

The HIV Test



Why get tested?

If you may have been exposed to infection with HIV, you can only know for certain whether or not you are seropositive by being tested. When you are tested you should also receive detailed professional counselling on HIV and AIDS.

In a matter of years, AIDS has become a pandemic (an epidemic spreading worldwide). It is important for everyone to know whether or not they are infected with the AIDS virus. They can then avoid contributing to the spread of this deadly disease.

Deceptive calm

It generally takes several years before people who have contracted HIV notice any sign of it (although some experience a flulike illness within the first six months). But this calm is deceptive. During this symptomfree interval, an infected person can already pass on the disease to others. The only sure way to know whether you are infected is to get tested. You are then behaving – for your own and for others' sake – as someone who is aware of their responsibilities.

Testing always makes sense

Those who test negative are very unlikely to be infected with HIV, provided that the timing of

the test is right (see below). A negative result banishes uncertainty and fear. Those taking the test and receiving skilful counselling will probably adopt a more responsible attitude, avoiding any risk behaviour in future. A positive test result shows they are infected. But this knowledge is also beneficial, as they can then take advantage of early antiviral therapy (in industrialised countries: see below). Early diagnosis also improves the chances of bringing complications under control. For those with HIV, other illnesses can play a part in increasing the amount of virus present, thus further weakening their immune system. Otherwise harmless illnesses such as diarrhoea and shingles may develop dangerously and so need treating as soon as they appear. Those who put off having an HIV test waste precious time for the early treatment of these complications. The seropositive must also avoid certain live, attenuated vaccines, e.g. oral vaccination against poliomyelitis and typhus. Finally, they must, on principle, make every effort to avoid spreading the disease. Normally nobody wants to pass it on to their partner or bring a seropositive child into the world.

It is vital for a doctor to know whether a patient is seropositive. Only then can the doctor make a correct diagnosis and provide for effective therapy. It will be necessary,

for example, to treat tuberculosis, systemic mycoses etc. We advise you to go for testing to a doctor in whom you have complete confidence so that you can also obtain any information and advice that you need.

Medical guidelines

Infected persons can only take appropriate steps to protect their health if they know whether they are seropositive. Any contact with carriers of diseases, ranging from children's ailments such as chickenpox to tuberculosis, can endanger their health. The seropositive must avoid raw or undercooked food (meat, eggs, fish, oysters, uncooked sauces) and water, as any of these may harbour microbes posing a serious health risk to them. Unboiled water or unpasteurised milk and dairy produce may also harbour germs that pose a serious risk to the infected person's health. A balanced, vitamin-rich diet is thoroughly recommended. They must avoid all contact with excrement from domestic animals and must not, for example clean animal pens, stables etc. They should wash their hands after gardening or farm work and are also at

risk from germs in house plant compost and bird cages. Those going on journeys need to enquire beforehand about health hazards in the countries they wish to visit. Many do not realise that mental stress and major physical exertion can weaken the immune system, as can cigarettes, drugs and alcohol. The seropositive are strongly advised not to take medication without medical advice, as there may be side effects on the immune system in particular.

Therapy

Antiviral therapy

Nowadays, one means of combating HIV is the use of drugs to inhibit transcriptase and protease. Inverse transcriptase inhibitors work directly to stop the genome of the virus becoming incorporated in the DNA of the human host cell. These drugs counteract inverse transcriptase, an enzyme important for the synthesis of DNA, whereas protease inhibitors counteract the enzyme responsible for new virus production. Prescribed in combination they control the viral load in the blood and the lymph nodes and thus slow down the development of the illness.

Therapy has been vastly improved in recent years. In the early 1990s antiviral therapy was used only when infection was already far advanced. Now it is begun early on in the hope: 1. of preventing the virus from reproducing itself, and thus of preventing the destruction of the immune system and progression of the illness, 2. of preventing resistant strains from appearing, 3. of making the disease less contagious; studies having shown that transmission from mother to baby is much reduced if antiviral therapy is given to women during pregnancy.

Therapy is now begun with two inverse transcriptase inhibitors (such as AZT [=Retrovir®], 3TC [=Epivir®], ddI [=Videx®] or ddC [=Hivid®]) in combination with one protease inhibitor (Indinavir [=Crixivan®] or Nelfinavir [=Viracept®]). It is important to realise that these therapies do not eliminate the virus, they have major unwanted effects and they are very expensive.

Who should have an HIV test?

- Persons with a history of risk behaviour (frequent change of partners, for example)
- Both lovers in a new relationship
- Couples wanting to have children
- Women at the beginning of pregnancy
- Blood donors
- Persons who have received untested blood transfusions
- Persons to be given certain vaccines made up of live attenuated germs
- Persons undergoing surgery
- Women who have been raped

As to timing, the test should be performed no earlier than 2 to 6 weeks after suspected exposure, and if the result is negative, it must be repeated 3 months later.

It makes no sense for those already diagnosed with HIV to take the test.

Prophylactic medication to combat AIDS

Prophylaxis is aimed at preventing – or at least delaying – the occurrence of opportunistic infections (which generally affect persons with AIDS). But this targets only the complications, as it were, and cannot cure the infection itself or prevent the destruction of the immune system.

Various prophylactic procedures are used to combat opportunistic infections, depending on how far the illness has progressed, and include the use of antibiotic and antimycotic drugs.

Prophylaxis after exposure

For several years now it has been usual for health workers at risk of HIV infection – after accidental injury from a syringe needle, for example – to be given a 2 to 3 week course of one or more anti-HIV drugs. This has reduced the risk of transmission by 80%. In Switzerland, since late 1997, this treatment has also been made available to those exposed to infection through having unprotected sexual intercourse with an HIV positive partner, although little is known about its effectiveness in such cases. What is, however, well established is that treatment must be begun as early as possible, ideally within just a few hours, but certainly within 72 hours of exposure, as by then the virus has proliferated in the organism. Medication must continue for 2 to 4 weeks and causes significant side effects. The decision requires very careful consideration by a specialist at a hospital, as nothing is yet known about undesirable longterm effects that this treatment might have on healthy individuals.

What you need to know about the test

The test mostly used for screening is the ELISA test. This detects the presence of antibodies to HIV and can be performed by a doctor or at a laboratory. The Western Blot test is used specifically to confirm a positive ELISA test result. After initial infection with the virus, it takes some time before antibodies appear in the blood (seroconversion). The length of time varies from person to person and depends on several factors (route of transmission, quantity of virus, etc.). The current view is that it takes at least two weeks before any antibodies show up during testing, although in most cases they do so within the first three months after infection. There is therefore no medical indication for testing until at least three weeks after suspected exposure to infection and then, if the result is negative, testing must be repeated three months later.

There are two other tests which demonstrate directly that the virus itself is present. Viral p24 antigenemia detects the p24 antigen, a component of the virus, whereas the polymerase chain reaction (PCR) detects viral DNA. Both of these methods are used for confirmation of an initial diagnosis based on the ELISA test if there are too few antibodies (in the first few weeks following infection) or if the test result is unclear. But even these two complicated procedures cannot detect infection in the days immediately following exposure. Although they can be used sooner after infection than the ELISA test, the difference is only a matter of days, and they are therefore not used routinely. PCR is also used to gauge the viral load, i.e. the quantity of virus in the blood. This level has a major bearing on the treatment of the infection.

There also now exist rapid antibody tests, which are cheap and easy to use and are as reliable as ELISA and Western Blot.

The test is in everyone's interest

Only if you know whether you are an HIV carrier are you in a position to act responsibly towards yourself and others:

- Those who are seropositive must tell all their recent partners that they too may be infected. They can then go for testing and counselling themselves, avoid passing on the virus to those around them and benefit early on from available medication.
- The seropositive must also tell their current partner or partners about their infection. The best protection is to avoid any exchange of body secretions and any sexual relations. Although condoms reduce the risk of transmission they do not eliminate it 100%. Those who do not wish to give up risky activities should make systematic use of condoms.
- If seropositive persons have sexual relations, it makes sense for them to use condoms to prevent transmission of other infections (syphilis, hepatitis, herpes, etc.) or of a particularly virulent strain of HIV.
- Doctors, dentists, nurses and care staff should be told about patients' HIV status so that they can take appropriate measures.
- The seropositive must not donate organs, blood or sperm.

The points listed below should form the basis of responsible behaviour for the good of all.

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AIDS Information Switzerland
P.O. box 26 • CH 8610 Uster 1
Phone +41 44 261 03 86
Fax +41 44 261 10 32 • www.aids-info.ch