

1. STRATEGIES PROVEN TO BE EFFECTIVE

Strategies proven to be effective *These strategies have been proven effective in preventing HIV transmission. They can be used alone, but since none of them are 100% perfect, it's often a good idea to combine more than one together.*



TAKING PrEP (PRE-EXPOSURE PROPHYLAXIS)

Taking antiretroviral medication (anti-HIV pills) by an HIV-negative person every day or intermittently (before and after sexual relations) to reduce the risk of contracting an HIV infection

Description

- Oral pre-exposure prophylaxis (PrEP) is a drug used to prevent HIV infection that can be taken continuously (every day) and/or intermittently (before and after risky sexual activity) by HIV-negative people who are at high risk of infection.^{1,2,3}
- PrEP does not protect against other sexually transmitted infections (STIs).

Effectiveness

- A number of studies have demonstrated that whether taken every day or intermittently, PrEP is effective at protecting against HIV transmission when used by people at high risk of becoming infected.
- Studies among men who have sex with men have shown that, compared to those who don't take PrEP:
 - The number of new infections was reduced by over 92% among participants in the iPREX study⁴ who took PrEP continuously and never missed a dose. Among participants in the PROUD study,¹⁰ new infections were reduced by 86%.
 - The number of new infections was reduced by 86% among participants of the Ipergay study⁸ who took PrEP intermittently (as needed, before and after sex) rather than on a daily basis.
- These studies offered PrEP in combination with counselling and regular testing. The Quebec ministry of health and social services (Ministère de la Santé et des Services sociaux du Québec, MSSS) also recommends that PrEP be accompanied by an HIV and STI testing routine, as well as by counseling on different risk reduction strategies.³
- For PrEP to be effective, it is essential that you adhere to the treatment by following the prescription without missing a dose. In a few rare cases, PrEP failure has occurred despite adequate use. Some of these cases can be explained by the acquisition of a strain of the virus that is resistant to the molecules present in PrEP.¹¹

Accessibility

- In 2016, Health Canada approved daily use of PrEP in the form of a tenofovir tablet (such as Truvada[®]) by people at high risk of infection. Although intermittent PrEP is not approved by Health Canada, physicians can give a prescription to the medication that does not specify intermittent use.¹¹
- If taken every day, the cost of PrEP is around \$900 to \$950 per month for Truvada[®] and \$200 to \$300 for the generic version of the drug. For people between the ages of 18 and 64 who have public prescription drug insurance (RAMQ), the maximum amount that a person will need to pay is \$85.75 per month.¹² Costs vary for those with private insurance but are generally between 20% and 25% of the monthly cost (about \$200/month for Truvada and \$50/month for the generic version) up to a maximum annual amount. The cost will likely be lower if PrEP is used intermittently because only 4 tablets are needed each time you have sex.

Acceptability

- In a survey that *Mobilise!* conducted among men who have sex with men in Montreal (2016-2017), 84% of respondents said they knew about PrEP. Of these, 88% said they were very confident about its

effectiveness. However, just under half (42%) said they were somewhat or very interested in using it and 15% had already used it.¹³

- In a cross-Canada survey among men who have sex with men, 36% believed PrEP was effective for reducing the risk of transmitting HIV.¹⁴
- If PrEP proves to be effective and is made accessible, as many as 74% of men said they would be prepared to use it.¹⁵⁻¹⁸ Reasons for wanting to use PrEP include¹⁹
 - the protection it can potentially offer against HIV
 - less concern or fear about getting infected
 - being able to have sex without condoms.
- PrEP can also be used if you anticipate being more likely to take risks during a short period, for example when on a trip.²⁰
- In light of encouraging results from clinical studies, activists²¹ and community groups²² have been campaigning for PrEP to be made more accessible to Canadians.
- In discussion groups with members of Montreal's gay community, it was found that²³
 - not everyone had the same understanding of PrEP; some thought that it was a pill that had to be taken every day, while others thought that it only needed to be taken before sex,
 - PrEP sparked some concerns and criticism, in particular about whether it would lead to the medicalization of gay sexuality, about the vested interests of pharmaceutical companies, and about ethical issues raised by this approach to risk reduction,
 - participants had a number of questions about PrEP as a prevention strategy; some thought it had the potential to be useful, others were worried that it would become a replacement for condoms.
- Advantages of PrEP:
 - It gives you a greater sense of control by offering a way to protect yourself from HIV without having to depend on sexual partners.
 - Convenience, given that PrEP is taken in the hours before and after sex (rather than during sex).
 - It offers protection to HIV-negative individuals who have HIV-positive sexual partners.^{11,24}
 - It provides an alternative for individuals who do not use condoms, whatever the reason.^{11,24}
 - It is highly effective in protecting against HIV.²⁴
 - It reduces HIV-related fear and stress.²⁴
- Disadvantages of PrEP:
 - It may cause side effects such as nausea, vomiting, diarrhea, headaches, or dizziness.¹¹ Among participants in the Ipergay study,⁸ 13% of those who took PrEP reported nausea and abdominal pains. These side effects usually went away after a few weeks.
 - Little is known about the long term effects of using PrEP.¹¹
 - PrEP requires planning, especially if you don't take it every day. You need to make sure you remember to take it before and after having sex.
 - Taking the medication requires discipline. For PrEP to be effective, the correct dosage must be taken as prescribed.
 - It does not protect against other STIs.²⁴
- Obstacles to PrEP:
 - Limited access, given that only some doctors are willing to prescribe it.²⁴
 - Thinking that PrEP is not effective enough since it does not offer 100% protection.^{24,25}
 - Needing to ensure you take the medication correctly as prescribed in order for it to be effective.^{24,25}
 - Not wanting to take medication on a daily basis, as is required if PrEP is used continuously.²⁵
 - Having concerns about side effects on health and or the impact on your sex life.^{24,25}
 - Thinking that you're not at risk because you avoid having sex with HIV-positive partners.²⁵
 - Not seeing the need because you already use condoms.²⁵
 - High monthly cost for some people.²⁴
 - Being afraid of what others think can make it difficult for some people to ask their doctors for PrEP, obtain it up at a pharmacy, or tell sexual partners about PrEP use.

- Having concerns that PrEP could lead to drug resistance (if someone is on PrEP when they contract HIV).^{3,11}
- Having concerns about the declining use of other risk reduction strategies, increases in STIs, and the tendency of people to fall into a false sense of security.^{3,25}
- Having concerns about being stigmatized as a careless person or someone with an unbridled sexual appetite (“Truvada whore”).²⁴
- Having difficulty maintaining PrEP in a context of homelessness or substance use.²⁴
- For trans people, having concerns about interactions between PrEP and hormones.²⁴

Cost effectiveness

- In a study using data from Quebec, the direct and indirect costs to the health system for the first year of an HIV infection range from \$27 410 to \$35 358. The annual cost of using PrEP on an intermittent basis is \$12 000 (total cost to the health system for the medication and all medical care; this is not the amount that individuals themselves have to pay).²⁶
- Introducing PrEP would not lead to an increase in costs but rather to savings in the costs associated with an HIV infection (e.g. ambulance calls, hospital stays, emergency visits, psychosocial costs, cost of antiretroviral therapy, absences from work).²⁶
- The availability of generic versions of the drug has increased the cost-effectiveness of PrEP.

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