Candida (90% vs. 61%; $p < 0.02$) was significantly higher in the active-treatment group than in the placebo group.[11]

Improving the Vaginal Flora in Postmenopausal Women

In premenopausal women, estrogen encourages vaginal colonization with lactobacilli. The decline in estrogen levels that occurs with menopause is associated with a decrease in lactobacilli, increased colonization with enterobacteria, and an increased incidence of urinary tract infections.

Seventy-two postmenopausal women (mean age, 57.6 years) with abnormal vaginal flora (i.e., intermediate flora; Nugent scores of 4–6) were randomly assigned to receive, in double-blind fashion, 2.5×10^9 viable cells each of *L. rhamnosus* GR-1 and *L. reuteri* RC-14 or placebo once a day for 14 days. The proportion of women who showed a reduction (improvement) in the Nugent score of at least 2 grades was significantly greater in the probiotics group than in the placebo group (60% vs. 16%; $p = 0.0001$). The median Nugent score decreased by 3 grades in the probiotics group and did not change in the placebo group ($p = 0.0001$ for the difference in the change between groups).[12] These results indicate that treatment with this probiotic combination restored the vaginal flora toward normal in postmenopausal women.

Conclusion

Oral administration of the combination of *L. rhamnosus* GR-1 and *L. reuteri* RC-14 has been found effective for the prevention of recurrent urinary tract infections in postmenopausal women. These probiotic strains also increased the cure rate in women with bacterial vaginosis or vulvovaginal candidiasis, when given as an adjunct to conventional therapy. In addition, *L. rhamnosus* GR-1 and *L. reuteri* RC-14 restored the vaginal flora toward normal in postmenopausal women.

Alan R. Gaby, MD

Disclosure

Dr. Gaby receives a royalty for sales of a product that contains *L. rhamnosus* GR-1 and *L. reuteri* RC-14.

Notes

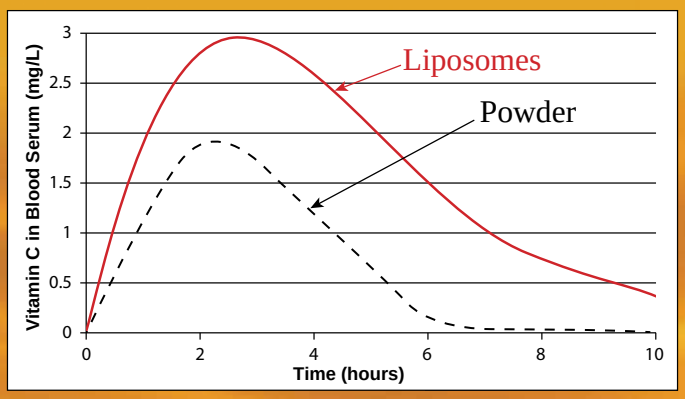
1. Reid G, Bruce AW. Selection of Lactobacillus strains for urogenital probiotic applications. *J Infect Dis*. 2001;183(Suppl 1):S77–S80.
2. Gardiner GE et al. Persistence of Lactobacillus fermentum RC-14 and Lactobacillus rhamnosus GR-1 but not L. rhamnosus GG in the human vagina as demonstrated by randomly amplified polymorphic DNA. *Clin Diagn Lab Immunol*. 2002;9:92–96.
3. Reid G, Bruce AW. Selection of lactobacillus strains for urogenital probiotic applications. *J Infect Dis*. 2001;183(Suppl 1):S77–S80.
4. Reid G. Probiotic agents to protect the urogenital tract against infection. *Am J Clin Nutr*. 2001;73(Suppl):437S–443S.
5. Kohler GA et al. Probiotic interference of Lactobacillus rhamnosus GR-1 and Lactobacillus reuteri RC-14 with the opportunistic fungal pathogen Candida albicans. *Infect Dis Obstet Gynecol*. 2012;2012:636474.
6. McMillan A, et al. Disruption of urogenital biofilms by lactobacilli. *Colloids Surf B Biointerfaces*. 2011;86:58–64.
7. Reid G, Bruce AW, Fraser N, Heinemann C, Owen J, Henning B. Oral probiotics can resolve urogenital infections. *FEMS Immunol Med Microbiol*. 2001;30:49–52.
8. Beerepoot MAJ, ter Riet G, Nys S, et al. Lactobacilli vs antibiotics to prevent urinary tract infection. A randomized, double-blind, noninferiority trial in postmenopausal women. *Arch Intern Med*. 2012;172:704–712.
9. Anukam K et al. Augmentation of antimicrobial metronidazole therapy of bacterial vaginosis with oral probiotic Lactobacillus rhamnosus GR-1 and Lactobacillus reuteri RC-14: randomized, double-blind, placebo controlled trial. *Microbes Infect*. 2006;8:1450–1454.
10. Martinez RCR et al. Improved cure of bacterial vaginosis with single dose of tinidazole (2 g), Lactobacillus rhamnosus GR-1, and Lactobacillus reuteri RC-14: a randomized, double-blind, placebo-controlled trial. *Can J Microbiol*. 2009;55:133–138.
11. Martinez RCR, et al. Improved treatment of vulvovaginal candidiasis with fluconazole plus probiotic Lactobacillus rhamnosus GR-1 and Lactobacillus reuteri RC-14. *Lett Appl Microbiol*. 2009;48:269–274.
12. Petricevic L et al. Randomized, double-blind, placebo-controlled study of oral lactobacilli to improve the vaginal flora of postmenopausal women. *Eur J Obstet Gynecol Reprod Biol*. 2008;141:54–57.

◆

Needle-Free Vitamin C and Glutathione

Power. Quality. Convenience.

1. The structure and absorption of our nano-sized Liposomes have been scientifically studied. Increased absorption for human subject is illustrated by Vitamin C concentration in blood serum after single 5 g dose (graph below). *
2. Five grams of liposomal ascorbic acid did not cause stomach / bowel discomfort on subjects, five grams of sodium ascorbate did. *
3. We use natural phosphatidycholine to create stable, nano-sized liposomes. *



10% off first order—use code TL0801

Empirical Labs
Nutrition Your Body Needs

(866) 948 8135
empirical-labs.com

* These statements have not been evaluated by the FDA. This product is not intended to diagnose, treat, cure, or prevent any disease.