

# Urinary Tract Infection - Adults

## Definition

A urinary tract infection, or UTI, is an infection that can happen anywhere along the urinary tract. The urinary tract includes the:

- Bladder
- Kidneys
- Ureters -- the tubes that take urine from each kidney to the bladder
- Urethra -- the tube that empties urine from the bladder to the outside

See also:

- Cystitis - acute
- Cystitis - recurrent
- Cystitis - noninfectious
- Interstitial cystitis
- Kidney infection (pyelonephritis)
- Urinary tract infection - children

## Alternative Names

Bladder infection - adults; UTI - adults

## Causes

Urinary tract infections (UTIs) have different names, depending on where the infection is located.

Cystitis, a common condition, is an infection of the bladder. It is usually caused by bacteria entering the urethra and then the bladder. This leads to inflammation and infection in the lower urinary tract.

Pyelonephritis is an infection of one or both kidneys and the surrounding area.

Certain people are more likely to get UTIs. Women tend to get them more often because their urethra is shorter and closer to the anus. Persons with diabetes and very old adults (especially those in nursing homes) are more likely to develop UTIs. The elderly are at increased risk for such infections because the bladder doesn't empty fully due to certain prostate and bladder conditions.

Children can also develop UTIs.

See: Urinary tract infection - children

The following increase your chances of developing a UTI:

- Bowel incontinence
- Having a tube called a catheter inserted into your urinary tract
- Kidney stones
- Staying still (immobile) for a long period of time (for example, while you are recovering from a hip fracture)
- Menopause
- Narrowed urethra
- Not drinking enough fluids
- Pregnancy
- Prostate inflammation or enlargement
- Sexual intercourse, especially if you have multiple partners
- Using a diaphragm for birth control

## **Symptoms**

The symptoms of a bladder infection include:

- Cloudy urine
- Foul or strong urine odor
- Frequent or urgent need to urinate
- Low fever (not everyone will have a fever)
- Need to urinate at night
- Pain or burning with urination
- Painful sexual intercourse
- Pressure in the lower pelvis

If the infection spreads to the kidneys, symptoms may include:

- Chills and shaking
- Fatigue
- Fever above 102 degrees Fahrenheit, which lasts for more than 2 days
- Flank (side) pain
- Flushed, warm, or reddened skin
- General ill feeling
- Mental changes or confusion (in the elderly, these symptoms often are the only signs of an UTI)
- Nausea and vomiting
- Severe abdominal pain (sometimes)

For more information see: Pyelonephritis

## Exams and Tests

A urine sample is usually collected. Urinalysis commonly shows white blood cells, red blood cells, and nitrates in the urine.

See also: RBC - urine

Special urine tests (urine culture (clean catch) or catheterized urine specimen) may be done to determine the type of bacteria in the urine and the appropriate antibiotic for treatment.

## Treatment

### TREATMENT AT HOME

A mild urinary tract infection may go away on its own without treatment. However, antibiotics are usually recommended because there is a risk that the infection can spread to the kidneys. Antibiotics are taken by mouth, usually from 3 to 7 days. It is important that you finish all the medication.

Commonly used antibiotics include:

- Amoxicillin or Augmentin
- Cephalosporins
- Doxycycline (should not be used under age 8)
- Nitrofurantoin
- Sulfa drugs (sulfonamides)
- Trimethoprim-sulfamethoxazole
- Quinolones (should not be used in children)

Your doctor may also recommend drugs to relieve the burning pain and urgent need to urinate, and to decrease bacteria in your urine.

Such medicines include:

- Acidifying medications such as ascorbic acid to lower the concentration of bacteria in the urine
- Phenazopyridine hydrochloride (Pyridium) to reduce urgency and burning with urination

### TREATMENT IN THE HOSPITAL

If you are very sick and cannot take medicines by mouth or drink enough fluids, you may be admitted to the hospital. You may also be admitted to the hospital if you:

- Are elderly
- Have kidney stones or other medical problems
- Have recently had urinary track surgery

At the hospital, you will receive fluids and antibiotics through a vein.

## LONG-TERM TREATMENT

Some people have urinary tract infections that keep coming back or that do not go away with treatment. Such infections are called chronic UTIs. If you have a chronic UTI, you may need antibiotics for a long period of time, perhaps as long as 6 months to 2 years, or stronger antibiotics may be prescribed.

A urinary tract infection is considered chronic if any of the following occur:

- The infection does not respond to usual treatment
- It lasts longer than 2 weeks
- It occurs more than twice in 6 months

Your health care provider may also recommend low-dose antibiotics after acute symptoms go away.

## SURGERY

If a structural (anatomical) problem is causing the infection, surgery may be recommended.

## Outlook (Prognosis)

A urinary tract infection is uncomfortable, but treatment is usually successful. Symptoms of a bladder infection usually disappear within 24 - 48 hours after treatment begins. If you have a kidney infection, it may take 1 week or longer for your symptoms to go away.

## Possible Complications

- Life-threatening blood infection (sepsis) - risk is greater among the young, very old adults, and those whose bodies cannot fight infections (for example, due to HIV or cancer chemotherapy)
- Kidney damage or scarring
- Kidney infection

## When to Contact a Medical Professional

Contact your health care provider if you have symptoms of a UTI. Call right away if the following symptoms develop:

- Back or side pain
- Chills
- Fever
- Vomiting

These may be signs of a possible kidney infection.

Also call if you have already been diagnosed with a UTI and the symptoms come back shortly after treatment with antibiotics.

## **Prevention**

Lifestyle changes may help prevent some UTIs.

### **BATHING AND HYGIENE**

- Choose sanitary pads instead of tampons, which some doctors believe make infections more likely. Change the pad each time you use the bathroom.
- Do not douche or use feminine hygiene sprays or powders. As a general rule, do not use any product containing perfumes in the genital area.
- Keep your genital area clean. Clean the genital and anal areas before and after sexual activity.
- Take showers instead of baths. Avoid bath oils.
- Urinate before and after sexual activity.
- Wipe from front to back after using the bathroom.

### **CLOTHING**

- Avoid tight-fitting pants.
- Wear cotton-cloth underwear and pantyhose, and change both at least once a day.

### **DIET**

- Drink plenty of fluids (2 to 4 quarts each day).
- Drink cranberry juice or use cranberry tablets, but NOT if you have a personal or family history of kidney stones.
- Do NOT drink fluids that irritate the bladder, such as alcohol and caffeine.