Kissing May Spread Human Herpes Virus 8, The Cause Of Kaposi's Sarcoma, Among Men

ScienceDaily (Nov. 9, 2000) — Most people do not think of kissing as a way of spreading serious sexually transmitted diseases. But kissing between men may be what spreads human herpes virus 8 (HHV-8), the cause of Kaposi’s sarcoma, according to researchers at the University of Washington and the Fred Hutchinson Cancer Research Center in Seattle.

The findings are published in the article, "Mucosal Shedding of Human Herpes Virus 8 in Men," in the Nov. 9 New England Journal of Medicine.

Kaposi's sarcoma is a tumor that usually appears as purplish raised blotches on the skin or in the mouth. It can also form inside internal body cavities, such as the abdomen and chest. This cancer has been recognized for centuries among people living in Southern Europe, the Middle East and Africa, but became more frequent in the United States and Western Europe in the early 1980s. At that time, an epidemic of Kaposi¹s sarcoma in homosexual men was what heralded the arrival of the AIDS epidemic.

Kaposi's sarcoma most often occurs in people with compromised or suppressed immune systems. That is why it attacks people with AIDS. That is also why it is also sometimes found in people who have received organ transplants -- they take medications to suppress their immune system in order to reduce the risk that the body will reject the new, foreign organ. The cancer can usually be treated effectively with chemotherapy, though occasionally, it can spread to internal organs and prove fatal.

HHV-8 was first characterized in 1994 by researchers at Columbia University who found it to be associated with Kaposi's sarcoma. HHV-8 is the latest recognized addition to a family of human herpes viruses that include those responsible for oral and genital herpes, chickenpox and infectious mononucleosis. Although previous studies had indicated that in the United States HHV-8 was more common among people with many sexual partners, the exact mechanism of transmission remains unclear. In addition, in Africa and in Southern Europe, the virus is found in children as well as adults, suggesting that non-sexual spread can occur.
"When we think of STDs, we traditionally think of infections which are spread through sexual contact. It turned out that HHV-8 has been very hard to find in genital secretions. One of the reasons people started looking at the mouth is because Kaposi’s sarcoma often shows up first as lesions in the mouth," says Dr. John Pauk, the lead author, who conducted the study during his fellowship in infectious diseases at the UW School of Medicine. He is now in private practice. "We found the virus in the mouth more often and in higher amounts than in genital secretions."

So far, the virus has been very difficult to grow in the laboratory and techniques to detect the virus have relied on detection of the viral DNA in the laboratory of Dr. Meei-Li Huang, research scientist at Fred Hutchinson Cancer Research Center. These findings are strengthened by studies performed by Dr. Scott Brodie, research assistant professor in the Department of Laboratory Medicine and director of molecular virology laboratories at the UW School of Medicine. Dr. Brodie showed that HHV-8 replicates in the cells that line the mouth.

Among men who have sex with men in Seattle, the virus was found in about 40 percent of the men with HIV infection and about 20 percent of men without HIV.

The study analyzed 112 men who have sex with men and found three independent risk factors for infection with HHV-8:

* A history of sex with a partner who has Kaposi’s sarcoma.

* A history of deep kissing - the exchange of saliva - with an HIV-positive partner.

* The use of amyl nitrite capsules (known as 'poppers') or inhaled nitrites. Researchers are not sure why this drug, taken to enhance the sexual experience, showed up as a risk factor in their study.

Despite the large percentage of men in Seattle who were infected with HHV-8, Kaposi's sarcoma is less common now than in the early days of the AIDS epidemic. This may be largely due to the success in treating patients with AIDS using drugs that halt the damage done to the body's immune system. "Currently, the number of people who go from infection with HHV-8 to any clinical syndrome is very low. Even if you become infected with HHV-8, your risk of developing cancer is very slim," Pauk said. Most people infected with HHV-8 are without symptoms.

The public health ramifications of this study remain unclear. Researchers are not telling people to modify their sexual practices. But they are suggesting that men who have sex with men, especially those with HIV infection, should be aware of the risks that might be associated with deep kissing.

"'Safer sex' messages have focused on exposure to genital secretions. The issue that this
paper raises is that kissing can also be a risk for a virus," said one of the paper's authors, Dr. Anna Wald. She is director of the UW Virology Research Clinic and an assistant professor of allergy and infectious diseases in the UW School of Medicine and of epidemiology in the School of Public Health and Community Medicine.

### The other co-authors on this paper include Dr. Lawrence Corey of the UW and a member of the clinical research division of Fred Hutchinson Cancer Research Center; Dr. David Koelle, Dr. Connie Celum and Stacy Selke of the UW; and Dr. Timothy Schacker of the University of Minnesota.

The UW Virology Research Clinic is undertaking more studies to examine HHV-8 transmission and infections. Researchers are particularly looking for couples of gay men who can be followed over time. For more information, call the clinic at (206) 720-4340.

Adapted from materials provided by University Of Washington.

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