

Urinary Tract infection

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Urinary tract infection (UTI)

A urinary tract infection (UTI) is an infection that affects part of the urinary tract. When it affects the lower urinary tract it is known as a bladder infection (cystitis) and when it affects the upper urinary tract it is known as kidney infection.

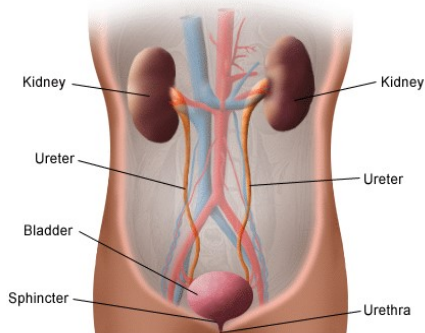
Urinary tract infections are caused by microbes such as bacteria overcoming the body's defenses in the urinary tract. They can affect the kidneys, bladder, and the tubes that run between them.

Urinary tract infection (UTI)

The urinary tract can be divided into-

- the upper urinary tract and the lower urinary tract. The upper urinary tract consists of the kidneys and the ureters, and
- the lower urinary tract consists of the bladder and the urethra.
- An uncomplicated UTI is one that occurs in an otherwise healthy person with a normal clear urinary tract. These can usually be cured with 2 to 3 days of treatment.
- A complicated UTI is one that occurs in a person who is weakened by another condition, such as pregnancy or heart transplant. Complicated UTIs tend to require longer periods of antibiotics, usually between 7 to 14 days.

Front View of Urinary Tract



Urinary tract infection (UTI)

UTIs are given different names depending on where they occur. For example:

- A bladder infection is called cystitis.
- A urethra infection is called urethritis.
- A kidney infection is called pyelonephritis.
- The ureters are very rarely the site of infection.

Some key points about urinary tract infection

- Women have a lifetime risk of over 50 percent of developing a urinary tract infection (UTI).
- Common symptoms include a strong, frequent urge to urinate and a painful and burning sensation when urinating.
- A UTI is usually diagnosed based on symptoms and testing of a urine sample.
- UTIs can be cured with 2 to 3 days of treatment.
- Cranberry extracts do not treat UTIs but may help reduce the risk of recurrent UTI.

Causes of UTI

- The vast majority of urinary tract infections (UTIs) are caused by the bacterium *Escherichia coli* (E. coli), usually found in the digestive system. Chlamydia and mycoplasma bacteria can infect the urethra but not the bladder

Risk factors of UTI

- Over 50 percent of all women will experience at least one UTI during their lifetime, with 20 to 30 percent experiencing recurrent UTIs.
- Pregnant women are not more likely to develop a UTI than other women, but if one does occur, it is more likely to travel up to the kidneys. This is because changes in the body during pregnancy that affect the urinary tract.

Risk factors of UTI

- As a UTI in pregnancy can prove dangerous for both maternal and infant health, most pregnant women are tested for the presence of bacteria in their urine, even if there are no symptoms, and treated with antibiotics to prevent spread.
- People of any age and sex can develop a UTI. However, some people are more at risk than others. The following factors can increase the likelihood of developing a UTI:

Risk factors of UTI

- sexual intercourse, especially if more frequent, intense, and with multiple or new partners
- diabetes
- poor personal hygiene
- problems emptying the bladder completely
- having a urinary catheter
- bowel incontinence
- blocked flow of urine
- kidney stones
- some forms of contraception

Risk factors of UTI

- pregnancy
- menopause
- procedures involving the urinary tract
- suppressed immune system
- immobility for a long period
- heavy use of antibiotics, which can disrupt the natural flora of the bowel and urinary tract

Symptoms of a UTI

The symptoms of a UTI can depend on age, gender, the presence of a catheter, and what part of the urinary tract has been infected. Common symptoms of a UTI include:

- strong and frequent urge to urinate
- cloudy, bloody, or strong-smelling urine
- pain or a burning sensation when urinating
- nausea and vomiting
- muscle aches and abdominal pains

Complication of UTI

- Most UTIs are not serious, but some can lead to serious problems, particularly with upper UTIs.
- Recurrent or long-lasting kidney infections can cause permanent damage, and some sudden kidney infections can be life-threatening, particularly if bacteria enter the bloodstream in a condition known as septicemia.
- They can also increase the risk of women delivering infants that are premature or have a low birth weight.

Prevention of UTI

There are several measures that can be taken to reduce the risk of developing a UTI:

- Drink lots of water and urinate frequently.
- Avoid fluids such as alcohol and caffeine that can irritate the bladder.
- Urinate shortly after sex.
- Wipe from front to back after urinating and bowel movement.
- Keep the genital area clean.

Prevention of UTI

- Showers are preferred to baths and avoid using oils.
- Sanitary pads or menstrual cups are preferred to tampons.
- Avoid using a diaphragm or spermicide for birth control.
- Avoid using any perfumed products in the genital area.
- Wear cotton underwear and loose-fitting clothing to keep the area around the urethra dry.

Diagnosis of UTI

- Diagnosis will usually be made after asking about the symptoms and testing a urine sample to assess the presence of white blood cells, red blood cells, and bacteria.
- Diagnostic imaging: This involves assessing the urinary tract using ultrasound, CT and MRI scanning, radiation tracking, or X-rays.

Management of UTI

- As UTIs are normally caused by bacteria, they are most commonly treated with antibiotics or antimicrobials.
- Drinking lots of fluids and frequently urinating are always recommended for people who have UTIs as this helps to flush out the bacteria.
- A variety of pain relief medications may be prescribed to alleviate pain.
- Applying a heating pad to the back or abdomen can also help.

Recurrent infections in women

Women who have recurrent bladder infections may be advised to:

- Take a single dose of an antibiotic after sexual contact
- Take a single, daily dose of an antibiotic for at least 6 months
- Take a 2-to-3-day course of an antibiotic if symptoms reappear
- Undergo vaginal estrogen therapy if they have already had menopause

Home remedies for a urinary tract infection

There are a variety of self-care measures (home remedies) and other treatments available for urinary tract infections.

- Use a hot-water bottle to ease pain.
- Drink plenty of water.
- Avoid coffee, alcohol, and spicy foods, all of which irritate the bladder.
- There are some indications that cranberry juice can help fight a urinary tract infection.