



Urinary Tract Infections

Urinary tract infections (UTIs) are common infections. Many women get them at some point in their lives. Some women have repeat infections and may have them often. But most UTIs are not serious. These infections can be treated with **antibiotics**, and symptoms usually can be relieved quickly.

You Need to Know

- what causes UTIs
- the symptoms and treatment
- how to prevent UTIs

The Urinary Tract and Infections

The urinary tract has a lower part and an upper part. The upper urinary tract consists of the **ureters** and **kidneys**. The lower tract is made up of the **urethra** and the **bladder**.

How do these organs work together?

- The two kidneys produce urine.
- The two tubes called ureters carry urine from the kidneys to the bladder.
- The bladder stores urine.
- The urethra carries urine from the bladder out of the body.

Where do UTIs start?

Most UTIs start in the lower urinary tract. **Bacteria** enter through the urethra and spread upward to the bladder. This can cause **cystitis**, a bladder infection. In some cases, an infection of the urethra called **urethritis** can develop at the same time.

How does a kidney infection start?

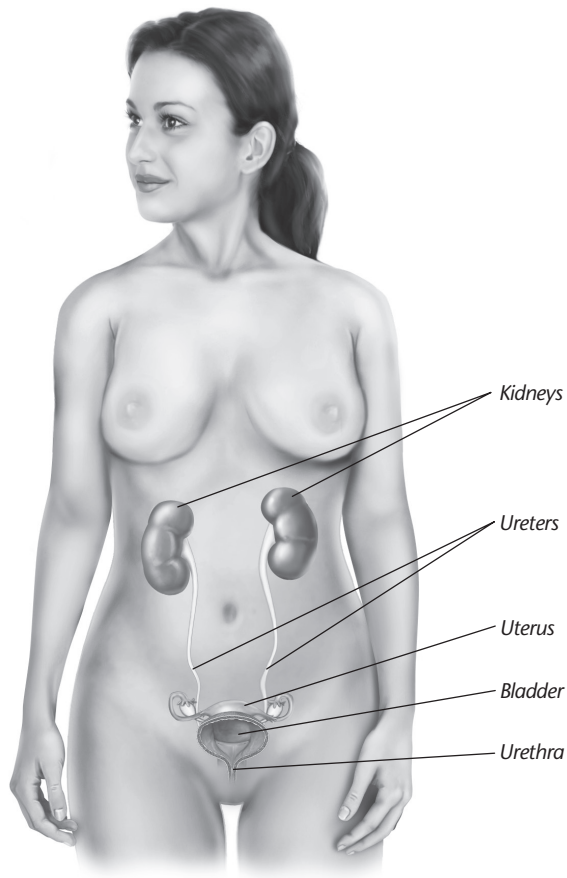
Bacteria that have infected the bladder may travel up the ureters to the kidneys. This can cause **pyelonephritis**, a kidney infection. An infection in the upper tract may cause a more severe illness than infection in the lower tract.

Do women get UTIs more often than men?

Women are more likely than men to get UTIs. This is because the urethra is shorter and closer to the **anus** in a woman than in a man. This means bacteria can reach the bladder more easily.

Causes of UTIs

It's normal for bacteria from the bowel to live on the skin near the anus or in the **vagina**. Sometimes these bacteria spread to the area around the urethra. If they move up the urethra, they may cause infections in the bladder and, sometimes, in other parts of the urinary tract.



- have obesity
- are going through *menopause*
- are pregnant

If you are pregnant and think you may have a UTI, call your *obstetrician-gynecologist (ob-gyn)* right away. Severe infections can cause problems for both you and your *fetus*, so it is important to treat UTIs early.

Symptoms of UTIs

Symptoms of UTIs can come on quickly. One sign is a strong urge to urinate that cannot be delayed (urgency). As urine flows, a sharp pain or burning may be felt in the urethra. The urge to urinate then returns minutes later (frequency). There may be soreness in the lower abdomen, in the back, or in the sides.

How does an infection affect my urine?

If you have a UTI your urine may

- have a strong odor
- look cloudy
- be tinged with blood

Blood in the urine may be caused by a UTI, but it also may be caused by other conditions. Call your ob-gyn right away if you see blood in your urine.

What are the symptoms of a kidney infection?

If the bacteria enter the ureters and spread to the kidneys, symptoms may include

- back pain
- chills
- fever
- nausea
- vomiting

If you have any of these symptoms, call your ob-gyn right away. Kidney infections are serious. They need to be treated promptly.

Can I get a UTI from sex?

The anatomy of women makes them prone to getting UTIs after having sex. The opening of the urethra is in front of the vagina. During sex, bacteria near the vagina can get into the urethra from contact with the *penis*, fingers, or sex toys. UTIs tend to occur in women who begin having sex or have it more often. Using *spermicide* or a diaphragm for birth control also can cause more frequent UTIs.

What else can cause UTIs?

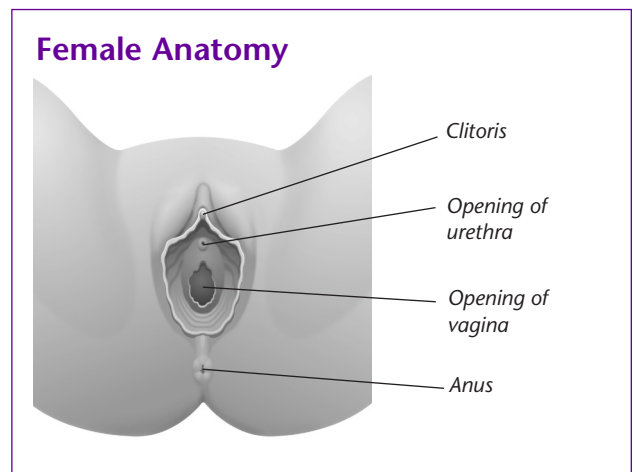
Infections also can develop when the bladder does not empty completely. This may be caused by the following:

- A stone in the ureters, kidneys, or bladder that blocks the flow of urine through the urinary tract. Stones develop when minerals in urine stick together and there is not enough fluid to flush them out.
- A narrowed tube in the urinary tract that slows the flow of urine.
- A problem with the nerves or muscles of the pelvis.

What other factors increase the risk of getting a UTI?

You are more likely to get an infection if you

- have had a UTI before
- have had several children
- have *diabetes mellitus*



Could my symptoms be something else?

Pain when urinating can be caused by other conditions, such as infection of the vagina or **vulva**. Tests may be needed to confirm the diagnosis of a UTI. Talk with your ob-gyn in detail about your symptoms.

Diagnosing UTIs

The diagnosis of a UTI often is made based on symptoms, including pain with urination or frequent urination.

What tests are done to diagnose a UTI?

A simple test called **urinalysis** may show if you have a UTI. For this test, you will be asked to provide a urine sample. This sample will be studied in a lab to look for white blood cells, red blood cells, and bacteria. The urine sample also may be grown in a culture (a substance that promotes the growth of bacteria) to see which bacteria are present.

Why would I need more testing?

You and your ob-gyn may discuss testing to look at your urinary tract if

- your infection does not clear up with treatment
- you have had several UTIs in a short time
- you have pain, fever, and chills

Your ob-gyn may recommend an **ultrasound exam** or **computed tomography (CT)** of the upper urinary tract.

Treatment of UTIs

Antibiotics are used to treat UTIs. The type, dose, and length of antibiotic treatment depend on the type of bacteria causing the infection and your medical history. A simple UTI rarely leads to infection of the upper urinary tract.

How to Provide a Urine Sample

For urinalysis, it is important to provide a clean sample of urine. Your ob-gyn or a nurse will give you a sterile cup and a special wipe. Follow these steps:

1. Open the cup and place it at easy reach. Place the cap nearby with the inside lid up.
2. Separate the **labia** with one hand. With the other hand, clean your genital area with the wipe. Wipe from front to back and do not touch or wipe your anus.
3. While still holding the labia open, pick up the opened container with your other hand, pass a little bit of urine into the toilet, and catch the rest in the cup. Place the cap back on the cup.

Do not touch the inside of the lid or the inside of the cup at any time. This helps keep the sample from picking up bacteria from your hands.

How long do I need to take antibiotics?

In most cases, treatment lasts a few days and is very effective. Most symptoms go away in 1 to 2 days. It is very important to finish medication prescribed for a UTI, even after your symptoms go away.

What if I have a more severe infection?

For more severe infection, such as a kidney infection, you may need to stay in the hospital. Severe infections take longer to treat, and you may need medication given through an **intravenous (IV) line**.

What does it mean if I get UTIs often?

If you have three or more UTIs in a year, you have **recurrent infection**. The first step in treatment is finding the cause. Factors that increase the risk of recurrent infection are

- frequent sex
- long-term spermicide use
- diaphragm use
- a new sexual partner
- young age at first UTI
- a history of UTIs

How are recurrent UTIs treated?

Recurrent infections are treated with antibiotics. A week or two after you finish treatment, a urine test may be done to see if the infection is gone.

How can recurrent UTIs be prevented?

- Changing your birth control method may be recommended.
- A single daily dose of antibiotic may be recommended for 6 to 12 months.
- If you often get UTIs from sexual activity, your ob-gyn may recommend you take a single dose of antibiotic after each time you have sex.

Preventing UTIs

There are a number of ways to prevent UTIs:

- Wash the skin around the anus and the genital area.
- Drink plenty of fluids (including water) to flush bacteria out of your urinary system.
- Empty your bladder as soon as you feel the urge or about every 2 to 3 hours.

Should I drink cranberry juice to stop a UTI?

Unsweetened cranberry juice and cranberry pills may decrease the risk of getting a UTI. The exact amount of juice or pills needed and how long you need to take them to prevent infection are being studied. Treatment with an **estrogen** cream or pills is being studied as a way to prevent UTIs in menopausal and postmenopausal women.

Your Takeaways

1. Urinary tract infections are common and can be painful.
2. Treatment with antibiotics can decrease painful symptoms and clear infections.
3. With prompt medical treatment, these infections can be treated with success.
4. If you have multiple UTIs in a year, talk with your ob-gyn about ways to help prevent frequent infections.

Terms You Should Know

Antibiotics: Drugs that treat certain types of infections.

Anus: The opening of the digestive tract through which bowel movements leave the body.

Bacteria: One-celled organisms that can cause infections in the human body.

Bladder: A hollow, muscular organ in which urine is stored.

Computed Tomography (CT): A type of X-ray that shows internal organs and structures in cross section.

Cystitis: An infection of the bladder.

Diabetes Mellitus: A condition in which the levels of sugar in the blood are too high.

Estrogen: A female hormone produced in the ovaries.

Fetus: The stage of human development beyond 8 completed weeks after fertilization.

Intravenous (IV) Line: A tube inserted into a vein and used to deliver medication or fluids.

Kidneys: Organs that filter the blood to remove waste that becomes urine.

Labia: Folds of skin on either side of the opening of the vagina.

Menopause: The time when a woman's menstrual periods stop permanently. Menopause is confirmed after 1 year of no periods.

Obstetrician–Gynecologist (Ob-Gyn): A doctor with special training and education in women's health.

Penis: The male sex organ.

Pyelonephritis: A kidney infection caused by bacteria.

Recurrent Infection: Infection that occurs more than once.

Spermicide: Chemicals (creams, gels, foams) that inactivate sperm.

Ultrasound Exam: A test in which sound waves are used to examine inner parts of the body.

Ureters: A pair of tubes, each leading from one of the kidneys to the bladder.

Urethra: A tube-like structure. Urine flows through this tube when it leaves the body.

Urethritis: Infection of the urethra, the organ through which urine flows out of the body.

Urinalysis: A test to check a urine sample.

Urinary Tract Infections (UTIs): Infections in any part of the urinary system, including the kidneys, bladder, or urethra.

Vagina: A tube-like structure surrounded by muscles. The vagina leads from the uterus to the outside of the body.

Vulva: The external female genital area.

This information is designed as an educational aid to patients and sets forth current information and opinions related to women's health. It is not intended as a statement of the standard of care, nor does it comprise all proper treatments or methods of care. It is not a substitute for a treating clinician's independent professional judgment. For ACOG's complete disclaimer, visit www.acog.org/WomensHealth-Disclaimer.

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