

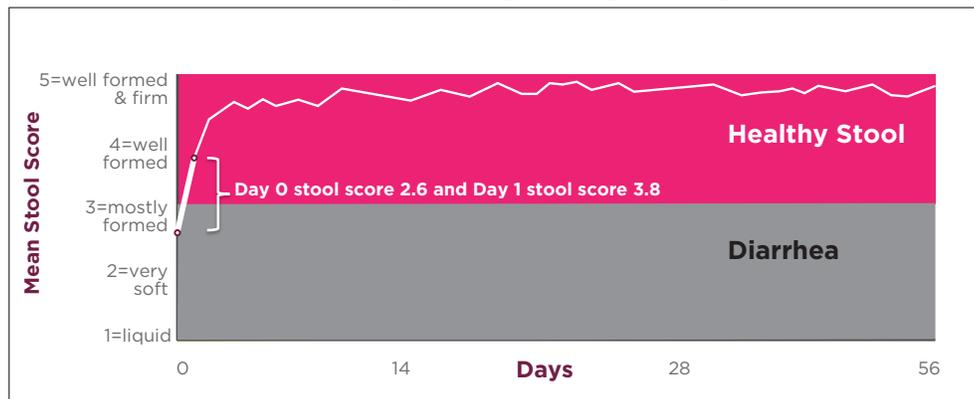
# Clinical Evidence Report

Dogs with chronic diarrhea fed **Hill's Prescription Diet Gastrointestinal Biome** in a multi-center, longitudinal study demonstrated clinical improvements in as little as 24 hours

Fritsch DA, Wernimont SM, Jackson MI, et al. Food with Novel Fiber Blend Improves Clinical Outcomes and Changes Gastrointestinal Microbiome Metabolism in Dogs, in *Proceedings. ACVIM Forum 2019*.

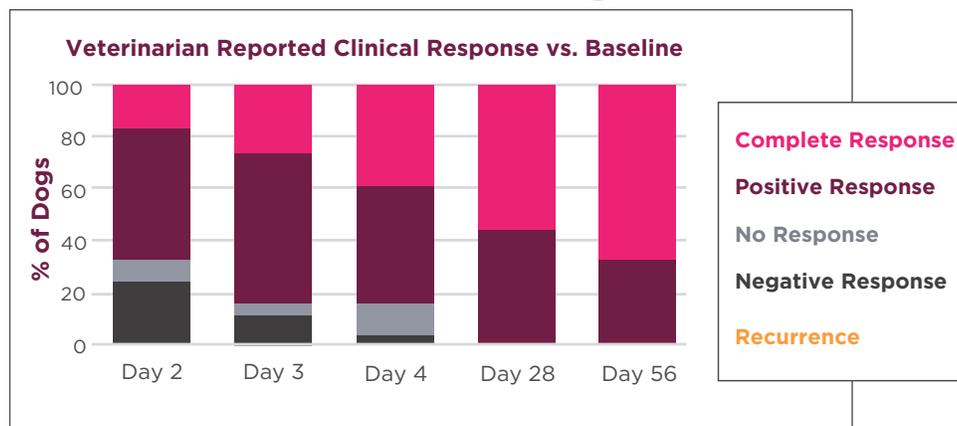
## RESULTS:

### Stool Quality Rapidly Improved



These results demonstrate that Prescription Diet Gastrointestinal Biome significantly improves stool quality in dogs with chronic large bowel diarrhea in as little as 24 hours.

### Limited Future Episodes in 100% of Dogs



## Additional Significant Findings When Gastrointestinal Biome was Fed to Dogs with Chronic Large Bowel Diarrhea:

- Veterinarians reported that a majority of dogs with chronic large bowel diarrhea experienced resolution of both poor stool consistency (68%) and blood and mucus in stool (59%) when fed Prescription Diet Gastrointestinal Biome Canine for 56 days.
- Gastrointestinal Biome significantly increased fecal antioxidant and anti-inflammatory polyphenols at study day 56 compared with baseline.
- Gastrointestinal Biome significantly decreased fecal putrefactive metabolites isobutyric, 2-methylbutyric, and isovaleric acids, and decreased fecal ammonium compared to baseline. In addition, Gastrointestinal Biome significantly increased fecal ribulose/xylulose and arabinose, saccharolytic products derived from microbiome metabolism of fiber, compared to baseline, demonstrating a shift in microbiome metabolism from putrefaction to saccharolysis.
- Pet owners observed a significant decrease ( $p < 0.05$ ) in the occurrence of nausea/vomiting and stooling behaviors (straining, unproductive attempts, defecation accidents) in dogs with chronic large bowel diarrhea after consuming Prescription Diet Gastrointestinal Biome Canine for 14 days.
- Pet owners also reported a significant improvement ( $p = 0.003$ ) in quality of life when dogs with chronic large bowel diarrhea were fed Prescription Diet Gastrointestinal Biome Canine for 28 days.

## Implications for Practice

These results demonstrate that Prescription Diet Gastrointestinal Biome significantly improves stool quality in dogs with chronic large bowel diarrhea in as little as 24 hours. Fecal samples from dogs included in the study demonstrated a reduction in putrefactive metabolites and fecal ammonium, and an increase in saccharolytic metabolites, consistent with a shift towards a healthier gastrointestinal microbiome as well as a significant increase in fecal antioxidant, anti-inflammatory polyphenols.

## Supplementary Study Information

### Study Subjects

- 31 client-owned dogs with chronic large bowel diarrhea
- Mean age 5.4 years
- Several dog breeds were represented

### Methods

A 56 day prospective study was conducted with 31 client-owned dogs with chronic large bowel diarrhea. Dogs were required to be experiencing an active episode of large bowel diarrhea at time of enrollment. Additional enrollment criteria included that dogs must be between 1-10 years of age and have a body condition score between 2-4/5. Dogs were excluded from this study if they had intestinal parasites, systemic diseases, chronic use of colonic motility drugs, received oral antibiotics within past 4 weeks, or consumed a therapeutic food within past 3 months (Proceedings, ACVIM Forum 2019). Upon enrollment dogs were fed Prescription Diet Gastrointestinal Biome Canine dry (Study Day 1) with no transition period and remained on the food for the remainder of the 56 day study.

Dogs were housed at their respective veterinary hospitals for the first three days of the study while the attending veterinarian conducted clinical evaluations including stool scoring and collected blood and feces for metabolomics and microbiome analyses. On Day 3 dogs were sent home with their owners who continued to complete questionnaires regarding clinical signs, stool quality, and quality of life throughout the remainder of the study. Physical examinations, clinical evaluations and fecal collections were performed by the attending veterinarian on days 1, 2, 3, 14, 28, and 56. Veterinarians evaluated changes in overall clinical signs, recurrence of clinical signs and stool parameters (consistency, blood, mucus, stool frequency) as compared to baseline at days 1, 2, 3, 28, and 56.

## Key Conclusions

Prescription Diet Gastrointestinal Biome rapidly improved stool quality and resolved clinical signs in dogs with chronic large bowel diarrhea and pet owners reported improvement in stooling behaviors and quality of life. Fiber sources rich in antioxidant and anti-inflammatory compounds such as those found in Gastrointestinal Biome may contribute to long-term health and contribute to rapid resolution and decreased recurrence of chronic diarrhea.



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