

Table 1: Considerations for Doxy-PEP Implementation	
Considerations	Comments
Available formulations	<ul style="list-style-type: none"> • Doxycycline hyclate delayed-release 200 mg oral tablet • Doxycycline hyclate or monohydrate immediate-release 100 mg oral capsule or tablet (2 capsules or tablets taken together for a total of 200 mg) • The immediate-release formulations are more widely available and usually cost less than the delayed-release formulation.
Administration	<ul style="list-style-type: none"> • As doxy-PEP, 200 mg of doxycycline should ideally be taken within 24 hours after condomless sex, up to 72 hours maximum. • No more than 200 mg of doxycycline should be taken in a 24-hour period. • Milk and vitamins containing positive cations (e.g., calcium, zinc, magnesium) should be avoided within 2 hours of taking doxycycline, because these interfere with doxycycline absorption and may lower doxycycline levels, potentially reducing efficacy.
Contraindications, drug-drug interactions, and dose adjustments	<ul style="list-style-type: none"> • Doxy-PEP should not be used concurrently with other doxycycline therapy (or any other tetracycline-class antibiotic) for treatment or prevention of a health condition (e.g., acne, rosacea, malaria prophylaxis). • No significant drug-drug interactions exist between doxycycline and ARVs used for HIV treatment or PrEP. • No known drug reactions exist between doxycycline and gender-affirming hormone therapies. • No doxycycline dose adjustments are indicated for patients with renal dysfunction. • Doxycycline is generally contraindicated during pregnancy because of potential adverse effects on the fetus [FDA 2016].
Adverse effects	<ul style="list-style-type: none"> • GI adverse effects are common; taking doxycycline with food may help alleviate nausea or GI upset. Symptoms including nausea, vomiting, and reflux can be severe enough to require cessation of doxycycline. • Esophageal injury and irritation can occur. Doxycycline should be taken with an 8-oz glass of water and the individual should remain upright for 30 minutes to 1 hour after dosing. • Skin photosensitivity and phototoxicity can occur; wearing sunscreen, limiting sun exposure, and avoiding tanning beds can help prevent sunburn and other skin injury. • Intracranial hypertension is a rare but serious adverse effect. Refractory headaches or vision changes should be evaluated promptly by a clinician. • Doxycycline use may select for antibiotic-resistant organisms, which can cause infections in some circumstances and can disrupt the microbiome.
Supply of doxy-PEP medications	<ul style="list-style-type: none"> • A 30- to 90-day supply is recommended, with actual number of pills to be determined by anticipated or actual dosing frequency during that time (see dose quantity below). • Dose quantity: <ul style="list-style-type: none"> – For delayed-release doxycycline 200 mg tablets, the quantity dispensed should not exceed 90 doses per 3 months. – For immediate-release 100 mg capsules or tablets, the quantity dispensed should not exceed 180 doses per 3 months. – The quantities above are the maximum number to be dispensed; many patients will not need such a large quantity. Shared decision-making can determine the lowest quantity needed based on the frequency of condomless sexual encounters during the prescribing interval.
Follow-up and laboratory monitoring	<ul style="list-style-type: none"> • Engage patients taking doxy-PEP in ongoing comprehensive sexual health services that include STI screening, HIV PrEP, immunizations, and other health promotion strategies as indicated [a]. • At least every 3 months: <ul style="list-style-type: none"> – Screen for syphilis, HIV if not previously diagnosed, gonorrhea, and chlamydia (including extragenital testing when indicated), ensuring that tests have been obtained before providing a doxy-PEP prescription refill. – Screen for hepatitis B virus at initiation, and screen for hepatitis C virus at least annually [CDC 2024]. – Offer HIV PrEP or HIV treatment as needed. – Assess for ongoing doxy-PEP needs and continue in shared decision-making as new evidence becomes available. • The doxycycline package insert advises periodic monitoring of hepatic function, renal function (specifically BUN), and CBC with prolonged therapy. Such monitoring may not be necessary with intermittent dosing.

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Key points for patient education	<ul style="list-style-type: none"> • Medication administration instructions and contraindications: See above. • Protective effect: Doxy-PEP is not 100% effective and is not effective against all STIs. For cisgender men and transgender women at risk of STIs who were engaged in routine sexual healthcare, doxy-PEP reduced the likelihood of an STI diagnosis by >50% [Luetkemeyer, et al. 2023]. Evaluation by a clinician after a possible STI exposure is necessary to determine whether treatment is needed. • Adverse effects: Doxycycline can cause GI adverse effects, photosensitivity, and esophageal irritation, which can be mitigated using strategies noted above. Long-term doxycycline use may increase the risk of developing an antibiotic-resistant infection. The potential long-term effects of doxy-PEP use are not known at this time. • Ongoing screening: Screening for STIs every 3 months is necessary while taking doxy-PEP. Routine HIV testing should continue in individuals at risk of HIV.
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Abbreviations: ARV, antiretroviral medication; BUN, blood urea nitrogen; CBC, complete blood count; doxy-PEP, doxycycline post-exposure prophylaxis; GI, gastrointestinal; PrEP, pre-exposure prophylaxis; STI, sexually transmitted infection.

Note:

- a. See the Centers for Disease Control and Prevention [STI Treatment Guidelines](#) and the NYSDOH AI guidelines [PrEP to Prevent HIV and Promote Sexual Health](#) and [Immunizations for Adults With HIV](#).

References

- FDA. Doxycycline hyclate delayed-release tablets, for oral use. 2016 Apr. https://www.accessdata.fda.gov/drugsatfda_docs/label/2016/90431Orig1s010lbl.pdf [accessed 2024 Aug 19]
- CDC. Doxy PEP for bacterial STI prevention. 2024 Aug 14. <https://www.cdc.gov/sti/hcp/doxy-pep/index.html> [accessed 2024 Oct 7]
- Luetkemeyer A. F., Donnell D., Dombrowski J. C., et al. Postexposure doxycycline to prevent bacterial sexually transmitted infections. *N Engl J Med* 2023;388(14):1296-1306. [PMID: 37018493] <https://www.ncbi.nlm.nih.gov/pubmed/37018493>