

Cystitis

Cystitis is a relatively common condition which can affect males and females of all ages. It refers to inflammation of the bladder and can occur as a result of a variety of triggers including microorganisms such as bacteria and fungi, chemicals and detergents and after radiation exposure.

Signs and Symptoms:

Cystitis may or may not be symptomatic. During an episode of cystitis, there are a variety of symptoms which may be experienced, including:

- Pain above the pubic bone
- Urgency
- Frequency
- Dysuria (pain on urination)
- Cloudy or smelly urine
- Haematuria (urine with blood)

Treatment:

The doctor will ask about your medical history and perform a physical examination. You will be required to provide a small specimen of urine collected in a jar after you have emptied half of your bladder (called a mid stream urine collection) so that a 'dipstick' test can be performed to look for signs of infection. Cystitis can usually be diagnosed on the basis of symptoms and urine analysis results, both of which can occur in the doctor's surgery. Usually, the urine will then be sent to pathology to gain more specific information.

A first episode of cystitis in a female can be treated with antibiotics without further investigation. If recurrent infections are occurring, further investigations may be required to rule out an abnormality of the urinary tract itself. In males or young children, any cystitis should be followed up. In these instances, further follow up can be done with an ultrasound scan or during a procedure called a cystoscopy (when a tube with a camera is inserted up the urethra into the bladder to allow direct visualisation of the inside lining). Other studies which may be performed include studies that evaluate the ability to void and whether or not there are any abnormalities during urination (micturating cystourethrogram).

In all cases of cystitis, drinking plenty of fluid and voiding the bladder regularly is recommended. Painful urination may be reduced by drinking bicarbonate preparations or urinary alkalisers available at your pharmacist.

If symptoms persist after the antibiotics have been completed, see your doctor.

Transmission:

Cystitis can occur from anything causing inflammation of the bladder. Most commonly, this is a bacterial infection that has entered the urinary tract from the perineum (the area between the genitals and the anus). The bacteria most often responsible for causing this infection are those which live in the gastrointestinal tract (for example, E.coli). Occasionally other microorganisms may be responsible (for example, fungi and protozoa).

Females tend to develop bacterial cystitis more often than males because of differences in the anatomy of the urinary tract in the male and female. Females have a shorter urethra (tube connecting the bladder to outside the body) than males and so it is easier for bacteria to ascend and enter the bladder in a female.

Non-infectious causes of cystitis include chemical irritation (for example, deodorant sprayed onto genital area or underwear, strong soaps and detergents or certain medications such as cyclophosphamide). People who have just received radiation for the treatment of cancers in the pelvic region may also develop symptoms of cystitis (called radiation cystitis).

Risk factors for the development of cystitis include:

- Female sex
- Frequent sexual intercourse
- Use of strong soaps/deodorants near genitals or underwear
- Poor hygiene
- Medical conditions such as diabetes mellitus
- Abnormalities in the urinary tract, including
 - inability to completely empty the bladder or
 - obstruction (such as an enlarged prostate or tumour) preventing bladder from emptying
- Catheterisation (inserting a plastic catheter or tube up the urethra into the bladder to remove urine)

Prevention:

Maintaining good hygiene practices including showering daily, emptying the bladder after sexual intercourse, wiping the perineum from the front to the back with non-perfumed toilet paper, avoiding the use of irritants in the vicinity of the genitals and wearing cotton underwear may help prevent episodes of cystitis. Avoiding bladder irritants such as excess caffeine and alcohol and drinking plenty of fluids is also recommended.

Cranberry juice or tablets have been shown to reduce the ability of bacteria to attach the lining of the urinary tract and therefore decrease the risk of infection. These may be recommended if you experience recurrent urinary tract infections. Alternatively, some people experiencing recurrent infections may be advised to take antibiotics regularly to prevent future infections.

Health outcome:

In simple bacterial cystitis with no abnormality of the urinary tract, a course of antibiotics will usually lead to complete resolution of the symptoms with no permanent damage. If untreated, the infection may ascend to the kidneys causing pyelonephritis (see factsheet), which may result in permanent damage and scarring of the kidneys. It can also lead to infection of the blood (sepsis) if very severe, requiring hospitalisation. Pregnant women may also be admitted to hospital for the treatment of cystitis, in order to minimise risk to the unborn child (including premature labour).

In other forms of cystitis, symptoms will generally resolve when the inflammatory agent (such as detergent or chemicals) is removed and the bladder is no longer inflamed.

In some instances, surgery may be required in order to fix any underlying abnormality predisposing you to urinary tract infections.

Help and assistance:

If you have any symptoms of or concerns about Cystitis:

- consult your usual general practitioner (GP) or
- contact 13 HEALTH by phoning 13 43 25 84 and speak to a registered nurse.

Other resources

- [Womens Health Queensland Wide Inc. - cystitis](http://womhealth.org.au/conditions-and-treatments/interstitial-cystitis-fact-sheet) (<http://womhealth.org.au/conditions-and-treatments/interstitial-cystitis-fact-sheet>)
- [eMedicine bladder_cystitis](http://emedicine.medscape.com/article/377318-overview) (<http://emedicine.medscape.com/article/377318-overview>)
- [Health direct](https://www.healthdirect.gov.au/cystitis) (<https://www.healthdirect.gov.au/cystitis>)

Related content

- [Urinary tract infection](http://conditions.health.qld.gov.au/HealthConditions/20/Bladder-Kidney-Urinary-Tract-Health/223/Infections-Parasites/669/Urinary-tract-infection)
(<http://conditions.health.qld.gov.au/HealthConditions/20/Bladder-Kidney-Urinary-Tract-Health/223/Infections-Parasites/669/Urinary-tract-infection>)
- [Pyelonephritis](http://conditions.health.qld.gov.au/HealthConditions/20/Bladder-Kidney-Urinary-Tract-Health/223/Infections-Parasites/512/Pyelonephritis)
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