

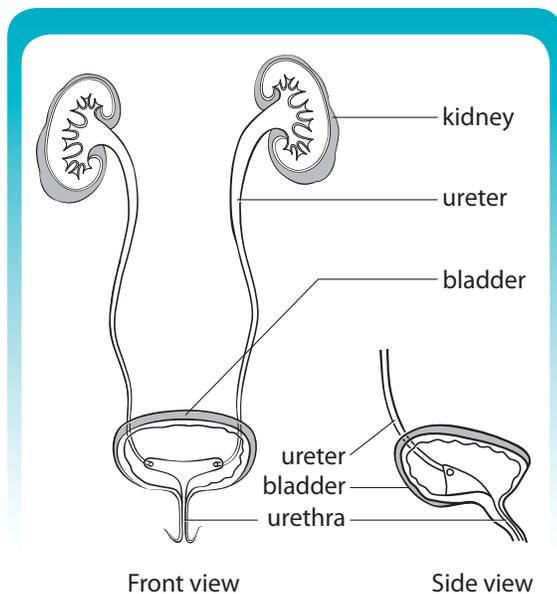


## Bladder infections in women

Bladder infections in women are common, usually easily treated and rarely associated with serious problems.

**B**ladder infection (cystitis) is common in women, usually easily treated and rarely leads to serious complications. It is important to know how to prevent it, treat it and when to see your doctor.

Urine is produced by the kidneys, carried through the ureters and stored in the bladder until it is appropriate to empty through the urethra.



### What causes these infections?

Many kinds of bacteria grow normally in the bowel, the vagina and on the skin. The bladder and urine are normally sterile or free of bacteria. When bacteria enter the bladder through the urethra and become established, a bladder infection develops. Occasionally, bacteria can grow in the bladder without causing inflammation or symptoms—in this situation, treatment is not always necessary.

### Why do women get bladder infections more often than men?

Women are more prone to bladder infections for several reasons. The shorter urethra in women allows bacteria to enter the bladder more easily. Sexual intercourse may also promote entry of bacteria through the woman's urethra into the bladder. Bacteria causing bladder infections are not passed between sexual partners.

### What other problems mimic bladder infection?

Any inflammation in the bladder, urethra or vagina may cause similar symptoms of discomfort with urination. Typically, bladder infection symptoms occur suddenly and are more severe than those of vaginal infections that are often associated with itching, vaginal discharge or discomfort with sex.

### What is a bladder infection?

The typical experience of a bladder infection is the sudden onset of frequent, painful and urgent urination. Low back or lower abdominal pain may be present. The urine is often cloudy and foul smelling. Symptoms may range from very mild to severe. In simple bladder infections there is no fever, flank pain, nausea or vomiting that might suggest a more serious kidney infection.

Bladder infections are common, affecting about 5% of women each year. They rarely lead to kidney infections or other serious problems.

### How is a bladder infection diagnosed?

The diagnosis of a bladder infection depends on the presence of symptoms, finding bacteria and signs of inflammation in the urine and one's response to treatment. A properly obtained mid-stream urine specimen is critical. An immediate office urine examination (urinalysis) may show evidence of inflammation, but cannot identify the type of bacteria causing infection. Definitive proof of a bladder infection requires identification of the specific

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bacteria by incubation over 2-3 days in a laboratory (urine culture). Even when these tests are inconclusive, a prompt response to antibiotics may be helpful in establishing the diagnosis.

## How is a bladder infection treated?

Although many cases of cystitis will resolve without medication, a short course of antibiotics will hasten the cure and minimize symptoms. Prolonged courses of antibiotics (more than five days) are usually unnecessary and are associated with higher cost and more side effects. In most cases an inexpensive generic antibiotic will be effective.

## Will my bladder infection come back?

A bladder infection may recur within one year in many women. The frequency of recurrences can be quite variable. Frequent bladder infections generally are not related to lifestyle or personal hygiene.

## How can I prevent bladder infections?

Several factors have been shown to reduce the risk of recurrent infections. Ensure that you are well hydrated and drink enough fluids. Empty your bladder regularly as it helps to flush out any bacteria. Eating yogurt with "active cultures" may also help. Various natural or alternative measures have been suggested to reduce the risk of bladder infections. These include acidification of your urine with products such as cranberry or vitamin C. Some women find these helpful but their benefit has not been proven in proper scientific studies.

Diaphragms and spermicides for birth control may increase your risk of bladder infection. The use of

vaginal lubricants and voiding immediately after sexual activity may be useful. Vaginal douches should be avoided. After menopause, estrogen supplementation may reduce your risk. The use of estrogen should be discussed with your doctor.

A prolonged course (often several months) of low dose antibiotics can be taken safely to prevent infections in some women. For those women who notice bladder infections soon after sexual activity, a dose of antibiotic just after sexual activity may prevent a subsequent infection.

## Can I treat a bladder infection myself?

In most cases of recurrent bladder infections where your doctor has established a clear diagnosis, you can safely treat yourself with antibiotics prescribed by your doctor ahead of time. Repeated cultures of the urine or other investigations, like x-rays and bladder examination (cystoscopy), are rarely necessary.

Occasionally, when a woman has recurrent bladder infections clearly related to sexual activity, a single dose of antibiotic at the time of sexual intercourse can be useful in preventing an infection from becoming established.

## When should I see my doctor?

You should see your doctor if you have:

- visibly bloody urine
- fever, vomiting, flank pain
- bladder symptoms persisting after treatment
- frequent infections

Bladder infections in women generally are not difficult to recognize and treat, with prompt relief of symptoms and a return to normal lifestyle.

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