

Emerging STD Issues

Florida Recommendations for Suspected Gonorrhea Treatment Failure

When should Gonorrhea Treatment Failure be suspected?

Gonorrhea treatment failure should be suspected if symptoms are present 7 days following initial antibiotic treatment. Depending on the original site of infection, symptoms may include:

- Persistent urethral discharge, dysuria, and/or pyuria (positive leukocyte esterase on urine dipstick)
- Persistent pharyngitis or odynophagia
- Persistent rectal discharge, pain, bleeding, pruritis, tenesmus, or painful defecation.
- Persistent vaginal discharge, dysuria, or post-coital spotting.

Patients with persistent or recurrent symptoms who report sexual exposure to untreated or new partners may have been re-infected. Patients suspected of having a re-infection should be retreated with a recommended antibiotic regimen, see CDC STD Treatment Guidelines, 2010 at <http://www.cdc.gov/std/treatment/2010/gonococcal-infections.htm>.

What steps should you take to ensure adequate testing, treatment, partner, management and follow-up?

1. Obtain a specimen for culture and antibiotic susceptibility testing at sites of sexual exposure (i.e. genital, rectal, pharyngeal). If gonorrhea culture is not available at your local laboratory, then contact the Florida Bureau of Communicable Diseases, STD Section's Clinical Unit at 850-245-4303.
2. Re-treat the patient with ceftriaxone 250mg intramuscular (IM) and azithromycin 2g orally in a single dose.
3. Inform your local health department about the case within 24 hours.
4. Ensure that all of the patient's partners in the last 60 days return to the clinic for testing and treatment with ceftriaxone 250mg IM and azithromycin 2g orally in a single dose.
5. Instruct the patient to abstain from oral, vaginal, or anal sex until one week after the patient and all of his/her partners are treated.
6. Ask patient to return for a test-of-cure one week after treatment, preferably with culture. If

culture is not available, then use a nucleic acid amplification test (NAAT).

Current Gonorrhea Treatment Recommendations

Due to epidemiologic patterns in cephalosporin susceptibility, the CDC recommends the following gonorrhea treatment:

- Dual antibiotic treatment with ceftriaxone 250mg intramuscular AND azithromycin 1g orally is the preferred treatment for uncomplicated urogenital and pharyngeal gonorrhea.
- Azithromycin is preferred over doxycycline for dual antibiotic treatment due to high rates of co-existing tetracycline resistance among gonococcal isolates with elevated cefixime MICs.
- Dual antibiotic treatment should be given regardless of any Chlamydia test result.

For more detailed treatment information, please visit the CDC treatment guidelines webpage at:

<http://www.cdc.gov/std/treatment/2010/gonococcal-infections.htm>

Recommendation for Performing Tests-of-Cure

Tests-of-cure after treatment are routinely recommended only for the following groups:

- Pregnant women
- Cases where an antibiotic other than a recommended or alternate regimen was used
- Cases of suspected treatment failure

According to the [July 8, 2011 CDC Morbidity and Mortality Weekly Report \(MMWR\)](#), clinicians caring for patients with gonorrhea with a travel history to California, the western states, and Asia, particularly men who have sex with men (MSM), may consider having these patients return as early as one week (CDC recommends 2-3 weeks) after treatment for a test-of-cure, preferably with culture.

Background: Antibiotic Resistance and Epidemiologic Susceptibility Patterns

Antibiotic resistance to *Neisseria gonorrhoeae* has been present since antibiotics were first used to treat the infection. *N. gonorrhoeae* has progressively developed resistance to sulfonilamides, penicillin, tetracycline, and ciprofloxacin. Most recently, it has developed resistance to the fluoroquinolones. In 2007, the CDC discontinued the use of fluoroquinolones in the treatment of gonorrhea. More recently in 2010, as a result of epidemiological surveillance data the CDC recommended dual antibiotic therapy with ceftriaxone and azithromycin to address the potential emergence of gonococcal cephalosporin resistance.

In order to monitor changes in antibiotic resistance and guide treatment recommendations, the Centers for Disease Control (CDC) established the sentinel surveillance program known as Gonococcal Isolate Surveillance Project (GISP). Approximately 5,900 male urethral gonococcal isolates are obtained annually from consecutive symptomatic men at 25-30 STD clinics in the United States. This represents approximately 4% of all reported annual cases of gonorrhea in men.

The CDC measures antibiotic susceptibility using the Minimum Inhibitory Concentration (MIC), the lowest concentration of an antibiotic that inhibits visible growth of the bacteria. Decreased antibiotic susceptibility for cefixime or ceftriaxone is defined by the Clinical and Laboratory Standards Institute (CLSI) as MICs $\geq 0.5 \mu\text{g/mL}$. According to the CDC, Morbidity and Mortality Weekly Report published on [July 8, 2011](#) there has been a reported decreased in cephalosporin susceptibility among *N. gonorrhoeae* isolates collected from California, other Western states, and in men that have sex with men (MSM). From 2000-2010, the nation-wide percentage of isolates with cefixime MICs $\geq 0.25\mu\text{g/mL}$ increased from 0.2% to 1.4%; ceftriaxone MICs $\geq 0.125\mu\text{g/mL}$ increased 0.1% to 0.3%. In the Western United States the percentage of isolates with cefixime MICs $\geq 0.25\mu\text{g/mL}$ increased from 0% to 3.3%; ceftriaxone MICs $\geq 0.125\mu\text{g/mL}$ increased 0% to 0.5%. In MSM, we saw a similar increase with cefixime MICs $\geq 0.25\mu\text{g/mL}$ increasing from 0% to 4.0%; ceftriaxone MICs $\geq 0.125\mu\text{g/mL}$ increased from 0% to 0.9% during the same time period. There have been documented treatment failures in Asia; thus, health care providers may consider a test-of-cure with a culture when treating MSM with a travel history to Asia and the Western United States.