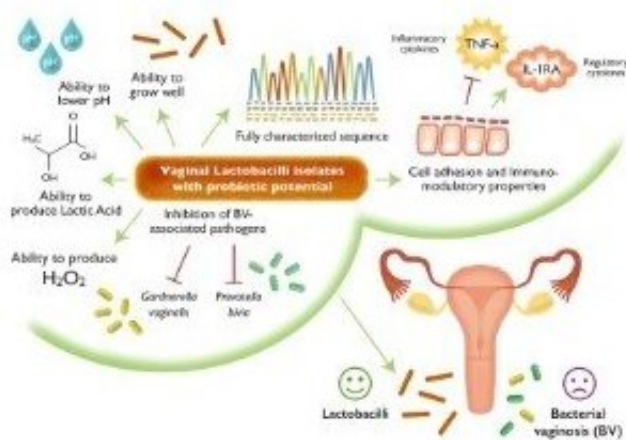


Probiotics with top-performing *Lactobacillus* strains may improve vaginal health

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Assessment characteristics in the hunt for novel vaginal probiotics for Africa.
Credit: Sean Crozier, 2020

Vaginal *Lactobacillus* bacterial strains largely perform better than strains currently used in probiotics for vaginal health, according to a study published June 4 in the open-access journal *PLOS Pathogens* by Jo-Ann Passmore of the University of Cape Town, and colleagues. The findings suggest that a vaginal health probiotic that includes top-performing vaginal *Lactobacillus* strains may improve treatment options for bacterial vaginosis.

Lactobacillus species in the lower reproductive tract of healthy [women](#)

lower vaginal pH and protect against sexually transmitted infections. But women commonly suffer from bacterial vaginosis—a disruption in the optimal *Lactobacillus*-dominated genital microbiota—resulting in higher vaginal pH as well as vaginal discharge and inflammation. Bacterial vaginosis is associated with adverse pregnancy outcomes and a higher risk of sexually transmitted infections, including HIV. Although antibiotics are the standard of care for bacterial vaginosis, most cases recur within six months. Probiotics that include *Lactobacilli* have been explored to improve the durability of treatment, but the majority of products do not contain species commonly found in the vagina. There is an urgent need for the development of additional well-designed probiotics for vaginal health.

In the new study, Passmore and colleagues compared 57 vaginal *Lactobacillus* strains from young African women to strains from commercial [probiotic](#) products for vaginal health. They analyzed their growth at varying pH values, ability to lower pH and produce antimicrobial products, pathogen inhibition, and susceptibility to antibiotics. Several vaginal strains exhibited better probiotic profiles than commercial strains, suggesting that they would be beneficial in the development of probiotic treatments for bacterial vaginosis. Moreover, [whole-genome sequencing](#) of the five best-performing vaginal strains revealed that they would likely be safe and not pose a risk of antimicrobial resistance. According to the authors, a wider range of well-characterized *Lactobacillus*-containing probiotics may improve treatment outcomes for bacterial vaginosis, and lower the risk of adverse pregnancy outcomes and sexually transmitted infections.

"Few probiotics aimed at promoting vaginal health contain *Lactobacillus* spp. that commonly colonize the lower genital tracts of African women," the authors add. "The discovery and use of novel vaginal probiotic strains in such women may improve the durability of [bacterial vaginosis](#) treatments and towards this end Happel et al. (2020) evaluated a

multitude of vaginal *Lactobacillus* [strains](#) and identified some that should be tested as vaginal probiotics in clinical trials in Africa."

More information: Happel A-U, Kullin B, Gamiieldien H, Wentzel N, Zauchenberger CZ, Jaspan HB, et al. (2020) Exploring potential of vaginal *Lactobacillus* isolates from South African women for enhancing treatment for bacterial vaginosis. *PLoS Pathog* 16(6): e1008559. doi.org/10.1371/journal.ppat.1008559

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