



INDIAN HEALTH SERVICE
National Pharmacy and Therapeutics Committee
Formulary Brief: Doxycycline Post-Exposure Prophylaxis
-April/May 2024-



Background:

The IHS National Pharmacy and Therapeutics Committee (NPTC) reviewed doxycycline for post-exposure prophylaxis (Doxy-PEP) of bacterial sexually transmitted infection (STI) at its 2024 Spring meeting. Doxy-PEP has a preliminary recommendation from the U.S. Centers for Disease Control and Prevention (CDC) for consideration only in men who have sex with men (MSM) and transgender women (TGW) at high risk for STIs. Doxy-PEP consists of 200 mg of doxycycline taken orally within 72 hours of condomless sex, ideally within 24 hours, with a maximum dose of 200 mg per day. **There were no changes made to the National Core Formulary (NCF)**, as doxycycline was added in 2021 along with azithromycin, benzathine penicillin, ceftriaxone, and cefixime, following the previous topic review and discussion of STIs.

Discussion:

Epidemiological data demonstrate American Indian/Alaska Native (AI/AN) people experience disparate rates of bacterial STIs including chlamydia, gonorrhea and syphilis. Rates of syphilis are greatest in AI/AN people compared to all other racial/ethnic groups in the United States. Chlamydia and gonorrhea rates among AI/AN are second highest among all U.S. racial/ethnic groups.¹

Risk factors for bacterial STI include multiple partners, condomless sex, and bacterial STI in the last 12 months. Doxy-PEP is to be considered in MSM and TGW who share these risk factors. These risk factors are also associated with increased human immunodeficiency virus (HIV) acquisition. Doxy-PEP is an ideal tool for use to mitigate bacterial STI risk in conjunction with HIV pre-exposure prophylaxis (PrEP).²

Doxy-PEP guidance was originally published by the CDC in September 2023 as a preliminary recommendation for public comment. The recommendation followed publication of data, which demonstrated a relative risk reduction of 66% (95% CI: 54-76%) for acquisition of bacterial STIs including syphilis, chlamydia, or gonorrhea.³ Two earlier studies also demonstrated significant reductions in bacterial STI in high-risk groups of MSM and TGW.^{4,5}

The recommendation for Doxy-PEP is not extended to cis-gender women in this preliminary clinical guidance due to a single study which demonstrated no benefit in this population.⁶ Poor adherence was evident in this single study of Doxy-PEP in cis-gender women and additional studies are necessary before Doxy-PEP for cis-gender women can be recommended.

Utilization of Doxy-PEP ideally consists of self-administration of doxycycline 200 mg orally within 24 hours of a condomless sexual encounter but no later than 72 hours. Doxycycline 200 mg orally every 24 hours is the maximum dose. Doxycycline should be administered with fluids and the recipient should remain upright for 30 minutes after the dose. Taking doxycycline with food may increase tolerability by reducing potential gastrointestinal upset. Doxycycline should not be taken with antacids, divalent cations such as calcium, iron or magnesium supplements or vitamins. Doxycycline is contraindicated in the second and third trimester of pregnancy due to the risk to the fetus of tooth discoloration.

When providing Doxy-PEP, the initial assessment should include STI evaluation and testing at all relevant anatomic sites and testing for syphilis and HIV. Presumptive treatment of individuals with symptoms or known exposure to a bacterial STI is recommended at the time, if suspected during initial evaluation. Risk reduction counseling, including condoms and discussion of partner-number-reduction, should be provided. Both pre- and post-exposure prophylaxis for HIV should also be offered. Lastly, discussion of known benefits as well as known/unknown risks of doxycycline as PEP should be provided.⁷

Follow-up for patients receiving Doxy-PEP should consist of screening for STI, including alternate site testing and testing for HIV and syphilis. Follow up is recommended every 3 months. Availability of HIV PrEP should be reiterated for any individual not already receiving it. Risk reduction messaging and condoms are to be provided at all follow up visits. Importance of STI evaluation any time symptoms are experienced should be stressed. Doxy-PEP is NOT intended for symptom management. An adequate supply of doxycycline should be provided to cover until the next follow up visit, based on individual needs.

If an individual is found to have an STI during the course of Doxy-PEP provision, the STI is treated as per current STI guidelines.² Partner management, when a recipient of Doxy-PEP is found to have an STI, falls under standard STI

treatment recommendations. Alternate site testing of the oropharynx and anus is to be offered. Testing for HIV and syphilis is recommended. Consideration of HIV PrEP is also recommended for all partners not already living with HIV.

Expedited partner therapy (EPT) for gonorrhea and chlamydia in MSM and TGW is not recommended by the CDC. However, current CDC recommendations do allow for shared decision-making regarding EPT when partners of MSM and TGW diagnosed with gonorrhea or chlamydia are “not likely to access timely evaluation and treatment”.⁸

People engaging in anal intercourse are at increased risk for hepatitis A, B, and C. Hepatitis B and C screening is recommended. Immunization for hepatitis A, B, MPOX and HPV should be considered.⁷

Findings:

The NPTC reviewed Doxy-PEP at the 2024 Spring meeting. No changes were made to the NCF as doxycycline was previously added in April 2021 as part of STI treatment.

- Doxy-PEP should be considered for MSM and TGW with bacterial STI in the previous 12 months.
- Doxy-PEP is ideally taken as doxycycline 200 mg by mouth within 24 hours of condomless sex, up to within 72 hours of sexual contact.
- Maximum dose is doxycycline 200 mg every 24 hours.
- Doxy-PEP is not recommended for cis-gender women given that the only data assessing its effectiveness in this group showed no benefit. Further study in this group is necessary.
- Quarterly STI screening of all anatomical sites for gonorrhea and chlamydia, as well as testing for syphilis and HIV is recommended for those on Doxy PEP. Every 6-month screening may be adequate in some individuals with less risk.
- Assess need for HIV PrEP in those whose risk makes Doxy-PEP a consideration
- Additional services such as hepatitis screening and immunization, MPOX and HPV immunization should be assessed in all individuals who are considered for Doxy-PEP

If you have any questions regarding this document, please contact the NPTC at IHSNPTC1@ihs.gov . For more information about the NPTC, please visit the [NPTC website](#).

References:

1. U.S. Centers for Disease Control and Prevention. [National Overview of STIs, 2022](#). Accessed April 2024.
2. Indian Health Service. National Pharmacy and Therapeutics Committee: [Formulary Brief: Sexually Transmitted Infections](#). Published April 2021
3. Luetkemeyer AF, Donnell D, Dombrowski JC, et al. [Postexposure Doxycycline to Prevent Bacterial Sexually Transmitted Infections](#). NEJM, 2023; 388;1296-1306.
4. Molina J, Charreau I, Chidiac C, et al. [Post-exposure prophylaxis with doxycycline to prevent sexually transmitted infections in men who have sex with men: an open-label randomised substudy of the ANRSIPERGAY trial](#). Lancet Infect Dis 2018; 18: 308–17.
5. Molina J. [ANRS 174 Doxyvac: An open-label randomized trial to prevent STIs in MSM on PrEP](#). 2024 CROI Abstract, Denver, CO; March 6, 2024.
6. Stewart J, Oware K, Donnell D, et al. [Doxycycline Prophylaxis to Prevent Sexually Transmitted Infections in Women](#). N Engl J Med. 2023 21;389(25):23312340.
7. Indian Health Service. National Pharmacy and Therapeutics Committee. [Interim guidance for the use of doxycycline post-exposure prophylaxis \(DoxyPEP\) for bacterial sexually transmitted infection prevention](#). Published October 2, 2023.
8. U.S. Centers for Disease Control and Prevention. [Expedited Partner Therapy](#). Accessed April 2024.