



NEW

## DIGESTICARE™ POWDER FOR CATS

PAW by Blackmores DigestiCare™ Powder is a combined pre- and probiotic made specifically for cats.



### FEATURES:

**PAW DigestiCare™ Powder for Cats contains**

- ✓ 2.1 billion CFUs of *Enterococcus faecium* SF68
- ✓ 500 mg of FOS
- ✓ In an easy to open 2-part sprinkle capsule

### BENEFITS:

- ✓ *E. faecium* is clinically proven to reduce diarrhoea duration associated with stress
- ✓ Supports intestinal microbial diversity in the presence of stress
- ✓ May inhibit colonisation of pathogenic bacteria in the gastrointestinal tract
- ✓ Supports intestinal health during antibiotic therapy
- ✓ May modulate the immune system

### WHEN TO RECOMMEND:

**During periods of stress in cats**

- ✓ Travelling
- ✓ Staying in catteries
- ✓ Rehoming or moving house

**To support gastrointestinal health**

- ✓ Pre-treatment at least two hours prior to antibiotics may support intestinal health and the gastrointestinal microbiome during antibiotic therapy

**To support immune system health**

- ✓ During periods of illness such as due to feline herpesvirus

**Active ingredients:** Each 620 mg capsule contains 2.1 billion CFUs of *Enterococcus faecium* SF68 and 500 mg of FOS

**Dosage:** Daily dosage of one capsule a day per cat, given with food

**Size:** 30 x 620 mg capsules

**Storage:** Store below 25°C in a dry place

**Warnings/Safety:** For animal use only



# EDUCATION

## Diarrhoea in cats

Cats can develop diarrhoea in response to stress, pathogens, as a side effect of medication use, due to a dietary change or due to local or systemic illness.<sup>1,2</sup> In a shelter environment, bacterial, viral, and parasitic agents have increased potential to result in diarrhoea, with some statistics demonstrating prevalence rates of around 18-60%.<sup>1</sup> Even healthy animals that harbour these organisms can develop clinical illness when housed in a stressful environment.

Another common cause of diarrhoea in cats, is in relation to antibiotic administration. Amoxicillin-clavulanate is a commonly prescribed antibiotic, indicated for feline conditions including upper respiratory tract infections, wounds and abscesses. Due to its broad-spectrum efficacy, gastrointestinal side effects are often experienced by the patient, potentially leading to decreased owner compliance and early cessation of treatment, posing an increased risk of the cat harbouring antibiotic resistant bacteria.<sup>2</sup>

## Supplementation with *Enterococcus faecium*

Species specific data exists showing many proven benefits of supplementing with the probiotic *Enterococcus faecium* strain SF68. In a study by Lappin et al. (2009) supplementation with  $5 \times 10^8$  (500 million) CFUs per cat, per day, lead to a more stable microbiome in cats suffering from active chronic feline herpesvirus infection, suggesting that supplementation in periods of stress can support the faecal microbiome, which may decrease stress related diarrhoea. Overall results in this study suggested that SF68 may reduce the morbidity associated with chronic FHV-1 infection, suggesting an immune-modulating effect.<sup>3</sup> This immune modulating effect has also been demonstrated in a study published in 2007 (Veir et al.,) where CD4+ lymphocyte percentages were significantly higher in SF68 treated kittens who

were given a multivalent vaccine.<sup>4</sup>

Apart from the immune enhancing effects of this probiotic species, SF68 is indicated in cases of stress and antibiotic associated diarrhoea in cats. A study published by Bybee et al. (2011), administered *Enterococcus faecium* SF68 to cats in a shelter environment to assess its impact on levels of diarrhoea experienced by this population of cats. The probiotic was administered for up to six days, and an overall reduction of diarrhoea duration (two days) was noted. It was proposed in this study that the decreased diarrhoea rate was likely due to inhibition of pathogenic bacteria colonisation brought about by the probiotic.<sup>1</sup>

Feeding *Enterococcus faecium* SF68 two hours prior to administering a broad-spectrum antibiotic, amoxicillin-clavulanate, may reduce the associated clinical adverse effects of this drug.<sup>2</sup>

## Supplementation with fructooligosaccharides (FOS)

Despite the cat being an obligate carnivore, supplementing with a fermentable fibre source can promote intestinal health. In a 2007 paper published by Barry et al., twelve cats were supplemented with three types of fibre: cellulose, pectin or fructooligosaccharides (FOS). Both FOS and pectin increased select beneficial microbial populations (namely, *Bifidobacterium* spp.) in the colon of these cats, and FOS supplemented cats had decreased concentrations of *E. coli*, demonstrating the potential for this prebiotic to competitively inhibit pathogenic bacteria. Another benefit observed due to fermentable fibre supplementation was an increase in faecal short-chained fatty acids (SFCAs), a known beneficial end-product of carbohydrate fermentation.<sup>5</sup>

Similar results were obtained in a 2011 study conducted by Kanakupt et al.<sup>6</sup>

**References:** 1. Bybee, S.N., Scorza, A.V. & Lappin, M.R. (2011). Effect of the Probiotic *Enterococcus faecium* SF68 on Presence of Diarrhea in Cats and Dogs Housed in an Animal Shelter. *J Vet Intern Med*, 25, 856-860. 2. Torres-Henderson, C., Summers, S., Suchodolski, J. & Lappin, M.R. (2017). Effect of *Enterococcus faecium* Strain SF68 on Gastrointestinal Signs and Fecal Microbiome in Cats Administered Amoxicillin-Clavulanate. *Topics in Companion Animal Medicine*, 32, 104-108. 3. Lappin, M.R., Veir, J.K., Satyaraj, E. & Czarnecki-Maulden, G. (2009). Pilot study to evaluate the effect of oral supplementation of *Enterococcus faecium* SF68 on cats with latent feline herpesvirus 1. *Journal of Feline Medicine and Surgery*, 11, 650-654. 4. Veir, J.K., Knorr, R., Cavadini, C., Sherrill, S.J., Benyacoub, J., Satyaraj, E. & Lappin, M.R. (2007). Effect of Supplementation with *Enterococcus faecium* (SF68) on Immune Functions in Cats. *Veterinary Therapeutics*, 8(4), 229-238. 5. Barry, K.A., Wojcicki, B.J., Middelbos, I.S., Vester, B.M., Swanson, K.S. & Fahey Jr, G.C. (2010). Dietary cellulose, fructooligosaccharides, and pectin modify fecal protein catabolites and microbial populations in adult cats. *J. Anim. Sci.*, 88, 2978-2987. 6. Kanakupt, K., Vester Boler, B.M., Dunsford, B.R. & Fahey Jr, G.C. (2011). Effects of short-chain fructooligosaccharides and galactooligosaccharides, individually and in combination, on nutrient digestibility, fecal fermentative metabolite concentrations, and large bowel microbial ecology of healthy adult cats. *Journal of Animal Science*, 89(5), 1376-1384.