



About HIV Infection



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- INFORMATION FOR PEOPLE WHO HAVE
RECEIVED A POSITIVE HIV TEST

This is a revised version of the About HIV Infection booklet. The original version was written by employees from the Olafia Clinic and the Norwegian Institute of Public Health. The text was revised by the Department of Infectious Disease Epidemiology at the Norwegian Institute of Public Health

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Foreword

This booklet is intended to give information and help to those who have received a positive HIV test result. We hope that it will answer a lot of the questions you probably have about your new situation.

Although HIV was previously associated with the development of a severe disease with high mortality, a person infected with HIV can expect to live for a long time with a good quality of life. HIV infection cannot yet be cured, but with the help of treatment, the disease can be controlled. As with other chronic diseases, it is important to take care of both mind and body.

Here you will find current knowledge about HIV and how HIV infection progresses. You will find concrete answers to a variety of questions about who to contact for help and advice. The content is primarily intended for people residing in Norway. It will help with all the thoughts that will arise when receiving a positive HIV test result. This booklet provides information about how to contact others in the same situation and learn from their experience that life, for most people, can continue with minimal changes. There are also suggestions about how to deal with school, work, family, friends and the community. A person who has received a positive HIV test result needs to understand about HIV infection and how it will progress.

Questions may also arise about nutrition, alternative medicine, travel and vaccinations. This booklet also provides information about pregnancy and the desire to have children. The information will be useful for family and friends, helping them to understand how an HIV positive person can stay healthy and how to reduce the effects of a severe and prolonged infection. As someone who has tested positive for HIV, the main points to remember are to gather as much knowledge as possible, go to regular check-ups, take care of your health and avoid infecting others.



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Prospects are very good with modern HIV treatment

An HIV test is only performed after obtaining Informed consent

HIV INFECTION

HIV (human immunodeficiency virus) causes the destruction of the immune system so that the body becomes more susceptible to infection and disease. The virus is transmitted via blood, sexual contact, and from mother to child during pregnancy, birth and breastfeeding.

There is no treatment that can cure HIV infection. Although the virus can result in severe illness and death, the prognosis is very good with current treatment. With effective treatment, most people with HIV infection can live a long life without becoming ill.

HIV was first identified in 1983 and was determined to be the cause of Acquired Immune Deficiency Syndrome (AIDS). The virus had probably caused disease among humans for many years before it was identified.

THE HIV TEST

An HIV test can only be performed with informed consent. The person to be tested has a right to know what the test implies and should agree to be tested. Based on situations that may have led to infection, the individual and the doctor will consider the possibility of a positive test. Even so, a positive test can still come as a shock.

What does a positive HIV test mean?

When infected with HIV, the body produces antibodies against the virus. In 2003, HIV tests were introduced that detected both antibodies and components of the virus, so-called HIV combo tests. They can detect HIV infection as early as 1-2 weeks after being in a situation with a risk of infection. In some cases, it may take longer before the test can detect infection, so anyone who has been at risk of infection should be monitored for up to 12 weeks to confirm the test result. The time from infection to the HIV test showing a positive result is called the “window period”.

Although the HIV tests that are used routinely are very reliable, they can sometimes show a false positive result. This means that the test detects other substances in the blood than HIV. Samples that give a positive result will be examined with another test, Western Blot, to give a final confirmation that the test is positive. As an extra precaution, a new blood sample is taken to rule out any mistakes in handling the samples. A positive HIV test result only confirms that a person is infected with HIV. It provides no information about when or how the person was infected or how far the illness has progressed.

Other HIV tests

Rapid tests have also been developed for HIV. With a regular HIV test, blood samples are sent to the laboratory and it takes about a week before the results are available. With a rapid test, the sample is examined immediately and the result is ready after 15-20 minutes. Even with rapid tests, it takes 12 weeks after infection exposure before the result is certain. PCR tests are used in special situations, for example for babies born to HIV positive mothers and during check-ups after needle-stick injuries.

Resistance test

When a virus becomes resistant, this means that immunosuppressant medicines no longer have any effect. This has been seen with HIV. Blood samples are taken from all people who are newly diagnosed as HIV positive to study the prevalence of the resistant virus. Resistance tests are also carried out when treatment is necessary. This will help when evaluating the appropriate choice of medicine. (See chapter about Medicinal follow-up of HIV infection).

A POSITIVE RESULT- WHAT NOW?

Many different feelings will arise when being told that the HIV test is positive and it often takes time to adjust to a new situation.

Modern medical treatment means that the prospects for people living with HIV are now very good compared to the past. However, life will still

Positive HIV test results must be confirmed



be different, even for those living without symptoms or ailments. HIV infection is a lifelong infection, which means that HIV positive people should be aware that they can infect others. Medication cannot yet cure or eradicate HIV and when treatment starts it must continue.

People who test HIV positive will be referred to a doctor with a good knowledge of HIV. Treatment for HIV infection is usually handled by a specialist health service in the hospital. For people who live far from a hospital, the local doctor can collaborate with the specialists to give the best possible local support.

People who are HIV positive and who want contact with a psychiatrist or psychologist have a right to referral to free treatment. (See the chapter about psychological help).

POSITIVE HIV TESTS AMONG IMMIGRANTS IN NORWAY

HIV tests are not required for entry or residence in Norway. This applies to tourists, students and people seeking work or asylum.

Upon arrival to the country, asylum seekers will often be offered HIV tests. They are entitled to information and must give their consent for the test to be taken. An asylum seeker can decide whether information about a positive test should be provided to the immigration authorities. A positive test has no negative impact on a subsequent application for residence, but does not automatically grant asylum or the right to permanent residence in Norway.

Everyone staying in Norway is entitled to medical treatment if they are ill. If a HIV-related disease is discovered that requires treatment, everyone living in Norway is entitled to treatment. For many asylum seekers it may be difficult to obtain medication and continue their treatment if they must return to their homeland. This may therefore be relevant in the overall assessment when applying for permanent residence. However, each case will always be considered individually.

Immigrants are offered an HIV test on arrival in Norway



WHO NEEDS TO BE INFORMED?

Sexual partners

A person who has an HIV infection has a responsibility not to infect others. In practice, this means always using a condom for sexual contact, and informing your regular or occasional sexual partner that you are HIV positive. Openness can be a challenge but it is easier to practice safer sex when both parties collaborate.

It can often be helpful to address issues about sexuality individually or in discussion groups with others in the same situation. (See references at end of the booklet of organisations for HIV positive). You can also talk to the doctor who is handling your treatment.

Contact tracing

Tracing contacts is a necessary step in the fight against the HIV epidemic. Contacts that may be infected should be contacted and offered a test. Either the infected person or health personnel can inform the contacts about the possible risk of being infected.

Health personnel will inform the contacts without disclosing the name of the person with HIV infection. The contact will be offered advice, counselling and an HIV test.

Family

How open the individual wants to be about their HIV status towards family, friends and acquaintances, is a personal choice. Consider who should be informed and why. Experience shows that most people who choose to tell their closest friends or family members that they have an HIV infection find this to be a good support.

Everyone staying in Norway has a right to medical treatment when they are ill

Contact tracing is important

**Neither employers nor
colleagues can
demand to know
if an employee has an
HIV infection**

Workplace

Neither the employer nor colleagues have a right to know if an employee is infected with HIV. This also applies to schools and places of education. Some people choose to be open with colleagues and their employer.

People with HIV can have a variety of professions. The exception is infected healthcare workers who perform procedures (operations, etc.) where the risk of needle-stick injury is particularly high. If an HIV positive person is unsure if their work involves a risk to themselves or others, they can discuss this with their doctor.

Healthcare professionals

Your doctor and your dentist should be informed about your HIV status. If you are receiving any form of treatment at hospital it is also appropriate to inform them. Healthcare professionals need to be able to assess your health status and provide the best possible treatment. Health professionals have a duty of confidentiality.

Some vaccines may be dangerous for a person with HIV infection. If you need vaccines, e.g. when travelling, you should inform the person who is administering the vaccine about your HIV status. (Read more in the chapter on vaccines).

Many of the medicines used to treat HIV can affect, or be affected by, medicines used to treat other diseases (allergy medicines, certain antibiotics and herbal medicines). There may be interactions between medicines that may have adverse or severe consequences for health. Never start to take other medicines without consulting the doctor who is handling your treatment.

Insurance companies

Insurance policies / agreements entered into before receiving an HIV diagnosis will be valid and will continue. For new agreements for individual life and health insurance, information should be disclosed

about health conditions. The insurance will be invalid if a person with HIV fails to do so. It is possible to sign individual life insurance on specified terms after being tested as HIV positive. Each insurance company will decide if they choose to offer such a scheme. Ill-health or invalidity insurance is not offered. As a member of a trade union and through the employer, it is still possible to be insured against disability/ death without disclosing health information.

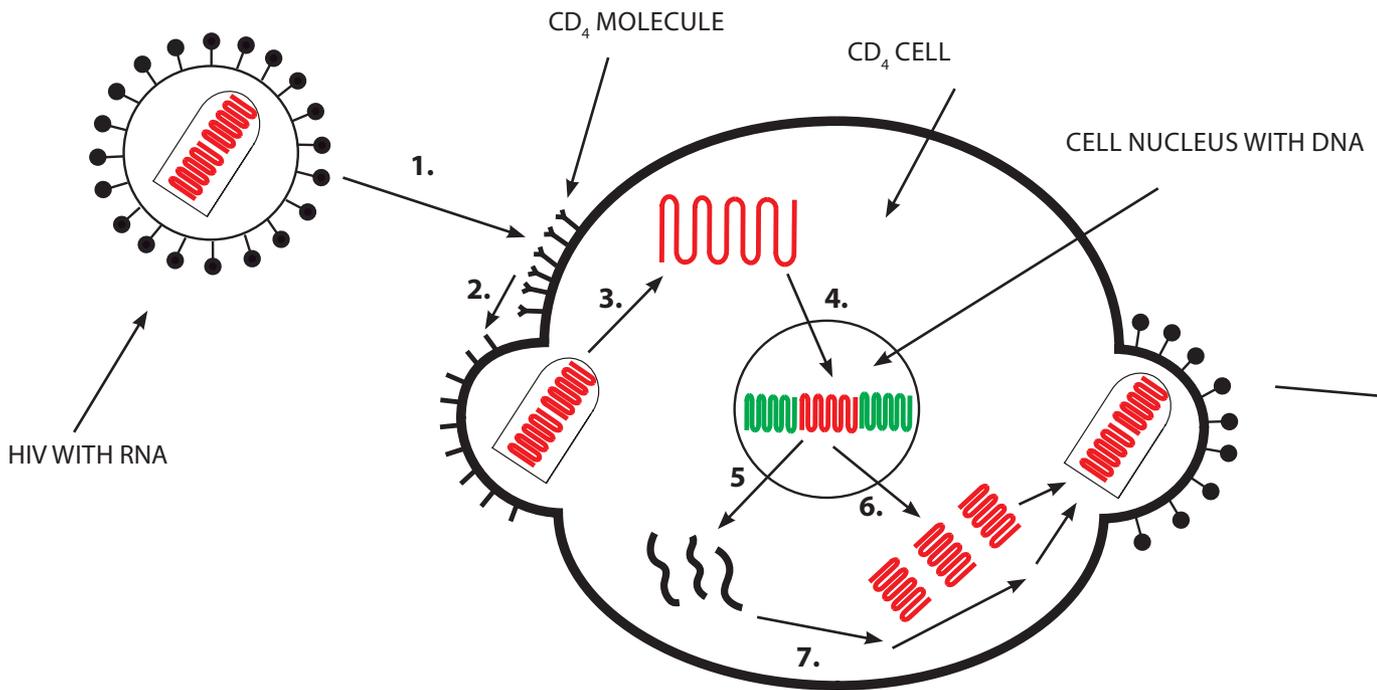
Armed forces

People with HIV infection are considered unfit for compulsory national service.

Employees in the Armed Forces who have been diagnosed with HIV infection are not considered fit for operational service or operations abroad. They are considered fit for office service / staff service in Norway.



HIV drugs can be influenced by other types of drugs and give serious reactions



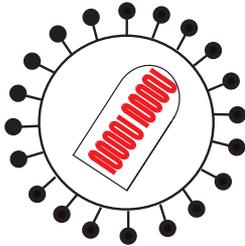
HIV attacks special cells in the body and uses these cells as «factories» to make millions of new viruses

WHAT IS HIV?

HIV (human immunodeficiency virus) belongs to a group of viruses called retroviruses. It is also a lentivirus (lente = slow), which means that it takes a long time from infection until the disease progresses.

As with all other viruses, HIV also depends on living cells to reproduce. HIV attacks certain immune cells in the body and uses these as a factory to make millions of new viruses which can then infect new, healthy cells. The cells that are attacked are destroyed in the process. The destruction of the cells will gradually weaken the immune system because they belong to the most important group in the immune system. (See chapter about the immune system)

8.



1. VIRUS BINDS TO CD4 MOLECULE
2. VIRUS MELTS TOGETHER WITH THE CELL
3. REVERSE TRANSCRIPTASE CHANGES RNA TO DNA
4. VIRUS DNA BINDS TO THE CELL'S DNA
5. VIRUS PROTEINS (BUILDING BLOCKS)
6. VIRUS DNA
7. BUILDS NEW VIRUS WITH HELP OF PROTEASE
8. NEW VIRUS ESCAPES FROM THE CELL

HOW IS HIV TRANSMITTED?

HIV is found in the bodily fluids of an infected person. The fluids that contain enough viruses to transmit infection are blood, semen, vaginal secretions and breast milk. Other bodily fluids (sweat, tears, saliva and urine) contain negligible amounts of virus and involve virtually no risk of infection.

Sexual contact

Sexual contact is the most common mode of transmission. Over 90 % of HIV infections occur by sexual contact. Worldwide, heterosexual infection is most common. The virus is transmitted when blood, semen or vaginal secretions come into contact with the mucous membranes of another person. Mucous membranes are found in the vagina, urethra, rectum, mouth and eyes.

Sexually transmitted infections such as chlamydia, gonorrhoea, herpes and syphilis increase the risk of HIV transmission through sexual contact.

**It is very important
that needles are
never shared**

**T-lymphocytes are a
particularly
important
type of white
blood cell**

Transmission by sexual contact may therefore occur during vaginal / anal intercourse or oral sex. Anal intercourse is considered to be the most risky, but it is possible to be infected with HIV by oral sex.

HIV is transmitted more easily from man to woman than from woman to man. Among men who have sex with men, the man who receives the semen is at greatest risk of infection.

Other sexually transmitted diseases (chlamydia, gonorrhoea, herpes, syphilis or other infections with genital sores) increase the risk of contracting HIV through sexual contact. Pre-existing vaginal infections caused by yeast also increase the risk of infection.

The increased risk of contracting HIV applies whether the person with the sexually transmitted infection / vaginal infection either has HIV infection or is exposed to the risk of HIV infection.

Transmission via blood

HIV is found in blood. It can be transmitted by blood transfusion, a risk that is now more or less eliminated in Norway because of blood donor testing and heat treatment of blood products. HIV can also be transmitted when significant amounts of blood come into contact with mucous membranes or damaged skin

HIV can spread among injecting substance users when sharing syringes, needles or other equipment. This applies both for drugs used for doping and narcotic substances. Never share syringes or needles.

From mother to child

The risk of transmission from mother to child during pregnancy, birth or breastfeeding is approximately 30 %. This risk can be reduced to under 2 % if the mother receives treatment during pregnancy, the child receives antiviral treatment in the first weeks after birth, and the child is not breastfed.

THE IMMUNE SYSTEM

The immune system is designed to protect us against a range of diseases. It consists of white blood cells that are made in the bone marrow. We have a number of different white blood cells with their own specific task. A cell type called the T lymphocyte is particularly important.

White blood cells recognise foreign bodies and neutralise or remove them. This applies especially to microbes, whether they are bacteria, virus, fungi or other infectious agents. The immune system is also important in protecting us against cancer.

How does HIV destroy the immune system?

HIV will only attack and reproduce in one cell type. The virus needs to bind to a specific molecule on the cell surface, known as CD4, to access the cell. There are many cell types in the body with CD4 molecules on the surface that can be attacked by HIV. The most important white blood cells are called T4 lymphocytes or helper cells. They play a key role in the immune response because they direct all the other cells and signals.

Healthy people have between 800 and 1,200 CD4 lymphocytes per microlitre of blood. When HIV attacks a CD4 cell and uses it to produce new viruses, the cell is destroyed. HIV destroys a large number of CD4 cells every day and eventually the bone marrow will be unable to maintain the production of new cells. The number of CD4 cells will therefore be gradually reduced. When the CD4 count sinks to 200-300 per microlitre, the immune system is so impaired that the person can contract illnesses that the body would otherwise be able to control.

What are opportunistic infections (OI)?

When the immune system is significantly weakened, the microbes that usually do not cause disease in people will attack. This is called opportunistic infection. Most opportunistic infections are caused by microbes that we carry after infection in early childhood. A normal immune system protects against these microbes. This protection

The lymphocyte is destroyed when HIV attacks a CD4-cell and uses the cell to produce new viruses

Treatment should be considered for primary HIV infection

disappears when the immune response fails, and the person becomes ill. Infections caused by these microbes can often be kept under control with medication, but may reappear if the immune system is still compromised. (See chapter about Antiviral therapy).

What is AIDS?

AIDS is an abbreviation for **A**cquired **I**mmunodeficiency **S**ndrome. Most countries have a well-defined combination of diseases and symptoms that, together with an HIV infection, are essential to diagnose AIDS. The definition varies from country to country, but this is often due to social security schemes rather than disagreements about the definition. A number of countries provide better financial support if a person has an AIDS diagnosis than an HIV diagnosis. This is not the case in Norway.

The most common reason for an AIDS diagnosis is an opportunistic infection. However, the first sign of AIDS in a person with HIV infection can be prolonged fever or diarrhoea, significant and unexplained weight loss or certain forms of cancer.

DEVELOPMENT OF HIV INFECTION

Primary HIV infection

50-70 % of the HIV infected develop symptoms 2-4 weeks after infection. This is known as acute or primary HIV infection. The usual symptoms are fever, sore throat, swollen lymph nodes, rash, and muscle and joint pain. The symptoms may resemble influenza and mononucleosis ("glandular fever") and usually last 2-3 weeks. After this phase, the symptoms disappear and the person feels healthy.

It is important to detect a primary HIV infection, because:

- with primary HIV infection and the first months after infection, there is a high concentration of virus in the blood and therefore a high risk of infection.

- With primary HIV infection, it is a short time since infection. This makes contact tracing easier and reduces the risk of further spread (see section about contact tracing).
- A specialist in infectious diseases should consider antiviral treatment in each case.

Progression

The amount of virus (viral load) in the blood after infection will gradually subside within 4-6 months and then stabilise at a certain level that varies from person to person. The disease progresses faster in people with a high stable viral load than with a lower viral load.

The speed of disease progression varies from person to person. Statistics show that even without treatment, 50 % of people with HIV infection will have no symptoms of disease after 10 years. Current treatment can effectively delay the deterioration of the immune system and the resulting complications. Therefore, these complications arise far less frequently now than in the days before effective treatment was available.

Early symptomatic HIV infection

In people with weakened immune systems, common diseases will occur more frequently and have a longer and more complicated course than in people with a normal immune system. When the number of CD4 cells decreases, other conditions could arise, such as fungal infections (thrush) in the mouth or the vagina. Other fungal infections such as athlete's foot and nail fungus can be troublesome. Herpes can cause serious problems, as can common warts and genital warts. Another early symptom of a weakened immune system can be shingles (herpes zoster). This is caused by a reactivation from childhood of the chickenpox virus. Skin problems are common, especially eczema with redness and flaking of the face and upper chest and back. Other skin diseases may also appear.

People with HIV infection have a greater risk that a tuberculosis infection will progress to disease, and reactivation of tuberculosis can be seen quite

Even without treatment, 50 % of people with HIV infection will show no signs of disease after 10 years

People with HIV infection are at greater risk of tuberculosis infection progressing to disease

**Serious
opportunistic
infections may
arise when the
CD4-number falls
below 200**

early in the course of an HIV infection. In Norway, few people have both HIV infection and tuberculosis but this combination is far more common globally. Tuberculosis should be considered for anyone with HIV infection, especially for those coming from countries with a high prevalence of tuberculosis.

Advanced HIV infection

Advanced HIV infection is seen less frequently today since most HIV infections are detected relatively early and treatment can begin before they develop.

With CD4 counts of around 200, serious opportunistic infections may arise. These are infections by microbes that a healthy immune system would manage to control. Pneumonia caused by the fungus *Pneumocystis jiroveci* is serious if the diagnosis is delayed or proper treatment is not given. Today, this form of pneumonia is mainly seen in people who are not being treated for HIV because they are not aware that they are infected.

Approximately 15 % of the population are carriers of the toxoplasmosis parasite, which can cause brain infection among people with weakened immune systems. Those who are not carriers and have a weakened immune system are advised to avoid contact with cats and to avoid meat that is not thoroughly cooked.

Some viruses that we carry can be reactivated and cause disease. Cytomegalovirus (CMV) is a virus that infects many, and approximately 60% of the adult population are carriers. With a weakened immune system, this virus may be reactivated and cause severe infection in a variety of body organs. The eyes are often affected.

At the advanced stage of HIV infection, increased rates of cancer are also seen, including Kaposi's sarcoma and lymphoma (cancer of the lymph nodes).

Other HIV-related diseases

Studies in recent years have shown that HIV positive people have an increased incidence of a variety of diseases that usually affect older, uninfected people. These include cardiovascular diseases, osteoporosis, liver diseases, kidney diseases, cancer and diabetes. This may be because HIV causes inflammation, particularly in the arterial walls, and an increased tendency to blood clots.

HIV positive people with other risk factors for disease (e.g., cardiovascular disease), together with side effects from HIV treatment may also affect the development of such diseases at an early age.

As more HIV positive people age, it is important to check for other health problems than the traditional HIV-related diseases.

The first medical examination is comprehensive and provides a basis for following the progression of HIV infection

MEDICAL FOLLOW-UP FOR HIV INFECTION

Regular medical follow-up is important for a person with HIV infection. The frequency depends upon disease progression and the immune response. Every 3 to 6 months is usually adequate. When treatment begins, frequent monitoring is often required.

The follow-up for a HIV positive person will require numerous tests and examinations. This is done to gain a comprehensive picture of the patient's health. In addition, you will receive information about your rights and duties, have regular counselling about sex, relationships and infection risk and be offered help to quit smoking and possibly to reduce the intake of alcohol and other stimulants.

Medical examination

At the first examination, it is important to get a good picture of the patient's physical, mental and social situation so that the conditions that may affect HIV infection are documented and monitored. It is therefore important to ask about social relations, previous illnesses, illnesses in the family, allergies, vaccinations, and the use of medicines and artificial stimulants (tobacco, alcohol and narcotic substances).

In addition, a clinical examination will be performed (blood pressure, lymph nodes, mouth, heart, lungs and stomach etc.). Normally nothing unusual will be found, but the examination gives a good basis should symptoms appear that may be related to HIV.

When HIV infection is detected, a range of blood tests and other tests will be taken to check for past and current illnesses.

Tests for other infectious diseases

It is common to take blood samples to check for past and current diseases. Samples are also taken that can detect if the patient is a carrier of microbes that could later cause disease if the immune system becomes weakened. Here are the most common:

- Hepatitis B and C
- Syphilis
- Gonorrhoea
- Chlamydia
- Toxoplasmosis
- Cytomegalovirus infection (CMV)
- Tuberculosis

Some of these tests will be repeated regularly, in addition to the standard tests for detecting the progression of other illnesses, such as kidney, liver, cardiovascular and bone diseases. Women will be offered regular cervical smear tests.

Tests to follow organ functions

As long as a person with HIV infection has a relatively normal immune response, the following blood tests will usually be within normal values or show small deviations. The tests are most important if and when treatment is started. All HIV medicines have side effects. Analysis of blood samples can detect side effects early, so that treatment can be changed before severe complications arise.

- Haemoglobin (Hgb) is important. Many with HIV develop a low red blood cell count (anaemia), but this could be due to other factors than HIV infection
- White blood cells are counted, and each type is differentiated and counted.
- Blood platelets (thrombocytes) are required for blood coagulation. There are often low counts among HIV positive people, but are rarely so low that there is a risk of bleeding.
- Vitamin B12 may show low values that require a supplement
- Kidney function tests
- Liver function tests
- Amylase is checked for pancreatic function
- Cholesterol and triglycerides to check fat metabolism



Blood tests are of greatest importance if and when treatment is started

CD4 cells give information about the immune response

ART is a treatment consisting of at least three active drugs

Tests to follow immune response and the development of HIV infection

As part of the follow-up, tests are taken that give information about possible weakening of the immune system and risk for further disease progression. The tests also give a basis for deciding when treatment should start and to monitor its effect.

The CD4-cells give information about the immune system. As long as the number is over 500, the immune system will function as normal and will be able to tackle most infections. If the number sinks to about 200, conditions may arise that are described in the chapter: *Early symptomatic HIV infection*.

Viral load

Viral load is the amount of virus per millilitre of blood. Immediately after infection and during the first months, there will often be millions of viruses per millilitre blood. Then the viral load will decrease to a lower level. For some this may be several hundred, in others many thousands. Viral load increases with advanced HIV infection.

If the viral load in the blood drops below a certain amount (<50 copies/ml), it can no longer be detected. However, there will still be millions of viruses blocked and hidden in various cells and organs in the body. These can be mobilised and circulate in the blood, so levels will fluctuate. There is usually, but not always, a correlation between viral load in blood, semen and vaginal secretions. In semen and vaginal secretions there may still be large enough quantities to present a virus infection risk even though only small amounts of virus are detected in the blood.

When antiviral treatment is successful, the viral load in the blood is low. The person will be significantly less contagious, but there is still a small risk of infection. An HIV positive person must be considered as infectious for life, even during treatment.

TREATMENT OF HIV INFECTION

HIV treatment

There is still no cure for HIV that can eradicate the virus. Treatment inhibits the virus' ability to multiply in the body and cause disease. Treatment is lifelong and will consist of combinations of various antiviral drugs (antiretroviral therapy, ART).

When should treatment start?

The Norwegian Association for Infection Medicine has published guidelines for the treatment of HIV positive people. Last issued in 2014, these guidelines recommend to always start treatment:

- When CD4 cell count is under 350
- With clinical symptoms of HIV-related disease
- Pregnancy

Even though the CD4 cell count is above 350, treatment may still be necessary. The person with HIV should be involved in the decision to begin treatment.

Other factors which should also be considered when starting treatment are:

- when the person with HIV is highly motivated about treatment
- acute HIV infection
- chronic liver inflammation (hepatitis) caused by the virus
- significantly increased viral load
- rapid decline in CD4 cells
- age over 55 years
- increased risk of HIV transmission (e.g., relationships where one is HIV positive and one is HIV negative or persistent risky behaviour)
- cancer
- high risk for cardiovascular diseases

The tendency over the past years has been to start treatment at an early stage of the disease

Instruction from your doctor must be strictly followed to ensure successful treatment

New drugs that work in different ways are being developed

What should be done before treatment starts?

When a person with HIV infection shows symptoms of a severely impaired immune system and feels ill, treatment may be the only alternative. Once treatment has started, it must continue. If treatment is to be successful, it must be taken as specified by the doctor and without interruption.

Good advice before treatment starts:

- 1) It is very important to become familiar with how the medication should be taken, e.g., how often should it be taken and if it should be taken with or without food. Daily routines may need to be changed to take the medicines as prescribed.
- 2) Learn about side effects and how they can be tackled. They can be bothersome at first, so medical leave of absence or help from others may be necessary. Do not discontinue treatment due to side effects without first consulting the doctor handling the treatment.
- 3) Discuss with the doctor what can be done if it is difficult to follow the treatment schedule.

HIV medicines

Today, there are a number of different registered HIV medicines and new ones are in development. Progress in recent years has meant that fewer tablets and fewer doses need to be taken daily. HIV treatment consists of combination therapy with multiple medications. When treatment begins, medicines are selected from four different classes:

- Nucleoside/nucleotide reverse transcriptase inhibitors (NRTI)
- Non-nucleoside reverse transcriptase inhibitors (NNRTI)
- Protease inhibitors (PI)
- Integrase inhibitors (INSTI)

How do the medicines work?

HIV treatment aims to prevent the reproduction of the virus and thus the attack on the white blood cells (immune cells). The virus needs several biochemical processes to enable it to penetrate the white blood

cells, multiply and then exit the cells to infect new ones. HIV medication prevents or disturbs these processes.

HIV treatment exploits different attack strategies to prevent HIV from multiplying. Some medicines block the virus from the immune cells and others destroy or prevent the virus production within immune cells, or prevent them from leaving in a form where they can attack new cells.

Risk of mutation and resistance development

HIV can multiply quickly and create new “versions” of the virus which differ slightly from the original, known as mutation. In practice, this means that an HIV positive person will eventually have many different variants of the virus, but none are produced in large enough quantities to overtake the majority of the original virus.

When starting treatment, the original virus will be blocked by HIV medicine. When the treatment only uses a single drug, a mutation could be formed that can withstand it. The mutated virus will escape the “blockade” created by the HIV drug. The viruses will continue to multiply and with time will overtake the original virus. Treatment will no longer work and this is called resistance.

The same can happen when two drugs are taken simultaneously, but the risk of resistance development is less. The more medicines are administered, the less risk there is for resistance development. Therefore a “cocktail” of several drugs is often given simultaneously. In recent years, fewer daily doses have been needed. The goal of treatment is to find a combination of drugs that reduces viral load to below detectable levels and keeps it there. Then the risk of new mutations and resistance is small.

The correct use of HIV medicine will usually be very effective in preventing the production of new viruses and reduce the risk of HIV mutations. However, this requires that the virus will constantly be “bombarded” with drugs that interfere with the reproduction process. Therefore, it is vital to take HIV medicine according to a rigid schedule and in the right dose every day.

The risk of developing resistance is reduced when many HIV drugs are taken simultaneously

**It is important to
regular medical
check-ups
when taking
HIV drugs**

Side effects of treatment

The side effects of HIV medicine can vary from one drug to another and from person to person. With many of the current HIV drugs it is possible to find a treatment that provides minimal side effects for the individual. Side effects of HIV medicine may be considered problematic or may only be detected in blood sample checks. They include:

- Bothersome, but mostly harmless side effects such as headache, muscle and joint pain, diarrhoea and nausea, dizziness, vivid dreams and a slight yellow tinge to the eyeballs. These are most pronounced during the start of treatment and will usually disappear after some time.
- Side effects that can damage organs such as bone marrow, kidneys, liver and pancreas.
- Side effects that influence fatty acid metabolism. This may increase the risk of cardiovascular disease and diabetes. In addition, the HIV infection itself may increase the risk of such diseases.

It is therefore important to have routine checks, both to monitor the effect of treatment and to assess any side effects.

Medicine used against other diseases than HIV can have effects that heighten or impair the effects of HIV medicine, and HIV medicine can also affect treatment for other diseases. The doctor who is responsible for the treatment of the HIV positive person will ask what other medicines are being taken. This also applies to some herbal remedies and stimulants, which could have unexpected effects when combined with HIV medicine.

Follow-up during treatment

Treatment is monitored by measuring the viral load in the blood and CD4 cells and resistance testing of viruses. If severe side effects arise, the drug combinations can be altered so that treatment is better tolerated. The goal of treatment is a viral load of less than 500 virus copies/ml after

12 weeks and less than 50 virus copies / ml after 24 weeks. Development of resistance is usually caused by medicines not being taken as directed by the doctor.

Wish for children

Treatment reduces the risk of transmission from mother to child. HIV positive people have good prospects for a long life. This makes the desire to have a child feasible when the father and / or mother are HIV positive. Despite advances in HIV treatment, there are still several obstacles and dilemmas linked to conception, pregnancy and birth.

What if the man has an HIV infection and the woman does not? Is it possible to conceive without exposing the woman to a risk of infection? In several countries, a method to “wash” the virus out of the semen is used, and the woman can be artificially inseminated. It has been decided that such a method will be available in Norway.

Even if the man receives treatment and has a low viral load in his blood, we know that there is not always the same amount of virus in the blood as in semen. The risk of transmitting infection from unprotected intercourse will always be present, although the risk is small.

What if the woman has HIV infection and the man does not? The man is not at risk of contracting HIV infection if the child is conceived by artificial insemination. However there is less than 2 % risk that the child could become infected during pregnancy or birth. People with HIV infection are not entitled to assisted reproduction in Norway. Some choose to become pregnant by inserting the sperm into the vagina with a plastic syringe.

Some consider adoption as an option. There are strict requirements for the adoption applicant's physical and mental health to ensure the child has a safe home with adequate resources for long-term care. The countries that release children for adoption also place requirements on who can be adoptive parents. Some countries state clearly that HIV positive

In many countries a method is used to «wash» the virus out of semen

HIV treatment is offered to pregnant women with HIV infection to reduce the risk of transmission from mother to child

Children born to mothers with HIV start treatment immediately after birth

adoption applicants will not be approved. Consideration for the child's best interests is crucial in the approval process.

Treatment during pregnancy

Worldwide, many women with HIV infection become pregnant and give birth. Transmission from mother to child occurs either during pregnancy, during birth or through breastfeeding. A man cannot transmit HIV directly to the foetus. This can only happen when the mother is infected.

In Norway, all pregnant women are offered HIV tests in early pregnancy. It does not appear that pregnancy worsens the mother's infection or increases her risk of disease progression and premature death. The primary risk of pregnancy is that the child may be infected.

The risk of transmission from mother to child during pregnancy, childbirth and breastfeeding is approximately 30%. This risk can be reduced to less than 2 % with successful antiviral treatment of the mother during pregnancy and the child in the first weeks after birth. If the pregnant woman is under successful treatment, a vaginal birth will normally be attempted. In other situations, a Caesarean section may become necessary. It is not recommended to breastfeed the child even if the woman is being successfully treated and the child is receiving prophylactic treatment. There are several combinations of HIV medication that can be used during pregnancy. These depend on the availability of monitoring and control for the mother.

In Norway, HIV treatment of pregnant women usually starts at week 12 to 20 of pregnancy, or as soon as possible if HIV diagnosis is made after week 20. A combination of several drugs is typical. Treatment of the child will start immediately after birth and continue for six weeks.

When do we know if a child is infected?

When a child is born, antibodies are transferred from the mother. The standard HIV test that detects antibodies will initially give a positive result. In a child who is not infected, the antibodies will gradually

disappear from the blood by two years of age. Testing the child's blood for viruses earlier with a PCR test will give a good indication of whether or not the child is infected. The first sample is taken a few weeks after birth. If there have been three negative PCR tests by 4-6 months of age, infection can be ruled out and the monitoring can stop.

Children born with HIV infection

It is important with early diagnosis so that HIV treatment may be continued beyond six weeks and adjusted to the child's needs. Treatment and follow-up of a child with HIV must take place at a hospital and by specialists with sound knowledge of children with HIV infection. As for adults, the effect of treatment is good.

PREVENTIVE TREATMENT AFTER RISK OF TRANSMISSION (PEP)

This treatment is often referred to as post-exposure prophylaxis (PEP). The risk of contracting HIV following exposure can be greatly reduced by immediately starting treatment with HIV medicine. PEP should only be used in cases where the source person is known to be HIV positive and where there has been a risk situation for HIV transmission.

Treatment usually lasts for four weeks. PEP can be used when other preventive measures have failed or with unexpected events such as a split condom. PEP should be started as soon as possible if there is an indication for such treatment and within 48 hours after the risk situation occurred.

PREVENTIVE TREATMENT BEFORE RISK OF TRANSMISSION (PREP)

Studies have shown that HIV medicine can also help prevent HIV transmission to the partner if the medicine is taken before a possible infection situation arises. This is called pre-exposure prophylaxis (PrEP). Use of PrEP does not remove the need for other preventive measures such as using a condom. In special cases, PrEP may be considered.

Preventive treatment will reduce the risk of acquiring HIV

**It is safe to
share a household
with an HIV infected
person**

RECOMMENDATIONS FOR DAILY LIFE

There have been no reports of HIV transmission through normal social contact during the 30 years that the epidemic has been monitored in our part of the world. It is safe to share a household with a person with HIV infection, and regular social contact represents no risk of infection to others.

Clothing, bedding, towels or cutlery can be washed as in any other household.

Use of a razor blade can result in small cuts and similarly, toothbrushes may cause gums to bleed. Toothbrushes and razors should therefore not be shared.

Wounds and small cuts should be covered with a plaster. Any items where blood is spilt should be packed in a plastic bag and disposed of in a bin. This applies to tampons and sanitary protection used during menstruation.

If others need to help to clear up blood, vomit, urine or faeces/diarrhoea; wear gloves. Add bleach to the washing water.

Childcare centres

Children with HIV infection may attend childcare centres with other children. The child's parents have no duty of disclosure to the nursery, but should consider informing the head of the unit where the child will attend so that arrangements can be made to ensure safe conditions. Beyond this, there is no other need to inform others about the child's HIV status.

If your child has behavioural problems that could expose other children to contact with the child's blood (biting / scratching), or has skin problems that may expose staff to blood, there should be a medical and educational evaluation of your child before beginning childcare.

Blood donors

People with HIV infection are permanently excluded from being blood, sperm or organ donors.

People who have had sexual contact with a person infected with HIV are excluded from giving blood for a minimum of 6 months after the last sexual contact.

DENTAL HEALTH

HIV infection can cause oral symptoms in some people. It is recommended that people with HIV infection should consult their dentist regularly.

As when contacting a doctor, it is appropriate to inform the dentist about your HIV status. Knowledge of HIV status is important when evaluating health status and treatment.

People with HIV infection are entitled to the same dental treatment as other patients.

HIV positive people are entitled to compensation from the National Insurance Scheme for preventive treatment. The dentist will complete and send the appropriate form to the Norwegian Health Economics Administration (HELFO).

PSYCHOLOGICAL HELP

According to the Social Security Insurance Act, patients with HIV infection have a right to free psychological help. Referral from a doctor is necessary, but support is given for up to three consultations without a referral. Treatment must be approved by a specialist in clinical psychology with a contract for operating subsidies from the regional health authority.

**HIV positive people
should visit their
dentist regularly**

Condoms and femidoms provide good protection against HIV and other sexually transmitted infections

WHAT ABOUT SEX?

A lack of sexual desire is a normal emotional reaction to a positive HIV test but this usually returns after some time. People with HIV infection can have a satisfactory sex life.

How easily is HIV transmitted?

Compared with other sexually transmitted diseases, the risk of infecting others with HIV is low. The risk of disease transmission with one incident of unprotected vaginal intercourse with a person with an untreated HIV infection can be as low as 0.1%. The risk of infection is greatest with anal intercourse, somewhat less during vaginal intercourse and far less for oral sex. The receiving partner has the greatest risk of infection. Receiving semen in the vagina or rectum involves the greatest risk of infection. Semen or vaginal secretions that come into contact with intact skin are not considered to be contagious, and it has never been shown that HIV can be transmitted by kissing.

Factors that affect risk of infection

Condoms and femidoms give good protection against HIV infection. Proper use of condoms /femidoms with vaginal, anal or oral sex also protects against other sexually transmitted diseases like gonorrhoea, syphilis and chlamydia. There are several factors that determine the risk of infecting others with HIV. The most important are:

- Normally, people with HIV infection have high viral loads in their blood and other bodily fluids for a few months after infection. This means that they are particularly contagious just after they are infected. Viral load can also be high in advanced HIV infection.
- If one or both partners have other sexual transmitted infection as well as HIV (such as syphilis, gonorrhoea, herpes infection), this increases the risk of HIV transmission.
- People who are being successfully treated will have a very low viral load in the blood (less than 50 virus copies per ml). This means that they are significantly less infectious than untreated people, and in practice transmission of the virus from a successfully treated HIV posi-

tive person has not been seen, although it is possible that infection can occur through sexual intercourse without a condom / femidom.

Do I need to tell my sexual partners that I am infected with HIV?

A person with HIV infection has a responsibility not to put others at risk of infection. In practice this means that a condom / femidom must be used for oral, vaginal or anal sex, and that you should always inform your sexual partner that you are HIV positive. Being open with your partner about HIV infection means you can both take a shared responsibility to practice safe sex.

If you have sex using a condom / femidom that splits or slides off and you have not informed your partner that you have HIV, you must tell them as soon as possible so that he / she can obtain short-term treatment to reduce the risk of infection (see chapter about post-exposure prophylaxis, PEP).

What if the HIV infection is being successfully treated?

If you are being successfully treated with HIV medicine and have been shown to have a stable, low viral load in the blood (less than 50 virus copies per ml), infection risk is minimal compared with HIV positive people who are not on treatment. The premise is that neither of the partners has another sexually transmitted infection.

If you have vaginal or anal intercourse with a regular partner who is not infected with HIV or who does not know their HIV status, you should discuss if you want to have sex without a condom / femidom and live with this small risk of transmission to the HIV-negative partner. With vaginal or anal intercourse with a casual partner, a condom / femidom should always be used to protect against other sexually transmitted diseases.

A person with HIV has a responsibility not to infect others

**Never share syringes
or other user
equipment with
others**

What about sex with another HIV infected person?

There are a number of genetic variants of HIV. If you are infected with one variant of the virus, by having unprotected intercourse with another HIV positive, you may become infected with another genetic variant of the virus that may be resistant to some HIV medicines. With current effective treatment possibilities, infection with new variants of HIV plays a minor role.

Free condoms

Free condoms can be ordered from <http://www.gratiskondomer.no/>. Your doctor or other healthcare professional can also order free condoms on your behalf. The femidom is not available in shops or pharmacies and must be purchased on the internet.

Use of syringes and equipment

People who inject drugs who have HIV infection should never share syringes / needles or other equipment with others. In all municipalities, it should be possible to obtain clean syringes and needles. Dispose syringes and other user equipment carefully so that others are not exposed to infection.

TRAVEL

Travel, particularly to countries outside Europe and to subtropical and tropical areas, increases the risk of disease for all people, especially those with a weakened immune system. HIV positive people should be careful with food and drink when travelling to areas with poor hygiene. Before making travel plans, consult your doctor and ask about any recommended vaccines (See chapter on vaccinations when travelling abroad).

The most common diseases when travelling are infections transmitted through food or water, with symptoms such as diarrhoea, nausea and vomiting.

General advice:

- Always wash hands well after using the toilet and before you eat.
- You can drink newly boiled, warm tea and coffee and water from bottles that you open yourself. Avoid drinking tap water and do not use ice cubes.
- Microbes are killed by cooking and frying. If food remains at room temperature it can be recontaminated. Avoid cold sauces, unpasteurised milk products, non-dairy packed ice cream, food prepared from raw egg (mayonnaise, desserts), salad, raw shellfish and undercooked or raw meat.
- Only eat raw fruit/vegetables that can be peeled.
- Avoid swallowing water when swimming and do not swim in water that may be contaminated.

What about medicines?

If you are using medicines for HIV infection or other diseases, take sufficient amounts for the entire journey, with a certificate in English that the medicine is necessary from your doctor or pharmacist.

It is not advisable to use preventive antibiotics to avoid infection while travelling abroad, even though the risk of infection may be high. It may be wise to take antibiotics with you in case of diarrhoea. Discuss this with your doctor. You should definitely take an anti-diarrhoeal agent with you. Contact a doctor or hospital if treatment does not work, i.e. if symptoms persist for more than 48 hours, if there is blood in the stools or high fever. In such cases, inform your doctor about your HIV status.

A number of diseases are transmitted by bites and stings (malaria, dengue fever, yellow fever, sleeping sickness). Malaria prophylaxis should be used by people with HIV when travelling to certain malaria areas, but there may be some interaction between HIV and malaria medicine. The choice of medication depends on the destination. Vaccination offices and doctors can give advice. In addition, it is important to use a good insect repellent, use a mosquito net at night, cover the body with clothing and do not walk barefoot elsewhere than on the beach.

Be sure to take the necessary vaccines and documents for medicines used during travel abroad

In addition to regular medication, it may be wise to bring these prescription-free products; antiseptic, compresses, plasters, motion sickness tablets, painkillers, nasal spray, talcum powder (for skin irritation), glucose-electrolyte powder (rehydration) and a mild anti-diarrhoeal agent.

Condoms purchased in Norway undergo strict quality control so it is wise to bring condoms with you.

Countries with entry restrictions for people with HIV infection

Some countries still have some form of entry restrictions for people with HIV infection. This must be checked for each country. Most countries do not require HIV tests for a regular tourist visa which is valid for three months. A number of countries require a HIV test for studying, seeking work or relocation. Some countries only accept tests taken in the country where the applicant has a residence permit. See the updated list on the website: <http://HIVtravel.org/>.

Travel insurance

Travel insurance covers expenses for treatment of acute disease or unexpected worsening of chronic diseases. Most people with HIV infection will therefore be covered by insurance if their condition worsens. However, the necessary check-ups and costs of ongoing antiviral treatment will not be covered. If you have advanced HIV infection and substantial treatment and care needs, they will not be covered by insurance. If in doubt, contact your insurance company.

VACCINES

People with a weakened immune system need to be protected against disease, and vaccination is the most effective tool we have against a range of infections. Before vaccination it is important to consider:

- Is the vaccine dangerous for the individual?
- How effective will the vaccine be?

- Will the individual benefit from certain vaccines?
- As a rule, a disease is more dangerous than the vaccine. If the infection risk is high, this must be weighed against the risk of vaccination.

Recommended vaccines

People with weakened immune systems may have limited benefits from vaccination because they cannot make antibodies against the disease that the vaccine is intended for. It is therefore wise to consider which vaccines should be taken as soon as possible after diagnosis with HIV infection.

Children with HIV infection should follow the Childhood Immunisation Programme with the exception of the vaccine against tuberculosis (BCG vaccine). All HIV positive people should be offered the pneumococcal vaccine (against a bacteria that can cause serious pneumonia) and the vaccines against hepatitis A and B. The vaccine against seasonal influenza should be taken every autumn.

Vaccines that should not be taken without careful consideration

Vaccines made from live attenuated viruses and bacteria can cause disease in people with weakened immune systems, i.e. with low CD4 counts. As a rule, it is not recommended to take such vaccines. This includes the BCG vaccine, the vaccine against chickenpox, the oral vaccine against typhoid fever and the yellow fever vaccine when travelling to certain countries (see below). The combined vaccine against measles, rubella and mumps (MMR) can be given to people with HIV infection unless the CD4 cell count is too low.

Vaccination for travel abroad

The choice of vaccination depends on your destination. This can be clarified with your doctor. If this is not possible, the vaccination office should be informed about the HIV infection to ensure a proper assessment of the vaccines that should and should not be given. Most vaccines recommended for international travel can be given to people with HIV.

Discuss which travel vaccines are necessary with your doctor

**Many who use
alternative
medicine experience
better health and
well-being
but the improvement
is difficult to measure
scientifically**

A booster dose against diphtheria and tetanus is recommended. Polio vaccine given by injection is also recommended. When travelling to countries with a risk of typhoid fever, it is recommended to take the vaccine by injection.

Some countries require certification that yellow fever vaccine has been given. In such cases, it is important to get a certificate in English from your doctor stating why it is not prudent to take such a vaccine.

Remember that it often takes several weeks after vaccination before enough antibodies are made to protect against disease. Therefore make sure you are vaccinated in good time.

ALTERNATIVE MEDICINE

Alternative medicine refers to methods that are not part of conventional medicine.

There are many forms of alternative medicine, and they may be combined. Many who make use of such treatment experience improved health and well-being. However, the effect of these treatment forms is difficult to measure.

Alternative medicine could affect the efficacy of antiviral drugs and, in some cases, the combination can be harmful. It is therefore important to talk with your regular doctor before using alternative medicine.

DIET AND NUTRITION

The Norwegian Directorate of Health has issued general recommendations for good nutrition. In brief, this means eating lots of fruit and vegetables. Whole-grain products and fish are good. Intake of fat, sugar, salt and alcohol should be limited. A good and balanced diet is beneficial for health.

A person with HIV infection experiencing illness or the side effects of medicine may need extra supplements. This may be due to nausea or loss of appetite, vomiting, diarrhoea, or other digestive conditions resulting in poor absorption of important nutrients. When the immune system fails, loss of appetite leads to reduced nutrient absorption, increased weight loss and loss of muscle tissue.

Illness or the side effects of HIV medicines can reduce the absorption of nutrients. There may be a need to take a greater amount of vitamins or supplements than stated on the package. However, it is important not to take too much. For example, many nutritional supplements contain the same ingredients and it is possible to consume too much. Some vitamins in large doses can have a toxic effect.

Many major hospitals have a nutritionist that you can ask to talk to.



With illness or side effects from medicine, extra dietary supplements may be required.

According to Norwegian legislation, people with HIV infection are entitled to free medical care for everything related to HIV infection

RIGHTS AND RESPONSIBILITIES

The right to treatment and follow-up

According to the Infectious Disease Control Act, HIV Infection is defined as an infectious disease of special importance for public health. This means that people who are HIV positive have some special rights and responsibilities. People with HIV infection are entitled to free essential treatment for HIV infection and assistance to avoid transmitting infection. Treatment includes doctor consultations, tests and medicines. This right applies to everyone residing in Norway, including tourists and people without legal residence in Norway.

People with HIV infection are entitled to reimbursement from the Social Security Insurance Scheme for preventive dental treatment according to government rates. The dentist decides if you are entitled to recover your costs.

People with HIV infection are entitled to free psychological help to come to terms with their HIV diagnosis. A referral from a doctor is necessary, but the benefit is payable for up to three consultations without a referral. Treatment must be approved by a specialist in clinical psychology with a contract for operating subsidies from the regional health authority.

Right to an interpreter

People who do not speak Norwegian are entitled to an interpreter when attending a check-up or other consultations for HIV. The hospital or municipality will pay for this service.

Right to free condoms

All HIV positive people can get free condoms. These can be ordered anonymously through your doctor or other health personnel. HIV positive people can also order free condoms from HIV-Norway (www.HIVNorway.no) or Gay and Lesbian Health (www.helseutvalget.no)

Right to reimbursement of travel costs

HIV positive people who have travel costs associated with visits to the doctor or hospital for treatment or check up for HIV are entitled to have these costs covered without paying the minimal charge.

Right to general health assistance

The Patient Rights Act ensures that everyone living or staying in Norway has the right to full and equal access to good quality care. The Act explains the various rights they have as a patient, including the right to freely choose a public hospital, the right to patient participation, the right to a dedicated doctor responsible for an individual plan and the right of access to their own records. Upon request, everyone has the right to be given a copy of their medical record.

Complaints

You can complain if you, as a person with HIV infection, believe that your patient or other rights have not been complied with. You can get help from the Patient Ombudsman (www.pasientombudet.no) or HIVNorway (www.HIVNorway.no) if you wish to complain.

Responsibilities as a HIV positive person

HIV is defined by the Infectious Disease Control Act as an infectious disease of special importance for public health. Some responsibilities are imposed by law for a person who has reason to believe that he or she is infected with an infectious disease of special importance for public health. The most important for those who are found HIV positive are:

- Give necessary information about who may have infected you and who you may have infected.
- Receive personal infectious disease guidance from the doctor to avoid transmitting the disease to others.

The right to information is guaranteed in the Patient's Right Act

**The Norwegian
Institute of
Public Health
receives anonymous
notification about
HIV infection**

Duty to not infect others

Criminal law contains a provision (§ 155) that makes it an offence for people with a serious communicable disease (including HIV) to infect or expose others to risk of infection. This has been criticised for being unclear in many areas. Work is ongoing to revise this provision in criminal law.

You can get more detailed information about your rights and responsibilities as a HIV positive person by contacting HIVNorway (www.HIVNorway.no).

Notification to the health authorities

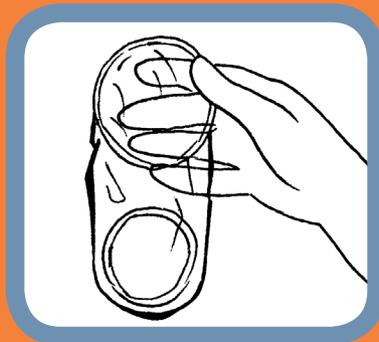
Health personnel are obliged to notify the Norwegian Institute of Public Health and the Municipal Medical Officer about infectious diseases. Notification about HIV infection does not include a name, only information about gender, birth year and birth month, transmission route and place of infection. This information is important to follow the epidemic. According to the regulations, AIDS must be notified to the Norwegian Institute of Public Health and Municipal Medical Officer with name and date of birth. The Norwegian Institute of Public Health is responsible for sending regular information about the HIV situation in Norway to the European Centre for Disease Control in Stockholm. This is not personally identifiable information.

How to use a femidom

1. Carefully open the package as shown in the diagram.



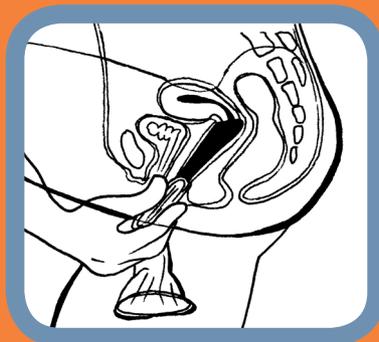
2. The femidom has two rings. The outer ring should cover the area surrounding the opening of the vagina. The inner ring that is in the femidom ensures that the femidom stays in place during intercourse.



3. Hold the closed end of the femidom. Press the inner, flexible ring with the thumb, pointing finger and middle finger so that the ring becomes long and thin.



4. Place the inner ring carefully in the vagina. Feel that the ring slides in.



5. Put the pointing finger in the femidom and push the inner ring as far up into the vagina as possible. Make sure that the femidom is not curled. The outer ring should remain outside the vagina

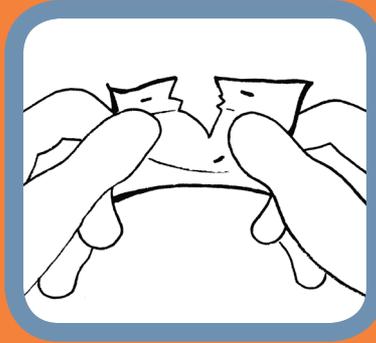


6. Guide your partner's penis carefully with your hand into the opening of the femidom.



How to use a condom

1. Carefully open the package as shown in the diagram.



2. Roll the condom out about a half a centimetre and squeeze out the air in the tip between two fingers. This ensures that there will not be an air pocket in the condom and that the semen will collect in the tip of the condom.



3. Roll the condom on when the penis is erect.



4. The condom must be in place throughout intercourse to protect against sexually transmitted infections.



5. Use a lubricant if the vagina is dry or if you practise anal sex.



6. Hold around the condom and pull out of the vagina/anus while the penis is still erect.



Organisations and useful addresses

Aksept– Contact centre for all HIV positive people and their friends and family).

Visiting address:

Fagerheimgata 16

PO Box 6590 Rodeløkka

0501 Oslo

Tel: 23121820

E-mail: hivsenter@aksept.org

Internet: <http://www.aksept.org>

Norwegian Institute of Public Health

Lovisenberggaten 8

PO Box 4404 Nydalen

0403 Oslo

Tel: 21077000

Internet: <http://www.fhi.no>

Norwegian Directorate of Health

PO Box 7000 St Olavs plass

0130 Oslo

Tel: 810 200 50

Internet: <http://www.helsedirektoratet.no>

HIV Foundation – for help in a difficult situation

c/o Advokatfirmaet Haakonsen & Haaland DA

Rådhusgaten 24

0151 OSLO

Tel: 22834000

E-mail: post@hivfondet.no

Internet: www.hivfondet.no

HIVNorway - organisation for the rights and interests of people infected with and affected by HIV

Christian Krohgs gate 34

0186 Oslo

Tel: 21314580

E-mail: post@hivnorge.no

Internet: www.hivnorge.no

Ministry of Health and Care Services

Teatergata 9

PO Box 8011 Dep, 0030 Oslo

Tel: 22 24 90 90

Internet: <http://www.regjeringen.no/nb/dep/hod>

Gay and Lesbian Health Norway

Skippergata 23, 0154 Oslo

Tel: 23357201

E-mail: post@helseutvalget.no

Internet: <http://www.helseutvalget.no/>

Church City Mission

Available for HIV positive people in many towns in Norway

Internet: <http://www.bymisjon.no/>

Nye Pluss – HIV Positive Association

Internet: <http://www.nyepluss.no>

Olafia Clinic (Clinic for Sexually Transmitted Infections)

Visiting address: Trondheimsveien 2,

Bygg N 0560 Oslo

Tel: 23 07 58 40

Internet: <http://www.olafia.no>

Sex and Society, Centre for young sexuality

Visiting address:

Trondheimsveien 2, building B

Tel: 22993900

E-mail: post@sexogsamfunn.no

Internet: <http://www.sexogsamfunn.no>

Sources of information

Strategic Plan

Acceptance and coping - National HIV strategy (2009-2014).

Ministry for Health and care.

<http://www.regjeringen.no/nb/dep/hod/tema/folkehelse/acceptance-and-coping---national-hiv-str.html?id=576820>

Information brochures

Sex between men.

Brochure from Gay and Lesbian Health Norway
<http://www.helseutvalget.no/>

Illustrated HIV information

for gay people. Brochure from Norwegian Directorate of Health
<http://www.helsedirektoratet.no/publikasjoner/>

Illustrated HIV information for heterosexuals.

Brochure from Norwegian Directorate of Health
<http://www.helsedirektoratet.no/publikasjoner/>

Women living with HIV.

Brochure from Norwegian Directorate of Health
<http://www.helsedirektoratet.no/publikasjoner/>

HIV information – video. Can be downloaded from Norwegian Institute of Public Health website
<http://vimeo.com/54601068>

For HIV positives. Website information from HIVNorway. <http://hivnorge.no/For-hivpositive>

Condoms with brochure in 7 languages.

Can be ordered from Norwegian Institute of Public Health website <http://www.fhi.no>

Free condoms. Can be ordered on <https://helsenorge.no>

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