



# PAW DIGESTICARE SB

## GASTROINTESTINAL SUPPORT FOR DOGS ON ANTIBIOTICS

PAW DigestiCare SB contains 10 billion CFU of *Saccharomyces cerevisiae (boulardii)*, a probiotic yeast shown to help reduce the duration & occurrence of antibiotic associated diarrhoea and help support digestive health. The two-part sprinkle capsule is easy to dispense and dose, simply open and sprinkle over the pets' food daily.

### FEATURES:

PAW DigestiCare SB contains

- ✓ Beneficial probiotic yeast for dogs
- ✓ 10 billion CFUs of *Saccharomyces cerevisiae (boulardii)*
- ✓ In an easy to open 2-part sprinkle capsule

### BENEFITS:

- ✓ Can be used safely alongside antibiotics
- ✓ Reduces the duration & occurrence of antibiotic associated diarrhoea
- ✓ Helps support overall digestive system health
- ✓ Versatile - can be used with acute diarrhoea and chronic enteropathy cases

### WHEN TO RECOMMEND:

To re-balance the gastrointestinal microbiome

- ✓ Antibiotic associated diarrhoea: prevention and treatment
- ✓ Acute uncomplicated GI disorders

For immunomodulation

- ✓ Modulation of chronic enteropathies (CE) in dogs ± concurrent medications

**Active ingredients:** Each 500mg capsule contains 10 billion CFUs of *Saccharomyces cerevisiae (boulardii)*

**Dosage:** Daily dosage of 1-2 capsules for any sized dog

**Size:** 30 x 500mg capsules

**Storage:** Store below 30°C in a dry place

**Warnings/Safety:** For animal use only. For Veterinary supply only.

# EDUCATION

## An imbalance in the microbiome

The balance between beneficial 'good' and pathogenic 'bad' bacteria in the GI microbiome of mature dogs and cats is remarkably stable. However, its composition can be influenced during the life of the animal in response to several factors such as diet, environment, medications and disease.<sup>1</sup> An imbalance of the GI microbiome is referred to as intestinal dysbiosis.<sup>2</sup>

Profound alterations in the GI microbiome are found in acute and chronic enteropathies in dogs and cats such as inflammatory bowel disease, as well as in cases of treatment with antibiotics (AAD) and other medications.<sup>13</sup> The GI microbiome also plays a role in diseases distant from the GIT such as atopic dermatitis, obesity and anxiety. Therefore, dysbiosis can have widespread impacts on the overall health of an animal.<sup>3,4,5</sup>

### Antibiotics and dysbiosis

Antibiotic administration can induce gut dysbiosis, with broad-spectrum antibiotics causing rapid and significant drops in richness, diversity, and evenness of microorganism groups found within the GIT.<sup>5</sup>

The intestinal dysbiosis can persist for several weeks to months following cessation of antibiotic treatment, and the return to the initial composition is rarely fully achieved.<sup>5,6</sup>

## Understanding probiotic yeast

Until now, practitioners have faced the challenge of commercial and veterinary probiotic products not being listed for use concurrently with antibiotics. This has been especially problematic in cases of AAD commonly seen in practice.<sup>2</sup> Yeast are naturally resistant to antibiotics, which sets them apart from probiotics of bacterial origin.<sup>7</sup>

### Introducing *Saccharomyces boulardii*

*Saccharomyces boulardii* is a strain of yeast which has been extensively studied in both humans and animals for its probiotic effects.<sup>9</sup> It is non-pathogenic and is antibiotic-resistant so therefore can be prescribed to patients receiving antibiotics.<sup>7</sup>

Within the lumen of the intestine, *S. boulardii* exerts many positive and protective effects through several different mechanisms.<sup>19</sup> It degrades toxins of pathogens, interferes with the adherence of pathogenic bacteria along the GIT, modulates normal microbiota by supporting the establishment of beneficial bacteria, and preserves normal intestinal physiology.<sup>8</sup>

It also directly restores normal short chain fatty acid (SCFA) balance.<sup>2</sup> Normally in a healthy and balanced GI microbiome, resident bacteria convert complex carbohydrates into beneficial SCFAs.<sup>19</sup> SCFAs provide energy for endothelial cells, increase anti-inflammatory regulatory T cells and modulate intestinal motility.<sup>3</sup>

In addition, *S. boulardii* increases mucosal surface antibody levels and acts as an immune regulator by decreasing inflammatory mediators.<sup>8</sup>

## REFERENCES:

1. Belizário JE, Faintuch J. Microbiome and Gut Dysbiosis. *Exp Suppl.* 2018;109:459-476. doi:10.1007/978-3-319-74932-7\_13
2. Suchodolski JS. Intestinal microbiota of dogs and cats: a bigger world than we thought. *Vet Clin North Am Small Anim Pract.* 2011;41(2):261-272. doi:10.1016/j.cvsm.2010.12.006
3. Blake, Amanda & Suchodolski, Jan. (2016). Importance of gut microbiota for the health and disease of dogs and cats. *Animal Frontiers.* 6. 37. 10.2527/af.2016-0032
4. Pilla R, Suchodolski JS. The Role of the Canine Gut Microbiome and Metabolome in Health and Gastrointestinal Disease. *Front Vet Sci.* 2020;6:498. Published 2020 Jan 14. doi:10.3389/fvets.2019.00498
5. Doidge C, Hudson C, Lovatt F, Kaler J (2019) To prescribe or not to prescribe? A factorial survey to explore veterinarians' decision making when prescribing antimicrobials to sheep and beef farmers in the UK. *PLoS ONE* 14(4): e0213855. <https://doi.org/10.1371/journal.pone.0213855>
6. Suchodolski JS. Companion animals symposium: microbes and gastrointestinal health of dogs and cats. *J Anim Sci.* 2011;99(5):1520-1530. doi:10.2527/jas.2010-3377
7. L. V. McFarland & P. Bernasconi (1993) *Saccharomyces boulardii*. A Review of an Innovative Biotherapeutic Agent, *Microbial Ecology in Health and Disease*, 6:4, 157-171, DOI: 10.3109/08910609309141323
8. McFarland LV. Systematic review and meta-analysis of *Saccharomyces boulardii* in adult patients. *World J Gastroenterol.* 2010;16(18):2202-2222. doi:10.3748/wjg.v16.i18.2202