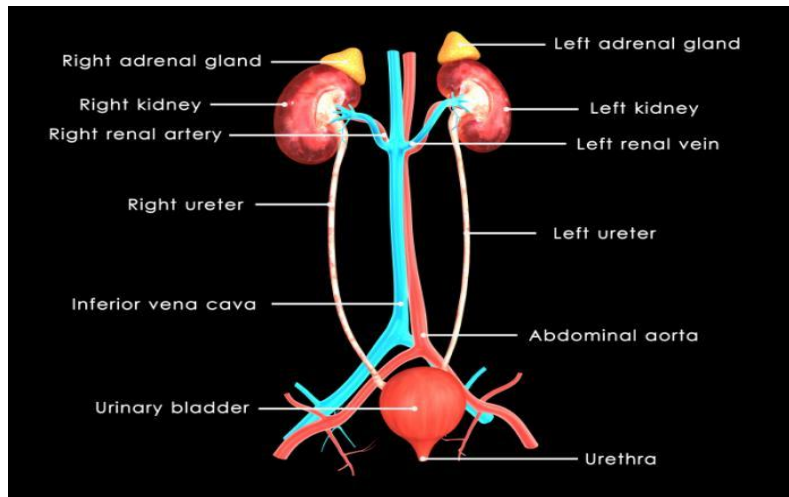


Urinary Tract Infection

What is urinary tract infection?

A urinary tract infection (UTI) is an infection of any part of the urinary system. Most infections involve the lower urinary tract.



The urinary tract is comprised of the bladder, kidneys, ureters and urethra.

UTIs are the second most common type of infection in the body and account for around 8.1 million visits to health care providers each year.

Women are more likely to develop UTIs than men. The lifetime risk of a woman having a UTI is over 50%. They are especially prone due to anatomical reasons; a woman's urethra is shorter than a man's, and is situated closer to the anus, making it quicker for bacteria to enter the bladder.

With each UTI, the risk that a woman or man will have another UTI increases.

Pregnant women are not more likely to develop a UTI than other women, but if one does occur in a pregnant woman then it is more likely to travel up to the kidneys.

Most UTIs are not serious, but some can lead to serious problems, particularly with upper urinary tract infections. Recurrent or long-lasting kidney infections (chronic) can cause permanent damage, and some sudden kidney infections (acute) can be life-threatening, particularly if septicemia (bacteria entering the bloodstream) occurs.

They can also increase the risk of women delivering low birth weight or premature infants.

What causes it?

UTIs are caused when microbes manage to get past the body's natural defenses.

The vast majority of UTI cases 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.

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:

- Sexual intercourse
- Diabetes
- Poor personal care
- Problems emptying the bladder completely
- Having a urinary catheter
- Bowel incontinence
- Blocked flow of urine
- Kidney stones
- Some forms of contraception
- Pregnancy
- Menopause
- Procedures involving the urinary tract
- Suppressed immune system
- Immobility for a long period

Signs and symptoms

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.



Abdominal pains are a common symptom of urinary tract infections.

Common symptoms include:

- Strong and frequent urge to urinate
- Cloudy, bloody or strong smelling urine
- Pain or burning sensation when urinating
- Nausea and vomiting
- Muscle aches and abdominal pains.

People with catheters may only have an otherwise undiagnosed fever as a symptom.

Acute pyelonephritis

If a person has a kidney infection, they could also experience upper back and side pain, high fever, shaking, chills, fatigue and mental changes.

Cystitis

If a person has a bladder infection, they could also experience low fever, and pressure and cramping in the abdomen and lower back.

Tests and diagnosis

Diagnosis will usually be made by a health care provider after asking about the symptoms and testing a urine sample, looking for white blood cells, red blood cells and bacteria. A method of collecting urine called "clear catch" is used: the person will wash around their genitals and collect a sample when "midstream." This helps to prevent bacteria from around the genital area getting caught in the sample.

If the person has recurrent UTIs, the health care provider may request to try some further diagnostic testing:

- Creating images of urinary tract, using techniques such as ultrasound, CT scanning, MRI scanning, radiation tracking and X-rays
- Urodynamics: the name for a procedure carried out to examine how well the urinary tract is storing and releasing urine
- Cystoscopy: a long thin tube with a camera lens can look inside the bladder and urethra, and is inserted via the urethra

Treatment and prevention

As UTIs are normally caused by bacteria, they are most commonly treated with antibiotics or antimicrobials. The type of medication and length of treatment will depend on the patient's symptoms and history.



Drinking plenty of water is advisable both for people with urinary tract infections and for lowering the risk of future infection.

The full course of treatment should always be completed for UTIs, in order to ensure that the infection is fully clear. UTI symptoms can disappear before the infection has completely gone.

Drinking lots of fluids, and frequently urinating are always recommended for people who have UTIs. Various pain relief medication is available to alleviate pain and may be prescribed. Applying a heating pad to the back or abdomen can also help.

An uncomplicated UTI is one that occurs in an otherwise healthy person with a normal clear urinary tract. These can usually be cured with 2-3 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, or who has a urinary tract which is compromised either structurally or functionally, such as with an obstructive kidney stone or enlargement of the prostate. Complicated UTIs tend to require longer periods of antibiotics, usually between 7-14 days.

Curing UTIs that are caused by problems within the urinary system depend on the underlying problem being found and corrected. If left untreated, these infections can lead to kidney damage.

If the patient is seriously ill, they may need to be admitted to hospital to ensure that they can drink enough fluids and take the right medication. Patients may also need to go to hospital if they:

- Are pregnant and are otherwise ill
- Are elderly
- Have cancer, diabetes, multiple sclerosis, spinal cord injury or other medical problems
- Have kidney stones or other changes in the anatomy of their urinary tract
- Have recently undergone urinary tract surgery.

Recurrent infections in women

Women can be given different advice if they have recurrent bladder infections:

- 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 short course - 2-3 days - of an antibiotic if symptoms reappear
- Have vaginal oestrogen therapy if postmenopausal.

Differences between the genders

Most young women with UTIs have uncomplicated UTIs. In comparison, men should be presumed to have complicated UTIs until proven otherwise. This is because men are more likely to develop a UTI as the result of an obstruction, such as an enlarged prostate.

Prevention

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

- Drink lots of water and urinate frequently
- Avoid bladder irritating fluids such as alcohol and caffeine
- Urinate shortly after sex
- Wipe from front to back after urinating and bowel movement
- Keep the genital area clean
- Showers are preferred to baths. Avoid using oils
- Sanitary pads are preferred to tampons
- Avoid using a diaphragm or spermicide for birth control
- Avoid using any products containing perfume in the genital area
- Wear cotton underwear and loose fitting clothing to keep the area around the urethra dry.