Cystitis means inflammation of the bladder. It is usually caused by a urine infection. Some women have recurring bouts of cystitis, sometimes defined as two proven infections within six months, or three infections in a year. In many cases there is no apparent cause. There are a number of treatment options to consider. This might be treating each episode promptly with a short course of antibiotics, a regular low dose of antibiotics taken long-term, or taking a single dose of antibiotic after having sex (if having sex seems to trigger episodes of cystitis).

What is cystitis?

Cystitis means inflammation of the bladder. It is usually caused by a urine infection. Typical symptoms are pain when you pass urine, and passing urine frequently. You may also have pain in your lower tummy (abdomen), blood in your urine and high temperature (fever). Your urine may also become cloudy or smell offensive.

About half of all women have at least one bout of cystitis. For many, only one or two bouts occur in their lifetime. However, repeated (recurring) bouts of cystitis occur in some women. This most commonly occurs in young, sexually active women and in women aged over 55.

This leaflet is for women who are prone to recurring cystitis. Cystitis is said to be recurrent when a woman has had two proven infections within six months, or three infections in a year.

Understanding the bladder and genital area

Most urine infections are caused by germs (bacteria) that come from your own bowel. They cause no harm in your bowel but can cause infection if they get into other parts of your body. Some bacteria thrive in urine and multiply quickly to cause infection.

Some bacteria lie around your back passage (anus) after you pass a stool (faeces). These bacteria can sometimes travel to your urethra and into your bladder. Some bacteria thrive in urine and multiply quickly to cause cystitis.

Women are more prone than men to cystitis, as their urethra (the tube from the bladder that passes out urine) is shorter and opens nearer the anus.

Why do some women have recurring cystitis?

Your body has defences to prevent germs (bacteria) from causing cystitis. The mucus around your vagina and opening of your urethra is slightly acid which prevents bacteria from multiplying. Although bacteria may thrive in urine, you empty your bladder regularly which flushes urine out. Also, the cells that line your urethra and bladder have some resistance against bacteria.
In most cases, there is no apparent reason why cystitis returns (recurs). There is usually no problem with your bladder or defence (immune) system that can be identified. It is possible there may be a slight alteration in the ability of the body to resist bacteria getting into the bladder and causing infection. A slight variation in the body’s defence may tip the balance in favour of bacteria to cause infection. (In a similar way, some people seem more prone to colds, sore throats, etc.)

For some women, one of the following may contribute:

- **Bladder or kidney problems** may lead to infections being more likely. For example, kidney stones, or conditions that cause urine to pool and not drain properly. Your doctor may arrange some tests if a problem is suspected.
- **Having sex** increases the chance of cystitis in some women (see below).
- **Contraceptive choice.** The use of diaphragms and spermicide may make cystitis more likely.
- **Hormones.** Your vagina, bladder and urethra respond to the chemical (hormone) called oestrogen. After the menopause, when the levels of oestrogen in the body reduce, the tissues of these organs become thinner, weaker and dry. These changes can increase the risk of recurrent cystitis. Cystitis is also more common during pregnancy because of changes in the urinary tract.

**What can I do to help prevent cystitis?**

Unfortunately there is no evidence that any lifestyle changes really help to prevent cystitis. Traditionally, doctors have advised drinking plenty of fluids to “flush out” the germs, and drinking cranberry juice. However, there is no evidence this makes any difference. Other changes, such as the way you clean yourself and which underwear you wear, have also not been found to make any difference. If recurring cystitis is a problem, you may need to discuss one of the options below with your doctor.

**What are the treatment options for recurring cystitis?**

**Prompt self-treatment of each bout of cystitis**

Antibiotic medication is usually needed for the treatment of bouts of recurrent cystitis. If your symptoms are mild then it is usually advisable to wait for the results of your urine test to see which antibiotics you should be treated with. However, if your symptoms are bad or worsening then you should start antibiotics without any delay.

Some women are prescribed a supply of antibiotics to keep on standby. You can then treat a bout of cystitis as soon as symptoms begin without having to wait to see a doctor. A three-day course of antibiotics is the usual treatment for each bout of cystitis. Antibiotics commonly used include trimethoprim and nitrofurantoin.

Ideally, you should do a midstream specimen of urine (MSU) to send to the laboratory before starting a course of antibiotics. You should see a doctor if your symptoms do not go within a few days, or if they worsen.

**Antibiotic prevention is another option**

This means taking a low dose of an antibiotic regularly. One dose each night will usually reduce the number of bouts of cystitis. A six-month course of antibiotics is usually given.

You may still have bouts of cystitis if you take antibiotics regularly (but they should be much less often). If a bout does occur, it is usually caused by a germ (bacterium) which is resistant to the antibiotic you are taking regularly. A urine sample is needed to check on which bacterium is causing any bout of cystitis. You may then need a temporary change to a different antibiotic.
Cystitis related to having sex

Some women find that they are prone to cystitis within a day or so after having sex. This may be partly due to the movements during sex which may push bacteria up into the bladder. There may also be slight damage to the urethra (the tube from the bladder that passes out urine). This slight damage encourages bacteria to thrive. This is more likely if the vagina is dry during sex. The normal mucus in and around the vagina may also be upset if spermicides or diaphragm contraceptives are used. The following may reduce the chance of cystitis developing after sex:

- After having sex, go to the toilet to empty your bladder.
- If your vagina is dry, use a lubricating jelly during sex.
- One option is to take a single dose of antibiotic within two hours after having sex.
- Do not use spermicides and/or a diaphragm for contraception. See your doctor or practice nurse for advice on other forms of contraception.

Further reading & references

- Urinary tract infection (lower) - women; NICE CKS, July 2015 (UK access only)
- Guidelines on Urological Infections; European Association of Urology (2015)
- Harris N, Teo R, Mayne C, Tincello D; Recurrent urinary tract infection in gynaecological practice, The Obstetrician & Gynaecologist 2008;10:17-21

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