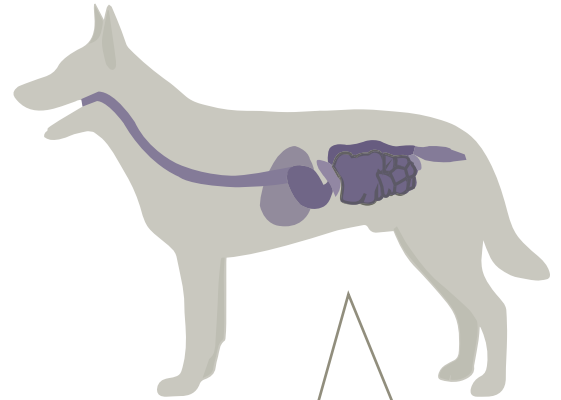




Prebiotics and Probiotics for Pets

Canine and feline facts

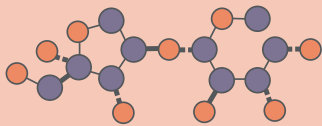
- Dogs and cats evolved from carnivores. While domestic cats are by nature still carnivores, domestic dogs are omnivores.
- Dogs and cats have relatively short, simple gastrointestinal tracts, but maintain a highly active microbiota population that is important to their health.
- Loose stools, constipation, and various gastrointestinal disorders (irritable bowel; chronic enteropathies) are common in pets.
- There is great demand for digestive health solutions in pet foods, treats, and supplements, with prebiotics and probiotic components included in many products.



Cat and dog gastrointestinal tracts are short, being only 4-5x body length – the human's is ~10x.

The stomach makes up ~70% of the digestive tract. Within the intestinal tract, the small intestine makes up ~80%, while the large intestine makes up only 20%.

Prebiotic definition



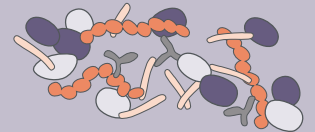
"Substrates that are selectively utilized by host microorganisms conferring a health benefit." Simply put, they are food for the beneficial microbes that live on or in our pets.

Prebiotic facts

- Prebiotics provide health benefits by specifically altering either the composition or activity of the resident microbiota.*
- Most prebiotics are dietary fibers, but not all dietary fibers are prebiotics.
- As with dietary fibers, flatulence or loose stools can result from too much prebiotic. If prebiotic-containing treats or supplements are fed, start with small amounts so that your pet's microbiota and gut can adapt.
- Most prebiotics are developed for the gut, but other microbially colonized sites (oral cavity, skin, vagina) may also be targeted.

* The resident microbiota may include bacteria, fungi, viruses and archaea and may include administered probiotics.

Probiotic definition



"Live microorganisms that, when administered in adequate amounts, confer a health benefit on the host."

Most probiotics are focused on gastrointestinal health, but other microbially colonized sites (oral cavity, skin, vagina) may also be targeted.

Probiotic facts

- Must be properly named (genus, species and strain designation) and fully characterized.
- Must be tested for safety and efficacy in target animal
- Must stay alive in the product through the "use-by" date
- May come in different formats, such as powders, capsules, pastes or be included in dry pet foods or treats
- Dosage, storage conditions, probiotic strain(s), and viability of probiotics may vary

How to identify prebiotics on a pet food label?



The word 'prebiotic' is seldom used on the label. Look for:

- Fructooligosaccharides
- Chicory root/chicory fiber
- Inulin
- Oligofructose

Potential benefits of prebiotics for pet health

Prebiotics have been studied for the following benefits to pets, but additional studies are needed to confirm their potential to:

- Improve digestive function and stool quality
- Support the body's natural defenses and reduce infection risk
- Help regulate your pet's energy balance and glucose metabolism
- Boost numbers of specific microbes associated with improved health
- Reduce fecal odor





"Prebiotics" in dog and cat milk

As in humans, dog and cat milk provides a rich source of nutrients to nursing puppies and kittens, which support their gut and immune health by encouraging beneficial gut microbes. Some of the oligosaccharides present in dog and cat milk have prebiotic potential, but further *in vivo* studies are needed to substantiate this.



Potential benefits of probiotics for pet health

Probiotics have been studied for the following benefits to pets, but additional studies are needed to confirm their potential to:

- Reduce incidence of and/or shorten recovery time from diarrhea 
- Reduce need for antibiotics in animals with diarrhea 
- Help maintain the health of animals with inflammatory bowel disease 
- Aid the digestion of food substances that are difficult for dogs and cats to break down 
- Animals most likely to benefit from probiotics include those prone to gastrointestinal disease, those on antibiotics or under high levels of stress, and older (geriatric) animals.



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