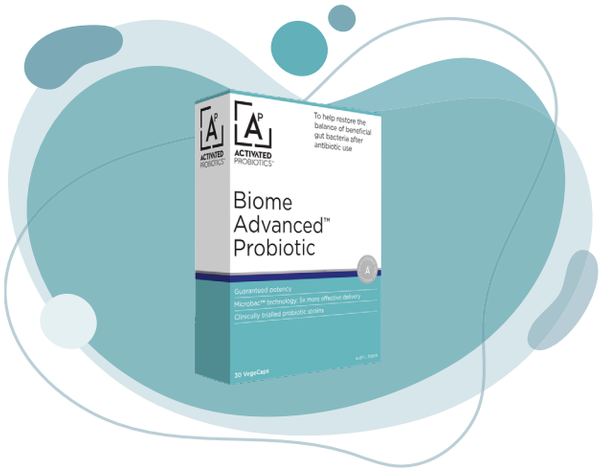
Biome Advanced™ Probiotic

Condition Management Guide

Restoration of beneficial gut bacteria following antibiotic use

FOR PROFESSIONAL REFERENCE ONLY



INTRODUCTION

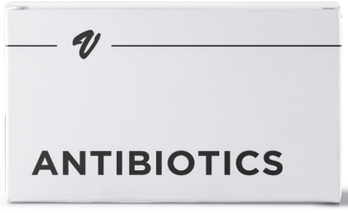
More than 30 million courses of antibiotics are prescribed each year in Australia (1). In order to target a range of different pathogenic microorganisms, most have broad-spectrum antimicrobial activity. An unintended consequence of this is that our beneficial gut bacteria are adversely affected, which can induce a state of microbial imbalance known as intestinal dysbiosis.

Intestinal dysbiosis can result in diarrhoea, and when related to antibiotic use, is known as antibiotic-associated diarrhoea (AAD). AAD is a relatively common side effect of antibiotic use, which can persist for months after the course has ended (2). As an intervention, probiotic supplements have been shown to reduce the risk of developing AAD by 51%, with Lactobacillus rhamnosus GG being the most effective probiotic strain, reducing the risk by 71% (3). Further, probiotics may help to restore the abundance and diversity of beneficial gut bacteria following a course of antibiotics.

To reduce the risk of AAD and support the balance of beneficial gut bacteria during antibiotic use, we recommend commencing daily supplementation with Biome Advanced™ Probiotic on the first day of antibiotic use, for a minimum of two weeks after the completion of the course.

CONSIDER AS AN ADJUNCT TO:

Antibiotics



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2. Busch R, Gruenwald J, Dudek S. Randomized, Double Blind and Placebo Controlled Study Using a Combination of Two Probiotic Lactobacilli to Alleviate Symptoms and Frequency of Common Cold. Food Nutr Sci. 2013;04(11):13–20.

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PROBIOTICS FOR THE PREVENTION OF ANTIBIOTIC-ASSOCIATED DIARRHEA IN OUTPATIENTS-A SYSTEMATIC REVIEW AND META-ANALYSIS.

Blaabjerg S, Artzi DM, Aabenhus R.

A common adverse effect of antibiotic use is diarrhea. Probiotics are living microorganisms, which, upon oral ingestion, may prevent antibiotic-associated diarrhea (AAD) through the normalization of an unbalanced gastrointestinal flora. The objective of this systematic review was to assess the benefits and harms of probiotics used for the prevention of AAD in an outpatient setting. A search of the PubMed database was conducted and yielded a total of 17 RCTs with 3631 participants to be included in the review. A meta-analysis was conducted for the primary outcome: the incidence of AAD. **The pooled results found that AAD was present in 8.0% of the probiotic group compared to 17.7% in the control group (RR 0.49, 95% CI 0.36 to 0.66; I^2 = 58%), and the species-specific results were similar regarding the probiotic strains L. rhamnosus GG and S. boulardii.** However, the overall quality of the included studies was moderate. A meta-analysis of the ten trials reporting adverse events demonstrated no statistically significant differences in the incidence of adverse events between the intervention and control group (RD 0.00, 95% CI -0.02 to 0.02, 2.363 participants). **The results suggests that probiotic use may be beneficial in the prevention of AAD among outpatients. Furthermore, the use of probiotics appears safe.**

BMJ Open. 2014 Aug 25;4(8):e005047. doi: 10.1136/bmjopen-2014-005047.

USE OF PROBIOTICS TO CORRECT DYSBIOSIS OF NORMAL MICROBIOTA FOLLOWING DISEASE OR DISRUPTIVE EVENTS: A SYSTEMATIC REVIEW.

McFarland LV

OBJECTIVE

To assess the evidence for the claim probiotics can correct dysbiosis of the normal microbiota resulting from disease or disruptive events.

METHODS

Sources searched (1985-2013): PubMed, EMBASE, Cochrane Database of Systematic Reviews, CINAHL, AMED and ISI Web of Science. Three on-line clinical trial registries were searched: Cochrane Central Register of Controlled trials, MetaRegister of Controlled Trials and National Institutes of Health.

SETTING

Systematic review of published clinical trials of patients receiving a probiotic intervention for the prevention or treatment of various diseases.

REVIEW METHODS

Included studies were randomised clinical trials of probiotic interventions having microbiological assays. Studies were evaluated following Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines for specific probiotic strains. A standard data extraction form was used to collect the raw data.

OUTCOME MEASURES

The primary outcome is the degree of microbiota correction by specific probiotic strains. Secondary outcome was the association between the degree of dysbiosis correction and clinical efficacy.

RESULTS

The review of the literature found three distinct study designs: **model A (restoration) assayed patients enrolled with a healthy, undisturbed microbiota and then assayed postdisruptive event and probiotic therapy**; model B (alteration) assayed patients with pre-existing disrupted microbiota and then postprobiotic therapy; model C (no dysbiosis) assayed volunteers with no disruptive event prebiotic and postprobiotic. **From a total of 63 trials, 83% of the probiotic products using model A restored the microbiota**, 56% using model B improved the microbiota and only 21% using model C had any effect on microbiota. Clinical efficacy was more commonly associated with strains capable of restoration of the normal microbiota.