

# UPDATE

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TITLE ..... Retrospective Study of HTLV-1/HTLV-2-Related  
Antibody Reactivity in U.S. Drug Abusers

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OF PRESENTATION

STOCKHOLM--Scientists reported today they have evidence that two related viruses, one of which causes a type of cancer and a neurologic disorder, have been present among some U.S. parenteral (by needle) drug abusers for at least 17 years.

Carl Saxinger, Ph.D., of the U.S. National Cancer Institute in Bethesda, Md., reported this finding today at the 4th International Conference on AIDS in Stockholm. He and NCI's Robert Gallo, M.D., and colleagues found that 6.5 percent of U.S. parenteral drug abusers were infected with the viruses in 1972.

The viruses are human T-cell lymphotropic virus type-1 (HTLV-I) and type-2 (HTLV-II). Both are retroviruses and distant "cousins" of human immunodeficiency virus (HIV), the AIDS virus. HTLV-I causes a form of adult

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leukemia-lymphoma and a chronic neurologic syndrome called tropical spastic paraparesis. HTLV-II has been isolated from several patients with some lymphoid malignancies and may be involved in the cause of them.

HTLV-I and -II are thought to be transmitted through similar routes (blood, intimate sexual contact) as HIV, but they are much less infectious. Both HTLV-I and -II are uncommon in the general U.S. population.

"The tests used to detect the viruses could not consistently distinguish between the two viruses," Dr. Saxinger said. "This problem is sometimes encountered when testing for closely related viruses. The findings are still important because they establish a benchmark for monitoring the spread of HTLV-I infection among this population over time." The data are the first national data on HTLV-I and -II infection in a high-risk segment of the U.S. population.

In 40 percent of the samples that tested positive for the viruses, Dr. Saxinger said, it was hard to tell if the test was identifying HTLV-I or -II. In 50 percent of the samples, he said, HTLV-I was most reactive; and in 10 percent of samples, HTLV-II was most reactive.

The rate of infection among parenteral drug abusers is not representative of the general U.S. population.

HTLV-I and -II are transmitted by blood. The American Red Cross recently announced plans to routinely screen for HTLV-I as soon as a test becomes available. Distinguishing between HTLV-I and -II is also a problem in the development of such a test.

Other research on the rate of HTLV-I and -II infection in the mid-1980s indicated there is a high prevalence of infection among parenteral drug abusers in certain U.S. locations. A national survey on the current infection rate in this population is being conducted by Dr. Saxinger and colleagues.

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The study reported today by Dr. Saxinger and Dr. Gallo was conducted in collaboration with Dr. James Moore, formerly of the U.S. National Institute on Drug Abuse and now at the University of Kentucky, Lexington, Ky., and other scientists at the University of Kentucky and the New Jersey School of Medicine and Dentistry, Newark, N.J.

The rate of infection was highest among parenteral drug abusers in the western United States, 9.1 percent, and lowest in the south, 4.7 percent. In the northeast, 6.4 percent of parenteral drug abusers were infected, and in the northcentral area, 8.2 percent were infected. The study covered data on 1129 parenteral drug abusers who attended drug abuse clinics in 43 states. Data by state are not yet available.

Three percent of white drug abusers and 9 percent of black drug abusers had been exposed to HTLV-I or -II. The risk increased with age, with drug abusers who were 40 or older, having a 25 percent or more risk of infection. Interestingly, Dr. Saxinger said, increasing age seemed to be a more important risk factor than number of years of drug abuse. There still was a definite correlation, however, between numbers of years of drug abuse and age and risk of infection, he said.

According to a recent study by the American Red Cross, 0.025 percent of blood donors in the United States may carry HTLV-I. Other research indicates that about one in every 80 individuals infected with HTLV-I develop adult T-cell lymphotropic/leukemia. Comparable data are not available on the frequency of HTLV-II infection in the blood supply.

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