

URINARY TRACT INFECTIONS

Introduction

Urinary tract infections (UTI) are common especially in women. Risk factors include sexual intercourse, spermicide use, new partner, childhood or family history of infections, menopause, prolapse, retention, incontinence, blood type and bladder procedures or catheterisations. The majority are caused by gut bacteria such as E Coli.

Symptoms

Bacteriuria - bacterial in urine without symptoms

- Urinary bacterial growth is found in 1-5% of healthy women, and requires no treatment in the absence of symptoms, except in special circumstances like pregnancy, immune suppression or before surgery

Cystitis - bladder infection

- Half of all women will have at least one bladder infection during their lifetime. One third experience this by age 24 years
- Symptoms include burning, frequency, urgency, cloudy, smelly, or discoloured urine, fever and lethargy

Pyelonephritis - kidney infection

- Fever >38 degrees Celsius, chills, abdominal or back pain and vomiting

Diagnosis

Tests performed include:

- Urine microscopy and culture - identify bacteria and antibiotic sensitivity
- Ultrasound - check kidneys, bladder, and residual urine after voiding
- Cystoscopy - look in the bladder with a small telescope

Complications

Problems that may arise include:

- Recurrent UTI's >1 in 6 months or >2 in a year
- Sepsis - life-threatening blood infection
- Kidney stones

Lifestyle changes

- Drink >2L fluid a day and empty bladder every 2-3 hours
- Wipe front to back or dab and drop after opening your bowels
- Wear breathable or cotton underwear
- Do not use diaphragm or spermicide
- Pass urine after intercourse and avoid douching

Prevention

Cranberry products have not been shown to reduce episodes of recurrent UTI's in scientific studies but are commonly used and works for some. Tablets have higher concentration of active compound than juice.

Methanamine (Hiprex®) is a urinary antiseptic that is reasonably effective in preventing recurrent UTI's. Hiprex® can be purchased over-the-counter at \$15 per month and the dose is 1g orally twice a day with Vit C to acidify the urine. Hang on to your bladder for 2-3 hours after each dose to allow it to soak and "clean" the urine

D-Mannose is a naturally occurring sugar sourced from birch trees that may help reduce recurrent UTI's. It can be purchased over-the-counter at \$20 per month and the dose is 1.5-2g orally once daily

Vaginal oestrogen helps to reduce vaginal thinning and dryness after menopause. It promotes growth of "good" bacteria to compete with "bad" bacteria. It comes in a cream Ovestin® or pessary Vagifem® and costs \$10 per month

Hyaluronic acid and chondroitin are often found in skin care products and joint healthy supplements. iAluril® is a solution that is flushed into the bladder through a catheter tube weekly to help replenish the GAG protective layer in the bladder. It costs \$200 per instillation, and a typical schedule is weekly x4, then fortnightly x2, and monthly maintenance until effective

Immunoactive vaccines stimulate antibody production to fight bacteria. Uromune® is sprayed under the tongue once daily for 3 months. It contains inactive bacteria and may reduce the number of recurrent UTI's for the next 12 months.

Antibiotic Therapy

Antibiotics are widely used to treat UTI's and work well if the correct drug is chosen and taken consistently for the prescribed duration.

It is important to send the urine to the lab for testing before starting treatment, even though results are not available for 1-2 days. This is to confirm the diagnosis, identify the bacteria and ensure it is sensitive to the chosen antibiotic.

If you frequently take antibiotics for symptoms not caused by a UTI, or use the wrong antibiotics, resistant bacteria may colonise your body and limit antibiotic choices when you need them.

Simple UTI's occur up to 2 times a year and can be easily managed with a short course of common antibiotics such as Cephalexin or Trimethoprim.

Post-coital UTI's occur after sexual intercourse and can be treated with preventative antibiotics such as Nitrofurantoin taken just before or after sex. You can reinforce the effect by taking a second dose 6 hours later as well

Recurrent UTI's are extremely frustrating and tricky to manage. Firstly, try the prevention methods listed above. If this fails, then Dr Ooi may suggest:

- (a) Self-starting a course of antibiotics after doing a urine test
 - Keep a specimen jar, pathology request form and script handy
- (b) Taking preventative antibiotics daily for 3 months to break the UTI cycle
 - Rotate antibiotics every week to reduce risk of developing resistant bacteria and improve tolerability
 - Scripts are provided for three different drugs - alternate weekly in a 3 weekly schedule and omit if any one of them causes side-effects