



Therapy Area Guide

HIV



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Facts about HIV and AIDS:

- 35 million people are living with HIV worldwide (2013), 3.2 million of whom are children
- An estimated 2.1 million people were infected with the virus in 2013
- HIV is the world's leading infectious killer – an estimated 39 million people have died from AIDS-related causes so far, including 1.5 million [1.4–1.7 million] in 2013.
- HIV continues to be a major global public health issue, having claimed more than 39 million lives so far. In 2013, 1.5 [1.4–1.7] million people died from HIV-related causes globally⁸
- Around 100,000 people were living with HIV in the UK in 2013, the majority infected through sex, although more than one in five (over 20,000) do not know they are infected¹
- Acquired Immune Deficiency Syndrome (AIDS) was first recognized as a new disease in 1981 when increasing numbers of young homosexual men succumbed to unusual opportunistic infections and rare malignancies⁹
- HIV was first isolated in 1983
- In 1999, scientists discovered the origins of HIV-1, the predominant strain of HIV, in chimpanzees native to west equatorial Africa. The researchers believe that HIV-1 was introduced into the human population when hunters became exposed to infected blood.¹⁰

Facts about GKA's experience in HIV:

HIV/AIDS is one of the most researched disease areas, both in terms of clinical and market research. Over more than a decade, healthcare fieldwork agency GKA has conducted nearly 100 research projects, building excellent relationship with the 60+ HIV specialists, 80+ GUM specialists and 50+ Infectious Disease specialists.

Through our long-lasting relationships with HIV/AIDS patient organisations and dedicated finders, GKA regularly recruits large numbers of validated patients across many different methodologies, including ethnographic studies, a key selling point for many clients.

We have also built strong relationships with key opinion leaders, such as Dr Anton Pozniak, HIV service Director at Chelsea and Westminster Hospital, who regularly helps GKA with projects and support with feasibility assessments and expert advice.

We are also passionate about making a difference. That is why we support charities such as [LEPRA Health in Action](#), which works to treat, educate and support people in some of the world's most deprived communities. Building on its their extensive experience in the prevention and treatment of leprosy, the charity has a large HIV testing and prevention programme as well as offering active help to patients with HIV through a wide range of support initiatives.

The Lowdown

HIV stands for Human Immunodeficiency Virus. 'Immunodeficiency' refers to the virus' ability to attack the immune system, weakening the body's ability to fight infection and disease. HIV is most commonly caught by having sex without a condom, although it can also be passed on by sharing infected needles or from an HIV-positive mother to her child during pregnancy, birth and breastfeeding.¹

AIDS, or acquired immune deficiency syndrome, is the name of a collection of illnesses caused by the HIV virus' ability to weaken the immune system. After many decades of research and development, current anti-HIV drugs are able to control (but not completely get rid of) the virus and far fewer people in Britain develop serious HIV-related illnesses. In fact, the term AIDS is rarely used by UK doctors, who instead talk about 'late-stage' or 'advanced' HIV disease or HIV infection.²

Transmission

HIV is found in the body fluids of an infected person. It is a fragile virus and does not survive outside the body for long and cannot be transmitted through sweat or urine. The most common way of getting HIV in the UK is by anal or vaginal sex without a condom. According to statistics from the Health Protection Agency, 95% of those diagnosed with HIV in the UK in 2011 acquired HIV as a result of sexual contact.

Other ways of getting HIV include sharing needles, syringes and other injecting equipment, from mother to baby before or during birth or by breastfeeding, sharing sex toys with someone infected with HIV, healthcare workers accidentally pricking themselves with an infected needle and blood transfusion (now very rare in the UK).

HIV is not passed on through kissing, spitting, being bitten, being sneezed on, sharing baths, towels or cutlery, using the same toilets or swimming pools, mouth-to-mouth resuscitation, or contact with animals or insects such as mosquitoes.

HIV infects CD4+ cells, part of the body's immune system that protect against bacteria, viruses and other germs. Once inside the cells, the virus makes thousands of copies of itself and kill the host cell. Over time, the number of CD4 cells – also called the CD4 count – drops so low that the immune system stops working, a process that can take 10 years.³

Symptoms and treatment

When they are first infected with HIV, some people notice no symptoms but within six weeks most people suffer a short illness lasting around two weeks as their body reacts to the virus. Symptoms can include a rash, sore throat or fever. This illness – often called a 'seroconversion illness' – is a sign that the immune system is reacting to the presence of the virus and is producing antibodies to HIV. After this illness, a HIV test is able to detect these antibodies and give a 'positive' result.

Once this initial illness passes, an infected person will usually feel fine for a number of years. However, if the virus is not prevented from destroying CD4 cells by anti-HIV treatment, an infected person will usually start to suffer life-threatening illnesses such as cancer, tuberculosis or pneumonia. Earlier diagnosis and treatment of HIV can prevent these problems.

As HIV weakens the immune system, they may experience: weight loss, night sweats, thrush in the mouth, an increase in herpes or 'cold sore' outbreaks, swollen glands in the groin, neck or armpit, or long lasting diarrhoea or tiredness.⁴

There is no cure for HIV but early diagnosis and treatment means that many people with HIV will never get serious HIV-related illnesses and will live long and healthy lives.

Emergency HIV drugs

Post-exposure prophylaxis or PEP is medication that can stop a person exposed to the virus becoming infected. It must be started within 72 hours (three days) of contact with the virus; the longer the wait, the less chance of it being effective. PEP is a month-long treatment of the same drugs prescribed to people who have tested positive for HIV and can have serious side effects. It is not guaranteed to work.

References

- 1 – <http://www.nhs.uk/conditions/hiv/pages/introduction.aspx>
- 2 – http://www.tht.org.uk/sexual-health/About-HIV/What-are-HIV-and-AIDS_qm_
- 3 – <http://www.nhs.uk/Conditions/HIV/Pages/Causes.aspx>
- 4 – <http://www.tht.org.uk/sexual-health/About-HIV/Symptoms-of-HIV>
- 5 – <http://www.nhs.uk/Conditions/HIV/Pages/Treatmentpg.aspx>

Antiretroviral drugs

HIV is treated with antiretrovirals (ARVs), which stop the virus replicating in the body, thereby allowing the immune system to repair itself. A combination of ARVs is used because HIV can quickly adapt and become resistant, with patients typically taking three or more types of ARV medication, known as combination therapy or antiretroviral therapy (ART).

As some antiretroviral drugs have been combined into one pill, known as a 'fixed dose combination', the most common treatments for people just diagnosed with HIV involve taking just one or two pills a day. Different combinations of ARVs work for different people, so the medicines taken will vary between individuals. Once HIV treatment is started, the medications will need to be taken lifelong.

HIV treatment can have side effects such as nausea, diarrhoea, skin rashes and sleep difficulties. Those people who experience more serious side effects may need to try a different combination of ARVs.⁵

The goal of HIV treatment is to keep the level of HIV so low that they are 'undetectable' in tests. 'Undetectable' doesn't mean HIV is not present, just that the level is too low for tests to pick up. The lower the amount of HIV, the better for someone's health.

Good adherence to medication is vital if treatment is to work, an easier proposition now that people with HIV take far fewer pills than in the past. If even a few doses are missed, the levels of drugs in the body fall and allow HIV

to develop resistance, meaning they stop working as they should. Without treatment serious illness and death will follow within a few years for nearly everyone with HIV.⁶

Types of treatment

Over 20 anti-HIV drugs in six 'classes' are now available. Each class works against HIV in a particular way. Most people take a combination of drugs, usually three.

The classes of anti-HIV drugs are:

- Nucleoside reverse transcriptase inhibitors (NRTIs or 'nukes') and nucleotide reverse transcriptase inhibitors (NtRTIs)
- Non-nucleoside reverse transcriptase inhibitors (NNRTIs or 'non-nukes')
- Protease inhibitors (PIs)
- Fusion and entry inhibitors
- Integrase inhibitors

Guidelines developed by the British HIV Association (BHIVA) recommend that patients start treatment with three anti-HIV drugs. Such combination therapy for newly-diagnosed people usually includes two NRTIs and either a protease inhibitor, an NNRTI or an integrase inhibitor.

For patients who have taken HIV treatment before, doctors will look at their treatment history and test results for drug resistance before deciding the most suitable combination of drugs.⁷

References

- 6 – <http://www.tht.org.uk/sexual-health/About-HIV/Treatment-for-HIV>
- 7 – <http://www.tht.org.uk/myhiv/HIV-and-you/Your-treatment/Types-of-treatment>
- 8 – <http://www.who.int/features/factfiles/hiv/facts/en>
- 9 – <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3234451/>
- 10 – <http://www.theaidsinstitute.org/node/259>

If you have been asked to run a healthcare market research project on HIV and would like to talk to someone who really understands all the aspects of this condition, why not send an email or give us a call today?



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