

Burning Issue

Recurrent urinary tract infections in women *by Dr Gerald Tan*

URINARY TRACT INFECTIONS (UTI) in women are a common occurrence. One in two women will experience a UTI at some point in their lives, and up to a quarter of these women may experience multiple repeated urinary infections.

The majority of women with uncomplicated UTI will usually experience a burning sensation on urination. This is often associated with any of the following:

- Frequent and urgent visits to the bathroom to urinate
- Small volumes of urine being passed each time
- Lower abdominal pain or discomfort
- Passage of bloody urine

In atypical cases, the bacterial infection in the bladder may ascend up the ureters to affect the kidneys. This is known as acute pyelonephritis, and may be accompanied by fever, chills and flank pain. There may also be vaginal discharge, itch or foul odour, which is likely due to inflammation of the vagina (vaginitis) or urethra (urethritis).

What causes recurrent UTI?

The most frequent route for bacteria to gain entry into the female urinary tract are ascending infections of bacteria from the peri-anal area or the vagina, often after sexual intercourse. Commonly identified types of bacteria in typical female UTIs include *Escherichia coli*, *Proteus*, *Klebsiella*, *Pseudomonas* and *Enterococcus*.

Patients who experience two or more UTIs within a 12-month period are diagnosed with having recurrent UTIs. Common causes for such recurrent infections include:

- Incomplete bladder emptying, with significant urine volume left after urination
- Presence of stones or tumours in the urinary tract,

providing 'safe harbours' for bacteria to repopulate after courses of antibiotic treatment

- Bacterial resistance to conventional oral antibiotics
- Loss of oestrogen in post-menopausal women, allowing bacteria to adhere more easily to the lining of the urinary tract
- Obstructed urination, e.g. stricture of the urethra, reflux of urine back into the kidneys
- Conditions that compromise the immune system, e.g. diabetes, pregnancy, oral steroid use, kidney transplants, and the frail elderly

What should I do if I suspect a UTI?

Consult your family doctor, gynaecologist or urologist immediately when you start to experience the abovementioned symptoms. If this is your first episode of UTI symptoms, your doctor will usually take your detailed medical history to identify possible causes. He will ask you for a sample of your urine to send to the laboratory for urine analysis and culture.

If you are not having high fevers, he will usually prescribe a short three- to five-day course of oral antibiotics to treat the likely bacteria in your urinary tract. Commonly prescribed antibiotics include ciprofloxacin, nitrofurantoin, and trimethoprim/sulphamethoxazole. Once your urine culture result is available, he may contact you to substitute your treatment to the most appropriate antibiotic to eradicate the offending bacteria as efficiently as possible.

What if my UTI symptoms keep recurring despite antibiotics?

If you continue to experience recurrent UTI symptoms more than twice in a 12-month period despite completing your antibiotics, you should request further evaluation of your urinary tract. Your family doctor will usually refer you on to a urologist, who will arrange some or all these tests to identify correctable causes:

- Repeat urine culture and antibiotic sensitivities
- Uroflowmetry and residual urine measurement after urination to look for abnormalities of bladder emptying
- CT urogram with contrast to identify any abnormalities in

the urinary tract, e.g. stones, urinary reflux into the kidneys (ultrasonography is an alternative for pregnant women)

- Flexible cystoscopy to look for presence of bladder tumours or ulcers, in women with smoking history or above the age of 50 years – this is usually a painless procedure performed under local anaesthesia
- Voiding cystourethrogram to confirm presence of diverticulum (abnormal pouches) of the urethra, or abnormal connections between bladder and the large intestine (colovesical fistula) where these are suspected

Once the abnormality in the urinary tract is identified, your doctor can then advise you and begin appropriate treatment to prevent future recurrences.

What can I do to prevent UTI from recurring?

In women from 25 to 45 years, UTIs most commonly occur within one to two days after sexual intercourse. If this is a repeated pattern, observe the following measures to minimise recurrent infections:

- Empty the bladder and wash the vagina after sexual intercourse.
- Consider alternative forms of contraception to diaphragms or spermicidal lubricants.
- Take one tablet of antibiotic before or after sexual intercourse.

Post-menopausal women with recurrent UTIs should consider having the vagina and cervix assessed to rule out early cancers or atrophic vaginitis. In atrophic vaginitis, topical oestrogen creams can boost the vaginal lining and reduce the colonisation of aggressive bacteria.

Women whose UTIs are not related to sexual intercourse may consider self-directed therapy. Patients are given a three-day course of antibiotics to keep on standby, and they can start treatment immediately once they recognise the onset of UTI symptoms. However, they must consult their doctors should their symptoms persist after the course of antibiotics has ended. Another popular remedy is to take cranberry juice or supplements regularly, although this has still not been scientifically proven to reduce the incidence of UTIs. ^{eh}



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