



Post-exposure Doxycycline to Prevent Bacterial Sexually Transmitted Infections (DoxyPEP)

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Conflict of Interest

- I have nothing to disclose

Learning Objectives

- Discuss the current recommendation on the use of doxycycline for post-exposure prophylaxis
- Review the DoxyPEP trial and how to apply to clinical practice

Assessment Question #1

What is the primary purpose of DoxyPEP in the context of STI prevention?

- a. To treat active sexually transmitted infections (STIs)
- b. To prevent STI transmission after potential exposure
- c. To provide long-term protection against all STIs
- d. To replace the need for regular STI screenings

Assessment Question #2

Which of the following is a recommended guideline for the administration of DoxyPEP?

- a. It should be taken daily regardless of exposure.
- b. It should be taken as a single dose within 72 hours after potential exposure.
- c. It should be taken weekly to prevent STI transmission.
- d. It should be used as a substitute for safer sex practices.

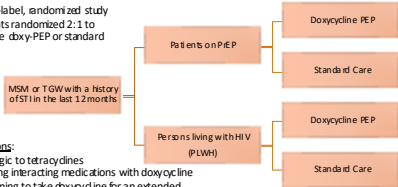
Background: Doxycycline

- Broad-spectrum tetracycline
- Well absorbed and tolerated
- Low incidence of failure/side effects.
 - Most common adverse effects: photosensitivity and esophageal erosion/ulceration
- No dose adjustment/monitoring required
- Recommended regimen for chlamydia and an alternative treatment for syphilis in non-pregnant patients with penicillin allergy
- Used as pre-exposure prophylaxis (PrEP) or post-exposure prophylaxis (PEP) for malaria and Lyme disease

MMA Learning 2023/24 (v. 8-23)-1

Trial Design

- Open-label, randomized study
- Patients randomized 2:1 to receive doxy-PEP or standard care



Exclusions:

- Allergic to tetracyclines
- Taking interacting medications with doxycycline
- Planning to take doxycycline for an extended period

N Engl J Med 2023; 389:1308-1316

Baseline Characteristics

Total (n = 501)	HIV PEP Cohort		PLWH Cohort	
	Doxycycline (n = 228)	Standard care (n = 107)	Doxycycline (n = 139)	Standard care (n = 59)
Age, mean (range) (yr)	36 (11-42)	36 (11-42)	43 (16-54)	42 (17-50)
Race (%)				
White	69%	63%	64%	70%
Black	4%	5%	13%	13%
Asian	16%	12%	6%	2%
Multiple races or other	11%	20%	17%	15%
Hispanic or Latino ethnic group (%)	25%	38%	34%	25%
Gender identity (%)				
Men	96%	100%	92%	98%
Transgender woman or gender diverse	4%	0%	8%	2%
Any STI at baseline (%)	30%	22%	30%	36%
STI in the past 12 months (%)				
Gonorrhea	70%	73%	60%	68%
Chlamydia	62%	59%	49%	58%
Syphilis (primary, secondary, or early latent)	15%	1%	29%	20%
≥ 2 bacterial STIs in the past 12 months	48%	41%	33%	47%
Median of sexual partners in the past 3 months (IQR)	8 (4-17)	10 (5-16.5)	7 (3-18.5)	10 (5-19.0)
Annual income (%)				
< \$20,000	14%	12%	35%	31%
\$20,001 - \$50,000	19%	37%	34%	40%
\$50,001 - \$75,000	21%	13%	18%	9%
> \$75,000	38%	38%	13%	20%

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Primary Outcome

A: PEP Cohort	Doxycycline		Standard Care		Relative Risk (95% CI)	P Value	B: PLWH Cohort	Doxycycline		Standard Care		Relative Risk (95% CI)	P Value
	n	%	n	%				n	%	n	%		
Primary outcome													
Any STI	61/218 (28.0)	28.0	43/107 (40.2)	40.2	0.14 (0.04-0.36)	<0.001	69/139 (49.6)	49.6	46/59 (78.1)	78.1	0.38 (0.24-0.58)	<0.001	
Any gonorrhea	52/218 (23.9)	23.9	32/107 (30.0)	30.0	0.15 (0.02-0.31)	<0.001	47/139 (33.8)	33.8	32/59 (54.2)	54.2	0.39 (0.25-0.59)	<0.001	
Any chlamydia	50/218 (23.0)	23.0	32/107 (30.0)	30.0	0.15 (0.02-0.31)	<0.001	47/139 (33.8)	33.8	32/59 (54.2)	54.2	0.39 (0.25-0.59)	<0.001	
Any syphilis	8/218 (3.7)	3.7	1/107 (0.9)	0.9	0.11 (0.00-0.33)	0.002	12/139 (8.6)	8.6	2/59 (3.4)	3.4	0.25 (0.05-1.12)	0.03	
Any bacterial STI	58/218 (26.6)	26.6	39/107 (36.4)	36.4	0.16 (0.03-0.32)	<0.001	59/139 (42.4)	42.4	40/59 (67.8)	67.8	0.39 (0.25-0.59)	<0.001	
≥ 2 bacterial STIs	33/218 (15.1)	15.1	21/107 (19.6)	19.6	0.11 (0.01-0.24)	<0.001	27/139 (19.4)	19.4	20/59 (33.9)	33.9	0.39 (0.25-0.59)	<0.001	
Any new syphilis	0/218 (0.0)	0.0	0/107 (0.0)	0.0	0.00 (0.00-0.00)	0.000	0/139 (0.0)	0.0	0/59 (0.0)	0.0	0.00 (0.00-0.00)	0.000	
≥ 1 bacterial STI and any STI	58/218 (26.6)	26.6	39/107 (36.4)	36.4	0.16 (0.03-0.32)	<0.001	59/139 (42.4)	42.4	40/59 (67.8)	67.8	0.39 (0.25-0.59)	<0.001	
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Any bacterial STI and any syphilis	66/218 (30.3)	30.3	44/107 (41.1)	41.1	0.17 (0.04-0.37)	<0.001	71/139 (51.1)	51.1	42/59 (71.2)	71.2	0.39 (0.25-0.59)	<0.001	
Any STI and any syphilis	69/218 (31.7)	31.7	46/107 (43.0)	43.0	0.18 (0.05-0.39)	<0.001	81/139 (58.3)	58.3	48/59 (81.3)	81.3	0.39 (0.25-0.59)	<0.001	
Any bacterial STI and any syphilis	66/218 (30.3)	30.3	44/107 (41.1)	41.1	0.17 (0.04-0.37)	<0.001	71/139 (51.1)	51.1	42/59 (71.2)	71.2	0.39 (0.25-0.59)	<0.001	
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PREVENTATIVE CARE
POST-EXPOSURE PROPHYLAXIS FOR
BACTERIAL SEXUALLY TRANSMITTED INFECTIONS (STI PEP)
 STATEWIDE DRUG THERAPY MANAGEMENT PROTOCOL for the OREGON PHARMACIST

AUTHORITY and PURPOSE: Per [ORS 689.645](#), a pharmacist may provide patient care services pursuant to a statewide drug therapy management protocol.

➤ Following all elements outlined in [OAR 855-115-0330](#) and [OAR 855-115-0331](#), a pharmacist licensed and located in Oregon may prescribe post-exposure preventative treatment for chlamydia, gonorrhea, and syphilis (STI PEP).

STANDARDIZED PATIENT ASSESSMENT PROCESS ELEMENTS:

- Utilize the standardized STI PEP Patient Intake Form (pg. 2)
- Utilize the standardized STI PEP Assessment and Treatment Care Pathway (pg. 3-6)
- Utilize the standardized STI PEP Prescription Template (optional) (pg. 7)
- Utilize the standardized STI PEP Provider Fax (pg. 8)
- Utilize the standardized STI PEP Patient Informational Handout (pg. 9-10)

Assessment Question #1

What is the primary purpose of DoxyPEP in the context of STI prevention?

- a. To treat active sexually transmitted infections (STIs)
- b. To prevent STI transmission after potential exposure
- c. To provide long-term protection against all STIs
- d. To replace the need for regular STI screenings

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Assessment Question #2

Which of the following is a recommended guideline for the administration of DoxyPEP?

- a. It should be taken daily regardless of exposure.
- b. It should be taken as a single dose within 72 hours after potential exposure.
- c. It should be taken weekly to prevent STI transmission.
- d. It should be used as a substitute for safer sex practices.

Assessment Question #2

Which of the following is a recommended guideline for the administration of DoxyPEP?

- a. It should be taken daily regardless of exposure.
- b. **It should be taken as a single dose within 72 hours after potential exposure.**
- c. It should be taken weekly to prevent STI transmission.
- d. It should be used as a substitute for safer sex practices.

References

* Bachmann et al., Barbera JA, Chan P, et al. ED Clinical Guidelines on the Use of Doxycycline Post-exposure Prophylaxis for Bacterial Sexually Transmitted Infection Prevention. *United States 2024 MMWR Recomm Rep* 2024; 73(9): RR-013-9. <https://www.cdc.gov/mmwr/preview/mmwrhtml/rr7309a1.htm>

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* Mohr JA, Chameau L, 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 ANRS IPERGAY trial. *Lancet Infect Dis*. 2023;14(10):1028-1037.

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