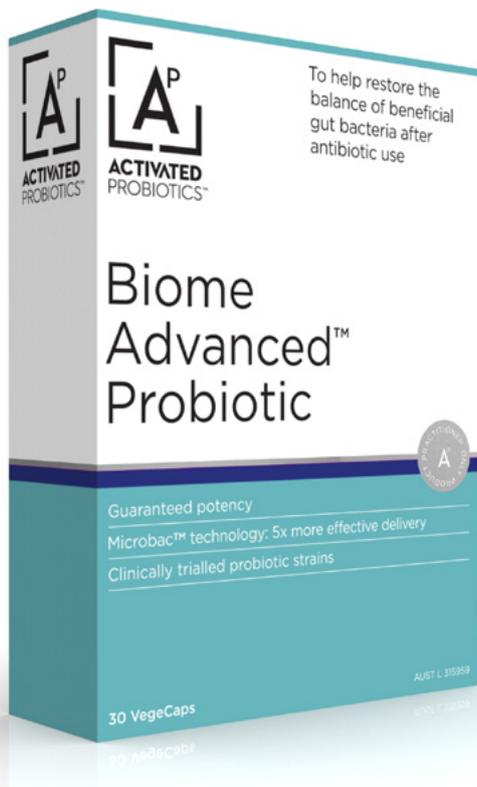




# Biome Advanced™ Probiotic

To help restore the balance of  
beneficial gut bacteria after  
antibiotic use



**PREMIUM, PRACTITIONER-ONLY PRODUCT**



Facilitates restoration of the gut microbiome after  
antibiotics

Clinically trialled probiotic strains

Microbac™ technology: 5x more effective delivery

Guaranteed potency

## INDICATIONS

- Supports beneficial gut bacteria during antibiotic use
- Helps restore beneficial gut bacteria after antibiotic use
- Promotes healthy digestion and bowel regularity

## FORMULATION

<i>Lactobacillus plantarum</i> 6595 (DSM 6595)	9 BLB*
<i>Lactobacillus plantarum</i> HEAL9 (DSM 15312)	0.5 BLB*
<i>Lactobacillus paracasei</i> 8700:2 (DSM 13434)	0.5 BLB*
<i>Lactobacillus rhamnosus</i> GG (ATCC 53103)	5 BLB*
<i>Lactobacillus acidophilus</i> LA02 (DSM 21717)	5 BLB*
<i>Bifidobacterium animalis</i> subsp. <i>lactis</i> BSO1 (LMG P-21384)	10 BLB*
<b>Total live bacteria</b>	<b>30 BLB*</b>

\*BLB = Billion Live Bacteria

## DIRECTIONS FOR USE

**Adults and children over 12 years:** take 1 capsule daily (with or without food), or as directed by your healthcare practitioner.

Take *Biome Advanced™ Probiotic* daily during antibiotic use, starting on the first day of the course. Separate probiotic dose from antibiotics by at least two hours. Continue taking *Biome Advanced™ Probiotic* daily for at least two weeks after completing the course of antibiotics.

If you are pregnant or breastfeeding – seek the advice of a healthcare practitioner before using. If symptoms persist, consult your healthcare practitioner. Drink plenty of water. Do not use when abdominal pain, nausea or vomiting are present, or if you develop diarrhoea.



GMP



LIVE  
PROBIOTIC  
PROMISE



DAIRY  
FREE



ONE A DAY  
FORMULATION



FRIDGE  
FREE



VEGAN

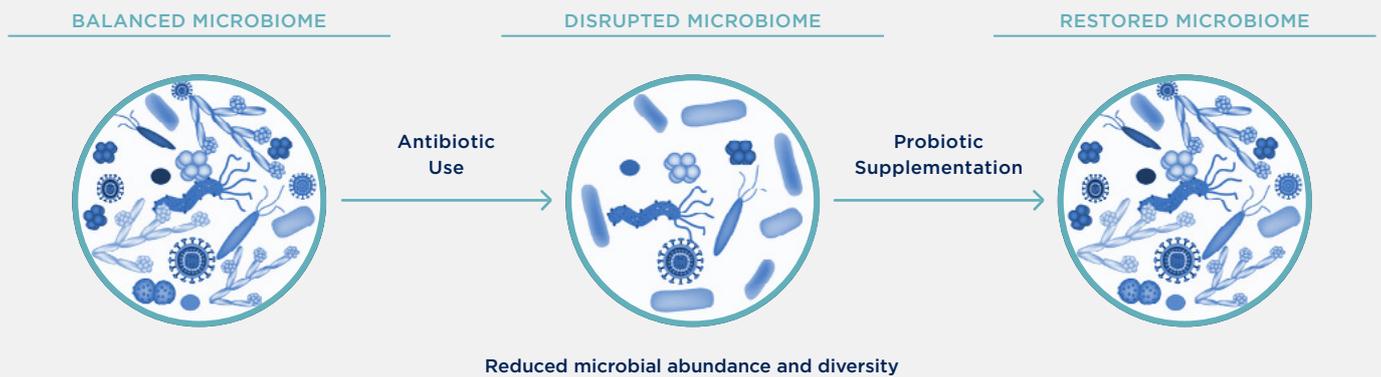
## NO ADDED

GMOs, wheat, gluten, dairy, lactose, fructose, yeast, nuts, seeds, peanut, soy, egg, fish, shellfish, or animal derivatives. No artificial colours, flavours, sweeteners, or preservatives.

We use an innovative delivery technology (Microbac™), which stabilises the probiotic bacteria by coating them with a layer of plant-derived lipid. This protects the bacteria from the strong acid in the stomach, allowing 5x more bacteria to survive transit through the upper gastrointestinal tract and colonise the intestines, compared to traditional, uncoated bacteria.



## RESTORATION OF THE GUT MICROBIOME FOLLOWING ANTIBIOTIC USE



**Figure 1:**

Disruption of a healthy, balanced gut microbiome by a course of antibiotics, with microbial recovery facilitated by supplementation with probiotics, adapted from McFarland, 2014<sup>11</sup>.

### EFFECT OF ANTIBIOTIC USE ON THE GUT MICROBIOME

The use of antibiotics in the Australian community is high, with more than 30 million courses prescribed in 2015<sup>1</sup>. In order to target a number of different pathogens, most antibiotics have broad-spectrum antimicrobial activity. An unintended consequence of this is that susceptible beneficial (non-pathogenic) strains in the gut microbiome are often adversely affected<sup>2</sup>. While the composition of the gut microbiome generally remains stable within individuals over time, the composition can be disrupted by a number of external factors, in particular, treatment with antibiotics<sup>3</sup>.

Numerous studies have demonstrated that antibiotics can significantly reduce microbial abundance and diversity<sup>3,4</sup> and induce a state of microbial imbalance, known as intestinal dysbiosis<sup>5</sup>. Intestinal dysbiosis results in the loss of the ability of the gut microbiota to ward off pathogens, which increases susceptibility to infections<sup>6</sup>. Intestinal pathogens weaken gut barrier function and trigger inflammation, which generally results in diarrhoea<sup>7</sup>. As such, a common side effect of antibiotics is antibiotic-associated diarrhoea (AAD), which affects 5-39% of patients treated (depending on the type of antibiotic used), and can persist for up to two months after the end of treatment<sup>8</sup>.

### BENEFIT OF PROBIOTIC SUPPLEMENTATION

Probiotics have numerous beneficial effects on the gut microbiome, including inhibiting the growth and proliferation of pathogenic microorganisms, known as colonisation resistance<sup>9</sup>. This is achieved through a number of mechanisms, including the production of acids, which lowers the pH intestinal lumen, suppressing the growth of pathogenic bacteria; the production of hydrogen peroxide, bacteriocins and other substances which are toxic to pathogens; and competitive inhibition of adhesion of the pathogen to the intestinal epithelium<sup>9</sup>. Probiotics are also able to enhance the gut barrier function (reducing intestinal permeability), and modulate the local immune system<sup>10</sup>.

Following a course of antibiotics, probiotics may help to restore the abundance and diversity of beneficial gut microbes after the course of antibiotics is completed<sup>11,12</sup> (Figure 1). A recent systematic review investigating the efficacy of probiotics for the restoration of the gut microbiome following a disruptive event (such as a course of antibiotics) found that the probiotic product partially or fully restored the gut microbiota in 83% of the studies included<sup>11</sup>.

### PROBIOTICS AND ANTIBIOTIC-ASSOCIATED DIARRHOEA (AAD)

A recent meta-analysis found that the use of a probiotic may reduce the risk of AAD by 51% (RR 0.49; 95% CI 0.36-0.66; I<sup>2</sup>=58%)<sup>13</sup>. *Lactobacillus rhamnosus* GG was found to be the most effective probiotic strain, which demonstrated a 71% reduction in risk of AAD (RR 0.29; 95% CI: 0.15-0.57)<sup>13</sup>. The authors concluded that **supplementation with probiotics is considered a safe and simple method of AAD prophylaxis**<sup>13</sup>.

### REFERENCES

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