

National Kidney  
Foundation™

# Urinary Tract Infections





### **Did you know that...**

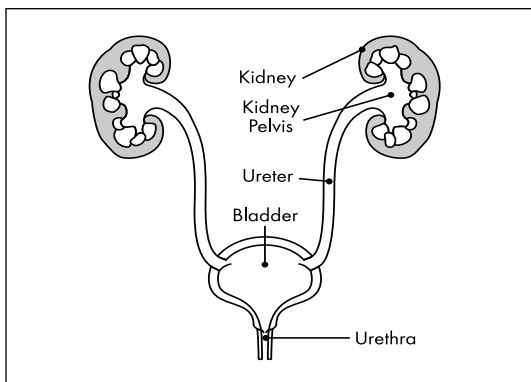
- Urinary tract infections (UTIs) are responsible for nearly 10 million doctor visits each year.
- One in five women will have at least one UTI in her lifetime. Nearly 20 percent of women who have a UTI will have another, and 30 percent of those will have yet another. Of this last group, 80 percent will have recurrences.
- About 80 to 90 percent of UTIs are caused by a single type of bacteria.
- UTIs can be treated effectively with medications called antibiotics.
- People who get repeated UTIs may need additional tests to check for other health problems.

This brochure answers the questions most often asked about UTIs. If you have more questions, speak to your doctor.

### **What is a urinary tract infection?**

A UTI is what happens when bacteria (germs) get into the urinary tract and multiply. The result is redness, swelling and pain in the urinary tract (see diagram). Most UTIs stay in the bladder, the pouch-shaped organ where urine is stored

before it passes out of the body. If a UTI is not treated promptly, the bacteria can travel up to the kidneys and cause a more serious type of infection, called pyelonephritis (pronounced pie-low-nef-right-iss).



### **What causes a UTI?**

About 80 to 90 percent of UTIs are caused by a type of bacteria, called *E. coli* (pronounced ee-co-lie). These bacteria normally live in your intestines, but they sometimes get into the urinary tract. Some UTIs are caused by other, less common types of bacteria.

### **What are the symptoms of a UTI?**

Some people don't have any symptoms with a UTI. However, most get at least some of the following:

- an urgent need to urinate, often with only a few drops of urine to pass
- a burning feeling when urinating
- an aching feeling, pressure or pain in your lower abdomen
- cloudy or blood-tinged urine
- a strong odor to your urine.

If the infection spreads to your kidneys and becomes more severe, you may also have:

- pain in your lower back
- fever and chills
- nausea and vomiting.

See your doctor right away if you have any of these symptoms.

### **What will the doctor do to check for a UTI?**

Your doctor will test a sample of your urine for bacteria and blood cells. Different antibiotics may also be tested to see which works best against the bacteria.

If an infection does not clear up with treatment, or if you have repeated infections, your doctor may order some special tests such as:

- An intravenous pyelogram, which involves injecting a dye into a vein and taking images of your kidneys and bladder.
- An ultrasound exam, which gives a picture of your kidneys and bladder using sound waves.
- A cystoscopic exam, which uses a hollow tube with special lenses to look inside the bladder.

### **How are UTIs treated?**

UTIs are treated with antibiotics. UTIs often clear up with one or two days of treatment. However, different antibiotics require different levels of treatment. Your doctor may ask you to take the antibiotics for a week or two to make sure the infection has been cured. If your

infection has spread to your kidneys, you may need several weeks of antibiotic treatment. In addition to antibiotics, your doctor may also tell you to drink plenty of fluids.

When people have other health problems in addition to their UTI, such as an enlarged prostate gland (in a man) or kidney stones, they will need to have these problems treated along with the UTI.

### **Are certain people more likely to get UTIs?**

Yes. While anyone can get a UTI, some people are more likely than others to get them.

- Women get more UTIs than men. This may be because women have a shorter urethra (pronounced you-reeth-rah). This makes it easier for bacteria to travel up to the bladder.
- People who have diabetes may have changes in their body's immune system, making it easier for them to get UTIs.
- People with blockages in their urinary tract, such as a kidney stone, are more likely to get UTIs. An enlarged prostate gland in a man can also block the flow of urine and cause a UTI.
- Infants who are born with an abnormality of their urinary tract have an increased chance of getting a UTI. Surgery is sometimes needed to correct the problem.
- People who have a catheter, or tube, placed in their bladder for a long time are more prone to UTIs. This is because bacteria on the catheter can infect the bladder.

## **Are pregnant women more likely to get UTIs?**

No. However, UTIs may be more serious during pregnancy because they are more likely to travel to the kidneys. If a UTI is not treated promptly in a pregnant woman, she may be more likely to have problems like high blood pressure or premature delivery of her baby.

## **What can be done for women who get repeated UTIs?**

A woman who gets UTIs often (three or more a year) should speak to her doctor. The doctor may recommend one of the following options:

- Take low doses of an antibiotic daily for six months or longer.
- Take a single dose of an antibiotic after having sex. (For many women, having sex seems to trigger a UTI.)
- Take an antibiotic for one or two days when symptoms of a UTI occur.

Some evidence suggests that drinking cranberry juice may also help ward off UTIs. According to a 1994 Harvard University study published in *The Journal of the American Medical Association*, elderly women who drank 10 ounces of cranberry juice cocktail a day had a reduced chance of developing UTIs.

## **Can women do anything to help prevent UTIs?**

Yes. The following steps may help to prevent UTIs:

- Drink plenty of fluids. Studies have shown that drinking 10 ounces of cranberry juice cocktail every day may help reduce the



chance of developing UTIs. Cranberry juice cocktail contains compounds that may actually inhibit certain bacteria from attaching to the urinary tract wall.

- Don't postpone going to the bathroom, urinate when you feel the urge.
- Wipe from front to back to prevent bacteria from the intestines from getting into the urinary tract.
- Cleanse the genital area every day and before having sex.

### **Do men get UTIs?**

Yes, though much less often than women. A UTI in a man is often caused by an enlarged prostate gland, which can block the flow of urine.

### **Do children get UTIs?**

Yes, though less often than adults. Girls, especially between ages 4 and 8, are more likely to have UTIs than boys. Because it's easy to overlook symptoms of a UTI in children, parents should look for the following signs of a possible UTI:

- low fever
- irritability



- frequent urination
- pain or burning when urinating (younger children may cry when urinating)
- pain around the belly button
- strong odor to the urine and cloudy or blood-tinged urine
- new day or night wetting in a child who has been dry.

If the infection spreads to the kidneys, the child may also have:

- high fever
- back pain
- vomiting.

Children who have an unexplained fever for three days or other signs of a possible UTI should be checked by a doctor. Some infants and children who get UTIs may have an abnormality of their urinary tract that needs to be treated. The doctor may want to do some special tests, such as an ultrasound exam, to check for any problems in the child's urinary tract.



## **Do UTIs lead to kidney damage?**

Not usually. In most cases, UTIs can be treated successfully without causing kidney damage. However, UTIs caused by problems like an enlarged prostate gland (in a man) or a kidney stone can lead to kidney damage if the problem is not corrected, and the infection continues. UTIs in young children may sometimes cause kidney damage if not treated promptly. This damage may lead to poor kidney function and high blood pressure in the future.

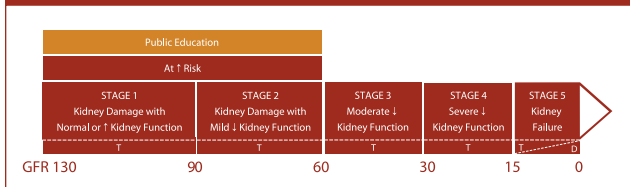
## **How can I find out more about UTIs?**

Your doctor can answer specific questions you or your family may have about UTIs, symptoms and medications. The doctor can order the tests needed to find out if you have a UTI and plan any other needed tests or treatment. You may also be interested in the following publications from the National Kidney Foundation:

- *About Kidney Stones*
- *Urinary Incontinence: Treating Loss of Urine Control*
- *Your Kidneys: Master Chemists of the Body*

More than 20 million Americans—one in nine adults—have chronic kidney disease, and most don't even know it. More than 20 million others are at increased risk. The National Kidney Foundation, a major voluntary health organization, seeks to prevent kidney and urinary tract diseases, improve the health and well-being of individuals and families affected by these diseases, and increase the availability of all organs for transplantation. Through its 47 affiliates nationwide, the foundation conducts programs in research, professional education, patient and community services, public education and organ donation. The work of the National Kidney Foundation is funded by public donations.

## Education Along the Continuum of Care



This arrow illustrates the potential scope of content for KLS resources. Lightshaded boxes indicate the scope of content targeted in this resource.  
GFR = Glomerular Filtration Rate; T = Kidney Transplant; D = Dialysis

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