



# To Treat or Not Treat Uncomplicated UTIs

## CLINICAL QUESTION

**Do we need to use antibiotics to treat uncomplicated symptomatic urinary tract infections (UTI)?**

## BOTTOM LINE

**About two-thirds of non-pregnant adult women with uncomplicated symptomatic UTI will have persistent symptoms without treatment. At 3-4 days, 46% of women treated symptomatically with NSAIDs alone will be symptom-free versus 67% given antibiotics. By one month, fever and/or pyelonephritis developed in 1.2% given NSAIDs alone versus 0.2% given antibiotics. Women with uncomplicated symptomatic UTI should be offered antibiotics.**

## EVIDENCE

- Results statistically significant unless indicated.
- Systematic review (3 Randomized Controlled Trials [RCT], 346 non-pregnant women) focusing on patients given placebo.<sup>1</sup>
  - Symptom-free at 4-7 days: Approximately 31% without antibiotics (range 28%-60%) (PEER pooled data for average).
  - Symptom-free at 6 weeks: 36% without antibiotics.
  - Adverse events: No consistent difference. 2 untreated patients progressed to pyelonephritis (versus 1 treated with antibiotics).

- Systematic review (4 RCTs, 1165 non-pregnant women) randomized to symptomatic treatment with NSAIDs (ibuprofen or diclofenac) versus antibiotics (ciprofloxacin, fosfomycin, norfloxacin, or pivmecillinam).<sup>2</sup>
  - Symptom-free at 3-4 days: NSAIDs lower (46%) versus antibiotics (67%), number needed to harm (NNH)=5 for using NSAIDs versus antibiotics.<sup>2</sup>
  - Adverse events (fever or pyelonephritis at ≤1 month): NSAID higher (1.2%) than antibiotics (0.2%), NNH=100 for using NSAIDs versus antibiotics.<sup>2</sup>
  - Other systematic review found similar.<sup>3</sup>

## CONTEXT

- Uncomplicated UTI is generally defined as adult (age 18-65) non-pregnant women with symptoms of cystitis with normal urinary tracts and immune systems.<sup>3,4</sup>
  - Asymptomatic bacteriuria is different and will be covered in future Tools for Practice.
- Women presenting to primary care concerned about uncomplicated UTI have a high prevalence (>60%) of UTI; history and dipstick testing are generally of limited value.<sup>5</sup>
- Empiric antibiotics maybe reasonable for uncomplicated UTI.
  - RCT, 309 non-pregnant women presenting to primary care with uncomplicated UTI were randomized to one of five antibiotic treatment options: Immediate, if dipstick positive, ≥2 symptoms, delayed for persistent symptoms, or if culture positive. All approaches provided similar symptom control.<sup>6</sup>
  - RCT of 59 non-pregnant women with uncomplicated UTI symptoms and negative dipstick urinalysis randomized to antibiotics or placebo found less dysuria after day 3 on antibiotics (24%) versus placebo (74%).<sup>7</sup>

## REFERENCES

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