

The Medical Letter[®]

on Drugs and Therapeutics

Volume 66

July 22, 2024

ISSUE No.
1707

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Volume 66 (Issue 1707)

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IN BRIEF

Doxycycline for STI Post-Exposure Prophylaxis

The CDC has issued a recommendation for use of a single dose of doxycycline for post-exposure prophylaxis (PEP) of bacterial sexually transmitted infections (STIs), specifically syphilis, chlamydia, and gonorrhea, in men who have sex with men (MSM) and transgender women (TGW) who had a bacterial STI within the previous 12 months.¹

CLINICAL STUDIES — Issuance of the new recommendation was based on data from three randomized, open-label trials evaluating the efficacy of doxycycline 200 mg taken within 72 hours of a potential STI exposure.

In a cohort of 232 HIV-negative MSM and TGW, doxycycline PEP after condomless anal or oral sex decreased the incidence of chlamydia by 70% and the incidence of syphilis by 73% over a 10-month follow-up period; the incidence of gonorrhea was not significantly reduced.²

In a trial in 501 MSM and TGW who were infected with HIV or were receiving HIV pre-exposure prophylaxis (PrEP) and had acquired at least one STI in the previous 12 months, doxycycline PEP after condomless sex decreased the incidences of gonorrhea, chlamydia, and early syphilis by 55-57%, 74-88%, and 77-87%, respectively, over a median follow-up of 9 months.³

In a trial in 556 MSM who were receiving HIV PrEP and had acquired at least one STI in the previous 12 months, doxycycline PEP decreased the adjusted incidences of gonorrhea, chlamydia, and syphilis by 33%, 86%, and 79%, respectively, over a median follow-up of 14 months.⁴

Use in Females — In a trial in 449 females in Kenya, doxycycline PEP was not associated with reduced rates of bacterial STIs, but treatment adherence was low.^{1,5}

ADVERSE EFFECTS — Doxycycline can cause GI adverse effects and photosensitivity.⁶ Prolonged use of the drug could increase the incidence of nasal colonization with tetracycline-resistant *Staphylococcus aureus* and the percentage of gonorrhea infections that are tetracycline-resistant.^{3,4}

RECOMMENDATIONS — The CDC recommends that MSM and TGW who had a bacterial STI within the previous 12 months be offered doxycycline PEP through shared decision-making. Clinicians should use clinical judgment to determine whether to offer doxycycline PEP to other high-risk populations. The recommended PEP dosage is 200 mg of doxycycline hyclate or monohydrate taken within 72 hours after oral, vaginal, or anal sex (maximum dose 200 mg per 24 hours). The need for PEP should be re-evaluated every 3-6 months.¹ ■

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3. AF Luetkemeyer et al. Postexposure doxycycline to prevent bacterial sexually transmitted infections. *N Engl J Med* 2023; 388:1296.
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