

Why would I give my pet a probiotic?



**Definition of a probiotic:** a viable organism that when ingested transiently becomes part of the gut microflora and exerts beneficial effects. These effects include the prevention and treatment of a number of gastrointestinal (GI) disorders, the stimulation of immunity, and inhibition of colonic carcinogens.

Similar to the live organisms found in yogurt, kefir, buttermilk, sauerkraut and cheese the health promoting qualities of these foods can now be seen in our pets, too. Probiotics exert their effects via the gastrointestinal tract (GI) which is the largest immune organ in the body and contains more neurons than the spinal cord.

**Potential applications for probiotic therapy in dogs and cats:**

* Stress-related diarrhea (boarding, travel, working dogs, shelters)
* Weaning and soft stools in puppies and kittens
* Anti-microbial/NSAID therapy
* Dietary change or indiscretion
* Food intolerance/maldigestion
* Inflammatory Bowel Disease (IBD)
* Emerging thought that probiotics can be used in the management of skin allergy, kidney disease, pancreatitis, and recurrent urinary tract infections.

Probiotics may alter GI flora and decrease numbers and types of bacteria in the urogenital tract. Use a probiotic that contains multiple organisms at highest number. -Joe Bartges DVM, PhD, DACVIM, DACVN (WVMA 2010)

Probiotics that provide an immune modulating effect or that increase the numbers of beneficial species while competing against pathogens might be expected to be helpful [in treating inflammatory bowel disease]. -Deb Zoran DVM, PhD, DACVIM-SAIM (WVMA 2010)

**The function of Probiotics in the GI tract include:**

**Nutritional**: synthesize B Vitamins; enhance the digestion by producing enzymes.

**Interaction with other gut bacteria**: produce products that inhibit harmful bacteria.

**Physical** Protect gut barrier, increase mucosal production, enhance cellular repair, increase enzyme activity.

**Immunologic** activates specific adaptive immune responses.

The viability and safety of these organisms is very important and that there are an appropriate number of organisms to be effective. Currently the American Feed Control Officials (AAFCO) regulations do not require identification to the bacteria strain level.

As with other nutraceuticals (joint supplements and fish oils) their use in humans precedes their use in pets so there are some good guidelines already available but represent the human use perspective. Below is a table of available veterinary products.

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|  | **Proviable DC** | **Fortiflora** | **Vetriprobiotic Everyday** |
| **Manufacturer** | Nutramaxx | Purina | Vetri-Science |
| **Form** | Capsule/Paste | Packet | Soft Chew |
| **Number of Microorganisms** | 5 billion/Capsule  0.5 billion/gm paste | 800 Million per packet | 286 million CFU/gram |
| **Species of microorganisms** | Lactobacillus acidophilus Bifidobacterium bifidum Lactobacillus bulgaricus Lactobacillus casei  Lactobacillus plantarum Enterococcus faecium  Streptococcus thermophilum | Enterococcus faecium | Bacillus subtilis Bacillus coagulans  Lactobacillus acidophilus  Bifidobacterium thermophilum  Bifidobacterium longum  Lactobacillus fermentum  Lactobacillus casei  Bifidobacterium bifidum  Enterococcus faecium |
| **Special notes** | Published paper supports product | First veterinary probiotic developed | National Animal Supplement Council seal |

References:

Consumer Lab.com Product review probiotic supplements (including lactobaccilus acidophilus, Bifidobacterium) available at consumerlab.com Accessed Nov 8, 2008.

Floch MH, Walker WA Guandalini S et al Recommendations for Probiotic use 2008 J Clin Gastroenterol 2008:42 (suppl2) S104-S108.

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