

## Title

A meta-analysis of the efficacy of oral cefixime 800 mg for the treatment of gonorrhea

## Background

To treat *Neisseria gonorrhoeae* infection, the CDC recommends a single oral dose of cefixime 800 mg as an alternative to injectable ceftriaxone 500 mg if ceftriaxone is not available. We conducted a systematic review and meta-analysis to describe the efficacy of cefixime 800 mg by mouth in treating gonorrhea at different anatomic sites.

## Methods

Following PRISMA guidelines, we searched PubMed using a standardized query limited to human studies of oral cefixime 800 mg as a single dose between January 1980 and December 2021.

We excluded studies that did not specify the cefixime dose/frequency or single case reports. We abstracted treatment success rates and cefixime dosage/frequency using Covidence software (Melbourne, Australia). We performed a meta-analysis by anatomic site with 95% Wald confidence intervals with logit transformation. We tested for heterogeneity using chi<sup>2</sup> statistic of the likelihood ratio (LR) test comparing the random- and fixed-effects model.

## Results

Of the 215 studies returned, 5 met our inclusion criteria. Those 5 studies represented 266 total gonorrhea infections (228 urogenital, 12 rectal, 26 pharyngeal) treated with a single dose of oral cefixime 800 mg. The LR p-value=0.11 suggesting there was heterogeneity between studies. The percent of gonorrhea cured for urogenital, pharyngeal, and rectal infections was 98% (CI: 95%-99%), 81% (CI: 61%-92%) and 100% (CI could not be calculated due to low sample size), respectively.

## Conclusion

A single dose of oral cefixime 800 mg was found to be highly efficacious at treating urogenital gonorrhea and less efficacious at treating pharyngeal gonorrhea. Further investigation of multiple doses and efficacy at treating rectal gonorrhea are needed.