

**NEW MEXICO HEALTH ALERT NETWORK (HAN)**  
**Doxycycline Post-Exposure Prophylaxis (doxy-PEP) for the Prevention of**  
**Bacterial Sexually Transmitted Infections**  
**August 23, 2023**

**Background:** In light of significant increases in sexually transmitted infections (STIs) in New Mexico and nationally, the New Mexico Department of Health (NMDOH) would like to share information about a new strategy for STI prevention: **doxycycline post-exposure prophylaxis (doxy-PEP)**. Doxycycline, when taken after condomless sex, significantly reduces chlamydia (CT), gonorrhea (GC), and syphilis infections in studies done in men who have sex with men and transgender women<sup>1</sup>.

Reducing STI rates in New Mexico is an urgent public health priority. Among states, NM had the second highest rate of syphilis, the 9<sup>th</sup> highest rate of chlamydia and the 16<sup>th</sup> highest rate of gonorrhea in 2021 which is the most recent data available from CDC<sup>2</sup>. Doxy-PEP is the first biomedical prevention tool for **bacterial STIs** that has been shown to be effective and well-tolerated.

**Recommendations for Clinicians:**

1. **Recommend doxy-PEP** to men who have sex with men (MSM) or transgender women (TGW) who have had one or more bacterial STI in the past 12 months.
2. **Offer doxy-PEP using shared decision-making** to all non-pregnant individuals at increased risk for bacterial STIs and to those requesting doxy-PEP, even if these individuals have not been previously diagnosed with an STI or have not disclosed their risk status.
3. For all sexually active individuals, **provide comprehensive sexual health counseling and education**, including HIV/STI screening, HIV PrEP and PEP, immunizations, condoms, and contraception as appropriate.

**Prescribing doxy-PEP:**

The Centers for Disease Control and Prevention (CDC) has released considerations for doxy-PEP as an [STI prevention strategy](#), and more detailed guidance is expected soon. In the meantime, NMDOH endorses use of California Department of Public Health's guidelines to providers<sup>3</sup>:

1. Prescribe 200 mg of doxycycline to be taken within 72 hours (ideally as soon as possible) after condomless oral, anal, or vaginal sex. Doxycycline can be taken daily depending on sexual activity, but no more than 200 mg every 24 hours. Clinicians can prescribe an amount of doxycycline to meet a patient's anticipated use for 1 – 3 months.
2. Either immediate release or delayed release doxycycline may be prescribed. Immediate release may be less expensive and should be equivalently bioavailable. The delayed release formulation has an enteric coating which delays release until further down the GI tract which prevents nausea but doesn't change the pharmacokinetics.

3. Screen for GC and CT at all anatomic sites of exposure (urogenital, pharyngeal, and/or rectal), syphilis and HIV (if not a known PLWH) at initiation of doxy-PEP and every three months. If diagnosed with an STI, treat according to CDC [STI Treatment Guidelines \(cdc.gov\)](#).
4. Counsel persons who can become pregnant that doxycycline should not be taken during pregnancy. Rule out pregnancy prior to prescribing doxy-PEP.
5. Counsel patients on standard precautions and warnings while taking doxy-PEP, (e.g., sun sensitivity, pill esophagitis, and rarely intracranial hypertension).
6. Consider hematopoietic, renal, and hepatic laboratory monitoring as clinically indicated<sup>4</sup>.

**Evidence:**

A [randomized, open-label study](#) concluded that doxy-PEP decreased bacterial STIs by two thirds in MSM and TGW who were taking HIV PrEP or were living with HIV and had had a bacterial STI in the previous year<sup>1</sup>. In persons taking HIV PrEP, taking doxy-PEP reduced syphilis by 87%, CT by 88%, and GC by 55%; in People Living with HIV (PLWH), doxy-PEP reduced syphilis by 77%, CT by 74%, and GC by 57%.

Of note, a randomized trial of cisgender Kenyan women did not show doxy-PEP to be protective against STIs<sup>5</sup>, although pharmacologic studies suggest that doxycycline levels in vaginal fluid should be sufficient to provide such protection<sup>6</sup>. Further studies are needed to understand the potential role of doxy-PEP for bacterial STI prevention in cisgender women.

**Safety:**

Long-term doxycycline has been prescribed safely for other medical indications (e.g., acne treatment, malaria prophylaxis). No serious adverse events have been reported in doxy-PEP studies. While initial data are reassuring, additional research and longer follow-up are needed to determine whether doxy-PEP is associated with resistance in commensal oropharyngeal *Neisseria* species, the gut microbiome, and other STI pathogens.

**References:**

1. Luetkemeyer et al. [Postexposure Doxycycline to Prevent Bacterial Sexually Transmitted Infections | NEJM](#). N Engl J Med. 2023;388(14):1296-1306. doi:10.1056/NEJMoa2211934
2. [Tables \(cdc.gov\)](#)
3. [CDPH Doxy-PEP Recommendations for Prevention of STIs \(ca.gov\)](#)
4. FDA. Package Insert for Doryx® (doxycycline hyclate) and Doryx® MPC Delayed-Release Tablets. February 2018. [label \(fda.gov\)](#)
5. Stewart et al. "Doxycycline Postexposure Prophylaxis for Prevention of STIs among Cisgender Women." Oral Abstract 121 at: Conference on Retroviruses and Opportunistic Infections (CROI); 2023 Feb 19-22; Seattle, Washington
6. Haaland et al. "Mucosal Pharmacology of Doxycycline for Bacterial STI Prevention in Men and Women." Oral Abstract 118 at: Conference on Retroviruses and Opportunistic Infections (CROI); 2023 Feb 19-22; Seattle, Washington

**Additional Resources:**

National Coalition of STI Directors (NCSD) Doxy-PEP resources: [Doxy as STI PEP Command Center | NCSD \(ncsddc.org\)](#)

NMDOH STD Homepage: [Sexually Transmitted Diseases \(nmhealth.org\)](#)

CDC 2021 STI Treatment Guidelines: [STI Treatment Guidelines \(cdc.gov\)](#)

California Prevention Training Center: [California Prevention Training Center \(CAPTC\) \(californiapctc.com\)](#)

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