risks of UTIs.

# Prophylactic methods against UTIs - what does the evidence show?



The clinical evidence around prophylactic methods to avoid UTIs are contradictory. In the literature there is evidence for the following substances to have an effect <sup>3,4</sup>

**Probiotics (especially certain lactobacillus strains):** These beneficial bacteria can help restore a healthy balance of microorganisms in the body, which may help prevent UTIs.

**Cranberry substances.** Cranberry pills are made from dried, powdered cranberries and have antioxidants, and a UTI preventive effect. Cranberry juice on the other hand is not better than placebo. Very large amounts of juice are needed to reach an effect, and juice contains a lot of sugar, which can have a negative effect on people with diabetes etc.

**Propolis** (also known as bee glue) has anti-inflammatory properties and may also have some antibacterial effects. Preventing bacteria from adhering to the bladder lining can be beneficial. This is available as granulated powder and may be added to your food.

**Methenamine hippurate** is an antibacterial medication used primarily to prevent and treat urinary tract infections. It works by acidifying the urine, which helps to suppress or eliminate bacteria associated with chronic or recurrent infections. This medicine can be prescribed by your doctor.

## References

1. Vahr et al., EAUN IC guidelines, 2024
2. Kennelly et al., Advances in Urology, 2019
3. Sihra et al, Nature Reviews Urology, 2018
4. Kyriakides et al, European Urology Focus, 2021

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Wellspect HealthCare, Aminogatan 1, P.O. Box 14, SE-431 21 Mölndal, Sweden.  
Phone: +46 31 376 40 00. [www.wellspect.com](https://www.wellspect.com)