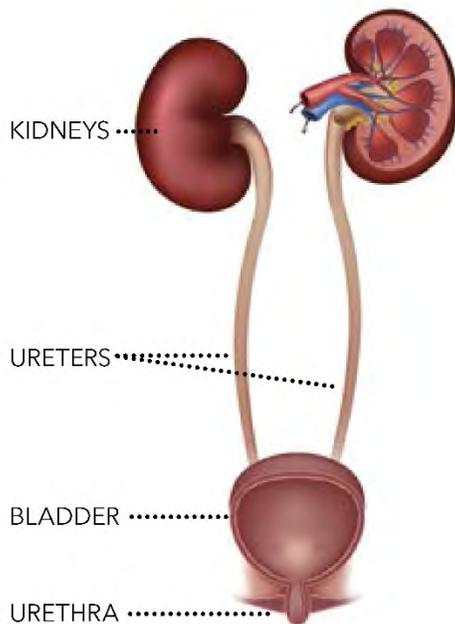


URINARY TRACT INFECTIONS

How does the urinary system work?

The urinary tract is made up of the kidneys, the ureters, the bladder and the urethra. Each plays an important role in helping your body to eliminate waste products in the form of urine.

The main job of the kidneys is to remove wastes from the blood and return the cleaned blood back to the body. The ureters are tubes that carry the waste products, as urine, from the kidneys to the bladder. The bladder stores urine until it passes out of the body, when you urinate, through a tube called the urethra.



What is a urinary tract infection?

A urinary tract infection (UTI) is an infection usually caused by bacteria (or germs) attacking the kidneys, ureters, bladder or urethra. Under normal circumstances the urinary tract is sterile, or free of bacteria.

What causes a urinary tract infection?

A UTI most often occurs when bacteria enter your urethra from the skin and travel to the bladder, causing a bladder infection. A kidney infection results if bacteria climb further from the bladder to the kidneys. The bacteria that most often cause UTIs sit on the skin in the genital area and are called *Escherichia coli* (E. coli).

Although this is by far the most common cause, there are other ways you can get a UTI. Some people get an infection because the normal flow of urine is blocked or is backed up from the bladder into the kidneys. Sometimes kidney or bladder stones can cause repeated infections. In rare cases, bacteria can reach the kidneys from an infection elsewhere in the body through the bloodstream.

Who can get a UTI?

You are more inclined to get a UTI if you have an abnormal urinary tract. You are also more susceptible to develop a UTI during pregnancy, if you have diabetes or if you have an indwelling urinary catheter (a tube placed in the bladder to help drain urine).

Women have a much greater tendency than men to get a UTI. In fact, Canadian women make about 500,000 visits to doctors per year due to UTIs.

What makes women more prone to UTIs?

Women are more prone than men to develop UTIs because a woman's urethra is much shorter than a man's, and bacteria have a shorter distance to travel from the outside skin into the bladder.

If a woman is prone to developing bladder infections, she should avoid wiping her genitals from back to front as this might transport bacteria from the anus to the vagina or urethra, causing infection. She should also avoid taking baths – particularly bubble baths – or using bath oils; showering is preferred.

Pregnant women are at increased risk of having a bladder infection progress to a kidney infection. The drainage system from the kidney to the bladder dilates during pregnancy and does not empty as rapidly. This reduced flow of urine makes it easier for bacteria to climb from the bladder to the kidney and for infection to set in. UTIs during pregnancy may result in a smaller, premature baby and should therefore be treated as early as possible.

After menopause, UTIs might increase due to a lack of certain hormones.

An increase in sexual activity might trigger symptoms of a urinary tract infection in some women. Bladder and kidney infections are generally not transmitted by sexual intercourse; however, a woman prone to UTIs should empty her bladder after intercourse.

What are the symptoms of UTI?

Bladder infection (cystitis) is the most common UTI. These are the symptoms:

- Feeling an urgent need to pass urine often, although the amount of urine may be small
- Burning during urination
- Cloudy or foul-smelling urine
- Pain in the lower abdomen

If, in addition, you suffer from any of the following, you might have an infection of your kidneys or prostate gland and should see your doctor without delay:

- Blood or pus in the urine
- Fever, chills or vomiting
- Diabetes or chronic illness
- A history of kidney infection or disease
- Pain on urination during pregnancy
- Bad back pain

In some cases, you might have mild symptoms (e.g. urge to urinate frequently) without having a UTI. Smoking, anxiety, drinking a lot of coffee, food allergies or premenstrual syndrome may cause symptoms similar to a UTI.

How will you know if you have a UTI?

If mild symptoms have not disappeared within a day or two, then you will need to have a urine test. Your doctor will ask you to wash your genitals, urinate a little, then collect the rest of your urine in a sterile jar. Your urine is then tested for bacteria to see if an infection is present.

How are UTIs treated?

If you have an infection, your doctor will probably prescribe an antibiotic. He or she will likely recommend that you follow the self-help suggestions below.

What can you do to help yourself?

- Drink plenty of water (about six glasses per day) so that you urinate often
- Don't try to hold your urine once your bladder feels full, and empty your bladder completely each time you pass urine

- Women prone to UTIs should urinate after having sex
- Wipe yourself from front to back so that you don't transport bacteria from your anus to your urethra
- Cut down on your caffeine and alcohol intake
- If you are prone to UTIs, avoid bubble baths, bath oils, perfumed soaps and vaginal douches

Who should see their physician?

- Women with more than three UTIs in one year
- Women with symptoms of a UTI associated with a fever or blood in the urine
- Anyone with UTI symptoms who also suffers from diabetes mellitus, kidney disease, or is pregnant
- Any male or child with UTI symptoms or blood in their urine
- Anyone with symptoms that do not resolve on their own within 48 hours

The Kidney Foundation would like to acknowledge and thank the members of the Kidney Foundation's National Programs & Public Policy committee for their contributions and professional expertise in the development of this resource.