

## **Recurrent Urinary Tract Infection (UTI)**

**What is a recurrent UTI?** This is defined as either 2 culture confirmed symptomatic urinary tract infections within a 6 month period or 3 such infections within 12 months. It is important to note that bacteria can be present on a urine culture, but this does not necessarily mean that you have a UTI if you do not have any symptoms (see below). This is called asymptomatic bacteriuria and is actually a common condition which increases with age and is generally benign. Asymptomatic bacteriuria does not require any antibiotic treatment. However, if you experience symptoms of a UTI, you should go to the lab and drop off a urine sample.

**Why does this occur?** There are many different risk factors that can predispose women to recurrent UTIs, including postmenopausal status, sexual activity, pelvic organ prolapse, reduced bladder emptying, diabetes, genetics as well as a history of urinary or fecal incontinence, urinary catheterization and prior UTIs. However, recurrent UTIs likely occur for a combination of reasons and fixing one risk factor may not completely eliminate recurrent UTIs. Your doctor may decide to take a closer look at your urinary tract to evaluate for any stones or other possible sources of these recurrent infections. This can be performed by a cystoscopy performed in the office (a small camera placed in the bladder) and/or by an imaging study, such as a CT scan.

**What are the symptoms of a UTI?** Acute onset of painful urination, increased urinary frequency and urgency, lower abdominal or suprapubic pain or blood in the urine.

What are the signs of a UTI? A positive urine culture, white blood cells in the urine and/or fever  $> 38^{\circ}\text{C}$  in adults 65 and older.

### **What treatment options are available for recurrent UTIs in women?**

1. Vaginal estrogen: In postmenopausal states, cell physiology changes secondary to a lack of estrogen in the lower urinary tract which can predispose women to UTIs. As a result, adding small amounts of estrogen to the vagina can improve cell function in preventing UTIs.
2. Prophylactic antibiotics: This involves taking a low dose of an antibiotic daily for 6-12 months. While this can be an effective treatment, there are risks with taking antibiotics and resistance can occur. If the recurrent UTIs are related to sexual activity, your doctor may have you take antibiotics only after sexual activity.
3. Cranberry products: Though there is conflicting data, cranberry appears to decrease the adhesion of certain bacteria to cells in the lower urinary tract and may possibly prevent, but not treat, UTIs. Cranberry juice may be helpful in decreasing UTIs, though the amount needed is high in calories and may cause gastric upset. As a result, most people prefer cranberry tablets, typically 500 mg twice a day.
4. Methenamine Salts: These bacteriostatic agents convert to formaldehyde in the urine and may have some use in preventing recurrent UTIs in patients who are unable to try any of the above therapies, though data is limited in their effectiveness and they are not safe to take long term.
5. Probiotics: Some lactobacilli (bacteria that normally live in the vagina) can help decrease the types of bacteria in the body that cause UTIs. Though the data is limited, there is some evidence that *L. crispatus* intravaginal suppositories or oral capsules with *L. rhamnosus* GR-1 and *L. reuteri* RC-14 may help prevent UTIs.