



Prevention: HIV Risk for Women

The team identified 14 species of vaginal bacteria linked to HIV acquisition.

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The vaginal microbiome and tissue inflammation may increase women's likelihood of acquiring HIV, according to a NIAID-sponsored study. Researchers analyzed vaginal swab samples from nearly 600 women in a biomedical prevention trial in African countries with high HIV incidence. They compared bacterial and inflammatory profiles of 150 women who acquired HIV and 436 women who did not. The team identified 14 species of vaginal bacteria linked to HIV acquisition and found that women with most or all of these species had the highest odds of infection, while those with few or none had the lowest risk. They also identified six associated inflammatory cytokines and chemokines, chemical messengers that play a role in immune response. Women with all six proteins were at greatest risk for HIV acquisition. One chemokine in particular—interferon- gamma-induced protein 10—was associated with the highest risk of infection. The results suggest that strategies to reduce these bacteria species and inflammatory proteins might help prevent HIV acquisition.

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