

Information for Individuals Who May Have Been Exposed to HIV, the AIDS Virus

COMMUNICABLE DISEASE CONTROL

Introduction

Health care workers and public service workers may be exposed to the human immunodeficiency virus (HIV) through their work. Even though safer work practices incorporating barrier precautions and safer needle devices will decrease the risk of exposure, they will not completely eliminate it. Accidental occupational exposures include needlestick injuries with a needle that is contaminated with HIV-positive blood, as well as splashes of contaminated blood or body fluids onto the mucous membranes (usually the mouth or eyes) or open sores. There are other ways of being exposed to HIV, for example through human bites or sexual assault. In these situations, prophylactic therapy may be indicated to prevent infection. If you are reading this, you may have had such an exposure and will require assessment, which may be provided by your occupational health physician, or by a hospital emergency room physician. As anti-retroviral therapy may be recommended to you, this information sheet is meant to provide some basic information on anti-retroviral drugs and the risk of HIV transmission. Your physician will likely go over the above in more detail with you when he/she examines you. Follow-up counselling will usually be provided by your occupational health physician or family physician.

What is the risk of acquiring HIV infection after an exposure?

The average risk of HIV transmission after an accidental needlestick exposure to infected blood or body fluids is estimated to be about 0.25% (1 in 400) and the risk following a mucous membrane or skin exposure is estimated to be about 0.1% (1 in 1,000). Risks following one-time sexual or needle sharing exposures are estimated to be in a similar range. These figures represent only average risk; the

risk may be higher depending upon the presence of other risk factors such as:

- high viral load in the source (e.g. source in late stage AIDS);
- deep wounds;
- large volume of blood transmitted during exposure;
- wide gauge of needle in needlestick exposures (larger bore needles represent a greater risk);
- needlestick exposure from a needle that had been placed directly in the vein or artery of the source person.

Why take anti-retroviral therapy?

Although the statistical probability of HIV transmission is low, HIV is a very serious infection, usually resulting in AIDS. Drug therapy taken soon after exposure may prevent infection from occurring. Effectiveness in preventing infection is thought to be about 80%. If drug therapy is taken and HIV infection still occurs, the early use of anti-retrovirals may favourably alter the course of the infection. Anti-retroviral drugs taken for four weeks (the length of time recommended in this situation) will generally have no long-term side effects.

What are the anti-retroviral drugs?

Zidovudine (ZDV or AZT) and lamivudine (3TC) are the two anti-retroviral drugs currently recommended for the treatment of exposures to HIV. Zidovudine works by stopping the HIV virus from replicating. Lamivudine is a similar drug and is used in combination with ZDV because of the existence of ZDV resistant strains of HIV. The duration of therapy is usually 28 days.

Possible side effects and contraindications of anti-retrovirals

Although anti-retroviral drugs may have important side effects when taken over a long period of time, or by individuals with established HIV infection or AIDS, short courses of anti-retrovirals taken in a post-exposure context have been associated with few immediate side effects and no evidence of long-term side effects. A study of 148 health care workers given ZDV post-exposure for 28 days and followed for a mean of 30 weeks examined the risk of toxicity. None stopped taking the ZDV for objective toxicity; 35% stopped for subjective toxicity (for example, fatigue, nausea or headache). These symptoms did not coincide with objective toxicity. For those who took the ZDV for at least 22 days, blood counts

remained stable. No health care workers on ZDV became infected with HIV. Lamivudine is also well tolerated in short-term therapy. However, only zidovudine is approved for use in pregnancy (after the first trimester).

ZDV is contraindicated in persons with liver or kidney insufficiency, or anemia. In these situations, alternative drugs may be considered after consultation with an infectious disease specialist. Laboratory evaluation is recommended if therapy is to be continued after the initial five-day start-up period.

You will receive more detailed instructions regarding the dose of drugs and when to take them from your attending physician.