

## Persons with herpes simplex virus type 2, but without symptoms, still shed virus

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Persons who have tested positive for herpes simplex virus type 2 (HSV-2) but do not have symptoms or genital lesions still experience virus shedding during subclinical (without clinical manifestations) episodes, suggesting a high risk of transmission from persons with unrecognized HSV-2 infection, according to a study in the April 13 issue of *JAMA*, a theme issue on infectious disease and immunology.

Anna Wald, M.D., M.P.H., of the University of Washington and Fred Hutchinson Cancer Research Center, Seattle, presented the findings of the study at a *JAMA* media briefing at the National Press Club in Washington, D.C.

"[Herpes simplex virus type 2](#) is one of the most frequent sexually transmitted infections worldwide, with global estimates of 536 million infected persons and an annual incidence of 23.6 million cases among persons aged 15 to 49 years. In the United States, 16 percent of adults are [HSV-2](#) seropositive, but only 10 percent to 25 percent of persons with HSV-2 infection have recognized [genital herpes](#). Moreover, most HSV-2 infections are acquired from persons without a clinical history of genital herpes," according to background information in the article. Thus, the risk of sexual transmission does not correlate with the recognition of clinical signs and symptoms of HSV-2 but most likely correlates with the activity of the virus on the genital skin or mucosa (viral shedding).

Dr. Wald and colleagues compared the rates and patterns of genital HSV

shedding in 498 immunocompetent HSV-2-seropositive persons between March 1992 and April 2008. Each participant obtained daily self-collected swabs of genital secretions for at least 30 days. The rate of viral shedding (the presence of virus that is actively replicating, and can thereby be transmitted to another person) was measured by polymerase chain reaction (testing method for viral DNA) from the swabs.

Among the findings of the researchers, HSV-2 was detected on 4,753 of 23,683 days (20.1 percent) in 410 persons with symptomatic genital HSV-2 infection compared with 519 of 5,070 days (10.2 percent) in 88 persons with asymptomatic infection. Genital HSV was detected at least once in 342 of 410 persons (83.4 percent) with symptomatic HSV-2 infection and in 60 of 88 (68.2 percent) persons with asymptomatic HSV-2 infection during the 2 month study.

Subclinical genital shedding rates were higher in persons with symptomatic infection compared with asymptomatic infection (2,708 of 20,735 [13.1 percent] vs. 434 of 4,929 [8.8 percent]). "However, the median [midpoint] amount of HSV detected during subclinical genital shedding episodes was similar in persons with symptomatic and asymptomatic infection," the authors write.

Persons with symptomatic infection had more frequent genital shedding episodes compared with persons with asymptomatic infection (median 17.9 vs. 12.5 episodes per year). Days with lesions accounted for 2,045 of 4,753 days (43.0 percent) with genital viral shedding among persons with symptomatic genital HSV-2 infection compared with 85 of 519 days (16.4 percent) among persons with asymptomatic infection. This indicates that the bulk of days of shedding in persons with asymptomatic HSV-2 is unrecognized, and people may engage in sexual activity not knowing that they are at risk for transmitting the virus to sexual partners.

"Our findings suggest that 'best practices' management of

HSV-2-infected persons who learn that they are infected from serologic testing should include anticipatory guidance with regard to genital symptoms, as well as counseling about the potential for transmission. The issue of infectivity is both a patient management and a public health concern. The primary concern of many HSV-2-seropositive persons is the risk of transmission to sexual partners; in our experience this is the main source of angst in patients with genital herpes."

The researchers note that several methods have been identified that partly reduce the risk of HSV-2 transmission to sexual partners.

"Condom use, daily valacyclovir therapy, and disclosure of HSV-2 serostatus each approximately halve the risk of HSV-2 transmission. However, these approaches reach a small portion of the population and have not had an influence on HSV-2 seroprevalence in the last decade. One of the reasons for such a limited effect is that few people are aware of their genital HSV-2 infection, and routine serologic testing, although available commercially, is recommended only in limited settings. We hope that these data will result in further discussions regarding control programs for HSV-2 in the United States."

**More information:** *JAMA*. 2011;305[14]1441-1449.

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