

# Uncomplicated Cystitis

This is a summation of guidelines from the AAFP and IDSA.

## CRITERIA FOR ANTIBIOTICS

- History of frequency, dysuria, urgency, suprapubic pain, and hematuria.
- Absence of flank pain, fever, chills, nausea, vomiting, or other systemic symptoms.
- Positive urine culture or urinalysis results.
- To classify as uncomplicated, the patient must be immunocompetent, have no comorbidities, no known urologic abnormalities, be non-pregnant, and have no recent urinary tract instrumentation.

## FIRST LINE (ADULTS)

Choose one of the following:

- Nitrofurantoin 100mg by mouth twice daily for 5 days (females) / 7 days (males)
- Trimethoprim-Sulfamethoxazole 160/800mg by mouth twice daily for 3 days(females) / 7 days(males)
- Fosfomycin 3g by mouth x One dose

## SECOND LINE (ADULTS)

Choose one of the following:

- Amoxicillin-clavulanate 500/125mg by mouth twice daily
- Cefadroxil 500mg by mouth twice daily
- Cefpodoxime 100mg by mouth twice daily
- Cephalexin 500mg by mouth twice daily
- Cefdinir 300mg by mouth twice daily
- Ciprofloxacin 250mg by mouth twice daily or 500mg by mouth once daily

**DURATION: 5-7 days**

**DOSAGES ARE FOR PATIENTS WITH NORMAL RENAL FUNCTION**

## REFERENCES

- Colgan R, Williams M. Diagnosis and Treatment of Acute Uncomplicated Cystitis. *afp*. 2011;84(7):771-776.
- Gupta K, Hooton TM, Naber KG, et al. International clinical practice guidelines for the treatment of acute uncomplicated cystitis and pyelonephritis in women: A 2010 update by the Infectious Diseases Society of America and the European Society for Microbiology and Infectious Diseases. *Clin Infect Dis*. 2011;52(5):e103-120. doi:10.1093/cid/ciq257
- Lala V, Leslie SW, Minter DA. Acute Cystitis. In: *StatPearls*. StatPearls Publishing; 2024. Accessed June 18, 2024. <http://www.ncbi.nlm.nih.gov/books/NBK459322/>

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# Uncomplicated pyelonephritis

This is a summation of guidelines from the AAFP and IDSA

## CRITERIA FOR ANTIBIOTICS

- Evidence of UTI from urinalysis or culture and signs and symptoms suggesting upper UTI
  1. fever
  2. chills
  3. flank pain
  4. nausea and/or vomiting
  5. costovertebral angle tenderness
- Symptoms suggestive of cystitis, such as (dysuria, urinary bladder frequency, urgency, and suprapubic pain) also may be present.
- To classify as uncomplicated, the patient must be immunocompetent, have no comorbidities, have no known urologic abnormalities, be non-pregnant, and have no recent urinary tract instrumentation.

## FIRST LINE (ADULTS)

Choose one of the following:

- Ciprofloxacin 500mg by mouth twice daily for 7 days
- Ciprofloxacin extended-release(XR) 1000mg by mouth daily for 7 days
- Levofloxacin 750mg by mouth daily for 5 days
- Trimethoprim-Sulfamethoxazole 160/800mg by mouth twice daily for 14 days

## SECOND LINE (ADULTS)

Choose one of the following:

- Amoxicillin/clavulanate 875mg/125mg by mouth twice daily for 10 to 14 days
- Cefixime 400mg by mouth once daily for 10 to 14 days
- Cefpodoxime 200mg by mouth twice daily for 10 to 14 days
- Cefaclor 500mg by mouth three times a day for 7 days.

NOTE: Cefaclor should be generally avoided in elderly patients because of the risk of affecting kidney function.

## DOSAGES ARE FOR PATIENTS WITH NORMAL RENAL FUNCTION

## REFERENCES

- Gupta, K., Hooton, T. M., Naber, K. G., Wullt, B., Colgan, R., Miller, L. G., Moran, G. J., Nicolle, L. E., Raz, R., Schaeffer, A. J., & Soper, D. E. (2011). International Clinical Practice Guidelines for the Treatment of Acute Uncomplicated Cystitis and Pyelonephritis in Women: A 2010 Update by the Infectious Diseases Society of America and the European Society for Microbiology and Infectious Diseases. *Clinical Infectious Diseases*, 52(5), e103–e120. <https://doi.org/10.1093/cid/ciq257>
- Herness J, Buttolph A, Hammer NC. Acute Pyelonephritis in Adults: Rapid Evidence Review. *afp*. 2020;102(3):173-180

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# Complicated pyelonephritis

This is from the AAFP guidelines

## CRITERIA FOR ANTIBIOTICS (INPATIENT TREATMENT)

- Evidence of UTI from urinalysis or culture along with signs and symptoms suggesting upper UTI (fever, chills, flank pain, nausea, vomiting, costovertebral angle tenderness). Also, lower urinary tract symptoms (dysuria, frequency, and urgency).
- Inability to maintain adequate oral hydration.
- Evidence of hemodynamic instability
- Unrelenting fever despite antipyretic therapy.

To classify as complicated the patient may have structural or functional urinary tract abnormalities, history of urologic instrumentation, immunocompromised state, evidence of obstruction on imaging, presence of resistant or atypical uropathogens.

## FIRST LINE (ADULTS)

Choose one of the following:

- Ciprofloxacin 400mg IV twice daily for 10-14 days
- Levofloxacin 750mg IV once daily for 5 days

NOTE: Guidelines suggest switching from intravenous therapy to oral therapy after 48 hours of treatment or when patient is afebrile.

## SECOND LINE (ADULTS)

Choose one of the following:

- Ampicillin/Sulbactam 1.5g IV every 6 hours
- Piperacillin/Tazobactam 3.375g IV every 6 hours
- Cefotaxime 1-2g IV every 8 hours
- Ceftriaxone 1g IV once daily
- Ceftazidime 2g IV every 8 hours

**DURATION: 10-14 days**

If allergic to cephalosporins

- Meropenem 500mg IV every 8 hours for 10-14 days

NOTE: Guidelines suggest switching from intravenous therapy to oral therapy after 48 hours of treatment or when patient is afebrile.

**DOSAGES ARE FOR PATIENTS WITH NORMAL RENAL FUNCTION**

## REFERENCES

- Belyayeva M, Leslie SW, Jeong JM. Acute Pyelonephritis. In: *StatPearls*. StatPearls Publishing; 2024. Accessed June 18, 2024. <http://www.ncbi.nlm.nih.gov/books/NBK519537/>
- Herness J, Buttolph A, Hammer NC. Acute Pyelonephritis in Adults: Rapid Evidence Review. *afp*. 2020;102(3):173-180.

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