

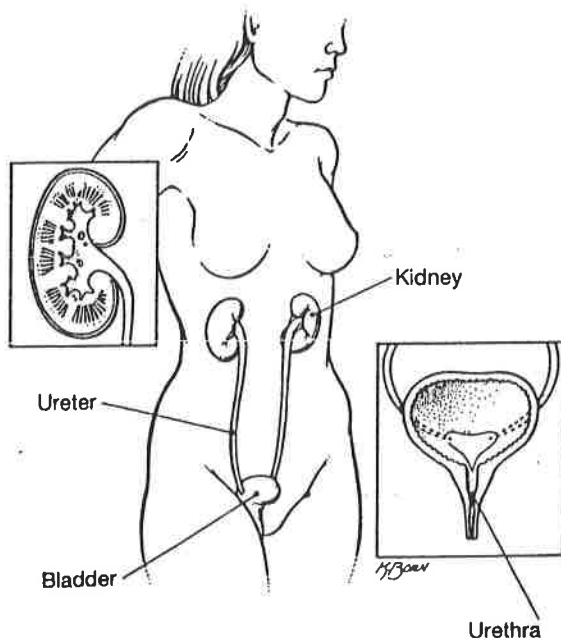
Urinary tract infection

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What is it?

The urinary tract includes the kidneys, ureters, bladder, and urethra. The kidneys take waste out of the blood and balance body fluids and salts. The ureters carry the waste (urine) from the kidneys to the bladder. The bladder stores the urine. The urethra is the tiny tube that empties the bladder when you urinate.

Any part of your urinary tract can become infected. In most cases, a urinary tract infection (UTI) is actually an infection of the urinary bladder and is called *cystitis*. When the urethra is inflamed, it is called *urethritis*. Both of these conditions occur in the lower urinary tract. If the infection progresses to the upper urinary tract, this is termed *pyelonephritis*.



What causes it?

Most urinary tract infections are caused by bacteria. The most common bacteria are called *Escherichia coli*, although other bacteria as well as viruses and fungi may be involved. *E. coli* normally lives in the large intestine, but it can migrate to, and multiply in the urinary tract.

In men and children, the leading cause of cystitis is obstruction or structural defect in the urinary tract. A common example in men over 50 is an enlarged prostate gland which slows the outflow of urine and promotes bacterial growth and infection.

Pyelonephritis is an infection that may be caused by bacteria carried to the kidney from another body infection, usually the urinary bladder. It involves both the kidney collecting system and the part of the kidney that filters waste from the blood. Infection in the kidney can be very serious.

Who gets it?

Urinary tract infections can occur at any age in either sex, but strikes women more frequently than men and adults more frequently than children. 10 - 20% of women will have at least one UTI during their lives. Of these, 3% will have recurrent infections.

Women tend to have UTIs more often than men do because the urethra is shorter in women so bacteria have a shorter distance to travel to the bladder. The urethra is also located near the rectum in women. Wiping from the back to the front after a bowel movement may bring bacteria from the rectum to the urethra. Having sex may also cause UTIs in women because bacteria can be pushed into the urethra.

Pregnant women seem to get urinary tract infections of the kidneys more often than other women. Pregnancy may make it easier for infections to happen because carrying the baby puts pressure on the ureters and because pregnancy causes changes in hormones.

What are the symptoms?

Although the onset of a urinary tract infection may be without symptoms, more typically the problem is noticed by one or more of the following symptoms:

Symptoms of Urinary Tract Infections

- Burning or stinging with urination
- Cloudy, dark, or bloody urine
- Foul smelling urine
- Urinating more often than usual
- Urge to urinate, but aren't able to
- Leakage of urine
- Fever or chills
- Low abdominal discomfort or pain

These symptoms are typical of uncomplicated UTIs. However, occasionally the above symptoms can

be accompanied by a characteristic pain that begins as a dull ache in the small of the back and grows progressively worse. The pain is steady and may radiate to the groin or abdomen. Spiking fever, chills and generalized weakness may occur and all of these are suggestive of the more serious pyelonephritis.

How do you prevent it?

If you have urinary tract infections often, you can take some steps to prevent them. The list below gives you some suggestions for preventing UTIs. Your family doctor can help you decide what changes will be helpful for you to make.

Tips on preventing urinary tract infections

- Drink plenty of fluids. (cranberry juice has proven to be helpful)
- Don't hold your urine. Urinate when you feel like you need to.
- Wipe from front to back after stooling.
- Urinate after having sex.
- Use adequate lubrication during sex.
- Avoid using the diaphragm for birth control.
- Avoid using perfumes, deodorants or fragrances in your vaginal area.
- Wear cotton underpants.

Can it be treated?

If your family doctor thinks you have a urinary tract infection, he/she will probably test a sample of your urine to find out if there are bacteria in it. If there is an apparent infection your doctor may also send your urine for culture to see which antibiotics will work best.

- **Antibiotics** are used to treat the bacteria which infect the urinary tract. Your doctor may give you one big dose of medicine, or may give you medicine to take for several days or more. Some antibiotics can make birth control pills less effective. Use another form of birth control (like a condom), in addition to the birth control pill, while taking these antibiotics.

If you have UTIs often, your doctor may give you a low dose of medicine for several months or more to prevent the infection from coming back. If having sex seems to cause your infections, your doctor may suggest that you take a single antibiotic pill after having sex to prevent urinary tract infections.

- **Phenazopyridine** may be taken to make you feel better while the antibiotic starts to work. This medication has a local anesthetic effect on the lining of the urinary tract. It colors your urine bright orange

(which can stain clothing), so don't be alarmed by the color when you urinate. Phenazopyridine should be discontinued after 2 or 3 days on antibiotics. It is available both over-the-counter (AZO Standard and other brands) or by prescription (Pyridium).

Are there complications?

Urinary tract infections vary in seriousness. Those infections in the lower urinary tract, usually cystitis or urethritis, are typically uncomplicated although if not treated promptly may lead to chronic smoldering infection that can persist with periodic flare-ups for months or even years.

Infection that has ascended into the kidneys can be very serious, especially if the condition is found during pregnancy. It is possible for the kidney to become severely and irreversibly damaged, resulting in kidney failure.

In summary

- Urinary tract infections are common, highly treatable disorders.
- They do not pose a serious threat when diagnosed and treated at an early stage.
- Women are much more likely to have UTIs than men.
- Treatment is usually with extra fluids and antibiotics.
- Follow the treatment schedule prescribed by your family physician. Even if you're feeling better, make sure to take all the medicine your doctor prescribes.
- For more information contact your doctor or the American Academy of Family Physicians at familydoctor.org or the American Urological Association at urologyhealth.org