

# HIV PrEP and DoxyPEP

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# Disclosures

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## Learning Objectives

- Review HIV PreExposure Prophylaxis (PrEPP) – options and benefits
- Review DoxyPep - benefits
- Think about how you discuss PrEP and DoxyPEP with patients

## Case - Jace

A 24yo male comes to your clinic for a work physical

Personal trainer at a local gym

Eventually wants to open his own gym

He is healthy and has no concerns



# Case - Jace

He take no medications

He does not smoke

He drinks occasionally

Uses no drugs

Exercises daily



# Case - Jace

What do you want to know about Jace's sexual history?



# GOALS Framework – Sexual History

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**G**ive a preamble that emphasizes sexual health

**O**ffer opt-out HIV/STI testing and information

**A**sk an open-ended question

**L**isten for relevant information and probe to fill in the blanks

**S**uggest a course of action

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# Give a preamble that emphasizes sexual health

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## Rationale & Intent

- Focuses on sexual health, not risk
- Normalizes sexuality as part of health and healthcare
- Opens the door for the patient's questions
- Clearly states a desire to understand and help

*I'd like to talk with you for a couple of minutes about your sexuality and sexual health. I talk to all my patients about sexual health, because it's such an important part of overall health.*

*Some of my patients have questions or concerns about their sexual health, so I want to make sure I understand what your questions or concerns might be and provide whatever information or other help you might need.*



# Offer opt-out HIV/STI testing and information

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## Rationale & Intent

- Does not commit to specific tests but normalizes testing
- Sets up the idea that you will recommend some testing regardless of what the patient tells you
- Opens the door for the patient to talk about HIV or STIs as a concern

*First, I like to test all my patients for HIV and other sexually transmitted infections. Do you have any concerns about that?*

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[https://cdn.hivguidelines.org/wp-content/uploads/20230104115829/NYSDOH-AI-GOALS-Framework-for-Sexual-History-Taking-in-Primary-Care\\_1-4-2023\\_HG.pdf](https://cdn.hivguidelines.org/wp-content/uploads/20230104115829/NYSDOH-AI-GOALS-Framework-for-Sexual-History-Taking-in-Primary-Care_1-4-2023_HG.pdf)

# Ask an open-ended question

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## Rationale & Intent

- Puts the focus on the patient
- Allows you to hear what the patient thinks is most important first
- Allows you to hear the language the patient uses to talk about their body, partners, and sex

*Tell me about your sex life.*

*What would you say are your biggest sexual health questions or concerns?*

*How is your current sex life similar or different from what you think of as your ideal sex life?*

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[https://cdn.hivguidelines.org/wp-content/uploads/20230104115829/NYSDOH-AI-GOALS-Framework-for-Sexual-History-Taking-in-Primary-Care\\_1-4-2023\\_HG.pdf](https://cdn.hivguidelines.org/wp-content/uploads/20230104115829/NYSDOH-AI-GOALS-Framework-for-Sexual-History-Taking-in-Primary-Care_1-4-2023_HG.pdf)

# Case - Jace

Tell me about your sex life.

- “I think it’s pretty good.”
- “I’m not talking to any one right now.”
- “Last time I had sex was about 3 weeks ago.”



# Listen for relevant information and probe to fill in the blanks

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## Rationale & Intent

- Makes no assumption (sexual behaviors, gender of partners, number of partners)
- Can be asked of patients regardless of gender.
- Increases motivation by asking the patient to identify strategies/ interventions.

*Besides [partner(s) already disclosed], tell me about any other sexual partners.*

*How do you protect yourself against HIV and STIs?*

*How do you prevent pregnancy (unless you are trying to have a child)?*

*What would help you take (even) better care of your sexual health?*

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## Case - Jace

*Besides [partner(s) already disclosed], tell me about any other sexual partners.*

- *“May 4 or 5 over the summer.”*

*How do you protect yourself against HIV and STIs?*

- *“I don’t really do anything specific.”*

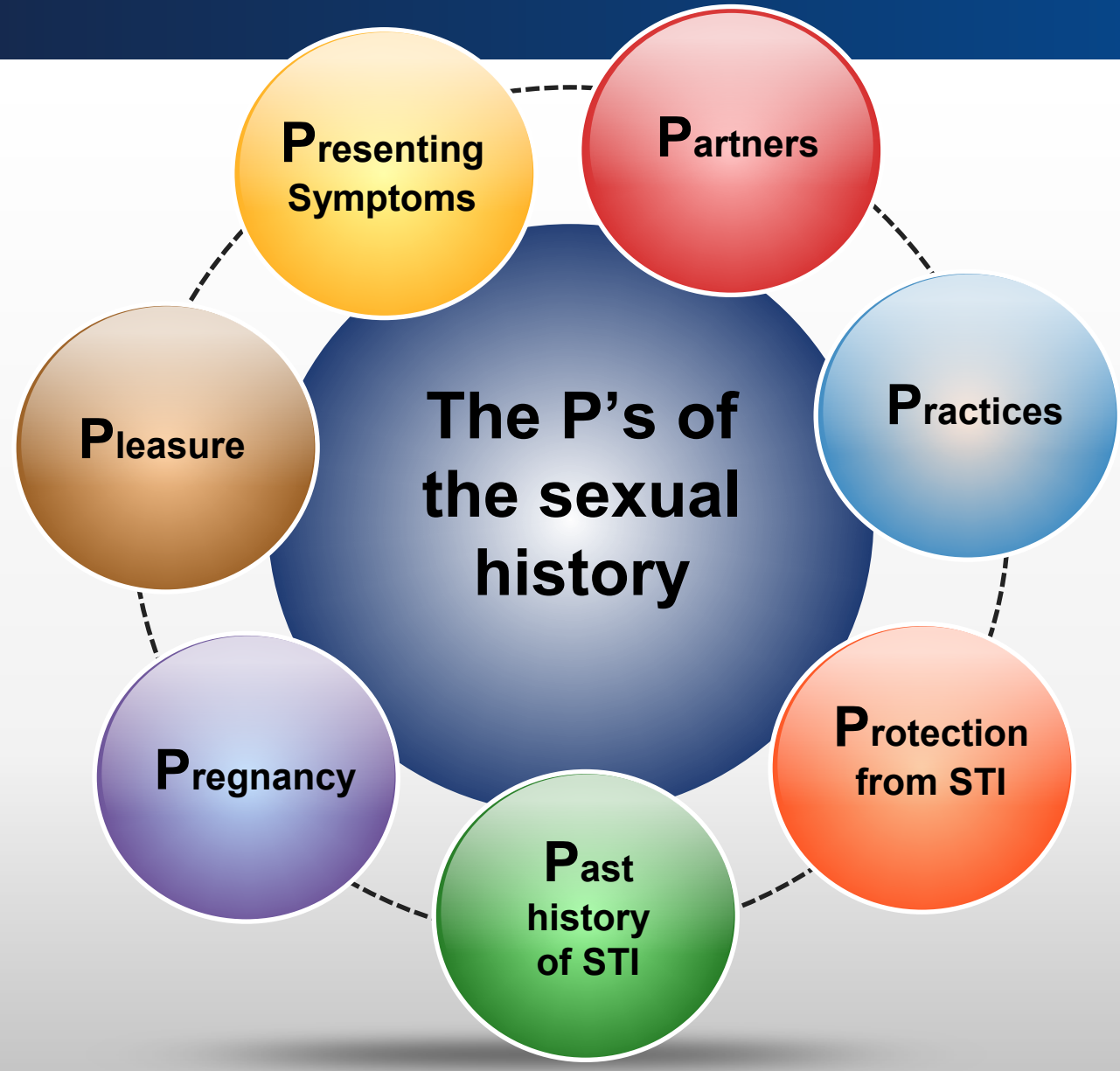
*How do you prevent pregnancy (unless you are trying to have a child)?*

- *“I don’t think you need to worry about that.”*

*What would help you take (even) better care of your sexual health?*

- *“I think it would be good to get tested today.”*





## Case - Jace

- 5 or so partners over the summer
- Oral and anal sex
- Both insertive and receptive
- Mostly condomless
- Tested maybe 2 years ago



# Suggest a course of action

## Rationale & Intent

- Allows you to tailor STI testing to the patient so they don't feel targeted
- Allows you to couch education or referral in terms of relevant benefits, tailored to the specific patient

*So, as I said before, I'd like to test you for [describe tests indicated by sexual history conversation].*

*I'd also like to talk with you about PrEP for HIV.*



What do you tell Jace about PrEP?

How do you frame it in what is important to him?

## PrEP for HIV

PrEP reduces the risk of getting HIV from sex by about 99% when taken as prescribed.

Some forms of PrEP reduce the risk of getting HIV from injection drugs use by at least 74% when taken as prescribed.

**Oral PrEP**  
1 pill taken once per day  
99% Effective if taken as prescribed

**VS**

**Injectable PrEP**  
1 injection every 2 months  
99% Effective if taken as prescribed

<https://fight.org/programs-2/forms-of-prep/>

# Oral PrEP

Emtricitibine/Tenofovir (FTC/TDF) is for people at risk for HIV through sex or injection drug use.

Emtricitabine/Tenofovir Alafenamide (FTC/TAF) is for people assigned male at birth at risk through sex. It is not for people assigned female at birth who are at risk for HIV through receptive vaginal sex.



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FTC/TDF (N = 2,665)

99.4%

Of Participants were HIV  
Negative  
Through 96 Weeks

FTC/TAF (N = 2,670)

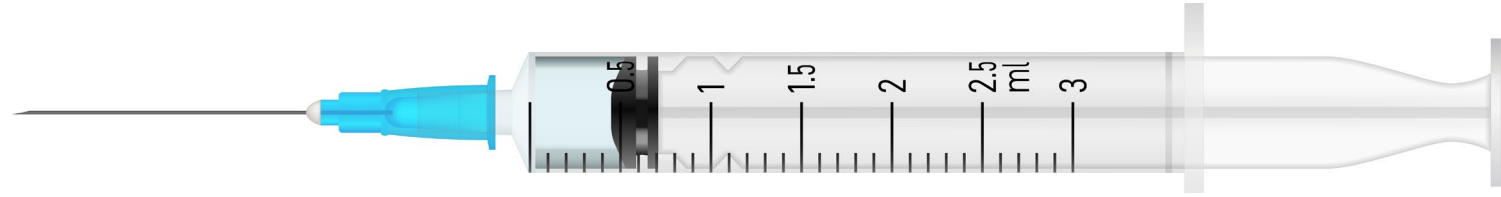
99.7%

Of Participants were HIV  
Negative  
Through 96 Weeks

Ogbuagu O, Ruane PJ, Podzamczar D, et al; the DISCOVER study team. Long-term safety and efficacy of emtricitabine and tenofovir alafenamide vs emtricitabine and tenofovir disoproxil fumarate for HIV-1 pre-exposure prophylaxis: week 96 results from a randomised, double-blind, placebo-controlled, phase 3 trial. Correction to *Lancet HIV* 2021;8(suppl):e397-e407. *Lancet HIV*. 2021;8(12):e734. doi:10.1016/S2352-3018(21)00264-2



# Injectable PrEP

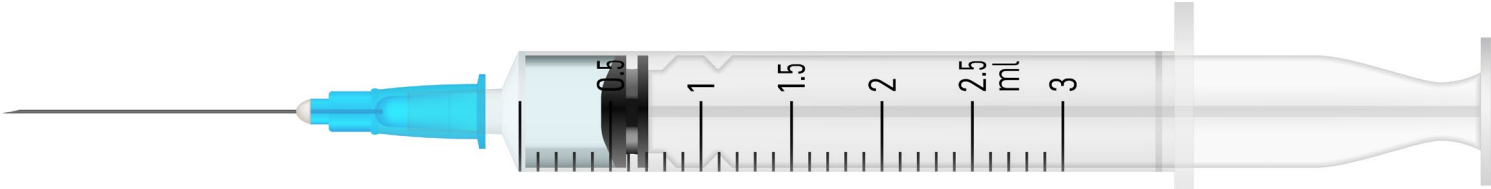


- Cabotegravir is the only shot approved for use as PrEP.
- Cabotegravir is for people at risk through sex who weigh at least 77 pounds (35 kg). Not recommended for people who inject drugs.

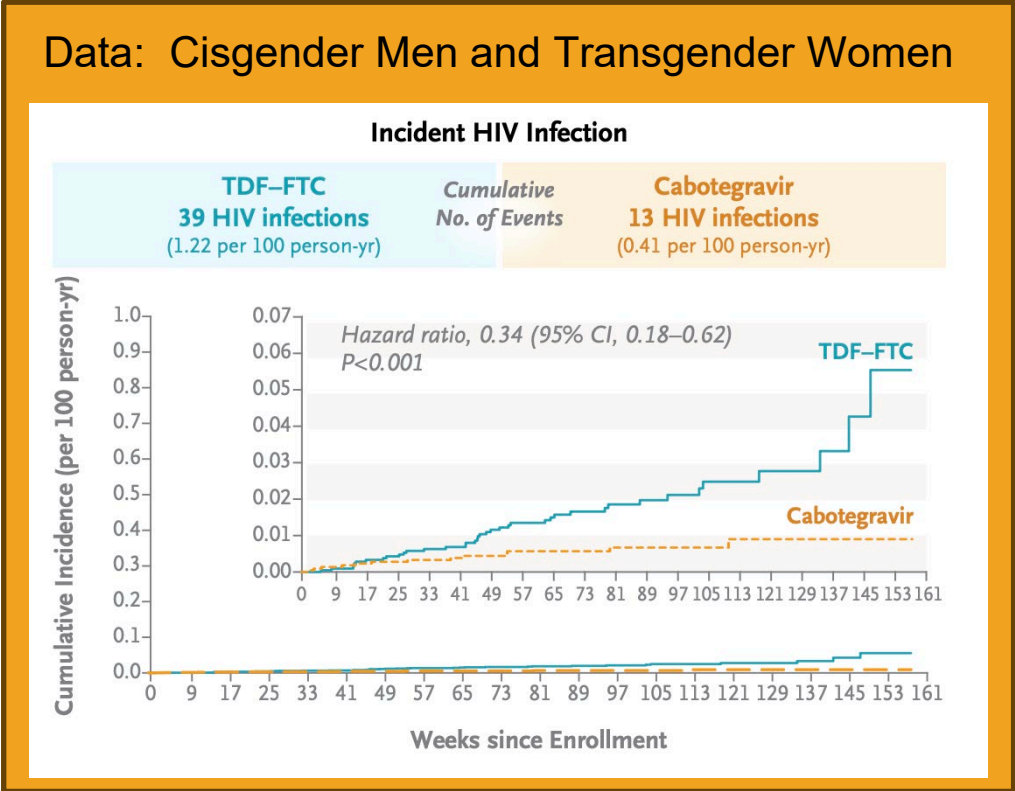
Landovitz RJ, et al. HPTN 083 Study Team. Cabotegravir for HIV Prevention in Cisgender Men and Transgender Women. N Engl J Med. 2021 Aug 12;385(7):595-608. doi: 10.1056/NEJMoa2101016. PMID: 34379922; PMCID: PMC8448593.



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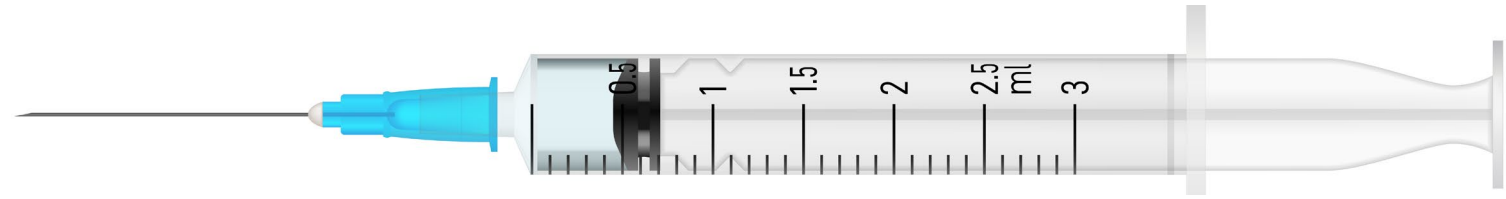
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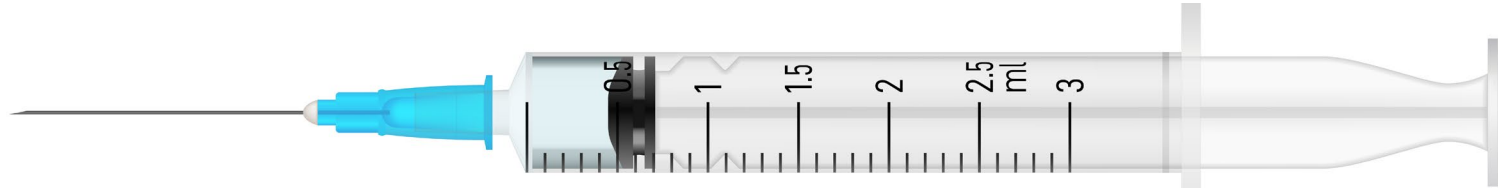
## CONCLUSIONS

Injectable cabotegravir given every 8 weeks was superior to daily oral TDF–FTC for preventing HIV infection among high-risk cisgender men and transgender women who have sex with men.

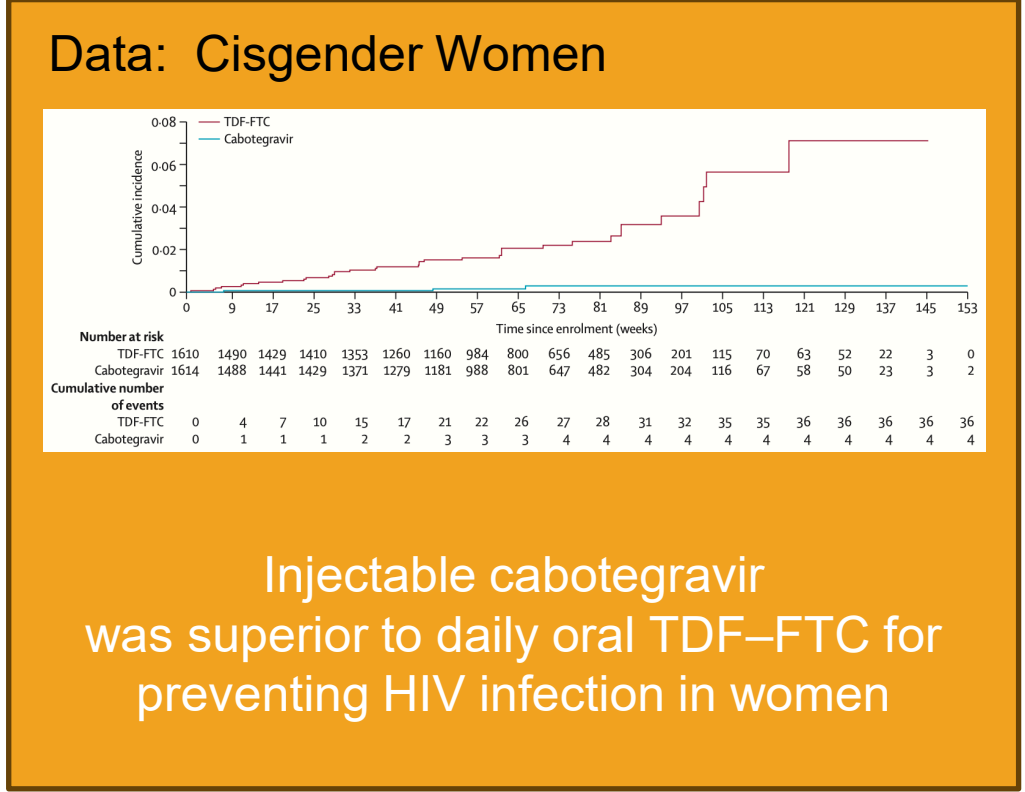
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What do you tell Jace about PrEP?

How do you frame it in what is important to him?

# Jace

- Comes back for PrEP follow up
- Tested positive for rectal gonorrhea
- Ceftriaxone 500 mg IM
- “It’ll be a long time before I have sex again.”



## What is DoxyPep?

DoxyPEP is also known as Doxycycline Post-exposure Prophylaxis.

Doxycycline is an antibiotic commonly used to treat bacterial infections.

DoxyPEP can prevent bacterial STIs like syphilis, chlamydia, and *gonorrhea* when taken after condomless sex.

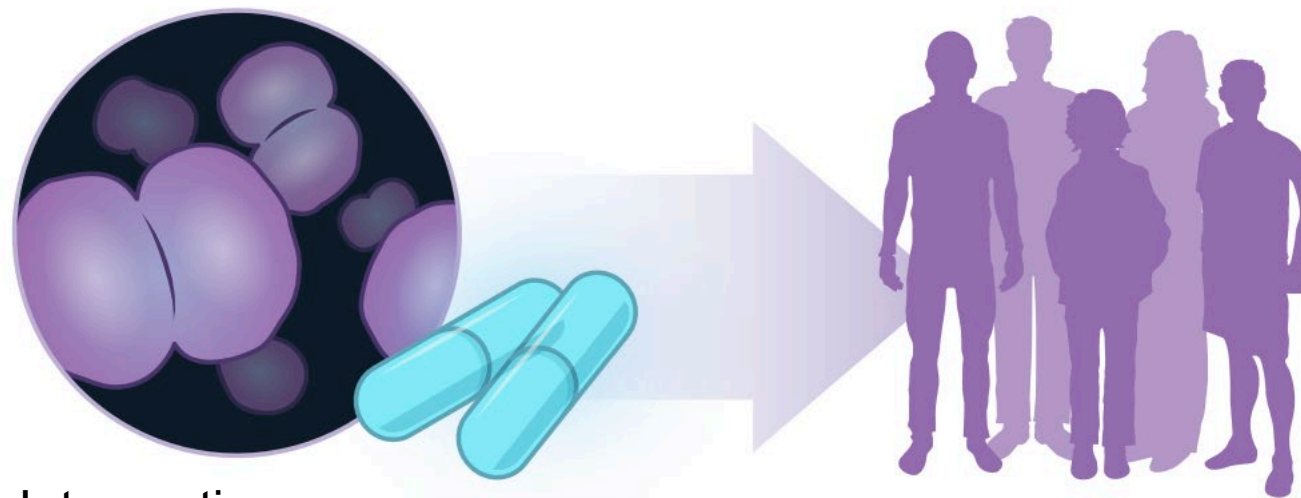
# Who is DoxyPep for?

DoxyPEP can be used by men who have sex with men (MSM) and transgender women who have sex with men who have had one or more STIs in the prior year.

# Is DoxyPep Effective?

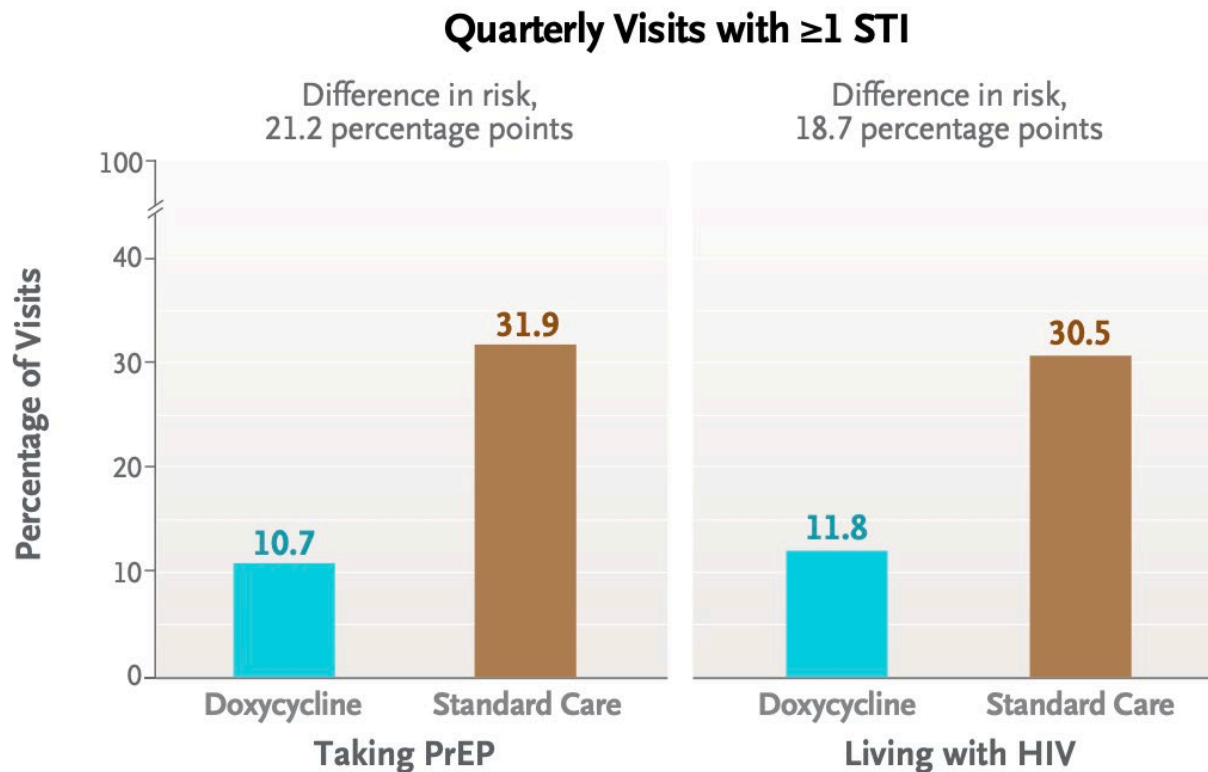
## Study Population

MSM and transgender women who were either taking HIV preexposure prophylaxis (PrEP) or living with HIV and who had had a bacterial STI in the past year.

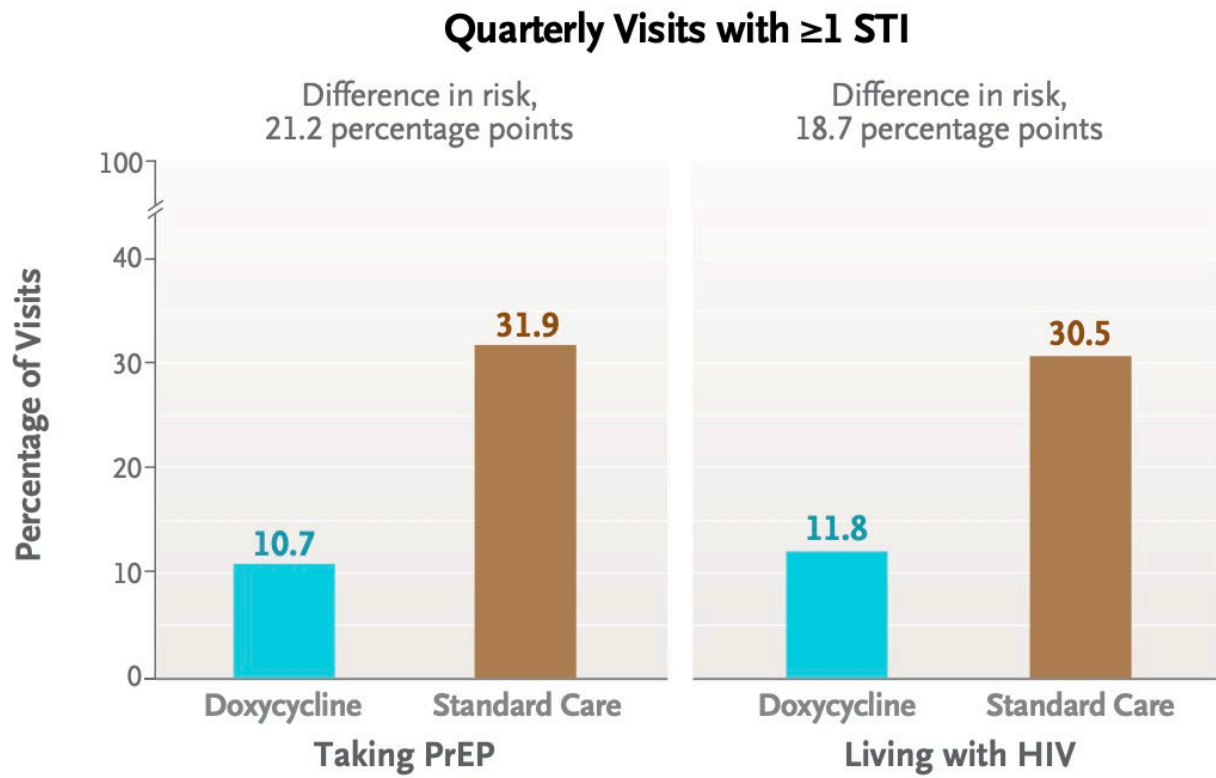


Intervention  
Doxycycline 200mg taken within 72 hours of condomless sexual activity

# Is DoxyPep Effective?



# Is DoxyPep Effective?



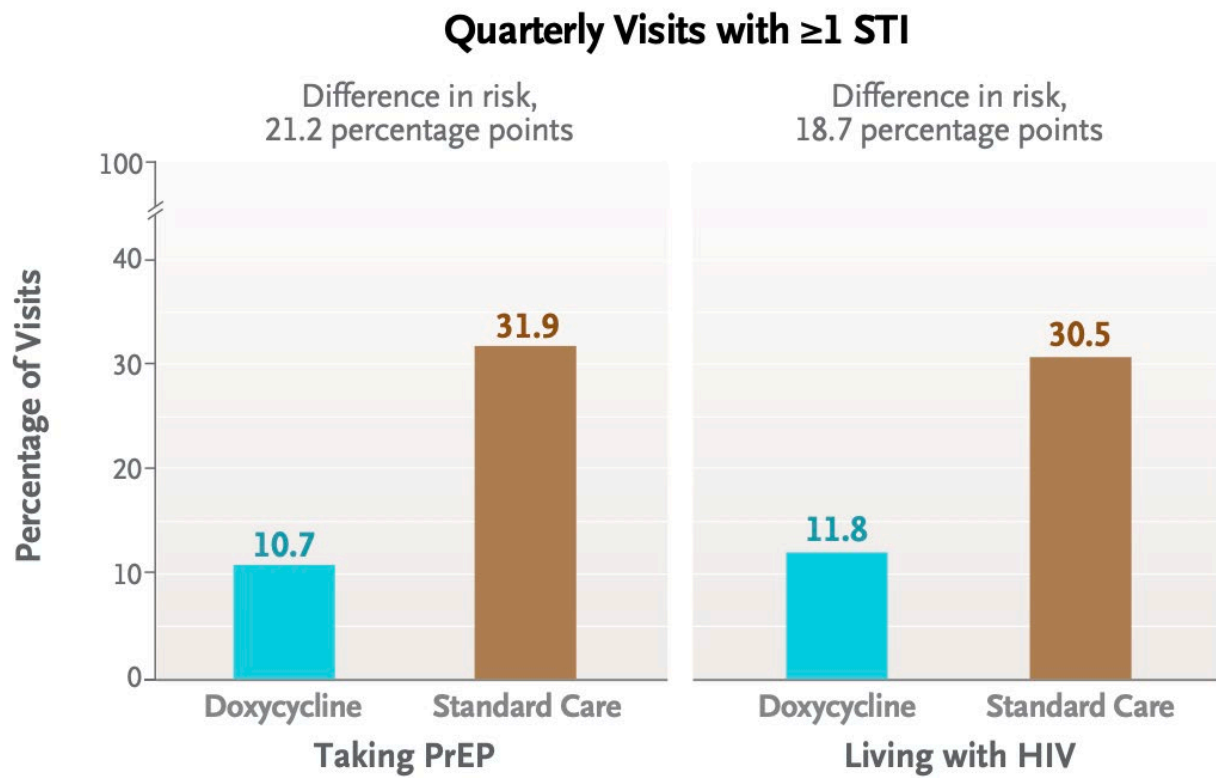
In the PrEP cohort, overall risk for

- Gonorrhea ↓ 55%
- Chlamydia ↓ 88%
- Syphilis ↓ 87%





# Is DoxyPep Effective?



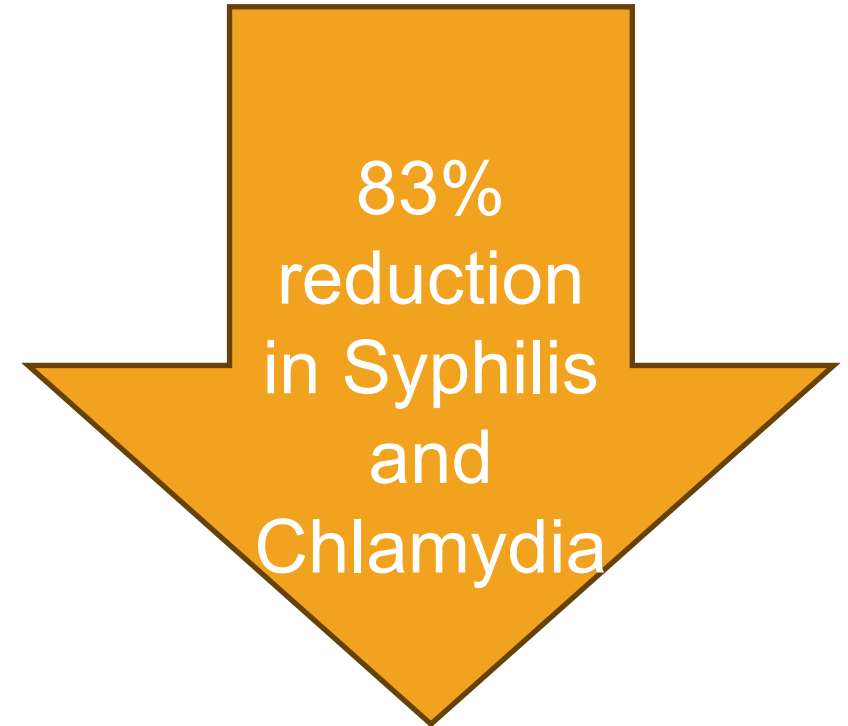
**CONCLUSIONS**

Among MSM and transgender women who had recently had a bacterial STI, doxycycline postexposure prophylaxis was associated with a lower risk of bacterial STIs than standard care.



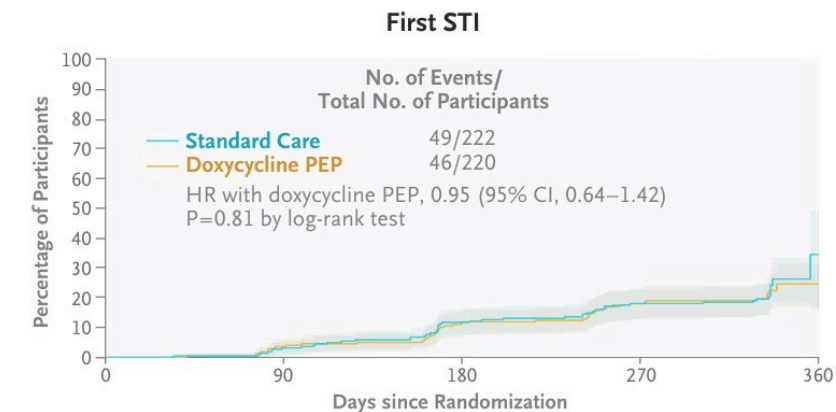
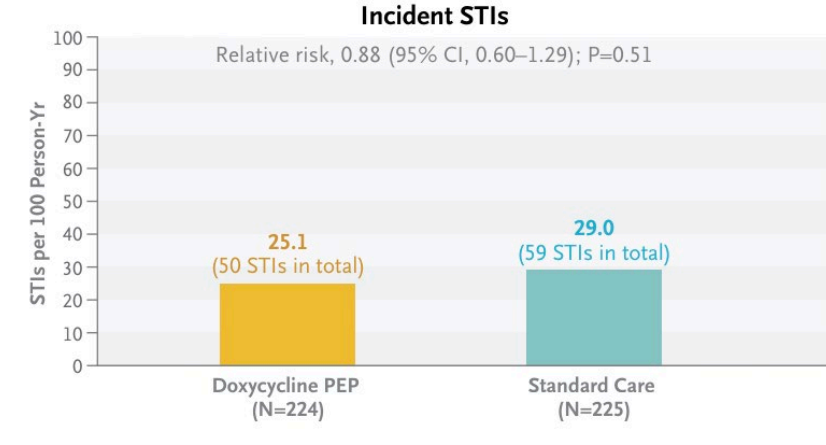
# Is DoxyPep Effective? - IPERGAY trial

- Substudy in a PrEP HIV prevention trial
- Decrease in incident cases of chlamydia and syphilis (83%)
- No difference in the incidence of gonorrhea (33%).
  - Study was done in France, where there is an already known high prevalence of tetracycline resistance



# Is DoxyPep Effective in women?

- Randomized trial assessed the efficacy and safety of doxycycline PEP among women in Kenya.
- Doxycycline PEP (200 mg of doxycycline hyclate to be taken within 72 hours after condomless sex) or standard care.
- Infection with *Chlamydia trachomatis*, *Neisseria gonorrhoeae*, or *Treponema pallidum*.



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## CONCLUSIONS

Incidence of STIs was not significantly lower with doxycycline PEP than with standard care.

But

Doxycycline use was low and tetracycline resistance in *N. gonorrhoeae* was high.

# DoxyPEP in the real world

01 2022 San Francisco Department of Public Health issues DoxyPEP Guidelines.

San Francisco AIDS Foundation's Magnet sexual health clinic began offering doxyPEP to its 3,000 clients who were already taking PrEP.

02

03

39% of the client base that was offered doxyPEP decided to incorporate it into their sexual health routine.

04

Reviewed STI cases from June 2022 to September 2023, comparing periods before and after the rollout of DoxyPEP

05

58% reduction in cases for any bacterial STI, a 67% reduction for chlamydia, and a 78% reduction for syphilis. No significant reduction in gonorrhea.



# Jace

- I'd like to start DoxyPep. How do I take it?



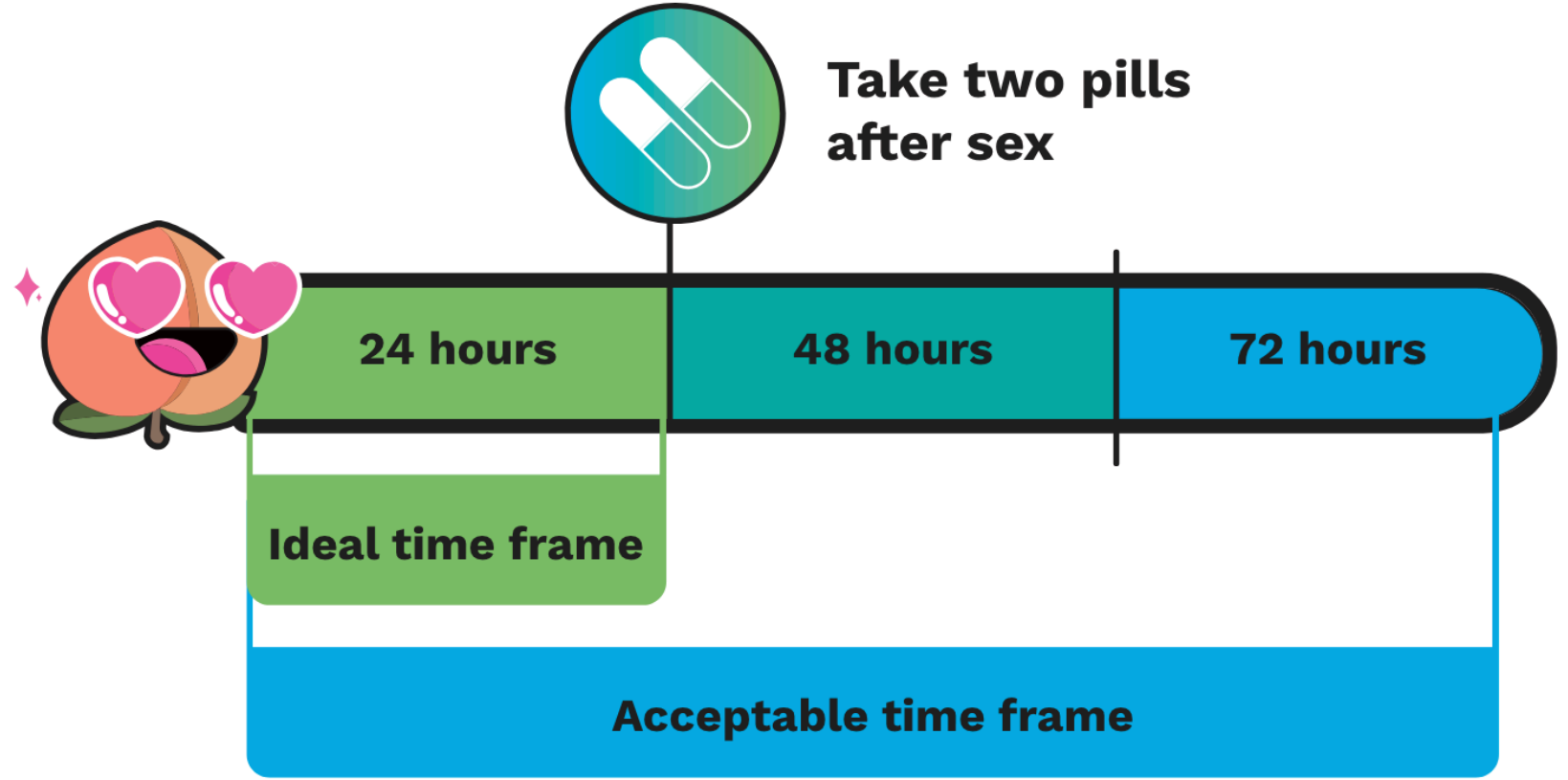
# Taking DoxyPep

## Sex daily (or more)

Take two 100-milligram (mg) pills of doxycycline within 24 hours (and no later than 72 hours) after condomless sex.

Take doxycycline as often as every day when having condomless sex but **do not take more than 200 mg (two 100 mg pills) in a 24-hour period.**

Take the last dose at least 24 hours after the previous one and within 72 hours of the last time you had condomless sex.



<https://www.nyc.gov/assets/doh/downloads/pdf/std/how-to-take-doxy-pep.pdf>



Jace decides to start  
DoxyPEP

What is important to  
discuss with Jace at the  
time of initiation of  
DoxyPEP?



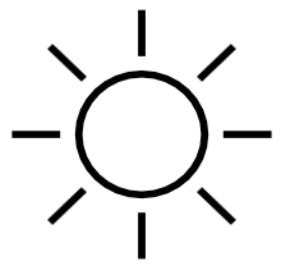
<https://www.sfcddcp.org/wp-content/uploads/2022/10/Health-Update-Doxycycline-Post-Exposure-Prophylaxis-Reduces-Incidence-of-Sexually-Transmitted-Infections-SFDPH-FINAL-10.20.2022.pdf>

September 25, 2024

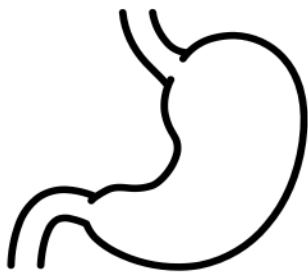


# Risks to taking DoxyPep

## Side Effects

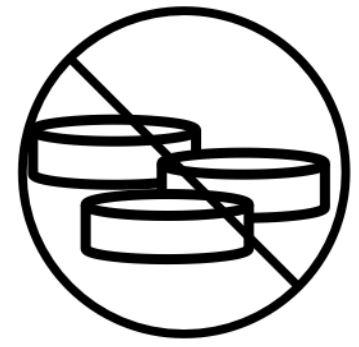


**Sun Sensitivity**



**Esophagus & Stomach Irritation**

## Other Possible Risks



**Antibiotic Resistance**



**Microbiome Changes**

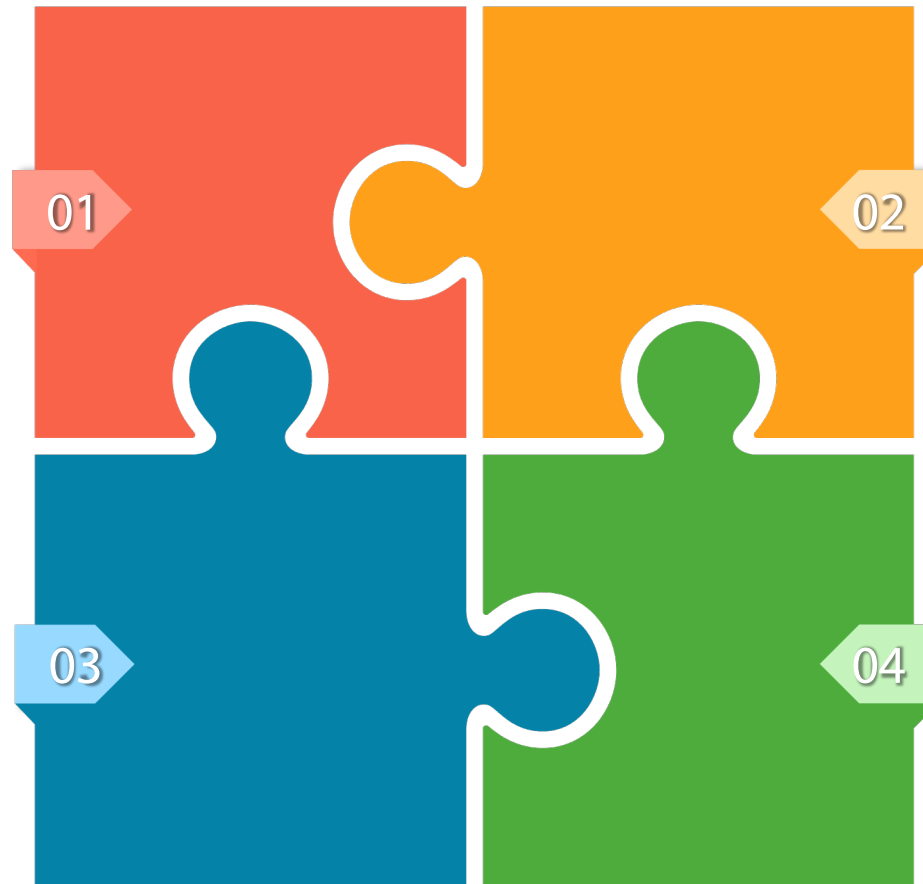
DoxyPep. Seattle and King County



# The DoxyPEP Discuss

## Efficacy/Effectiveness

Syphilis  
Chlamydia  
Gonorrhea



## Dosing and Prescribing

Doxycycline can be taken as often as every day, depending on frequency of sexual activity, but individuals should not take more than 200 mg within a 24-hour period.

## Counseling Messages

Possible drug interactions  
Risk of sun sensitivity  
Remaining upright for 30 minutes after taking doxycycline to reduce the risk of pill esophagitis  
Rare risk of benign intracranial hypertension

## Does Not Prevent

HIV, monkeypox (MPX) or other viral infections  
Impact on other bacterial STI is not known

# DoxyPEP for Providers

Coding: Z20.2 (Contact with and (suspected) exposure to infections with a predominantly sexual mode of transmission). 3 of 4 c. Counseling messages

Formulations: Either doxycycline hyclate delayed release 200 mg (1 tab) OR doxycycline hyclate or monohydrate immediate release 100 mg (2 tabs taken simultaneously) are acceptable.

- Immediate release may be less expensive than delayed release and should be equivalently bioavailable

Monitoring: LFTs, renal function and a CBC should be checked periodically in patients taking doxycycline for a prolonged period. Consider checking these laboratory parameters annually, particularly in individuals with a history of liver disease.

Persons taking doxy-PEP should be screened every three months for gonorrhea and chlamydia at all anatomic sites of exposure, syphilis, and HIV (if not known to be living with HIV). iii. If a patient is diagnosed with an STI while using doxy-PEP, they should be treated according to standard CDC STI treatment guidelines.



# What do you take away today?

- PrEP and DoxyPep work but only if the patient takes it
  - Do we know our patients?
  - Do we know what they value
- If you think about PrEP, think about DoxyPep