

Teaching the essentials of HIV and AIDS

Handout- "Churches, Channels of Hope"

The facts

HIV vs AIDS

Many people view HIV and AIDS in the same light, and therefore have the underlying prejudice that someone who is HIV-positive could die tomorrow. This is not true. It is essential to distinguish between HIV and AIDS. AIDS is the final stage of the disease caused by infection with a type of virus called HIV:

H Human
I Immune deficiency
V Virus

A virus is a very small germ. HIV is not one virus, but a family of similar viruses. HIV 1 is found in most countries of the world while HIV 2 is found mainly in West Africa.

AIDS is a medical diagnosis for a combination of illnesses which results from weakness of the immune system due to infection with HIV. The immune system defends the body against infections and diseases. The word "AIDS" is an abbreviation for the following:

A Acquired become infected
I Immune the immune system (the body's defence system) is weakened by the virus
D Deficiency the illness has a variety of symptoms
S Syndrome

How HIV weakens the immune system

Our blood contains white and red blood cells. Normally the white cells fight off and kill any germs which enter our bodies. They do this by eating up the germs and by producing chemicals called antibodies which kill them. In this way our bodies fight off many different germs and we stay healthy.

Sometimes we have symptoms of illness when our white cells are fighting the germs, but usually the white cells win and we get better.

HIV weakens the immune system by entering and destroying our white cells. As more and more white cells are killed, the body becomes less and less able to fight off the many different

germs which live around and in our bodies all the time. After many years the white cells are so damaged that these germs, which normally do not cause problems, can cause deadly diseases. People with AIDS eventually die from one of these diseases which their bodies cannot resist.

HIV can also attack the brain cells and nervous system directly causing mental and co-ordination problems.

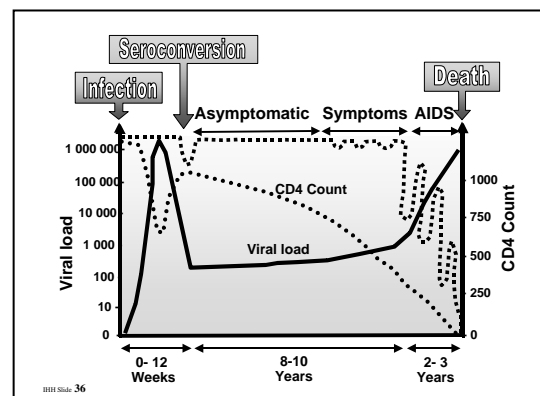
What happens when a person is infected with HIV?

There are four stages of HIV infection.

1. Initial symptoms shortly after infection with HIV

Immediately after a person is infected with HIV, the virus rapidly starts to multiply using the body's white blood cells. After about two to six weeks most people infected with HIV produce antibodies against the virus. These antibodies can contain a number of HI viruses, but they are not able to kill HIV because it hides in the white cells. A blood test generally used can detect these antibodies, which will show that the person has been infected with HIV. The period from the time a person is infected until these antibodies appear is called the window period. During the window period there will be no antibodies present in the blood, and if a person would be tested during this time a person therefore tests negative, although the virus is already in the blood.

Around the time of infection some people have



a short illness similar to glandular fever. This could be associated with a short spell of night sweats, swollen glands and some flu-like symptoms. These symptoms would normally disappear within a few days.

2. A healthy person infected with HIV

After this, most people remain healthy with no signs of illness for many years. However, HIV is still present in the body and the person can infect others without either partner knowing it.

3. Illnesses associated with HIV infection may begin to appear

The longer a person is infected with HIV, the more white blood cells get destroyed and the weaker the person's immune system become. This will initially cause the person to begin to show some minor signs of illness.

Minor signs are those which occur frequently in other illnesses as well. Major signs are those which are more closely linked with HIV infection.

Minor Signs

- Cough for more than one month
- Itchy skin rashes
- Cold sores all over body
- Shingles
- Thrush in the mouth and throat
- Swollen glands at two or more sites (excluding the groin) for more than 3 months

If possible people with such signs and symptoms should also have an HIV antibody blood test.

4. The illnesses in AIDS

Finally so much of the immune system is destroyed that the person is attacked by rare and serious infections which eventually kill him or her. These diseases are called opportunistic infections since they use "opportunity" of a weakened immune system to make attack the body. The diseases vary in different countries, depending on which viruses, bacteria, fungus and protozoal infections are around. An infected person will then experience major sign of illness.

Major Signs

- Weight loss greater than 10% of body weight
- Fever for longer than one month

- Diarrhoea for longer than one month (on and off or all the time)
- Persistent severe fatigue

Common diseases that can affect a person with AIDS include:

- chest infections causing pneumonia and shortness of breath (TB is common in people with AIDS)
- brain infections causing mental confusion, severe headache and fits
- gut infections causing severe diarrhoea lasting many weeks
- cancers, particularly a skin cancer called Kaposi's sarcoma.

Without access to antiretroviral medication (ARVs) people with AIDS will die within one to two years.

How can I tell whether I am HIV positive or not?

You can only know if you are HIV infected if you go for a HIV test. An HIV test tests for the presence of antibodies for HIV in the blood. Most countries currently use the Rapid test where a small sample of your blood is tested and results are available within 20 minutes.

Do not try to diagnose yourself whether you are HIV+ by looking for certain symptoms. They only appear in the late stage of the disease, and it might also be misinterpreted. People who are worried that they might be HIV infected should go for HIV testing as soon as possible. Nobody should be forced to go for testing. The testing should be accompanied by pre- and post-test counselling. This is called voluntary counselling and testing (VCT)

If you are worried, do not walk around being worried the whole time. Go to any clinic, doctor or local hospital, and ask to be tested for HIV. All test results will be kept confidential. People are very often afraid of hearing that they are HIV infected, which is understandable, but it is definitely better for you to know your HIV status, than not to know. If you know you are infected you can start to look after your own health, start to investigate different treatment options, make plans for the future, adapt your lifestyle and make sure that you do not infect anyone else, get support, accept your HIV status and start to live again.

If people are infected with HIV, how long will they have before they get AIDS?

On average, people infected with HIV develop AIDS after eight to twelve years if they receive no treatment. This however has started to change as new antiretroviral drugs are constantly developed. The prices of these drugs may still be out of reach of many people, but thanks to global advocacy efforts most governments now have programs to make antiretroviral drugs more available for free or at reduced prices.

If an infected person uses these medications correctly and can tolerate the possible side-effects of these drugs, HIV infection can now become a treatable and manageable disease similar to high blood pressure or diabetes. This implies that a person infected with HIV can survive many years longer than the eight to ten years mentioned before.

Even if someone cannot afford these drugs, there is much s/he can do to stay healthy.

A person could for instance include fresh fruit and vegetables, garlic and some multi-vitamins as part of his normal diet.

How does a person become infected with HIV?

For the HI virus to be transmitted, it needs –

- Perfect conditions
- Certain body fluids
- Certain “actions” that could lead to infection

Which conditions does HIV need to infect someone

It is not easy to become infected with HIV. HIV is a simple virus. The most important thing to remember is that it cannot survive outside the body at all. But inside a human body, conditions are perfect for the virus to survive and multiply. The reason for this is:

- Our body temperature is ideal for the virus to survive - high temperatures will kill the virus.
- The body is moist inside – otherwise the virus will dry out and die.
- There is no contact with air - otherwise, its protective protein layer will break down and it will die.

- The correct pH balance plays a vital role, as the virus needs a pH balance very close to that which we find within the human body. As soon as the environment changes to being too acidic or alkaline, the virus will die.
- There must be a point for the virus to enter the body. This could be through direct contact of infected high concentration body fluids into an open wound, cut or injection needle injury. But the point of entry could also occur during sexual intercourse where friction can cause microscopic lesions in the mucous membranes of the sexual organs.
- Many sexually transmitted diseases, such as syphilis, herpes and gonorrhoea cause small sores or small areas of broken skin on the sexual organs or in the mouth. This creates an ideal place for the virus to enter the bloodstream. This is why people with sexually transmitted diseases are even more at risk to be infected with HIV.

Which body fluids might contain enough HIV to infect a person

In some body fluids of an infected person, the HI virus is found in such high concentrations that someone can be infected if they come into direct contact with it. These fluids are blood, semen, vaginal fluid and breast milk. During unprotected sex, a person will have direct contact with semen or vaginal fluid, and sometimes even with blood. This is, once again, why HIV infection takes place mostly when people are having unprotected sex. On the other hand, body fluids such as saliva, tears, perspiration and urine will have such low concentrations of HIV that there is no chance of infection. This is why normal social contact and kissing is not dangerous and will not lead to HIV infection.

Which “actions” could lead to HIV infection

HIV cannot enter the body through the air in the same way as measles. There are only four ways by which HIV can enter the body and many, many ways that it cannot enter.

HIV can enter the body in these four ways:

- by having unprotected sexual intercourse with an infected person
- by an infected mother to her unborn child;
- by transfusion of infected blood; or by infected blood in or on needles, syringes or other instruments.

HIV from an infected person must enter the white cells of another person in order to survive. HIV can only enter another person when the blood, semen or vaginal secretions of an infected person come into contact with the blood or mucous membranes of another person.

The outside of the body is covered with a thick skin which keeps out HIV as long as there are no cuts or sores in it.

The vagina, penis, rectum and mouth are covered with a much thinner skin called mucous membrane. White blood cells can be found on the surface of these mucous membranes. HIV can infect these white cells before they return to the blood vessels which are close to the surface of the membranes.

Any break, sore or inflammation in the vagina, penis, rectum or mouth makes it even easier for HIV to come into contact with the blood cells. This is why most people get infected during sexual intercourse.

HIV infection does not easily occur in the mouth since there are many white blood cells in the mouth which will kill HIV before infection could happen.

Discharges contain a lot of white cells which make it easier for HIV to infect people with discharges from the vagina, penis or rectum. For these reasons, people with other sexually transmitted diseases are at greater risk of HIV infection.

What can you do to protect yourself from HIV infection?

There are many ways to prevent HIV infection. You can prevent sexual infections by safe(r) practices such as abstinence, mutual faithfulness in marriage, waiting as long as possible before engaging with sex for the first time, the correct and consistent use of condoms, and the reduction of number of sexual partners.

Abstinence is the best way to protect yourself against HIV infection. The safest sex is no sex! The longer young people can wait before they have sex, the less their chances of becoming HIV-positive.

Mutual faithfulness: If you are already in a sexual relationship, mutual faithfulness, when both people know their HIV status, is the best way of protecting yourself against HIV and other sexually transmitted diseases. But the key word is **mutual** faithfulness. If two people are

involved in a longstanding, monogamous, mutually faithful relationship, and not one of the partners was HIV-positive before their relationship, there is no chance of infecting each other.

Now let's say you choose to become sexually active, but you are not in a relationship such as I've just described. You must know that you will be putting yourself at risk and that you need to take responsibility to protect yourself against HIV.

Condoms: Remember – you are responsible for your own sexual health. You need to use a condom when you have sex, unless both partners know that they are HIV negative and are within a mutually faithful relationship. Don't rely on trust, or on how healthy the person looks. Don't wait for the person to tell you that he/she is HIV-positive or not. If you are willing to become sexually active, you are the only person who can look after your own sexual health.

Do not use drugs, especially not injecting drugs. If you do, never share needles and syringes. Always use sterilized equipment.

An HIV-negative person who has a **Sexual Transmitted Infection** (STI) is five to ten times more susceptible to HIV infection, because the lesions and immune response associated with STIs make it easier for HIV to enter the body. This implies that a person with symptoms of an STI needs to be encouraged to seek treatment as soon as possible. Treatment will lower his/her own risk of infection and the transmission of the STI and/or HIV to other people.

Remember: Anybody can get infected with HIV, but nobody has to get infected. In most cases HIV is 100% preventable.

Can AIDS be cured

At this stage there is no cure for HIV infection. A great deal of money and time are spent throughout the world to find an effective, safe vaccine to prevent HIV infection, but it is not expected that a vaccine will be available soon. A growing number of HIV drugs are available. These antiretroviral drugs are prescribed in combinations and have proved to be very effective if used correctly. These drugs, however, cannot cure HIV infection. It can only slow down or stall the HI-virus' destruction of the body's immune system.

Although the drugs are now more readily available, there are still many people who do not have access to the drugs in their countries.

The only effective way to prevent HIV infection is to prevent any contact with the HI-virus – and that depends greatly on you and your lifestyle.

How can we reassure people?

There are no known cases of people becoming infected with HIV through normal living with an infected person. Parents who look after HIV positive children and health care workers who look after patients with AIDS do not become infected as long as they are not accidentally injected with infected blood. It is only the sexual partners of infected people who may become infected in such situations.

All the people who have got HIV infection are either sexually active, or have had blood transfusions or are young babies.

If HIV was spread through mosquitoes or normal contact many older children and others outside these groups would be infected, as they are with malaria or measles.

HIV can therefore not enter the body through: holding hands, living together, kissing, sport, toilet seats, touching, dancing, bathing together, hugging, massage, sharing food, swimming, sneezing, coughing, breathing, sharing clothes, flies, mosquitoes.

How should we treat an HIV-positive person?

Remember that you cannot be infected through casual contact, and that to the person who is HIV-positive, it means a lot to have normal contact with others. People with HIV need positive contact as much as they need the most advanced antiretroviral therapies. They need normal and healthy emotional lives that include:

- love
- companionship
- support of family and friends
- medical care
- housing
- access to a job
- access to social, educational, and recreational facilities
- access to places of worship.

If your friend or a member of your family is HIV-positive, show friendship and love simply by being there for that person. Make physical contact by hugging him or her. Your friendship

will not only mean a lot to that person; you will become a richer person in the process.

Where did AIDS come from?

There are two main strains of the HI virus, known as HIV1 and HIV2. HIV1 is the more virulent strain, which has spread throughout the world. It is also called the Western strain of the HIV. HIV2 is a less virulent strain found in West Africa. It was previously called the African strain of HIV.

It was suspected for some years that both these strains of the virus might have an animal, specifically a simian or “primate specie”, origin. Very often the “green monkey” got the blame. Whether it was a “green” monkey is not important. What is important is that since the beginning of 1999 scientists have provided sound evidence to show for certain that HIV1 – the virulent and widely spread strain of the virus – originated in the chimpanzee sub-specie, while HIV2 – the less virulent and more contained strain of the virus – originated from the “sooty mangaby” monkey.

A particular kind of chimpanzee is known to carry a virus quite similar in structure to the human AIDS virus. This chimpanzee virus (SIV) is a great deal older than the HI virus.

In certain areas of Africa, the monkey and chimpanzee is considered a luxury food. Possibly the first human was infected by eating some uncooked organs, or through an accidental cut while preparing a carcass. The disease may have begun in this simple, quiet manner, spreading to others from this point through sexual intercourse and later through shared needle use.

Many African government representatives are sensitive about this view. Understandably so, as it is often phrased in a way that seems to blame Africa for the appearance of the virus. While scientific events are not themselves racist, observations and reporting of them may be so. It is important to remember that no one person, nation or population is responsible for the development of HIV/AIDS. The most important task now is to prevent the further spread of the virus and care for those who are infected with HIV. No one is to blame for the appearance of HIV. But now that we know it is there, we must not be accused of failing to create the kind of responsible and caring society which will make it possible to prevent AIDS.

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