

# Post-exposure prophylaxis (PEP)

## Summary

Post-exposure prophylaxis, or PEP, is a way for a person who may have recently been exposed to HIV to prevent HIV infection. It involves taking anti-HIV medications right after a potential exposure to HIV. Anyone who thinks they may have been exposed to HIV should contact their doctor immediately. PEP is not 100% effective.

## What is PEP?

PEP consists of a combination of two to three anti-HIV drugs that an HIV-negative person who may have been exposed to HIV takes to reduce their risk of HIV infection. PEP should be taken as soon as possible, within 72 hours of being exposed to HIV. These prescription drugs need to be taken every day, exactly as directed, for four full weeks.

## When is PEP used?

*After exposure to HIV in the workplace (occupational exposure)*—PEP is used when people are exposed in the workplace to body fluids that may contain HIV—for example, a healthcare worker who accidentally suffers a needle-stick injury.

*After exposure to HIV in other settings (non-occupational exposure)*—PEP can also be used after a high-risk exposure that is not work-related, such as unprotected sex, a condom breaking during sex, needle sharing or sexual assault.

## How much protection does PEP provide from HIV infection?

We don't know. Several studies suggest that anti-HIV drugs can reduce the risk of HIV infection if taken within 72 hours of an exposure to HIV and if taken every day for four weeks. The sooner PEP is started after an exposure, the more likely it is to work.

We DO know that PEP does not always prevent HIV infection. There are several reports of people becoming infected with HIV despite taking PEP medications.

## Who should consider taking PEP?

An HIV-negative person who has had a possible high-risk exposure to HIV within the last 72 hours should consider taking PEP.

Not all types of exposure have the same chance of causing HIV infection—some are riskier than others. Before taking PEP, a person must first discuss their situation with a nurse, doctor or counsellor. If the chance of becoming infected with HIV is low, either because it is unlikely that the source person was HIV-positive or because the way they were

exposed has a low risk of transmission, PEP may not be recommended.

PEP is intended to *prevent* HIV infection and should not to be used by a person who is HIV-positive. When a person starts PEP, an HIV test must be done to determine the person's HIV status. If rapid testing (which gives results within a matter of minutes) is not available, the test result may not be ready for one to two weeks; nevertheless, PEP will be started immediately. If the test result is positive, the person will stop taking PEP and a doctor will need to decide whether HIV treatment is needed.

### **Is PEP an alternative to other prevention methods, such as condoms or clean needles?**

No. PEP is for emergencies only. It should not replace other more effective prevention methods, such as condoms or clean needles.

A person should not use PEP regularly to prevent HIV infection.

- PEP is not like a “morning-after” pill that prevents pregnancy; it requires taking pills several times every day for an entire month.
- The medications are very expensive, can cause side effects—such as nausea, fatigue and diarrhea—and can be difficult to access.
- There is no guarantee that PEP will prevent HIV infection.
- PEP provides no protection against other sexually transmitted infections.

### **What are the safety concerns associated with PEP?**

*A false sense of safety*—There is a concern that when people know that PEP is available to prevent HIV after an exposure, they may develop a false sense of safety and engage in more risky behaviours as a result. For example, they may be more likely to have sex without a condom, have sex with more partners or share needles to inject drugs. This is concerning because these behaviours could increase a

person's risk of becoming infected with HIV and other sexually transmitted infections.

*Drug resistance*—A person could develop drug resistance if they become infected with HIV while taking PEP. If a person's HIV becomes resistant to the PEP drugs, the same anti-HIV drugs may not work for treating their HIV.

*Side effects and adherence*—Anti-HIV drugs can cause side effects. The nature and severity of the side effects depend on the type and number of anti-HIV drugs prescribed and the person who is taking them. The side effects of PEP drugs may make it difficult for a person to adhere to their medication schedule. If the medications are not continued for an entire month or if some doses are missed, then the risk of infection and drug resistance will increase. Newer anti-HIV drugs cause fewer side effects and are better tolerated than many of the older anti-HIV drugs. A doctor can help choose the best medications for a person who has decided to take PEP.

### **What is involved in taking PEP?**

First, a doctor will assess whether the risk of HIV transmission is high or low. If the risk is high and the person who may have been exposed to HIV decides to start taking PEP, they will be tested for HIV. If the HIV test is negative, or cannot provide immediate results, the exposed person will be given a prescription for PEP medications.

If the HIV status of the source person is unknown, the PEP user will be encouraged to ask the source person to get tested for HIV. If the source person is HIV-negative, then the use of PEP medications can be discontinued.

PEP medications need to be taken correctly—every day for one month—or the risk of infection will increase. A counsellor, doctor, nurse, pharmacist, friend and/or staff member at an AIDS Service Organization can help a person manage the side effects of the drugs and adhere to the pill-taking schedule.

A person taking PEP needs to be monitored for side effects and other complications. Blood tests may be performed to ensure that the anti-HIV medications are not causing harm to the body. If side effects and toxicity are a problem, a doctor may decide to change one or more of the anti-HIV drugs being used for PEP.

A person taking PEP should take extra precautions to avoid exposure to HIV while taking PEP. PEP is only intended to reduce the risk of infection associated with the initial exposure. If a person taking PEP continues to engage in high-risk behaviours, such as unprotected sex or sharing needles, PEP will be less likely to work and the risk of HIV infection will increase.

### How can PEP be accessed?

Although there are clear guidelines across Canada for access to PEP for occupational exposures, the guidelines are less clear for non-occupational exposures. After a non-occupational exposure, it may be possible to access PEP in some emergency rooms and urgent care clinics in Canada; however, it is not always readily available. The decision to provide PEP lies with the healthcare provider and is often made on a case-by-case basis. Many healthcare providers are unaware of non-occupational PEP, are not trained to provide PEP, or may be unwilling to prescribe it.

Anti-HIV drugs are expensive: a month-long course of PEP can cost more than \$1,000. Although occupational PEP is normally covered by workplace insurance, coverage for non-occupational PEP varies across Canada. Non-occupational PEP medications are covered by some private and public health insurance plans; coverage varies depending on the province or territory and the nature of the exposure.

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### Credits

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**Decisions about particular medical treatments should always be made in consultation with a qualified medical practitioner knowledgeable about HIV-related illness and the treatments in question.**

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