

Untreated HIV carriers transmit resistant viruses

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Around one in every ten newly infected HIV carriers in Switzerland has viruses that are resistant to at least one of the three classes of drugs used to treat AIDS. Contrary to previously held assumptions, resistant viruses are primarily transmitted by people who are not yet receiving treatment, according to the reports in "*Clinical Infectious Diseases*" from the researchers headed by Roger Kouyos and Huldrych Günthard at Zurich University Hospital.

Reconstruction of transmission chains

In their molecular epidemiological analysis of 1674 male carriers of HIV who had sex with other men, the researchers demonstrated resistant viruses in 140 [patients](#). The research group reconstructed the [transmission](#) chains of these viruses on the basis of the patients' estimated infection dates and the degree of genetic relatedness of their blood-borne viruses. Most of the transmission chains commence in HIV carriers who were not yet undergoing treatment at the time at which the resistant viruses were transmitted.

"We were astonished to note that the resistant viruses are primarily brought into circulation by untreated people," said Günthard. "Previously we had assumed that the resistant viruses came from patients for whom treatment had failed as resistances were produced while treatment was ongoing."

Early diagnosis is vital

The principal role of untreated HIV carriers in the transmission of resistant viruses means that combating these [resistant strains](#) is not solely reliant on optimised treatment, but also on preventing transmission by people who are not undergoing treatment. Prevention and early detection of newly infected persons are particularly vital in this respect. "In contrast to other tests, such as that for hepatitis, the HIV test requires that permission is obtained from the patient," explained Günthard. Since many doctors are reluctant to discuss their patients' sexuality with them openly, many infections are not discovered until much later than they could and should have been. While progress in medicine has robbed AIDS of its deadly effect, Günthard went on to stress, "there is still a great deal to be done."

The Swiss HIV Cohort Study

The aim of the study, which started in 1988, is to better understand HIV infection and AIDS, and improve the treatment of patients. All of Switzerland's specialist HIV clinics (Basel, Berne, Geneva, Lausanne, Lugano, St. Gallen and Zurich) collect data on [treatment](#) and the progress of the disease. Currently over 8,800 people are taking part in the Swiss HIV Cohort Study, of whom almost one third are women.

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