



Biome Advanced™ Probiotic

Mechanism of Action

FOR PROFESSIONAL REFERENCE ONLY



MECHANISM OF ACTION

Impact of antibiotics on the gut microbiome

The human gut is home to an estimated 100 trillion bacteria, with hundreds of different species represented. Antibiotic treatment depletes commensal microbial communities in the gut, decreases mucus layer thickness and predisposes to infection. Disruption of the commensal microbiome community structure ('dysbiosis') accounts for a significant proportion of cases of antibiotic-associated diarrhoea (AAD), which is a common side effect of antibiotic therapy (5-35%). Reconstitution of the gut microbiota following antibiotic treatment is often slow and incomplete.

Probiotics - Mechanism of Action

Supplementing with a high-dose, broad-spectrum probiotic such as Biome Advanced Probiotic during - and after - antibiotic use helps to maintain the abundance and diversity of the gut microbiota, reducing the risk of antibiotic-associated diarrhoea (AAD). Probiotics compete with pathogenic microorganisms for nutrients and resources; inhibit epithelial and mucosal adherence of pathogens; lower the colonic pH (through the production of short-chain fatty acids), which favours the growth of non-pathogenic species; and stimulate the immune system.

REFERENCES

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Newberry SJ. Probiotics for the Prevention and Treatment of Antibiotic-Associated Diarrhea: A Systematic Review and Meta-analysis. *JAMA.* 2012 May 9;307(18):1959.

