Scientists and researchers have been studying HIV and AIDS since the 1980s, and we now know a lot about them. However, HIV mutates very quickly and there are various strains of the virus making scientific advances in the field difficult.

Here we discuss in more detail the way HIV is transmitted, prevented and progresses to AIDS; the various strains and types; the different stages of HIV infection in the body; and advances towards preventative measures such as vaccines and microbicides.

**The science of HIV and AIDS - overview**

Discover how HIV is structured, how it replicates in the body, and progresses to AIDS without treatment.

**HIV strains and types**

There are two types of HIV called HIV-1 and HIV-2. Find out where in the world they exist and cause illness.

**Developing a vaccine against HIV infection**

An optimistic forecast of HIV vaccine availability is that one might be available by 2030. The critical determinant of the speed at which a vaccine will become available is the question of the minimum efficacy needed to make it cost-effective.
Searching for a cure for HIV and AIDS

There has been a lot of promising cure research but scientists can't yet completely remove HIV from the body.