

A series from thelovetank

DoxyPEP

**LITTLE
BACK
POCKET
GUIDE TO**

The Love Tank would like to acknowledge the work of researchers, clinicians and frontline workers - as well as the experiences of communities and people who are using DoxyPEP - that informed this guide.

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queerhealth.info/lbgt/doxypep



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DoxyPEP

LITTLE BACK POCKET GUIDE TO

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What is DoxyPEP?

DoxyPEP stands for doxycycline post-exposure prophylaxis (PEP). It's a new tool that can help prevent sexually transmitted infections (STIs).

It simply involves taking a dose (200mg) of the antibiotic doxycycline within 24 hours (or no later than 72 hours) after sex. It can help protect against infection by certain bacteria that cause STIs, including: chlamydia, syphilis, and gonorrhoea (and even common but lesser known bacteria like mycoplasma genitalium).

Doxycycline is already used in the USA as post-exposure prophylaxis to prevent certain diseases - like Lyme disease and Weil's disease - after suspected exposure. Now we have evidence that it works for STIs too!

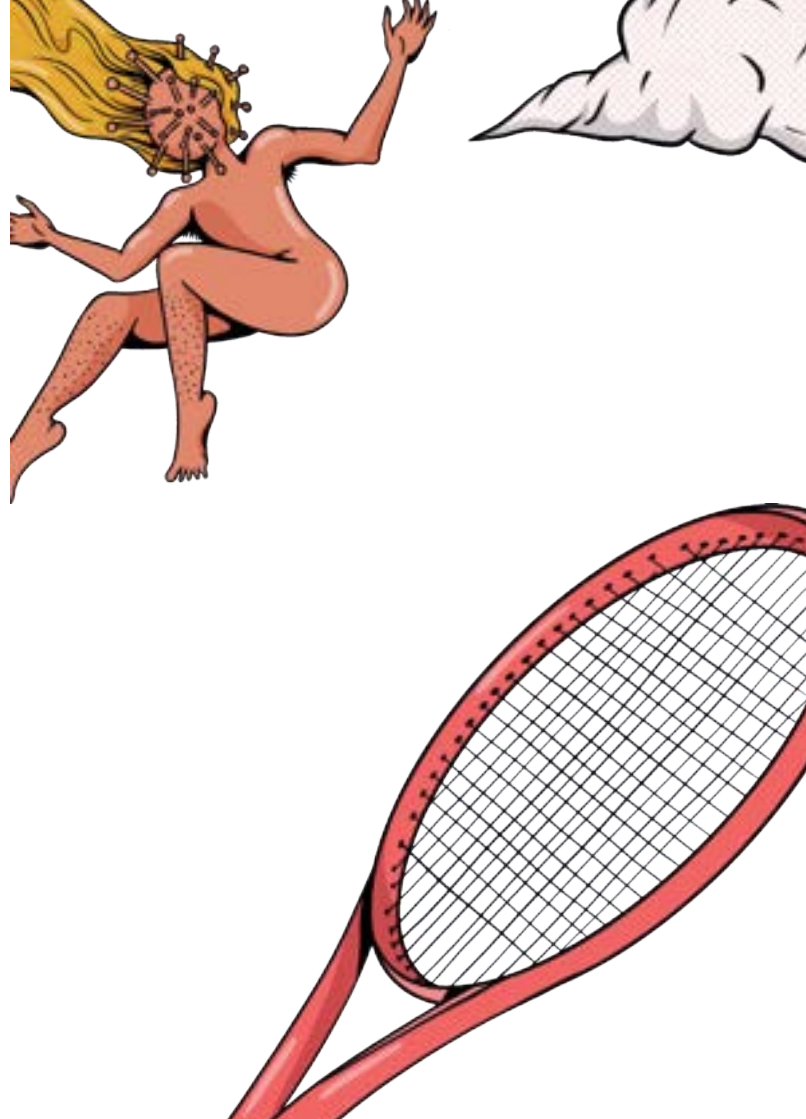


Because it is an antibiotic, DoxyPEP can **only** prevent bacterial infections and **not** other things that cause STIs like viruses (including HIV and hepatitis B) or parasites (including crabs and scabies).

This guide is for anyone who wants to learn more about DoxyPEP - whether they are already using it, thinking about using it, or thinking about recommending it to a friend. The rest of this guide provides helpful information about how DoxyPEP works, how to use it (safely) and how to access it.

If you want a quick reference for how to use DoxyPEP, see the section in this guide: “How to use DoxyPEP: A summary”.

If you want to learn about DoxyPEP in further detail, visit our FAQ guide at queerhealth.info/doxy pep





Who might benefit from DoxyPEP?

DoxyPEP may be useful for anyone who is at an elevated risk of getting a bacterial STI.

According to current UK data, groups that are more likely to acquire a bacterial STI, and therefore might benefit from DoxyPEP are: gay, bisexual and other men who have sex with men (GBMSM), Black communities, and young people between the ages of 18 and 24.

Other people who are likely to benefit from DoxyPEP include transgender women who have sex with GBMSM, anyone who is less likely to use a condom regularly and has previously been diagnosed with an STI, and sex workers (including those who might wish to have an added layer of protection against STIs for their work).



How well does DoxyPEP work?

There have been a number of clinical trials that tell us how effective DoxyPEP is at preventing infection by bacterial STIs.

Current evidence suggests that DoxyPEP can prevent more than three quarters (~70-89%) of chlamydia infections and more than three quarters (~73-87%) of syphilis infections.

Most available studies show that DoxyPEP can prevent over half (~51-57%) of gonorrhoea infections.

DoxyPEP does appear to be a bit less effective on the whole at preventing gonorrhoea, in part because some gonorrhoea bacteria

show signs of resistance to doxycycline (see the section in this guide: “What about antimicrobial resistance?”). How well DoxyPEP works at preventing gonorrhoea may also vary from country to country because of different levels of doxycycline resistant gonorrhoea.

Most major studies have been conducted with GBMSM and transgender women, including both people living with HIV and people who use HIV PrEP, which tells us DoxyPEP definitely works for these communities.

What about receptive vaginal and/or frontal sex?

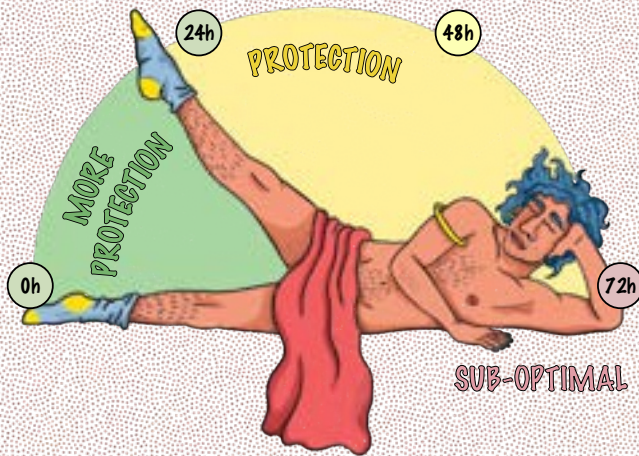
The evidence about DoxyPEP for people who might acquire STIs through receptive vaginal or frontal sex is more limited. For instance, no studies have yet explicitly included transgender men.

Only one study has been conducted with cisgender women. The data from this study appeared to suggest that DoxyPEP was not effective at preventing STIs in cis women.

However, upon further investigation, researchers found that this might have been because participants in the study were not actually using DoxyPEP very much.

If your STI risk is from receptive vaginal or frontal sex and you want to use DoxyPEP, please note that the lack of current evidence does not mean that DoxyPEP is ineffective - only that we do not currently have the knowledge to confirm this until further studies are conducted. Doxycycline is well-tolerated and generally very safe to use but before deciding to use please carefully read the section of this guide entitled “Is there anyone who shouldn’t use DoxyPEP?”.

How do you use DoxyPEP?



To use DoxyPEP, you simply take 200mg of doxycycline - two 100mg pills - within 24 hours (and not later than 72 hours) after oral, anal, vaginal and/or frontal sex.

The current understanding is that DoxyPEP works best if taken within 24 hours of sex. It still works up to 72 hours after sex, but you'll get the most protection against STIs when you use DoxyPEP within the first 24 hours following sex.

Notes on dosing

You shouldn't take more than 200mg of doxycycline in a 24 hour period. If you have

sex again soon after taking a dose, don't take another one immediately - wait another 24 hours after your last dose to take it again if you choose to.

Because DoxyPEP still provides protection within the 72 hour period after sex, you can use it flexibly. Some people might choose to use DoxyPEP within the first 24 hours after sex, because they want maximum protection. Other people might choose to take DoxyPEP on a Monday after having a lot of sex on Saturday and Sunday.

How often can I use DoxyPEP?

You can choose to use DoxyPEP as regularly as you like (as often as every day), as long as you don't take more than one dose (i.e. two pills of 100mg) in a 24 hour period.

Some people might choose to use it to provide protection every time they have sex. Other people might only choose to use it on particular occasions (for instance, after sex parties or when they are having sex with someone who is not their regular partner).

What to avoid whilst on DoxyPEP

You should avoid ingesting dairy, antacids (indigestion remedies), or supplements that contain calcium, iron or magnesium two hours before or after using DoxyPEP. These reduce the absorption of doxycycline by the stomach (so could reduce its effectiveness). You should also follow the advice in the section "Are there risks or side effects?" to minimise the chances of experiencing any side effects.

What next?

While you are using DoxyPEP, we recommend that you continue to follow your usual sexual and reproductive health regimen, including any of: taking your normal HIV medication; using daily or event-based dosing of HIV PrEP; using condoms; using your usual contraceptives; and testing for STIs regularly.

If you develop symptoms of an STI while using DoxyPEP (which is still a small possibility), get tested as soon as you can.

If you test positive for an STI while using DoxyPEP, stop using DoxyPEP until you have completed treatment.

Are there risks or side effects?



Doxycycline is considered very safe to use because it has few side effects and does not interact negatively with a lot of medications.

This makes Doxycycline ideal for use as STI PEP, as well as the fact that there is evidence that it works to prevent STIs and it is cheap to purchase and manufacture.

There are a few common, mild side effects that about one in ten people might experience when taking DoxyPEP. These include feelings of nausea, headaches, and mild gastrointestinal issues (like acid reflux or an upset stomach) and the intensity of these will vary from person to person.

You can reduce your chances of experiencing any side effects by following some of the suggestions below.

Drink a big glass of water and have some food

One way to minimise the risk of these side effects is to take your dose of DoxyPEP with a big glass of water. It also helps if you take your dose with a meal or some food and also to avoid drinking alcohol at the same time as you take the dose. It is also recommended that you remain upright - sitting or standing - for 30 minutes after taking a dose to prevent acid reflux.

Wear sunscreen

Doxycycline can also increase the skin's sensitivity to sunlight. You are more likely to experience increased skin sensitivity if you use doxycycline more often. Increased skin sensitivity means you are more likely to develop rashes or burns from sun exposure. If you're using DoxyPEP regularly, consider using a high SPF sunscreen to prevent damage to the skin caused by sun exposure.

Look after your 'good' bacteria

More frequent use of doxycycline can also disrupt the normal balance of 'good' bacteria in your body. This can have an impact on both the health of the gut and increase the likelihood of developing vaginal yeast infections. If you're using DoxyPEP regularly, consider taking a probiotic supplement or eating foods that promote gut health (like yoghurt, kimchi, sauerkraut, or miso) to help counter this.

DoxyPEP and oral contraception / PrEP

Doxycycline does not affect the action of birth control or HIV PrEP.

However, if you experience a prolonged period of vomiting or diarrhoea while using DoxyPEP, please note that this can mean that oral contraception (the pill) is less effective at preventing pregnancy. If you vomit within 1 hour of taking HIV PrEP you should take another dose.



Is there anyone who shouldn't use DoxyPEP?

Doxycycline is generally well tolerated. However, if you have a tetracycline allergy - which is the class of antibiotics that doxycycline belongs to - you shouldn't use DoxyPEP.

Doxycycline also has very few negative interactions with other prescribed drugs. There are a few that are significant, however.

These drugs, when taken in combination with doxycycline, can increase your risk of experiencing negative side effects.

Medications and DoxyPEP

You should avoid taking DoxyPEP or speak to a clinician if you are taking any of the following medications:

- Other antibiotics, such as rifampicin
- Acne medicines containing vitamin A, such as isotretinoin
- Warfarin, a medicine that prevents blood clots
- Medicines for epilepsy, like phenytoin or carbamazepine
- Ciclosporin, a medicine that calms down the immune system

Some other drugs - indigestion remedies (antacids) and stomach ulcer medicines that contain Bismuth (like Pepto-Bismol) - can reduce the effectiveness of doxycycline. As far as possible, avoid taking these while using DoxyPEP or make sure to take your DoxyPEP dose at a different time of day than these medicines.

Pregnancy and DoxyPEP

Doxycycline is considered by many clinicians to be safe to use if you are or suspect that you are pregnant. However, if you are pregnant or suspect you are, you might find it important to know that the use of tetracyclines - the class of antibiotics to which doxycycline belongs - is associated with some risks during pregnancy, including impact on the bone and teeth development of the foetus.

The evidence that specifically links doxycycline to these adverse outcomes during pregnancy is mixed or weak. Some researchers therefore believe it is safe to prescribe doxycycline to people who are pregnant, while others think we need more evidence before we can draw a strong conclusion about this.

Ultimately, if you are pregnant, or suspect you are, you might wish to consider whether the benefits of using DoxyPEP for you outweigh the risks associated with doxycycline. If it's relevant, you might wish to discuss this with the clinician or doctor who is providing your prenatal care.



How to use DoxyPEP: A summary

Before starting

- Know that you are not allergic to doxycycline
- Check that doxycycline does not negatively interact with any of your other medications

When using

- Take 200mg (two 100mg pills) within 24 hours (and not later than 72 hours) after sex
- Take doxycycline with a big glass of water and some food
- Stay upright for 30 minutes after taking a dose of DoxyPEP

After using

- ☐ Immediately after taking a dose (two 100mg pills), avoid ingesting alcohol, dairy, antacids (indigestion remedies), or supplements containing calcium, magnesium, and iron
- ☐ Always wait 24 hours to take another dose (two 100mg pills)
- ☐ Remember to wear sunscreen with SPF
- ☐ Look after your gut health with probiotic foods and/or supplements
- ☐ Continue following your normal sexual and reproductive health regimens

Stop using

- ☐ If you experience severe side effects
- ☐ If you test positive for an STI and are prescribed a course of treatment

Consider this

- ☐ If you are pregnant (or suspect you are), consider discussing doxycycline use with a health professional
- ☐ If you use the oral contraceptive pill, consider additional protection against pregnancy if you experience stomach upset when using doxycycline



What about antimicrobial resistance?

Antimicrobial (or antibiotic) resistance is a widespread public health concern. The World Health Organisation has named it as “one of the biggest threats to global health, food security, and development today.”

What is antimicrobial resistance?

Antimicrobial resistance occurs when the bacteria that cause infections - like sexually transmitted infections - evolve or acquire genes that means they are no longer affected by antibiotics that normally kill them. There is a greater risk of a bacteria becoming resistant

to antibiotics when antibiotics are overused - for instance, in intensive animal farming or prescribed when they are not needed.

DoxyPEP and impact on antimicrobial resistance

There are some concerns that the use of DoxyPEP could cause an increase in antimicrobial resistance. Some people consider long-term use of doxycycline to be a form of overuse, especially because some common infection-causing bacteria, including *E. coli* and gonorrhoea - already demonstrate high levels of resistance to tetracyclines (the class of antibiotics to which doxycycline belongs). In fact, one clinical study in France found that DoxyPEP was less effective at preventing gonorrhoea infection because of high levels of doxycycline-resistant gonorrhoea circulating in the country at the time.

It's really important that we take seriously the possibility that DoxyPEP could have an impact on antimicrobial resistance. We don't yet know what that impact will be. This is something that will require careful and ongoing monitoring.

However, the possibility of antimicrobial resistance does not necessarily mean people should not use or not have access to DoxyPEP today. There are a number of reasons for this:

1. Monitoring of the effects of DoxyPEP on antimicrobial resistance has already begun and it will require people to be using DoxyPEP to be able to monitor this.
2. What we know so far about the impact of DoxyPEP use on antimicrobial resistance from the studies so far is not a cause for immediate alarm. So far there have been no cases of chlamydia or syphilis developing meaningful resistance to doxycycline in people.
3. The effects of DoxyPEP on antimicrobial resistance are not a given and will vary depending on how much is used. When DoxyPEP is offered, not everyone will want to use it and not everyone will use it in the same way. Also, DoxyPEP tends only to be recommended for people who are at the highest risk of acquiring an STI so that means the use of the antibiotic

could be limited only to populations where it will have the highest impact.

4. Given what we currently know about levels of resistance, the benefits of offering DoxyPEP to people at the highest risk of acquiring STIs outweighs the costs. For instance, as well as offering protection from bacterial STIs, DoxyPEP could help relieve strain on sexual health service providers, by saving time, money and resources spent diagnosing and treating STIs.
5. Long-term doxycycline use is already prescribed to treat or prevent other conditions but without such alarm about antimicrobial resistance. For instance, long-term doxycycline use is prescribed to lots of people who have acne but it is much less effective than DoxyPEP for STIs (helping treat acne symptoms in between 33%-50% of people). When anxieties are expressed about some uses of DoxyPEP - to prevent sexual transmission of infection in minoritised communities - and not others, this may be because of other, unspoken or

unconscious concerns (for instance, moralising about sex, gay sex or an assumption that certain people care more about things like sex than important issues like antibiotic resistance)

What is the verdict?

The bottom line is that some people who are at higher risk of acquiring an STI may benefit from DoxyPEP - whether because it can give them peace of mind about having sex without condoms or because it will reduce the risk of them developing a symptomatic STI.

There is also a benefit to communities (because it could lower everyone's risk of acquiring an STI) and to services (because it could reduce strain placed on them).

Antimicrobial resistance is a real concern but, without clear ongoing evidence of DoxyPEP's impact, this does not necessarily outweigh the potential benefits that the tool might have.



How can I access DoxyPEP?

While it is approved for use in some parts of the world - including Australia and San Francisco and Chicago in the US - doxycycline is not currently approved for use as DoxyPEP on the NHS in the UK. Policymakers in the UK are currently reviewing whether DoxyPEP should be commissioned for use and some NHS clinics are considering making it available soon.

The guidelines about DoxyPEP are changing rapidly. For the latest information about DoxyPEP access in the UK, check out:

queerhealth.info/doxypep

It is still possible to access DoxyPEP in the UK, however, and survey data tells us that lots of people already are. A 2019 survey, for instance, told us that 9% of gay, bisexual and other men who have sex with men who use HIV PrEP are already using antibiotics as a way to prevent STIs.

Buying DoxyPEP online

Many people are choosing to buy DoxyPEP online. They are doing so by purchasing generic doxycycline without a prescription from online suppliers or online pharmacies.

IMPORTANT: In the UK, it is legal to import up to 3 months worth of some classes of medication for personal use. This means it is legal to import up to 90 doses (or 180 100 mg capsules) of doxycycline provided you do not share this with, intend to share this with, or sell this to others. (The quantity listed here assumes that 3 months of medication is equivalent to taking a dose of doxycycline - two 100 mg pills - every 24 hours.)

Some of the online suppliers that people are using to buy doxycycline are the same ones

that people use to access generic HIV PrEP without a prescription. In 2018, PrEPster independently tested generic HIV PrEP to assess its legitimacy and safety. Regarding their tests of HIV PrEP purchased from Dynamix International; Green Cross Pharmacy; In House Pharmacy; and United Pharmacy, they concluded that “we can be very confident that the PrEP we’re buying online is safe and genuine, from the sources that were tested.” All of the websites named here also sell generic doxycycline at a relatively affordable price.

DISCLAIMER: Note that listing of any of the above sites is not an endorsement or recommendation of these sites, nor an indication that The Love Tank has a preferred relationship with any of these sites. These sites were chosen for testing of HIV PrEP because these were the main sources of online HIV PrEP in the UK when testing was undertaken, according to community PrEP surveys.

In addition to purchasing doxycycline through online pharmacies without a prescription, doxycycline can also be purchased at online pharmacies - like Doctor Fox - that offer doxycycline as an anti-malarial regimen for

people travelling to countries where malaria is a risk. You will not be asked your medical history, only asked to state that you intend to travel to a country where malaria is a risk. You should answer any questions about potential contraindications (e.g. medicines that might negatively interact with doxycycline) as honestly as possible for your safety.

At the time of writing (May 2024), the costs of purchasing doxycycline from these suppliers is as follows:

NAME OF SUPPLIER	QTY OF 100MG PILLS ORDERED	TOTAL COST (INC. UK POSTAGE)	COST PER DOSE (200MG)
Dynamix International	120	£75.33	£1.26
Green Cross	120	£24.04	£0.40
In House Pharmacy	160	£41.84	£0.52
United Pharmacies	120	£46.48	£0.77
Doctor Fox	114	£29.50	£0.26

Hyclate or monohydrate?

Both doxycycline hyclate and doxycycline monohydrate are appropriate to use as DoxyPEP. These are the two forms that doxycycline is available in and they typically come as 100 mg pills (capsules or tablets).

Is online doxycycline safe?

Doxycycline is cheap to manufacture and purchase and therefore is unlikely to be a target for counterfeits or tampering.

However, if you order doxycycline online and it arrives in damaged, wet or unsterile packaging (e.g. is loose within an envelope) do not take any of the pills within it.

It is also unsafe to take doxycycline after its expiry date as it can cause kidney damage. If your doxycycline is past its expiry date or does not have an expiry date labelled on it, discard it.



If I use DoxyPEP, what else can I do for my sexual health?

DoxyPEP could be a useful tool for some people - including people living with HIV - to help prevent bacterial STIs and give them peace of mind about their sexual health, especially when having sex without condoms (which are still also an effective way of preventing STIs).

HIV and DoxyPEP

DoxyPEP can only prevent bacterial STIs and not other infections caused by viruses, like HIV. If you previously tested negative for HIV and think you would like additional protection

against acquiring it (especially if you like to have sex without condoms), you could consider taking HIV PrEP (the pill that is almost 100% effective at preventing HIV). If you wish to access HIV PrEP, you can book an appointment at your chosen sexual health clinic to start.

If you are living with HIV, DoxyPEP is perfectly safe for you to use in combination with your usual HIV medication.

Regular STI testing

Although DoxyPEP can prevent STIs, we do recommend that you continue to test for STIs while using it. If you do not want to visit a sexual health clinic to do this, at-home self-test kits can be a convenient option for testing while using DoxyPEP. If you live in London, the majority of London boroughs offer at-home self-test kits free of charge at www.shl.uk.

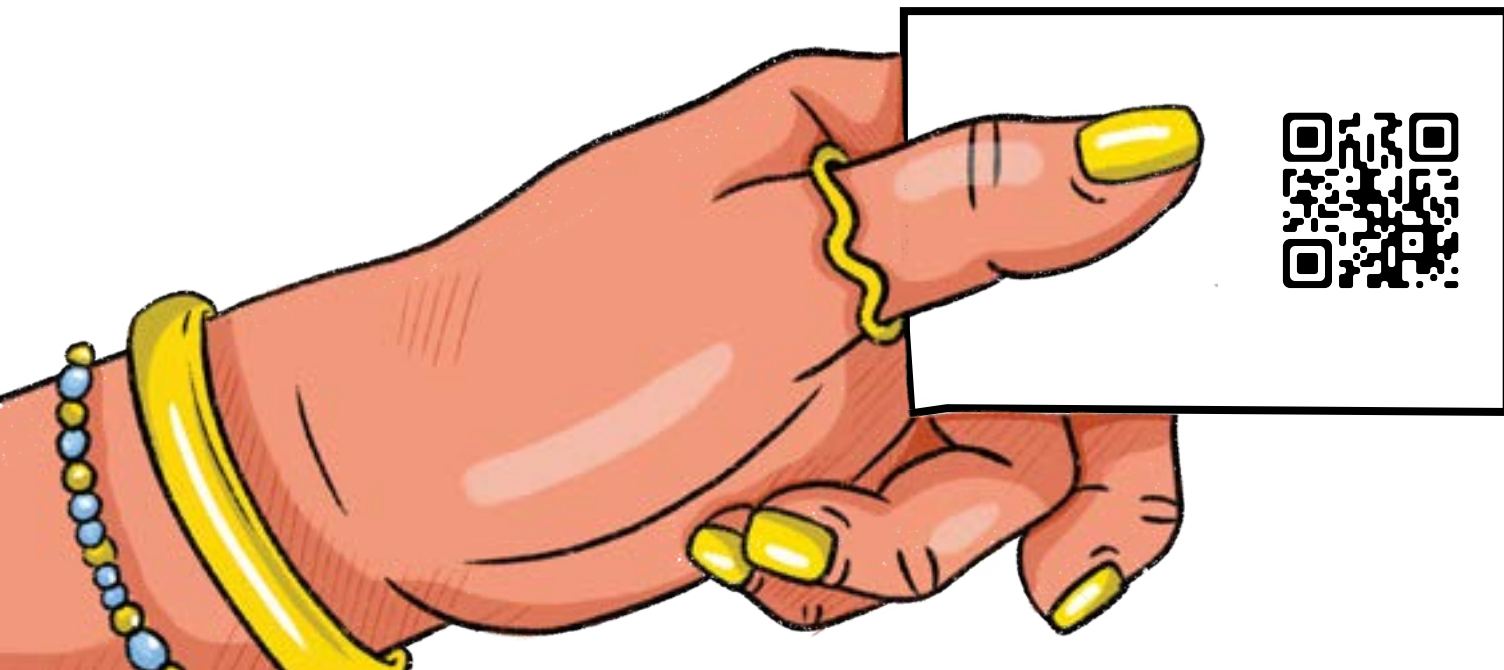
Remember, if you do develop symptoms of an STI while using DoxyPEP (which is still a small possibility), we recommend that you get tested as soon as you can and, **if you do test positive, to stop using DoxyPEP until you have completed your course of STI treatment.**



If you want to learn about DoxyPEP
in further detail, visit our FAQ guide at

queerhealth.info/doxypep

Scan the QR code below to visit our
queerhealth.info website, where you can find
links to more helpful resources, including:
support with drugs and sex, STI testing
resources, information about HIV PrEP and
DoxyPEP, details on how to get your vaccines,
ways to access hormone replacement
therapy, and advice on accessing queer health
resources for migrants in Europe.



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