

# Study highlights converging and diverging immune factors that may predispose people to HIV and HSV

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Genital herpes, caused by the herpes simplex virus-2 (HSV-2), is a known risk factor for HIV acquisition: people infected with HSV are

three times more likely to acquire HIV. But do HIV predictors and other risk factors in the immune system and cervical mucosa predispose people to acquiring HSV-2?

To answer this question, investigators at Brigham and Women's Hospital, a founding member of the Mass General Brigham healthcare system, analyzed longitudinal samples of cervical and serum biomarker levels for immune activation, before and after subjects acquired HSV-2.

They found that altered levels of specific biomarkers in the mucosa and serum were associated with HSV-2 acquisition only, while others overlapped with biomarkers and combinations predictive of HIV-1 acquisition. This study helps highlight the converging and diverging factors predisposing one to both viral diseases.

"HSV-2 infections, which cause [genital herpes](#), have a high global prevalence especially in regions of Sub-Saharan Africa that are at the center of the HIV pandemic, where as much as 80 percent of women are infected with HSV-2," said corresponding author Raina Fichorova, MD, Ph.D., of the Department of Obstetrics and Gynecology.

"By identifying molecular predictors of HSV-2 risk, we help provide targets for future development of preventive treatments."

The research was published in *Sexually Transmitted Infections*.

**More information:** Yashini Govender et al, Cervical and systemic innate immunity predictors of HIV risk linked to genital herpes acquisition and time from HSV-2 seroconversion, *Sexually Transmitted Infections* (2022). [DOI: 10.1136/sextrans-2022-055458](https://doi.org/10.1136/sextrans-2022-055458)

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