

Probiotics and Prevention of Antibiotic Associated Diarrhea

Probiotics are living microorganisms which, upon ingestion in certain numbers, exert health benefits beyond inherent general nutrition. (1). Elias Metchnikoff proposed in 1907 the idea that the presence of certain bacteria in the human intestinal tract could prolong life. The early investigations focused on infectious GI disorders and the science was weak, being mainly organized as descriptive studies. However, there is a growing body of more recent literature which is clarifying the role of probiotics in the promotion of health.

While well controlled human studies evaluating probiotics are paltry, smaller studies have demonstrated benefit in a variety of disorders including management of atopic eczema and cow's milk allergy, irritable bowel syndrome, travelers' diarrhea, remission maintenance in Crohn's disease and prevention of recurrence of Crohn's in the post-operative period, and acute infectious diarrhea.

A number of studies reveal probiotic benefits against antibiotic-induced diarrhea (2-7), though a recent study from the Mayo Clinic using Lactobacillus GG in adults did not (8). Other studies demonstrate benefit in recurrence of C. difficile colitis (9-13), but no study has looked at prophylaxis against this occasionally fatal complication.

Studies in children clearly demonstrate benefit, and practitioner's experience with Lactinex and yogurt is broad. In the current study, we want to determine if a probiotic mixture that is enteric coated will prevent both antibiotic-associated diarrhea and C. difficile colitis in adults.

The bacteria and yeast chosen for the mixture have all been used in previous human studies and no detrimental effects have been noted. In fact, for the probiotics studied to date, they have been found safe. (14). There is, however, one reported case of bacteremia with a probiotic in a patient who was immunocompromised and had colitis. This organism is not included in this study, nor are immunocompromised patients to be recruited.

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