

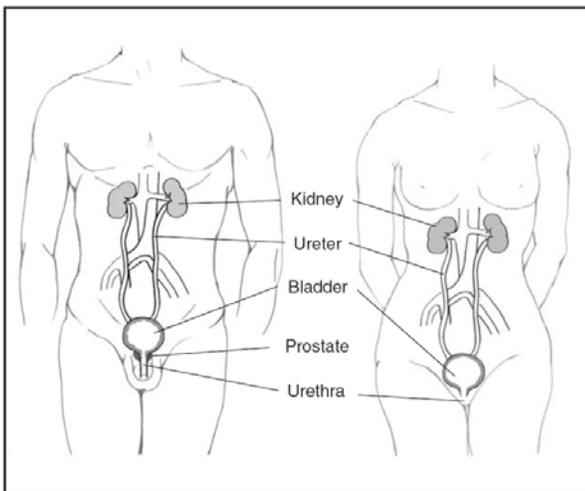
## What is a Urinary Tract Infection?

### What is a urinary tract infection?

A urinary tract infection, usually referred to as a UTI, is an infection of the urinary system. The organs that make up the urinary system include:

- Kidneys
- Ureters
- Bladder
- Prostate (in men)
- Urethra

Image Source: National Institute of Diabetes and Digestive and Kidney Diseases @ [kidney.niddk.nih.gov](http://kidney.niddk.nih.gov)



The kidneys remove waste and extra fluid from the blood stream and convert them to urine; the ureters are very narrow tubes that carry urine from the kidneys to the urinary bladder; and the urethra is the tube that empties the urine out of the body.

An infection of the urethra is called "urethritis" (u-ree-thri-tis). An infection of the bladder is called "cystitis" (sis-ti-tis). An infection of the kidney is called "pyelonephritis" (pi-lo-ne-fri-tis).

### What causes a UTI?

A UTI is often caused by bacteria that live in the digestive tract, vagina (women), or around the urethra. Bacteria enter the urinary tract system through the urethra and travel to the

bladder and kidneys. Usually the body removes the bacteria before an infection can occur. However, some people who have weakened immune systems, elderly people, and women are more prone to developing infections.

### How is a UTI diagnosed?

Your physician will do a complete history and physical examination. He/she may also order the following:

- Urine specimen for culture
- Blood tests
- Ultrasound exam of urinary tract
- X-rays of the kidneys, ureters, and bladder called a KUB
- CT scans
- Cystoscopy, which is a thin, flexible fiber-optic tube inserted up the urethra to examine the inside of the bladder

### What are the symptoms of a UTI?

- Frequent urge or feeling to urinate
- Pain or burning on urination
- Difficulty urinating
- Fever
- A feeling of pressure or fullness in the pelvic area
- Cloudy or foul smelling urine
- Blood in the urine
- If the kidneys are involved, there may also be pain in the lower back
- Frail elderly may have unusual symptoms, such as confusion, weakness, or falls

## **How is a UTI treated?**

Usually your physician will ask for a urine specimen to send to the lab to culture which bacteria is causing the infection. The type of antibiotic used depends on the bacteria identified in the culture. It is important to take all of the medication prescribed to get rid of the infection, even if you are feeling well. Sometimes the physician will order a repeat urine specimen after your medication has been completed to make sure that the infection is completely gone. It is beneficial to drink plenty of fluids (non-alcoholic and non-carbonated) unless you are on a fluid restriction.

## **Are there possible complications from a UTI?**

In some patients with UTI's, the infection can progress further when bacteria enter the bloodstream. This is called urosepsis. This can be a serious illness that can affect other organs in the body and requires prompt attention.

Once bacteria enter the bloodstream, this may cause your blood pressure to drop. This drop prevents vital body organs, such as the brain and heart, from getting the necessary amount of oxygen needed to function properly. Sometimes a drug called a vasopressor, is given to keep the blood pressure up. Some patients require a transfer to the intensive care unit where special equipment is used to closely monitor the blood pressure for changes.

Treatment for urosepsis includes the use of medications, such as antibiotics for bacterial infections, to rid the body of the infection. Those at higher risk for urosepsis are the same as those at higher risk for UTI's. Because urosepsis can be so serious, it is important to recognize the symptoms of UTI and report them to your physician promptly, especially if you are at higher risk for getting these infections.

## **Are there ways to prevent UTI's?**

There are ways to prevent or minimize the relapse of UTI's:

- Drink plenty of fluids (non-alcoholic and non-carbonated) each day to help empty the bladder frequently, which flushes bacteria from the urinary tract. Eight to ten 8-ounce glasses per day is generally recommended unless you are on a fluid restriction.
- Urinate when you have the urge rather than holding urine for a long time.
- Avoid constipation
- Drink cranberry juice
- Wear cotton underpants to prevent growth of germs
- Use sensible hygiene; wipe from front to back after using the toilet
- Avoid caffeine, carbonated drinks, and alcohol, which are all irritating to the urinary tract system.
- Urinate after sexual intercourse
- Some physicians may recommend avoiding tub baths for those who are prone to frequent UTI's.

*Source: National Kidney and Urologic Diseases Information Clearinghouse @ kidney.niddk.nih.gov*

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