Effects of obesity and post-bariatric surgery weight loss on the vaginal microbiota

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Video Byte

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Abstract

Obesity is a prevalent problem worldwide with major health effects. In addition to overall effects, obesity can cause a wide array of gynecological and obstetric complications in women. Because shifts in the vaginal microbiota (VMB) can also be a risk factor for adverse reproductive and health outcomes, researchers examined the relationship between the VMB and obesity. Using sequencing to assess the microbiota in 67 obese women, 42 non-obese women, and 27 women who underwent bariatric surgery, they found a lower prevalence of *Lactobacillus* and higher prevalence of high-diversity species in the VMB of obese subjects. Local vaginal levels of many inflammatory cytokines were also elevated in obese women, but only IL-1 β and IL-8 levels were correlated with VMB diversity. The VMB did not change significantly within 6 months of bariatric surgery, but many women's BMIs also remained within the obese range during that time. Post-surgery, women with a *Lactobacillus*-dominant VMB had significantly lower BMIs than those with a diverse VMB. These results provide novel insight into the relationship between weight, VMB, and reproductive health.