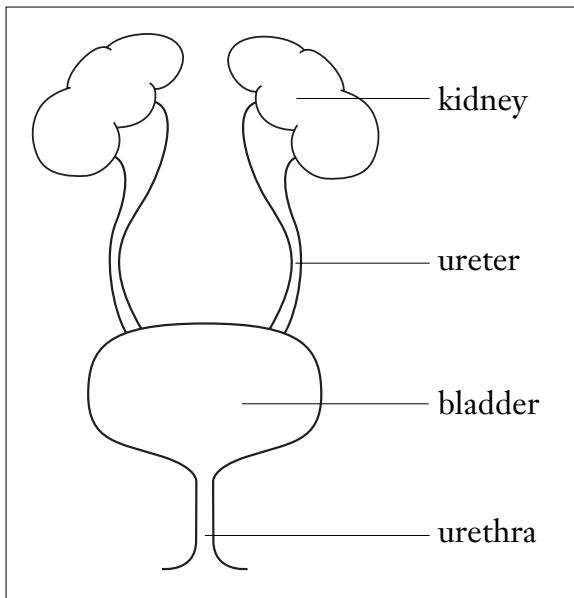


Urinary Tract Infection

University of
Pittsburgh
Medical Center

Information
for Patients

The urinary tract is the body's filtering system for removing liquid waste, or urine. It comprises the kidneys, ureters (tubes that carry urine from kidneys to bladder), bladder, and urethra (tube that carries urine from the bladder for excretion). A urinary tract infection (UTI) is caused by bacteria that enter the urinary tract.



Women are more likely than men to get UTIs because of their urinary tract's design. Men have a longer urethra, so it is more difficult for bacteria to enter the urinary tract. Nearly half of all women will have a urinary tract infection at some point in their lives. About 20 percent of these women will have repeat infections.

The urinary tract has two parts: the lower and upper tracts. Most infections occur in the lower urinary tract and can also be called bladder infections. Infections in the lower tract (involving the bladder and urethra) are more common because bacteria can easily enter this area.

Infections in the upper urinary tract (involving the kidneys and ureters) can also be called kidney infections and cause serious illness.

Symptoms

Symptoms of a lower urinary tract infection or bladder infection may include:

- frequent need to urinate
- burning sensation while urinating
- pressure in the lower abdomen
- pain in the lower back
- blood in urine

Symptoms of an upper urinary tract infection or a kidney infection may include:

- fever
- chills
- nausea and/or vomiting
- pain higher in the back (around the upper sides and waist)

In women, the symptoms of a urinary tract infection are similar to those caused by some vaginal infections.

Causes of UTIs

In women, urinary tract infections usually are caused by bacteria that live on the skin near the rectum or vagina. These bacteria can travel through the urinary tract and cause infections in the bladder or other parts of the urinary tract. UTIs in men are rare and usually indicate an abnormal urinary tract or an enlarged prostate.

The most common causes of urinary tract infections are:

Sexual intercourse — The back and forth motion of the penis during intercourse can push bacteria into the urethra. Bladder infections are more common in women who have had multiple sexual partners or have frequent intercourse.

Waiting too long to urinate — The bladder is a muscle that gets bigger when it holds urine and shrinks to push it out. Waiting too long to urinate can cause the bladder muscles to stretch too much. Stretching weakens the muscle so not all the urine is pushed out, increasing the risk of a urinary tract infection.

Other causes include:

- kidney stones that may physically block the free flow of urine
- cystocele [SIS-toh-seel]—relaxing of the bladder and vaginal area, which causes pools of urine to remain in the bladder
- diverticula [die-ver-TICK-you-la]—infections that develop on the inside wall of the urethra, allowing urine to collect
- urethral stenosis [steh-NO-sis]—a narrowing of the urethra, preventing an easy flow of

urine out of the body — this can be present at birth or result from a number of conditions or activities

Certain conditions may put you at risk for urinary tract infections, including

- urinary tract infections in childhood
- diabetes
- pregnancy

Testing for UTIs

Several methods may be used to tell whether you have a UTI.

- A urine sample may be used to evaluate the number of bacteria and white blood cells present. A high number of white blood cells in your urine may indicate an infection.
- A pelvic exam may be needed to rule out a vaginal or pelvic problem.

X-rays or ultrasounds may be used if infection returns often or does not respond to treatment.

Treatment

Urinary tract infections are treated with antibiotics. **It is very important to use all medication that your doctor prescribes, even if symptoms go away before finishing the medication.** Your doctor may recommend testing your urine after the treatment is finished to be sure the infection has completely cleared up.

If you have had several bladder infections, or even one kidney infection, your doctor may refer you to a urologist [your-OLL-uh-jist]. A urologist is a doctor who specializes in treating problems of the urinary tract.

Prevention

You can help prevent urinary tract infections by practicing the following health habits:

- Understand the causes.
- Practice good personal hygiene. Always wipe from front to back.
- Drink plenty of fluids (at least three to four glasses of water each day) to help flush bacteria out of the urinary tract.
- Empty your bladder completely as soon as you feel the urge, or at least every three hours.

- Get plenty of vitamin C. It makes urine acidic and helps keep bacteria down. Vitamin C is found in orange juice, citrus fruits, and broccoli.
- Wear cotton underwear. Bacteria grows better in moist places. Cotton does not trap moisture.
- If you contract an infection, see your doctor and follow the prescribed treatment.

Several additional measures are helpful for women:

- During intercourse, try different positions that cause less friction between your urethra and your partner's penis.
- Change sanitary pads and tampons frequently during menstruation.
- After intercourse, urinate as soon as possible. This will help flush out any bacteria that may have gone into the urinary tract.

If you have any symptoms of a urinary tract infection, see a doctor as soon as possible. With proper treatment, the infection can be cleared up before it causes serious problems.

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