

**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.*



## ADAPTING YOUR SEXUAL PRACTICES TO THE VIRAL LOAD OF ANY HIV-POSITIVE PARTNERS WHO ARE INVOLVED

**Adapting the prevention strategies that would normally be used, in instances when an HIV-positive partner has an undetectable viral load (fewer than 40 copies per milliliter of blood)**

### Description

- An HIV-positive person's viral load can be taken into account when choosing which sexual activities or prevention strategies to adopt.
- Viral load goes down when an HIV+ person takes antiretroviral treatment (ART).<sup>1</sup>
- Viral load is said to be undetectable when viral multiplication is under control. This generally occurs up to 6 months after treatment is started. The amount of HIV in the blood will at that point have gone below 50 copies per millilitre of blood.<sup>1-3</sup> Viral load is usually measured only in the blood; however, there is a correlation with the amount of virus in other bodily fluids (pre-ejaculatory fluid, sperm, vaginal and anal secretions).
- The term "undetectable" refers to the fact that for many years, lab tests were unable to detect viral load when it went below 50 or 40 copies/ml of blood (depending on the test that was used).<sup>1</sup> A more sensitive test that can measure as little as 20 copies/ml is now used in Quebec and the test result is said to be "below 20" or "undetected." However, a viral load that is lower than 40 or 50 copies/ml is still considered to be "undetectable."
- When viral load is undetectable, a person is still carrying the virus but in quantities so small that it cannot be transmitted to another person through sex.<sup>2</sup> This is the message behind a world-wide educational campaign that has adopted the slogan "Undetectable = Untransmittable" (often shortened to "U=U").<sup>4</sup>
- In all studies conducted up to now, there have been no reports of HIV transmission to an HIV-negative partner during sex with an HIV-positive partner who is on continuous antiretroviral therapy and whose viral load remains consistently suppressed to an undetectable level. We have long known that antiretroviral therapy is essential for maintaining and improving the health of people living with HIV. It has now become clear that when a person living with HIV is on antiretroviral therapy, is taking the medication as prescribed, and has confirmed that viral load is undetectable, the risk of transmitting HIV to sexual partners is virtually zero.<sup>5</sup>
- If an HIV-positive sexual partner who has an undetectable viral load respects the above conditions, it's possible to change the practices one might normally follow. For example, one could decide to no longer engage in serosorting or no longer use condoms during sex. The term "viral sorting" is sometimes used to describe this type of risk-reduction strategy.<sup>6</sup>
- The viral load of an HIV-positive person has no effect with respect to preventing the transmission of other STIs.<sup>2</sup>

### Effectiveness

- Most research that has assessed the effect of an undetectable viral load on the sexual transmission of HIV has been done among heterosexual couples and for the most part only for vaginal sex. According to mathematical estimations and expert consensus, however, the risk of transmission during anal sex if viral load is undetectable would be similar to that of vaginal sex, that is, negligible or very low.<sup>3,7</sup>

- In recent study among men who have sex with men in a relationship with someone whose HIV status is different from their own, no instances of HIV transmission were found to have occurred within couples where the HIV-positive partner had an undetectable viral load.<sup>8</sup>
- Several factors can cause viral load to change from undetectable to detectable:<sup>3</sup>
  - Not adhering to the treatment (forgetting to take pills, taking them at different times).
  - Having a resistance to the medication.
  - Being at a more advanced stage of the infection.
- For this reason, it's important that a person who uses viral load for the purposes of prevention takes the medication as prescribed and has regular medical check-ups to verify that viral load has remained undetectable.<sup>2</sup>

### **Acceptability**

- Over half (65%) of the men who have sex with men who participated in the Mobilise! survey in Montreal (2016-2017) said they were aware that taking viral load into consideration could be used as a risk-reduction strategy. Of these, 67% were very confident about its effectiveness for reducing risk.<sup>9</sup>
- In a Vancouver study, 26% of HIV-positive participants and 6.7% of HIV-negative participants reported that they had anal sex without a condom only when the viral load was undetectable or when the HIV-positive person was on treatment.<sup>10</sup>
- During discussion groups held in Montreal's gay community<sup>11</sup>
  - many participants misunderstood the term "undetectable" and what it means to have an undetectable viral load
  - the idea of undetectability brought up diverse reactions based on perceptions of this strategy's effectiveness and what information people felt could be believed. The practice of identifying as "undetectable" on mobile and online profiles was also a matter of debate.
- Advantages of taking the viral load into account:
  - Makes it possible to have sex without condoms once it has been confirmed that viral load is undetectable.
  - Offers an effective strategy for couples in which one partner is HIV-negative and the other is HIV-positive.<sup>12</sup>
  - Offers effective protection for HIV-negative sexual partners.<sup>12,13</sup>
  - Improves an HIV-positive person's health through the use of anti-HIV medication.<sup>13</sup>
  - Reduces serophobia and fears of contracting HIV.<sup>12</sup>
- Disadvantages of taking viral load into account:
  - Requires that you know what the viral load is before having sex.
  - Puts responsibility for carrying out the strategy on the shoulders of the HIV-positive person.<sup>14</sup> Conversely, the HIV-negative person does not have direct control over the protection being used and instead relies on the information shared by the HIV-positive person.<sup>12</sup>
  - Requires an HIV-positive person to adhere strictly to their treatment (take the medication every day, at the same time) and go for regular medical check-ups.<sup>12</sup>
  - Does not offer protection against other STIs.<sup>12,14</sup>
  - Creates a distinction between those who are undetectable and those who are not, as if those who are undetectable had a 'higher' status.<sup>12</sup>
  - Requires a good understanding of how viral load works, and sometimes this has to be explained to sexual partners as well.<sup>12</sup>

### **Cost effectiveness**

- Using mathematical projections based on data from the epidemic among heterosexuals in Africa, a study has shown that reducing the number of new infections would make this strategy cost effective.<sup>15</sup>

## References

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