



**THE
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TRUST**

HIV and Sexual Health Services

Information Services Fact Sheet

HIV

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We urge you to contact your GP, GUM Department or Consultant if you have any concerns regarding your own health.

HIV

INTRODUCTION

The human immunodeficiency virus (HIV) attacks the body's immune system. A healthy immune system provides a natural defence against disease and infection. If the immune system is damaged by HIV, it increases the risk of developing a serious infection or disease, such as cancer.

HIV infects particular cells, called CD4 cells, that are found in the blood. CD4 cells are responsible for fighting infection. After they become infected, the CD4 cells are destroyed by HIV. Although the body will attempt to produce more CD4 cells, their numbers will eventually decline and the immune system will stop working.

How is HIV spread?

HIV is spread through the exchange of bodily fluids. This most commonly happens during unprotected sexual contact, such as vaginal, oral and anal sex. People who inject illegal drugs and share needles are also at risk of catching HIV. The condition can also be spread from a mother to her unborn child.

There is no cure for HIV and no vaccine to stop you becoming infected. However, since the 1990s, treatments have been developed that enable most people with HIV to stay well and live relatively normal lives.

What is a retrovirus?

HIV is a special type of virus known as a retrovirus. The retrovirus reproduces inside the cell and releases copies of itself into the blood. It can be challenging to treat as the virus can rapidly mutate (alter) into new strains of virus.

What is AIDS?

Acquired Immune Deficiency Syndrome (AIDS) is a term that is used to describe the late stage of HIV. This is when the immune system has stopped working and the person develops a life-threatening condition, such as pneumonia (infection of the lungs).

The term AIDS was first used by doctors when the exact nature of HIV was not fully understood. However, the term is no longer widely used because it is too general to describe the many different conditions that can affect somebody with HIV. Specialists now prefer to use the terms advanced or late-stage HIV infection.

Facts about HIV

How common is HIV?

HIV is a global pandemic. This means the condition has spread across the world. The World Health Organization estimates that 33.4 million people around the world were living with HIV at the end of 2008.

The virus is particularly widespread in sub-Saharan Africa, the African countries that lie south of the Sahara Desert, such as South Africa, Zimbabwe and Mozambique.

In the UK, around 83,000 people are living with HIV and experts believe that 27% of people with HIV do not know that they have it.

The number of people who are diagnosed with HIV has been rising since the beginning of the 21st century.

How is HIV spread?

HIV can be spread through the exchange of bodily fluids, such as blood, semen and vaginal fluids. The most common way that HIV is spread is through unprotected sexual contact, such as vaginal, oral and anal sex.



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The virus can also be spread through sharing needles to inject drugs, and from a pregnant woman to her unborn baby. However, advances in treatment mean that it is possible to prevent the virus from being passed on by a mother to her child.

You cannot catch HIV from kissing, from being sneezed on by someone with HIV, from sharing baths, towels or cutlery with an HIV-infected person, from swimming in a pool or sitting on a toilet seat that someone with HIV has used, or from animals or insects such as mosquitoes.

Who is affected by HIV?

Although HIV is currently most widespread in gay men and people of sub-Saharan African origin, there is still a high risk among heterosexual and non-African populations. Rates of infection among people who acquired their infection heterosexually within the UK have risen, from an estimated 740 in 2004 to 1,130 in 2008.

People who inject illegal drugs and share needles are also at risk of getting HIV. The condition can also be spread from a mother to her unborn child. However, medicines can now be used to prevent this from happening.

HIV can be spread through blood transfusions. However, since 1985, all blood donated in the UK must be screened for HIV. Since this policy was introduced, no one in the UK has caught HIV from a blood transfusion.

Screening policies in the developing world may not be as rigorous, so there is a possible risk of developing HIV if you receive a blood transfusion in certain parts of the world.

SYMPTOMS

Symptoms of HIV

The initial stage of HIV is known as primary HIV infection or seroconversion. Many people develop symptoms, although they might not recognise them at the time. Their symptoms usually occur two to six weeks after they are infected with HIV.

Symptoms of primary HIV infection include:

- fever
- sore throat
- tiredness
- joint pain
- muscle pain
- swollen glands (nodes)
- a blotchy rash

These early symptoms are often very mild, so it is easy to mistake them for another condition, such as a cold or glandular fever. However, it is unusual to get these symptoms in association with a rash, so anyone concerned about the risk of HIV infection should request a test.

After the initial symptoms have gone, HIV will often not cause any further symptoms for many years. This is known as asymptomatic HIV infection. During this time, the virus is still reproducing and damaging your immune system.

Late-stage HIV infection

Late stage HIV infection is also known as AIDS infection. Left untreated, HIV will damage your immune system so much that you are likely to develop a serious, life-threatening condition. It typically takes about 10 years for the virus to damage the immune system in this way.

Possible symptoms of a serious infection caused by a damaged immune system include:

- persistent tiredness
- night sweats



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- unexplained weight loss
- persistent diarrhoea
- blurred vision
- white spots on your tongue or mouth
- dry cough
- shortness of breath
- a fever of above 37C (100F) that lasts a number of weeks
- swollen glands that last for more than three months

AIDS-related illnesses, such as TB, pneumonia and some cancers, may appear. Many of these, though serious, can be treated to some extent and some are likely to improve if you start treatment and your CD4 count increases.

CAUSES

Causes of HIV

HIV almost certainly arose from a very closely related virus, known as SIVcpz (simian immunodeficiency virus), which is found in chimpanzees living in parts of Africa.

The virus spread from infected chimps to humans when human blood came into contact with contaminated chimpanzee blood during the hunting of chimpanzees. It is thought that for many years, the human form of HIV was limited to a remote part of Africa. However, when new transport links opened up that part of Africa, the virus spread to other parts of Africa, before slowly spreading across the world.

How HIV spreads inside the body

HIV infects cells of the immune system, known as CD4 cells, and uses the cell to make copies of itself. The body can make more CD4 cells, but eventually HIV will reduce the numbers of CD4 cells to such an

extent that the immune system will stop working.

How HIV spreads outside the body

HIV can be spread through the exchange of bodily fluids, such as semen or blood. Therefore, it can be spread through unprotected sexual contact, including vaginal, oral and anal sex.

People who inject illegal drugs and share needles are also at risk of getting HIV. The condition can also be spread from a mother to her unborn child. However, medicines can now be used to prevent this from happening. HIV can be spread through blood transfusions. However, since 1985, all blood donated in the UK must be screened for HIV. Since this policy was introduced, no one in the UK has caught HIV from a blood transfusion.

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DIAGNOSIS

Diagnosing HIV

It is very difficult to diagnose HIV from symptoms alone. So if you think you might be at risk of infection, it is very important that you have an HIV test. The earlier HIV is diagnosed, the more likely it is that treatment will be successful.

Where can I get an HIV test?

There are various places you can get an HIV test, such as:

- sexual health clinics or genitourinary medicine (GUM) clinics at hospitals
- your GP surgery (ask your doctor or practice nurse whether your surgery offers HIV testing)



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- some contraception and young people's clinics
- a private clinic
- an antenatal clinic, if you are pregnant
- local drugs agencies, if you are an injecting drug user

It is up to you to choose where you would be most comfortable having the test.

HIV testing

HIV can be diagnosed by testing your blood for the presence of the virus. A blood test can usually pick up HIV within a few weeks of infection, however it can occasionally take longer and a test after three months is recommended to exclude HIV infection.

Therefore, if you have a test before three months has passed since you put yourself at risk of HIV (through unprotected sex or needle sharing, for example), you are recommended to have another test three months after you were potentially exposed to the HIV infection.

Not every blood test you have is used to check for the presence of HIV. Blood is only tested for HIV if you specifically consent to being tested.

The results of your HIV test will remain strictly confidential. However, if you are diagnosed with HIV and you have health or life insurance, you will need to inform your insurance company.

Usually, you should not have to pay for an HIV test.

Receiving a positive HIV result

If you receive a positive HIV result, you will be referred to an HIV clinic.

An HIV clinic is a specialist health unit that is staffed by many different professionals who specialise in helping people living with HIV. Clinic staff may include:

- a counsellor
- a social worker

- a dietitian
- a dentist
- specialist doctors with experience in treating HIV
- emergency 'walk-in' doctors
- a pharmacist

TREATMENT

What are the treatment options?

If you are diagnosed with HIV, you will be referred to an HIV clinic. You will also be offered counselling.

As part of your treatment, you will undergo regular blood tests. The tests are used to measure two things:

- your CD4 count, which is the number of CD4 cells in your blood
- your viral load, which is the amount of HIV in your blood

These tests allow the staff at the HIV clinic to see how far the disease has progressed and to judge the likelihood that you will develop an HIV-related infection.

As a general rule:

- A CD4 count of 500 or above means that there is no risk of HIV-related infection.
- A CD4 count of less than 200 means that there is high risk of serious HIV-related infection.

The viral load will be regularly measured to show whether the medicines being used to treat HIV are working effectively. The aim of treatment is to reduce the levels of virus in the blood (viral load) to undetectable levels. If you have a detectable viral load while taking treatment, you may need a new combination of medicines.



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Both CD4 count and viral load will naturally change with time, so one high or low reading does not automatically mean that your condition has got worse. The general trend of your CD4 count and viral load over time is more important in tracking the progression of the condition.

Want to know more?

- <http://namlife.org/cms1254930.aspx>

Combination therapy

There is no cure or vaccine for HIV. However, combination therapy, also called highly active antiretroviral therapy (HAART), slows the progression of the condition and can prolong life. A combination of medicines is used because HIV can quickly adapt and become resistant to one single medicine. HIV medicines are known as antiretrovirals (ARVs).

It is normally recommended that you begin treatment with ARVs if your CD4 count drops below 350.

For a small number of people, treatment may start before the CD4 count drops below 350. This may be recommended by your doctor if:

- You have an AIDS diagnosis (for example, Kaposi's sarcoma) or any other HIV-related illness.
- You have hepatitis B infection and it needs to be treated.
- You have a hepatitis C infection.
- You have a high risk of heart attack or stroke (cardiovascular events).
- You are pregnant and need to prevent your unborn child from becoming infected with HIV.

If treatment is not started immediately after diagnosis, your condition will be monitored and regular CD4 counts will be taken.

Want to know more?

- <http://namlife.org/cms1254940.aspx>

Medicines

Many different types of ARV medicine can be used as part of your therapy. A combination of medicines that suits one person may not be suitable for another, so the medicine you take will be individual to you. There are five main types of ARV:

- nucleoside reverse transcriptase inhibitors (NRTIs) or nucleotide reverse transcriptase inhibitors (NtRTIs)
- non-nucleoside reverse transcriptase inhibitors (NNRTIs)
- protease inhibitors (PIs)
- fusion and entry inhibitors
- integrase inhibitors (INIs)

These medicines work in different ways, but they all stop the virus reproducing inside your cells, slowing down its spread and protecting your immune system.

Most people with HIV are initially recommended to take two types of NRTI/NtRTI medication, plus another type of medicine. The two NRTI/NtRTIs are often combined in a single tablet.

The goal of treatment is to find the best combination of medicines, which reduces the viral load to undetectable levels while minimising any side effects.

Want to know more?

- www.aidsmap.com/files/file1000883.pdf
- <http://i-base.info/guides/starting>

Side effects

In some people, the medicines that are used to treat HIV will cause side effects. However, often the side effects improve after a few weeks as your body gets used to



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the medicines. Common side effects of HIV medication include:

- nausea
- tiredness
- diarrhoea
- skin rashes
- mood changes
- gaining fat on one part of your body while losing it on another (lipodystrophy)

If the side effects from HIV treatment adversely affect your quality of life, tell the staff at your HIV clinic. It may be possible to change your medicines or other medicines may be available to relieve any side effects.

Want to know more?

- www.aidsmap.com/files/file1003407.pdf

Adherence

The medicines used to treat HIV are only effective when taken exactly as prescribed. Missing even a few doses will increase the risk of your treatment not working. Sticking to your treatment plan is known as adherence. To adhere to treatment, you need to:

- take the medicine at the recommended time
- take the recommended dose
- follow all instructions regarding diet, for example some medicines should only be taken on an empty stomach, while others need to be taken with food

You will need to develop a daily routine to fit your treatment plan around your lifestyle. The staff at your HIV clinic can give you advice and support.

Many of the medicines used to treat HIV can react in unpredictable ways if you take other types of medicines. These include herbal remedies such as St John's Wort,

recreational drugs such as cocaine, and over-the-counter medicines.

Always check with clinic staff or your GP before taking any other medicines.

Want to know more?

- www.aidsmap.com/file/file1003808.pdf

Post exposure prophylaxis (PEP)

It is sometimes possible to halt the development of HIV in the first 72 hours after exposure. This is known as post exposure prophylaxis (PEP). PEP involves taking anti-HIV medicines for four weeks. PEP is often used when a person knows they have been exposed to HIV. This could be because they had sex with someone who they knew had HIV and the condom broke, or they were accidentally stabbed with an HIV-infected needle.

PEP is not guaranteed to work and the medicines that are used cause some unpleasant side effects, such as nausea, vomiting, diarrhoea and headaches. If you are concerned that you have been exposed to HIV, immediately contact your local accident and emergency department or GUM (genitourinary) or sexual health clinic.

Want to know more?

- www.pep.chapsonline.org.uk

PREVENTION

Preventing HIV - Safer sex

HIV is passed from one person to another through the direct exchange of bodily fluids. This can happen through unprotected penetrative vaginal or anal sex, as well as through oral sex.

The best way to prevent HIV and other sexually transmitted infections is to restrict bodily contact by using condoms (for



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penetrative sex and oral sex on penises) and dental dams (for oral sex on vaginas or anuses).

It is important to continue to practice safe sex even if you and your sexual partner both have HIV. This is because it is possible to expose yourself to a new strain of the virus that your ARV medicine will not be able to control.

Knowingly infecting somebody with HIV is a criminal offence.

Condoms

Condoms come in a variety of shapes, colours, textures, materials and flavours. They are available for both males and females. A condom is the most common and effective form of protection against HIV and other sexually transmitted infections. They can be used for anal sex, oral sex performed on men and vaginal sex. HIV can be passed on before ejaculation, through pre-come and vaginal secretions, and from the anus. It is very important that condoms are put on before any sexual contact occurs between the penis, vagina, mouth or anus.

Lubricant

Lubricant is often used to enhance sexual pleasure and safety, by adding moisture to either the vagina or anus during sexual intercourse or other sexual practices. Lubricant can enhance the safety of intercourse by reducing the risk of vaginal or anal tears being caused by dryness or friction. It can also reduce the likelihood of a condom tearing. Lubricant can be bought in most supermarkets and pharmacies. It is important to use a water-based lubricant (such as K-Y Jelly) rather than an oil-based lubricant (such as Vaseline or massage and baby oil). This is because oil-based lubricants weaken the latex in condoms and can cause them to break or

tear. Only water-based lubricants should be used with condoms.

Dental dams

A dental dam is a small sheet of latex that can act as a barrier between the vagina or anus and the mouth to reduce the risk of STI and HIV transmission during oral sex.

Dental dams are available in a variety of flavours and colours, and typically come in two forms: as a sheet, which can be spread across the vagina or anus and held in place during oral sex by either the giver or the receiver, and as a mask with elasticised bands, which is held in place around the ears of the person giving oral sex, leaving the hands free.

It is important that dams are only used once, the same side of the dam is always kept against the body, and a new dam is used if a new area of the body is being stimulated. A dam should never be moved from the vagina to the anus or vice versa.

Intravenous drug use

If you inject drugs, do not share needles as this could expose you to HIV and other blood-borne viruses, such as hepatitis C. Many local authorities and pharmacies offer needle exchange programmes, where used needles can be exchanged for clean ones. If you are a heroin user, consider enrolling in a methadone programme. Methadone can be taken as a liquid, so it reduces your risk of getting HIV.

Your GP or drug counsellor should be able to advise you about both needle exchange programmes and methadone programmes.

Living with HIV

How people cope with being diagnosed with HIV, as well as with treatment, varies from person to person.



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Self care

Self care is an integral part of daily life. It means that you take responsibility for your own health and wellbeing, with support from the people involved in your care. Self care includes the things you do each day to stay fit, maintain good physical and mental health, prevent illness or accidents, and effectively deal with minor ailments and long-term conditions. People living with long-term conditions can benefit enormously if they receive support for self care. They can live longer, have less pain, anxiety, depression and fatigue, have a better quality of life, and be more active and independent.

Regular reviews

Because HIV is a long-term condition, you will be in regular contact with your healthcare team. A good relationship with the team means that you can easily discuss your symptoms or concerns. The more the team knows, the more they can help you.

Keeping well

Everyone with a long-term condition such as HIV is encouraged to get a flu jab each autumn to protect against flu (influenza). It is also recommended that they get an anti-pneumococcal vaccination every five years. This is an injection that protects against a serious chest infection called pneumococcal pneumonia.

Healthy eating and exercise

Regular exercise and a healthy diet are recommended for everyone, not just people with HIV. They can help prevent many conditions, including heart disease and many forms of cancer. Try to eat a balanced diet, containing all the food groups, to give your body the nutrition it needs. Exercising regularly can help relieve stress and reduce fatigue.

Stopping smoking

Giving up smoking can improve your overall health. Research has shown that you are up to four times more likely to quit smoking if you use NHS support along with stop-smoking medicines, such as patches or gum. Ask your doctor about this or see the NHS Smokefree website:
<http://smokefree.nhs.uk/>

Preventing infection

If you have HIV, you should take extra precautions to prevent exposure to infection. Be careful around animals as they can be a source of parasitic infection. Avoid coming into contact with cat litter or animal faeces. Wear latex gloves if you need to clean your pet or dispose of their droppings. Wash your hands regularly, particularly after going to the toilet, before and after preparing food, and after spending time in crowded places.

Want to know more?

- www.aidsmap.com/Smoking/cat/1481
- www.aidsmap.com/cms1045096.aspx

Source: NHS Choices



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