

Health Advisory

Updated Guidance from CDC on the Use of Doxycycline for Chemoprophylaxis of Bacterial STIs July 2, 2024

SUMMARY POINTS

- Doxycycline is recommended for use as postexposure prophylaxis (doxy PEP) to reduce the acquisition of chlamydia, gonorrhea, and syphilis in men who have sex with men and transgender women.
- Data show a reduction in syphilis and chlamydia infections by >70% and gonococcal infections by approximately 50% when using doxy PEP.
- The recommended dose and administration is 200 mg PO of doxycycline as soon as possible but up to 72 hours after oral, vaginal, or anal sex.

Introduction:

On June 6, 2024, Centers for Disease Control and Prevention (CDC) published guidance on the use of chemoprophylaxis for bacterial STIs. Doxycycline is effective in reducing bacterial STIs. Doxycycline should be used as postexposure prophylaxis (doxy PEP) in certain patient populations to reduce the acquisition of the bacterial STIs chlamydia, gonorrhea, and syphilis.

Eligibility:

CDC recommends that clinicians should counsel all patients who are men who have sex with men (MSM) or transgender women (TGW) and have had a bacterial STI diagnosis within the last 12 months about the benefits and harms of doxy PEP. While not directly assessed in the clinical trials, doxy PEP could be discussed, using a shared decision-making approach, with MSM and TGW who have not had a bacterial STI diagnosed within the last 12 months but will be participating in sexual activities that are known to increase the likelihood of exposure to STIs. This could include but is not limited to condomless sex, sex with multiple partners, or sex work.

While there is not yet enough evidence to routinely recommend doxy PEP in other populations, specifically cisgender women, clinicians should use clinical judgment and shared decision-making to inform use outside of the specific recommendation.

Administration, Dosage, and Side Effects:

Prescribe 200 mg of doxycycline to be taken within 72 hours (ideally within 24 hours or as soon as possible) after condomless oral, anal, or other insertive/receptive sex. Doxycycline can be taken daily depending on sexual activity, but no more than 200 mg every 24 hours. The prescription should account for enough doses based on the individual's anticipated sexual activity until their next visit. Ongoing need for doxy PEP should be assessed every 3–6 months.

Gastrointestinal side effects were more commonly reported by those taking doxy PEP than control groups. Throughout the course of the studies, no serious adverse events were attributed to doxycycline.

Other Clinical Services to Consider with Doxy PEP:

Individuals being prescribed doxy PEP should be considered in the context of a comprehensive sexual health approach, including risk reduction counseling, STI screening and treatment, recommended vaccinations and

linkage to HIV PrEP, HIV care, and other services as appropriate. Those who are prescribed doxy PEP should undergo bacterial STI testing at anatomic sites of exposure at baseline and every 3–6 months thereafter. HIV screening should be performed for HIV-negative MSM and TGW according to current recommendations.

Risk of Antimicrobial Resistance:

A potential concern of doxy PEP use is the facilitation of antimicrobial resistance in bacterial STIs and other common bacterial pathogens. Doxycycline resistance was already present in about two-thirds of *Neisseria* species, and this did not change significantly after 12 months of doxy-PEP. CDC notes that current data suggest overall benefit of the use of doxy PEP, but potential risks related to the development of resistance and changes in the microbiome will need to be monitored as these guidelines are implemented.

Resources and References:

MMWR, CDC Clinical Guidelines on the Use of Doxycycline Postexposure Prophylaxis for Bacterial Sexually Transmitted Infection Prevention, United States, 2024.

<https://www.cdc.gov/mmwr/volumes/73/rr/pdfs/rr7302a1-H.pdf>

CDC STI Screening Recommendations: <https://www.cdc.gov/std/treatment-guidelines/screening-recommendations.htm>

Recommendations for HIV Screening of Gay, Bisexual, and Other Men Who Have Sex with Men — United States, 2017: <https://www.cdc.gov/mmwr/volumes/66/wr/mm6631a3.htm>

Bachmann LH, Barbee LA, Chan P, et al. CDC Clinical Guidelines on the Use of Doxycycline Postexposure Prophylaxis for Bacterial Sexually Transmitted Infection Prevention, United States, 2024. MMWR Recomm Rep 2024;73(No. RR-2):1–8. DOI: https://www.cdc.gov/mmwr/volumes/73/rr/rr7302a1.htm?s_cid=rr7302a1_w

Luetkemeyer ADD, Dombrowski J, Cohen S, et al. Doxy PEP and antimicrobial resistance in *N. gonorrhoeae*, commensal *Neisseria* and *S. aureus*. Conference on Retroviruses and Opportunistic Infections; 2023; Seattle, WA.