

# Urinary Tract Infections (UTI)

Urinary Tract Infections (**UTI**) are infections in the urine, anywhere from the kidneys to the bladder. They are very common - so common, that there are hundreds of websites, books and magazine articles on the subject. [Some further excellent information is linked from the foot of this page.](#)

**Cystitis** is infection of urine in the bladder. Most people pass small amounts of urine much more frequently than usual, and painfully ('burning'). There may be lower abdominal pain and sometimes other symptoms too. Urine may be cloudy and smelly. In young children it may be difficult to spot though, and they may just have a fever and be unwell.

**Pyelonephritis** is infection in the kidney. This is a much more serious infection, which causes fevers, pain in the loin (the low back, on either side of the middle), and usually (but not always) there are symptoms of cystitis as well.

## Why am I getting urine infections?

**Women** are much more likely to get cystitis and other urine infections than men. This is usually blamed on the shorter distance to the bladder in women. However some women get lots of infections, while others get hardly any at all. Cystitis is very common. About 1 in 3 women have a urine infection at some time in their life, and it is common to have many.

## Things making urine infections more likely

- Females - see above
- Infancy - boys and girls under 1 year get more urine infections
- Sexual intercourse - makes urine infections more common in women
- Pregnancy - makes urine infection even more common in women
- Reflux - when urine travels up the ureter towards the kidney - [further information](#)
- diabetes - because sugar in the urine helps bacteria to grow
- tubes, stones, or anything 'foreign' in the bladder or urinary tract
- abnormal urinary tract - congenital or other abnormalities

- incomplete bladder emptying - because bacteria aren't 'emptied out' properly - eg with prostate gland enlargement in men

Remember that in most women, none of these things explain it.

## What tests should I have?

Before you receive antibiotics, a urine sample should be sent to prove infection and identify the bugs responsible for it. This is collected as an **MSU**, which stands for **Mid-stream Sample of Urine**. For these to be reliable, they should be collected properly. These links describe how to collect an MSU, for [women](#) and for [men](#) (from an Australian lab). Alternative links from New Zealand - [women](#), [men](#). For young children urine can often now be collected from pads.

Other tests are usually only worthwhile if the infections occur unexpectedly (eg in young men), or are particularly frequent or severe. These tests will be to look for any of the things that make urine infection more likely (see above).

## What is the treatment?

Antibiotic tablets usually cure cystitis very quickly, and should be taken for several days to reduce the risk of the infection coming straight back again. Infection in the kidney, or if there are other complicating factors, requires longer treatment. You should continue to drink plenty of liquid (enough to keep the urine light coloured) during and after the infection.

It is necessary to send a urine sample (MSU, see above) to be certain that you are receiving an antibiotic that will kill the bugs responsible for the infection. Different bacteria need different antibiotics.

## What can I do to prevent them?

**Women** - Many things are recommended for women who have frequent infections, and some of these are sensible. Further information is given from the sources recommended at the [foot of the page](#), especially in the NIDDK information. The most important things are probably:

- Keep plenty of fluid going through to 'wash out' the system - drink plenty
- Empty your bladder last thing at night, and after sex

Beyond these simple things, the best evidence for a 'non-medical' treatment is for

cranberry juice. Something in cranberry juice (if you drink some every day) helps to reduce the number of infections.

**Reflux** - If you have [reflux](#), 'double emptying' is sometimes recommended. This means that after emptying your bladder, you should go again 10-15 minutes later to empty the tiny extra amount that has collected.

**Antibiotics** - If other measures don't work, a single night-time dose of an antibiotic is often helpful. However it is best to avoid this unless really necessary.

### **Should all urine infections be treated with antibiotics?**

Not necessarily. Some people find that the early symptoms of cystitis disappear if they drink a lot, and if they do, then that is OK.

Some people have bugs in their urine without having any symptoms, or coming to any harm. Antibiotics are then often unnecessary, although there are some exceptions, for example:

- in pregnancy
- in some patients with abnormalities in their urinary tract

### **I get symptoms of cystitis but the samples don't show infection**

This can have a number of explanations. Here are some:

- antibiotics have prevented the sample from coming out positive
- it is an 'ordinary' type of infection, but a problem with urine sampling or delivery of the sample to the lab has led to it being missed.
- the infection is caused by an unusual bug that the lab can't grow using ordinary methods (there will usually be other signs of infection in the sample though; white blood cells, for instance)
- it isn't infection, but irritation of the bladder or urethra (the tube from bladder to the outside) caused by something else. In women this may be caused by soap or shampoo or other causes of irritation or inflammation.

In most cases where samples don't show infection, antibiotics will not help.

### **Further information**

#### **Patient-oriented links**

[UTI in adults](#) (NHS Choices)

[UTI in children](#) (NHS Choices)

### **Medical links**

[UTI in men](#) (NICE CKS)

[UTI in woman](#) (NICE CKS)

[UTI in children](#) (NICE CKS)

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