



### Urinary Tract Infection (UTI) Uncomplicated and Prevention of Post-coital

<b>DEFINITION</b>	An infection of the urethra, bladder (cystitis), ureters, or kidneys. UTI symptoms after sexual intercourse may be caused from the introduction of bacteria from the urethra into the bladder. Most common bacteria that lead to infection are <i>E. coli</i> , <i>K. pneumoniae</i> , and <i>P. mirabilis</i> . Antibiotic resistance is increasing, and local susceptibilities should guide empiric treatment.
<b>SUBJECTIVE</b>	<p>May include:</p> <ol style="list-style-type: none"> <li>1. Complaints of urinary frequency, burning, nocturia, dysuria or urgency</li> <li>2. Hematuria</li> <li>3. Suprapubic pain or lower abdominal pain</li> <li>4. Sexual history</li> <li>5. Stress/urge incontinence</li> <li>6. Malodorous and/or cloudy urine</li> <li>7. Diaphragm and/or spermicide use</li> <li>8. Vaginal symptoms</li> <li>9. Complaints of recurrent UTIs after sexual intercourse. (at least 2-4 UTIs in one year)</li> <li>10. No symptoms</li> </ol> <p>Should exclude:</p> <ol style="list-style-type: none"> <li>1. Severe flank pain</li> <li>2. Nausea/vomiting</li> <li>3. Chills</li> </ol>
<b>OBJECTIVE</b>	<p>May include:</p> <ol style="list-style-type: none"> <li>1. No remarkable physical findings</li> <li>2. Suprapubic tenderness on abdominal exam</li> <li>3. Urethral and/or bladder tenderness</li> <li>4. Inflammation of urethral meatus</li> <li>5. Pelvic exam as indicated</li> </ol> <p>Should exclude:</p> <ol style="list-style-type: none"> <li>1. CVA tenderness</li> <li>2. Temperature &gt; 100.4° F</li> </ol>
<b>LABORATORY</b>	<p>Should include:</p> <ol style="list-style-type: none"> <li>1. Clean catch urine dipstick:             <ol style="list-style-type: none"> <li>a. Positive blood</li> <li>b. Positive nitrates</li> <li>c. Positive Leukocyte esterase</li> </ol> </li> </ol> <p>May include:</p> <ol style="list-style-type: none"> <li>1. Clean catch urine microscopy:             <ol style="list-style-type: none"> <li>a. Greater than or equal to 5-10 WBCs/high power field (HPF)</li> <li>b. Positive red blood cells &gt; 5 RBC's/high power field (HPF)</li> <li>c. Positive bacteria</li> <li>d. STD screening, as appropriate.</li> <li>e. Negative pregnancy test in non-contracepting women</li> </ol> </li> <li>2. Vaginitis/cervicitis screening, as appropriate</li> <li>3. Urine C&amp;S report positive for &gt;100,000 organisms of the same species for clean catch specimen</li> <li>4. Due to increasing rates of antibiotic resistance all suspected UTI consider UA and culture.</li> </ol>



<b>ASSESSMENT</b>	Urinary tract infection or post-coital cystitis
<b>PLAN</b>	<p>1. Treatment options may include one of the following for <u>uncomplicated UTI</u>, refer to local antibiotic susceptibility for empiric treatment:</p> <ol style="list-style-type: none"> <li>Trimethoprim-Sulfamethoxazole DS 160/800mg PO BID for 3 days (avoid if local biogram has &gt;20% resistance) OR</li> <li>Trimethoprim 300 mg (PO) for 3 days OR</li> <li>Fosfomycin Tromethamine (Monurol) 3 gm sachet sig: 1 sachet mixed with 4 oz. H2O x 1 OR</li> <li>*Nitrofurantoin monohydrate/macrocrystals 100 mg (PO) BID for 7 days OR</li> <li>*Nitrofurantoin macrocrystals 50 mg – 100 mg (PO) QID for 7 days OR</li> <li>Amoxicillin 500 mg. TID x 7- 10 days (consider if pt. has a possible risk of pregnancy OR</li> <li>Augmentin 500mg BID x 5-7d OR</li> <li>Cefdinir 300mg BID 5-7d or</li> <li>**Ciprofloxacin HCL 250 mg (PO) BID for 3 days (Black Box warning- associated with potential tendon rupture) OR</li> <li>**Ciprofloxacin extended release 500 mg (PO) QD for 3 days</li> <li>**Levofloxacin 250 mg QD for 3 days OR</li> <li>**Norfloxacin 400 mg BID for 3 days</li> <li>May use alternative antibiotic, as indicated most appropriate by the C &amp; S Report</li> </ol> <p><b>**May 12, 2016, FDA advises that side effects associated with fluoroquinolones generally outweigh the benefit for uncomplicated UTI.</b> In those with other options reserve use for those who do not have alternative treatment options. Avoid use during pregnancy.</p> <p>*August 2017 ACOG advises Nitrofurantoin and TMP/SMZ not to be used in first trimester of pregnancy</p> <p>2. For the complaint of severe dysuria, may offer:</p> <ol style="list-style-type: none"> <li>Phenazopyridine 100-200mg PO TID prn for 2 days (available OTC as AZO 97.5mg OR</li> <li>Uristat 95mg: 2 tabs PO TID prn for 2 days (available OTC)</li> </ol> <p>3. Treatments options for post-coital cystitis (<b>Non-pregnant patients only</b>) may include:</p> <ol style="list-style-type: none"> <li>Trimethoprim-sulfamethoxazole 40mg/200mg (1 dose)</li> <li>Trimethoprim-sulfamethoxazole 80mg/400mg (1 dose)</li> <li>Nitrofurantoin 50mg or 100mg (1dose)</li> <li>Cephalexin 250mg (1 dose)</li> <li>** Ciprofloxacin 125mg (1 dose)</li> <li>** Norfloxacin 200mg (1 dose)</li> <li>** Ofloxacin 100mg (1 dose)</li> <li>For symptom control, may use Phenazopyridine 100-200mg q8 hours prn if symptomatic (MUST be taken along with antibiotic. Has a crossover reaction with sulfa allergy.)</li> </ol> <p>*These are ideally to be taken within 2 hours of each act of sexual intercourse. Antibiotic only needs to be taken once in 24 hours, even if there are multiple acts within that time period.</p> <p><b>**May 12, 2016, FDA advises that side effects associated with fluoroquinolones generally outweigh the benefit for uncomplicated UTI.</b></p>
<b>CLIENT EDUCATION</b>	<ol style="list-style-type: none"> <li>Provide client education handout(s)</li> <li>Review symptoms, complications, and danger signs</li> <li>Emphasize importance of good perineal hygiene</li> </ol>



	<ol style="list-style-type: none"><li>4. Avoid intercourse until infection resolves. Intercourse during infection may be painful and irritate healing tissues.</li><li>5. Recommend frequent urination. Urination before and after intercourse.</li><li>6. Review safer sex education, as appropriate</li><li>7. Recommend client RTC if symptoms are not relieved by medication; seek medical care if symptoms worsen on medication</li><li>8. Spermicides containing contraceptive particularly, diaphragm, increase the risk of UTI's.</li><li>9. Phenazopyridine may change your body fluids including tears and urine orange and stain clothing and contact lenses.</li></ol>
<b>CONSULT/ REFER TO PHYSICIAN</b>	<ol style="list-style-type: none"><li>1. Pregnancy</li><li>2. Exhibits signs and symptoms of upper UTI (fever, flank pain, malaise, nausea, vomiting and chills).</li><li>3. History of pyelonephritis, renal or bladder stones, recurrent UTI (3 infections/year).</li><li>4. Symptoms that persist post treatment.</li><li>5. Symptoms present with negative urine and negative STD test results.</li></ol>

**References:**

1. Urinary Tract Infections | UTI | UTI Symptoms | MedlinePlus
2. FAQs: Urinary Tract Infection (UTI) Events | NHSN | CDC