

## Abstract

**Bacterial vaginosis (BV) is common and has been associated with increased HIV-1 susceptibility. The objective of this study was to identify risk factors for BV in African women at high risk for acquiring HIV-1. We conducted a prospective study among 151 HIV-1-seronegative Kenyan female sex workers. Nonpregnant women were eligible if they did not have symptoms of abnormal vaginal itching or discharge at the time of enrollment. At monthly follow-up, a vaginal examination and laboratory testing for genital tract infections were performed. Multivariate Andersen-Gill proportional hazards analysis was used to identify correlates of BV. Participants completed a median of 378 (interquartile range 350-412) days of follow-up. Compared with women reporting no vaginal washing, those who reported vaginal washing 1 to 14 [adjusted hazard ratio (aHR) 1.29, 95% confidence interval (CI) 0.88-1.89], 15 to 28 (aHR 1.60, 95% CI 0.98-2.61), and >28 times/wk (aHR 2.39, 95% CI 1.35-4.23) were at increased risk of BV. Higher BV incidence was also associated with the use of cloth for intravaginal cleansing (aHR 1.48, 95% CI 1.06-2.08) and with recent unprotected intercourse (aHR 1.75, 95% CI 1.47-2.08). Women using depot medroxyprogesterone acetate contraception were at lower risk for BV (aHR 0.59, 95% CI 0.48-0.73). Vaginal washing and unprotected intercourse were associated with increased risk of BV. These findings could help to inform the development of novel vaginal health approaches for HIV-1 risk reduction in women**