

Use of doxycycline prophylaxis against STI among gay and bisexual men taking pre-exposure prophylaxis

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2019 Australasian Sexual Health Conference | Perth | 16 Sep 2019

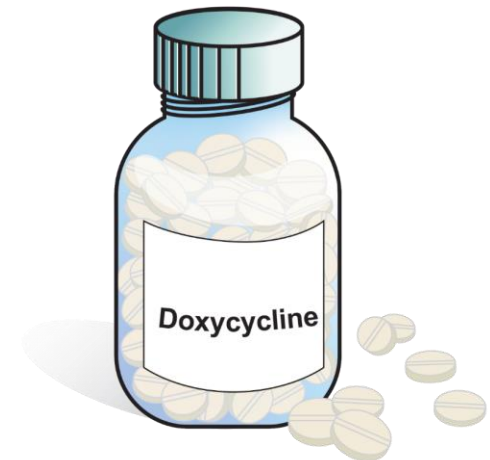


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- The ANRS IPERGAY study¹
 - 232 MSM taking PrEP
 - Men taking doxycycline within 24 hours after sex had a 70% reduction in the incidence of chlamydia and syphilis but not gonorrhoea.
- A mathematical model has predicted that the number of syphilis cases could potentially be reduced by half if 50% of the MSM in the population use doxycycline.²
- Concerns about potential for increased antimicrobial resistance with widespread use of doxycycline.³



1 Molina JM, et al. Lancet ID. 2018; 18: 308–17.

2 Wilson DP, et al. STD. 2011; 38: 573–79.

3 Fairley CK, et al. Lancet ID; 2018; 18: 233–34.



Public Health
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Position Statement on Doxycycline as Post-Exposure Prophylaxis for Sexually Transmitted Infections

Key Points

- Doxycycline Post Exposure Prophylaxis for sexually transmitted infections (STIs) is not endorsed by BASHH or Public Health England.
- Any potential benefits will be outweighed by the considerable potential to select resistance in STI pathogens and other bacterial species.
- Further studies are required to measure the wider impact of prophylactic doxycycline on antimicrobial resistance (AMR) at an individual and population level.
- We recommend the use of antibiotics as prescribed by a healthcare professional and as indicated by the results of a suitable diagnostic test.

A report from CROI 2017 stated that Post-Exposure Prophylaxis (PEP) with Doxycycline halved the rates of bacterial Sexually Transmitted Infections (STIs) in men who have sex with men (MSM) in an extension of the French IPERGAY trial. Many of the online companies selling HIV Pre-exposure Prophylaxis (PrEP) in the form of Tenofovir Disoproxil Fumarate 300mg / Emtricitabine 200mg are now making Doxycycline available to UK buyers. Here we provide a summary of the data presented in abstract 91LB at CROI 2017 and a statement on potential implications.

ON DEMAND POST EXPOSURE PROPHYLAXIS WITH DOXYCYCLINE FOR MSM ENROLLED IN A PREP TRIAL - Jean-Michel Molina et al CROI Seattle, Washington Feb13-16, 2017

Jean-Michel Molina's study was the first randomized open-label trial of the efficacy and safety of a novel antibiotic prophylaxis strategy for STIs using doxycycline PEP (200 mg within 24h after sex) in 232 MSM on PrEP for HIV prevention in the Ipergay study. A high rate of STIs without doxycycline PEP was shown (69.7 events per 100-person years of follow-up) and the antibiotic strategy showed an overall reduction in STI incidence of 47%.

There was a significant decrease in chlamydia and syphilis incidence with reductions of 70 and 73% respectively in intent to treat analyses but no clear benefit was shown for gonorrhoea, likely due to the high rate of doxycycline resistance already developed.

A higher rate of gastro-intestinal adverse events was observed in those taking PrEP plus doxycycline compared to those taking PrEP alone (53 vs 41%, respectively, $p=0.05$). Laboratory abnormality rates did not differ significantly between the two

Doxycycline Post Exposure Prophylaxis for sexually transmitted infections (STIs) is not endorsed by BASHH or Public Health England.

We recommend that the use of doxycycline PEP should be restricted to the research setting at present.

Public Health England, British Association for Sexual Health and HIV. Position statement on doxycycline as post-exposure prophylaxis for sexually transmitted infections (PHE Publications gateway number: 2017543). 2017.

https://www.bashhguidelines.org/media/1156/doxy_pep_statement_v5_phe_bashh.pdf
(accessed Aug 12, 2019).

- MSHC, between June and November 2018
- One additional question on doxycycline prophylaxis was added on computer assisted self-interviewing (CASI) as part of the routine clinical care and management at MSHC.
- MSM taking PrEP were invited to answer this question – where they had taken doxycycline prophylaxis to prevent STI for the past month.
- Univariable and multivariable logistic regressions were performed to examine the association between patient's characteristics and use of doxycycline prophylaxis.



- 1686 MSM taking PrEP attended the clinic and 1065 (63%) completed the additional question on doxycycline.
- 10% (95% CI: 8-12%) reported use of doxycycline prophylaxis in the past month.

	Men using doxycycline prophylaxis (%)	OR (95% CI)*	p value	Adjusted OR (95% CI)*	p value
Age (years)					
16-25	13/173 (7.5%)	1 (ref)	..	..	..
26-35	62/554 (11.2%)	1.53 (0.80-2.94)	0.202	..	..
≥36	30/338 (8.9%)	1.21 (0.60-2.46)	0.597	..	..
Country of birth					
Overseas	36/411 (8.8%)	1 (ref)	..	..	..
Australia	63/617 (10.2%)	1.25 (0.79-1.97)	0.340	..	..
Unknown	6/37 (16.2%)	2.20 (0.83-5.81)	0.112	..	..
Injecting drug in the past 3 months					
No	94/1018 (9.2%)	1 (ref)	..	1 (ref)	..
Yes	10/36 (27.8%)	3.82 (1.76-8.25)	0.001	3.26 (1.50-7.08)	0.003
Unknown	1/11 (9.1%)	0.82 (0.09-7.31)	0.857	0.80 (0.09-7.22)	0.840
Had a regular male partner					
No	64/667 (9.6%)	1 (ref)	..	..	..
Yes	40/385 (10.4%)	1.15 (0.75-1.77)	0.508	..	..
Unknown	1/13 (7.7%)	0.92 (0.12-7.28)	0.938	..	..
Number of casual male partners in the past 3 months					
<5	36/496 (7.3%)	1 (ref)	..	1 (ref)	..
≥5	69/569 (12.1%)	1.74 (1.13-2.67)	0.011	1.49 (0.96-2.30)	0.075
Condom use in the past 3 months†					
Consistent	2/70 (2.9%)	1 (ref)	..	1 (ref)	..
Inconsistent	102/950 (10.7%)	4.37 (0.98-19.53)	0.054	3.57 (0.80-16.04)	0.097
Unknown	1/45 (2.2%)	0.82 (0.07-9.80)	0.874	0.87 (0.07-10.41)	0.913

- Our data (10%) are similar to a large sexual health clinic in London (56 Dean Street)
 - 8% of 106 MSM taking PrEP were also taking doxycycline prophylaxis.¹
- MSM injecting drugs are more likely to use doxycycline prophylaxis and that sexual practices, such as number of partners and condom use, are not associated with the use of doxycycline prophylaxis.
- Further research will be required to explore not only the benefits of doxycycline prophylaxis on STI prevention but also the potential harm in terms of antimicrobial resistance.




ClinicalTrials.gov


**Impact of the Daily Doxycycline
Pre-exposure Prophylaxis (PrEP)
on the Incidence of Syphilis,
Gonorrhoea and Chlamydia
(Syphilaxis)**


ClinicalTrials.gov Identifier: NCT03709459



Sexual Health Conference Closing Session

 Wednesday, September 18, 2019

 4:00 PM - 5:30 PM


 Riverside Theatre

Speaker



Prof Basil Donovan
Program Head
Kirby Institute,
UNSW Sydney

Debate: Doxycycline should be provided for syphilis prophylaxis in those at high risk


 4:00 PM - 4:30 PM

Biography



**Professor
Christopher Fairley**
Director
Melbourne Sexual
Health

Debate: Doxycycline should be provided for syphilis prophylaxis in those at high risk

 4:00 PM - 4:30 PM

Biography



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Published: September, 2019 • DOI: [https://doi.org/10.1016/S2352-3018\(19\)30186-9](https://doi.org/10.1016/S2352-3018(19)30186-9)

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