

EFFECT OF *ENTEROCOCCUS FAECIUM* SF68 SUPPLEMENTATION ON DIARRHEA IN CATS HOUSED IN A NORTHERN COLORADO ANIMAL SHELTER. SN Bybee, V Scorza, MR Lappin. Department of Clinical Sciences, Colorado State University, Fort Collins, Colorado.

Numerous studies have evaluated the effects of probiotics in veterinary medicine with conflicting results. In previous studies with *Enterococcus faecium* strain SF68 (FortiFlora, Nestle Purina PetCare), we showed that supplemented healthy cats had increased %CD4+ lymphocytes over time and supplemented cats with chronic FHV-1 infection had less conjunctivitis over time than cats administered a placebo. The purpose of this study was to determine if administration of SF68 lessens diarrhea in cats housed in a shelter.

Stray or feral cats housed in two separate rooms were all fed a standardized diet and were administered SF68 or a placebo mixed with their food daily for eight weeks. A standardized fecal score system was applied to all samples daily by a person masked to the treatment groups and the percentages of cats with diarrhea of ≥ 2 days duration were calculated. A generalized linear mixed model using a binomial distribution with treatment being a fixed effect and the room being a random effect was used to assess for statistical differences between treatment groups. Significance was defined as $p < 0.05$.

The percentage of cats with diarrhea ≥ 2 days was 7.7% for the probiotic group and 20.7% for the placebo group. This result was significantly different ($p = 0.0297$).

These results suggest that administration of SF68 to cats housed in shelters may lessen the numbers of days with diarrhea. As this was a short term study, this effect was likely from probiotic influences on intestinal flora rather than systemic immune enhancing effects.

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