

## Primary HIV infection

The first few weeks after an individual becomes infected with HIV are known as primary HIV infection, or acute HIV infection. When HIV first enters the body the immune system is unprepared to attack it, so HIV can reproduce at very high levels. A viral load test at this stage will usually show extremely high levels of HIV in the blood – often higher than at any other stage of HIV infection.

Levels of HIV elsewhere in the body, such as the lymph nodes and possibly semen and vaginal fluids, may also be very high. This may mean that the risk of transmitting HIV to other people may also be greatest during primary infection.

It takes several weeks after infection for the body to start to produce antibodies against HIV, and to generate immune cells that can recognise and destroy HIV-infected cells. The time at which antibodies to HIV appear is called seroconversion. When these immune responses against HIV develop, viral load drops to a much lower level known as the set point, which varies from person to person. However, the immune system is not able to eradicate HIV from the body altogether or to stop it from causing illness.

### Symptoms of primary infection

The high levels of HIV reproduction can cause a range of symptoms, which can be very similar to the flu or other common viral illnesses. These symptoms are sometimes called seroconversion illness, or acute retroviral syndrome, and usually only last for one or two weeks.

The symptoms may include fever, swollen glands, sore throat, rash, mouth or throat ulcers, and aching muscles or joints. At least 50% of newly infected people are thought to experience some such symptoms, and the true figure may be higher, but most people probably do not realise that their symptoms are HIV-related.

Several studies suggest that the more serious and prolonged the symptoms an individual experiences during primary infection, the faster he or she is likely to develop AIDS.

### Treating primary infection

Some doctors think that people who are identified during primary HIV infection should start an aggressive

anti-HIV regimen immediately. They argue that the drugs may help to control the high rates of HIV reproduction and limit its spread throughout the body. Studies have shown that in the vast majority of cases, taking a triple combination during very early HIV infection can suppress HIV to levels that are too low to be measured with current viral load tests.

Not so long ago, the most optimistic researchers believed that several years of intensive anti-HIV therapy might eradicate HIV from the body altogether. Nowadays, after many studies and much research, this possibility has been insofar ruled out as the current therapies have only proved, in many cases, to keep the virus undetectable (virus not found on blood); lengthening, nonetheless the lifetime of PWAS and endowing them with a better quality of life.

At present, there is no hard evidence that starting treatment during primary infection is better, in the long-term, than delaying treatment until later in the course of infection. Also, no-one knows whether there will be any real benefit from treating primary infection if the treatment is later stopped.

Indeed, some doctors are worried that suppressing HIV with drugs very soon after infection may make it harder for the body to generate strong anti-HIV immune responses.

Other potential disadvantages include the risk of developing drug-resistant HIV strains, and the side-effects and inconvenience of taking the drugs throughout the entire duration of HIV infection.

The benefits of treatment may be greater for people who experience severe or prolonged symptoms during primary infection, since they are at a greater risk of disease progression.