vesia

[ALBERTA BLADDER CENTRE]

Understanding and Preventing Bladder Infections in Women

Understanding and Preventing Bladder Infections in Women

Recurrent bladder or urinary tract infections (UTI's) are a very common diagnosis. In fact, about 1 in 3 women will experience an infection before the age of 24. Doctors often classify the infections as either: SIMPLE - occur in a patient with a normal urinary tract (e.g. a young female) or COMPLEX - occur in a patient with other factors such as pregnancy, kidney or bladder stones, immunosuppression (e.g. transplant patients), diabetes or HIV, indwelling urinary catheters, or spinal cord injury. This information package is focused on recurring simple infections in women.

Why me?

This is a difficult question to answer and doctors are still working to sort this out. The bacteria (germs) that cause infection are normal bacteria ("normal flora") living within the bowel or on the perineum (space between the anus and the vagina). Over 80% of UTI's are caused by a germ called E. coli which moves up the urine channel (urethra) and settles into the bladder. If the bacteria successfully invade the lining of the bladder, a patient can get the symptoms of a bladder infection.

Sometimes it is obvious why a patient may get an infection: an indwelling urinary catheter, a blockage in the urinary system preventing drainage of the bladder, or a large stone in the bladder amongst other things. However, in the majority of young women with recurrent infections, one cannot usually identify any particular reason why they develop. Often a trigger can be identified such as the onset of a new relationship with a change in sexual pattern or a timing of the infections with a woman's cycle (perhaps related to the use of tampons, for example) or menopause. No matter whether a cause can be found or not, recurrent UTIs are extremely frustrating for all patients, and often lead to referral to a urologist.

How do I know if I have a UTI?

Most women who have had a bladder infection can quickly tell if they have another. They often describe a burning when they urinate (pee), a pain in the lower abdomen or back, and frequent urination of very small amounts. Infections can sometimes result in bloody or foul smelling urine and even an urgency to void or leakage of urine before a woman can make it to the toilet. Many women will believe it has "gone to their kidneys" because they have back pain; however, the kidneys sit much higher in the back than most patients realize. If the kidneys are infected, the patient will usually have a high fever and feel a full body sickness which requires hospitalization or an intravenous antibiotic.

Do I need investigations?

A great place to start to assess whether a patient has a UTI is a simple urine test. During an infection, white blood cells, red blood cells and substances called nitrites are often detected on a urine dip test and point to a likely infection. The urine will then be sent to the lab for a test called a urine culture to see what kind of bacteria grow and what type of antibiotic it is sensitive to. Unfortunately, many patients are treated without this being done because the symptoms clearly point to infection. While this is okay for an initial infection, in the case of recurrent infections it is necessary to have proper urine cultures done. Urologists like this lab information especially when they are trying to figure out why a patient is getting frequent infections.

Beyond a urine test, a young woman with frequent UTI's will often be investigated further; however, most commonly nothing will be found. An ultrasound of the kidneys may be done to look for stones or obstruction, and sometimes a cystoscopy will be performed. Cystoscopy is a procedure done by a urologist under local freezing jelly only, using a video telescope to look into the urethra and bladder. The objective is to look for reasons why the patient is getting infections. In some more complex patients, such as older men, spinal cord injured patients, or diabetics, cystoscopy is necessary to rule out treatable problems such as impaired bladder emptying, bladder stones, an obstructing prostate etc. In some cases, urologists may recommend a bladder function test called urodynamic studies to determine how a patient's bladder is working while it is filling and emptying.

What can I do to prevent them?

All women should strive to empty their bladder regularly (every 4-6 hours) and completely, as retained urine can stagnate and become infected. The key to emptying well is to take your time and to relax the pelvic and sphincter (valve) muscles completely to let the bladder pump and empty. Urinating before and after intimacy, and wiping from front to back may be helpful. Diaphragms and vaginal douches should be avoided. Although popular belief, avoiding bubble baths and hot tubs may or may not make a difference. Other measures like wearing cotton panties, avoiding tampons, or not wearing a wet bathing suit may help some but should not be relied upon by all.

Women who are going through menopause may develop a run of infections due to hormonal changes, and often these will settle once the hormonal balance re-sets itself. For post-menopausal women, the use of topical estrogen cream or suppositories is recommended if there is evidence of estrogen deficiency (see your doctor). The use of water-based lubricants without spermicide is recommended during intimacy if there is vaginal dryness.

For some women, increasing the consumption of water at the onset of symptoms may speed clearance of their UTI.

Are there any natural remedies?

Many natural products have been described for the prevention of recurrent UTIs; however, the exact form and dosage is not clearly established. Cranberry has been known to prevent the bacteria from "sticking" to the wall of the bladder. Capsules, juice, pure berries or extract have all been tried and patients should try to find a formulation that works for them. If you choose the juice form, you should drink the pure juice and not a cocktail, and beware of the additional calories being consumed. Vitamin C has been suggested to acidify the urine and prevent infections. As well, D-mannose, may prevent E. coli from sticking to the bladder.

Probiotics are gaining widespread popularity in the health food market as natural means of preventing and treating disease. Probiotics are living microorganisms which have a benefit to the host. The most common example of a probiotic is the organism Lactobacillus, which is found in yogurt. Prebiotics are compounds like sugars, etc, which aid the growth of these microorganisms, and synbiotics are a combination of the two, with yogurt being an example. In trying to prevent bladder infections, probiotics can be given in different forms. By mouth, they can be taken as a pill, or in the form of yogurt. They can be given vaginally as well, in the form of a douche. The idea behind this therapy is that these agents will promote the growth of the good germs in the vagina to suppress the growth of the bad germs. The major problem with probiotics at this point is that we do not yet know for certain what is the best organism to use, and how to best deliver it. Oral forms, like yogurt, also involve the ingestion of extra calories, and vaginal forms can be very messy; these agents are also very expensive.

Because recurrent UTIs are so frustrating, because many people find it helpful, and because there is no safety concern, a trial of twice daily Cranberry supplements and D-mannose, along with a daily dose of Vitamin C and probiotic-rich yogurt seems reasonable, even in the absence of rigorous scientific studies to support them. Keep in mind the cautions above about cost and caloric intake, and periodically try to assess whether these measures are making a difference.

What about antibiotics?

At the onset of symptoms, it is appropriate to be put on a course of antibiotics. This will often be done at a walk-in clinic or urgent care centre. They are generally safe and have been extensively tested in research trials. The problems arise when they are used incorrectly, side effects and allergies develop, or resistance develops.

For recurrent UTIs, 3 strategies can be tried under the guidance of your doctor.

1. Pre-or post-coital antibiotics. If infection predictably follows sexual activity, and this does not occur too frequently, then a single tablet before or after sexual contact is a very reasonable preventative approach. The right medication and risks will be discussed by your doctor.
2. Self-start therapy. Compliant patients with reliable clear-cut symptoms of infection may be given a supply of antibiotics to be kept at home and taken for a few days at the onset of symptoms. The purpose of this is to achieve earlier symptom relief, and to avoid a more significant infection

caused by delay to treatment. These antibiotics should only be used for the condition prescribed and not shared with others, and if you require more than 4 such courses per year, you should re-visit your doctor.

3. Suppressive antibiotics. Some patients will be placed on a nightly low dose for 3 - 6 months to "break the cycle" of infection. This can be an excellent way to treat but does have some risks associated with long term antibiotics such as resistance and rare side effects.

Summary:

Despite many advances in medicine, bacteria continue to be able to penetrate the bladder and cause UTIs. The reasons why are not always clear. Most young women do not need investigation beyond a urine test; however, other patients do require an ultrasound and cystoscopy if their infections are recurring. Treatment of an initial infection is rest, fluids and a prescribed antibiotic. If the problem is happening often, prevention with natural products and antibiotics may be needed.