



- [News Front Page](#)
- [World](#)
- [UK](#)
- [England](#)
- [Northern Ireland](#)
- [Scotland](#)
- [Wales](#)
- [Business](#)
- [Politics](#)
- [Health](#)
- [Medical notes](#)
- [Education](#)
- [Science & Environment](#)
- [Technology](#)
- [Entertainment](#)
- [Also in the news](#)
-
- [Video and Audio](#)
-
- [Have Your Say](#)
- [Magazine](#)
- [In Pictures](#)
- [Country Profiles](#)
- [Special Reports](#)

Last Updated: Tuesday, 13 May, 2003, 08:02 GMT 09:02 UK

[Email this to a friend](#)

[Printable version](#)

War may have spread HIV

Scientists believe a form of HIV probably entered the human population in Africa at least 60 years ago - and that war helped it spread.

Although HIV is usually spoken of as one virus, in fact it comes in two distinct types, HIV-1 and HIV-2.

HIV-1 came from chimpanzees, and has spread globally; but HIV-2, which came from sootey mangabey monkeys, has remained concentrated in west Africa, where it infects approximately 1% of the population.

A team of international researchers has calculated that HIV-2 crossed to humans sometime between 1890 and 1940 - probably shortly after HIV-1 made the same leap.

The researchers also made a detailed study of how HIV-2 spread within Guinea-Bissau.

They conclude it remained a low-level infection for many years, only spreading widely in the 1960s - a period which coincided with the country's war to gain independence from Portugal.

Portuguese soldiers who had fought in the war were the first Europeans to contract HIV-2.

The scientists say that a number of factors prevalent in wartime - such as mass immunisations with unsterilised needles - could have helped the virus spread rapidly.

Scientists hope that the more they can discover about the way HIV has spread, the better will be the chances of coming up with new ways of combating the virus.

They were able to trace the evolutionary history of HIV-2 by comparing its genetic sequences with those from an ancestral monkey virus.

By estimating the number of genetic mutations in the sequences over time, the scientists were able to track the incidence of HIV-2 and learn when it transferred to humans.

The research is published in the journal Proceedings of the National Academy of Sciences (PNAS).



War produces conditions for HIV spread

SEE ALSO:

- [Africa devastated by Aids](#)
27 Feb 03 | Africa
- [Dirty needles blamed for HIV](#)
06 May 03 | Health
- [HIV 'hijacks immune system'](#)
02 May 03 | Health

RELATED INTERNET LINKS:

- [UNAIDS](#)
 - [Proceedings of the National Academy of Sciences](#)
- The BBC is not responsible for the content of external internet sites

TOP HEALTH STORIES

- [Big drop in new swine flu cases](#)
- [IVF couples 'in postcode lottery'](#)
- [Structure of HIV genome 'decoded'](#)

| [News feeds](#)

- RELATED BBC SITES**
- [SPORT](#)
 - [WEATHER](#)
 - [CBBC NEWSROUND](#)
 - [ON THIS DAY](#)
 - [EDITORS' BLOG](#)

[Email this to a friend](#)

[Printable version](#)

War May Have Stimulated Spread of AIDS Virus in Africa

By Sarah Graham | Tuesday, May 13, 2003

In addition to the obvious destruction war can wreak, violent conflicts may lead to the spread of epidemic diseases, new research suggests. One of the viruses that causes AIDS, HIV-2, may have risen to epidemic status in West Africa as a result of an independence war fought under particularly unsterile conditions. A report describing the findings is published online this week by the *Proceedings of the National Academy of Sciences*.

Previous research had identified two genetically distinct viruses, dubbed HIV-1 and HIV-2, that cause AIDS in humans. Both types were transmitted from simians (HIV-1 from chimpanzees and HIV-2 from sooty mangabeys) but they currently have very different distribution patterns among people. Whereas subtypes of HIV-1 are spread globally, those of HIV-2 are largely restricted to West Africa. Philippe Lemey of Katholieke Universiteit Leuven in Belgium and his colleagues analyzed historic and modern samples of HIV-2 from a rural population in Guinea-Bissau, as well as a SIV-SM strain from sooty mangabeys. (In the image above, a girl from Sierra Leone carries a pet sooty mangabey.) By comparing the different genomes, the team estimated the number of mutations in the sequences that had occurred over time and determined that the virus jumped from primates to humans twice, once around 1940 and again in 1945.



Image: COURTESY OF THE PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES

The researchers also ascertained that the incidence of infection with the subtype of HIV-2 that was first transmitted to humans in 1940 reached epidemic proportions between 1955 and 1970. This timing coincides with Guinea-Bissau's fight for independence from Portugal, which occurred between 1963 and 1974. In particular, they note that army-trained doctors launched a massive inoculation program in the region, and suggest that the difficulties of running such a campaign during war-time could have led to an increase in unsanitary injections that may have spread of the disease. Diagnosis of HIV-2 cases among Portuguese war veterans also supports a hypothesis of increased sexual transmission of the disease during the war. The authors thus conclude that their work "strongly supports the major role of the independence war and associated changes in sociocultural patterns in the transition of HIV-2 from endemic to epidemic behavior."