



What Do You Know About PROBIOTICS?

By Susan Lauten, PhD

Do you remember when *L acidophilus* was the only probiotic we knew about? Options have increased, but do we really understand what they do and why we buy them? If you have searched for a probiotic for your dog or for yourself, you would have found literally hundreds of different products. What should the consumer look for?

There are essentially three critical requirements for probiotics. The product must be safe, it must remain stable, and it must work. This may sound simple, but probiotics consist of live microorganisms. They must be produced without contamination by pathogenic microorganisms. They must be able to tolerate heat, cold, mishandling by distributors, retailers, and finally by the consumer. Then, they must be able to live through stomach acid, bile, and digestive enzymes. If they make it that far, they must be able to bind or adhere to the intestinal wall, or be washed away, thus requiring repeated administration. Finally they must reproduce to maintain populations in the target host.

What do we expect from probiotics? We depend on microbes to synthesize B vitamins, folate, and some digestive enzymes. Dogs obtain roughly 4% of their daily energy requirements from microbes. Lactic-acid producing bacteria help create an unfriendly environment for pathogens by lowering intestinal pH. They may also compete (with pathogenic bacteria) for attachment sites. The GI tract

is the largest immune “organ” in the body. Probiotics can stimulate immune response, and they can modulate immune response. They will stimulate production of digestive enzymes, and help maintain the healthy integrity of the intestinal wall and its mucous layer. Probiotics are used to reduce the incidence of chronic urinary tract infections. Early research has shown potential for prevention of allergy development. Essentially, we have barely scratched the surface of the potential for use of probiotics in disease prevention, management, and restoration of health.

Probiotics are not classified as drugs, but are classified as supplements. To the consumer, this means there is no regulation of quality control or efficacy of products. So, let the buyer beware. A study published in 2002, by Weese, JS, tested eight veterinary probiotics and 5 human prebiotic products were tested. Only 2 of the 13 products contained the labeled concentration and actual species. Five of the veterinary products did not identify their contents. The concentration of viable or live bacteria was very low for most products. Five products did not contain all of the specified microbial components, and 3 contained additional species. Unfortunately, some of the products contained organisms that provide no prebiotic effects, and some of the species are defined as pathogenic. Weese published the results of another study, testing 44 products, with

similar results. For pet products, the organization called National Animal Supplement Council, a non- profit organization, provides assurances for the consumer by standardizing products, and by requiring adherence to safety issues in the manufacturing process. A product with the NASC seal should be a wise choice.

Do I want a product with one species of microbe, like lactobacillus, or do I want a cocktail of many different microbes? Which is better? The paucity of information available regarding microbial cocktails being more efficacious than single species products leaves that question unanswered. Speculation exists about both positive and negative interactions among microbial species in one product. This interaction may be responsible for negative or inconclusive outcomes of studies. Additionally, the use of Enterococcus and Bacillus species, which in their original state are pathogenic, is questionable. There is concern that these bacteria could revert to their pathogenic form. Many of these species are anti-microbial resistant.

If you are using one of these products now, the best way to determine its value is to see if it works for your dog. What works for one dog in your household may not work for another. Recommendations from friends may or may not be valuable. When selecting Probiotics, look for the NASC seal, or research the website to see how forthcoming the manufacturer is with regard to its product. Look for expiration dates on products. Does the manufacturer guarantee how many microbes are capable of surviving until the expiration date? A little research on your part will go far to help you make proper purchasing decisions.

As you can see, we know very little, and have a lot to learn about the role of probiotics in health and disease management. Hopefully, research will continue to provide us with more and more ways to use probiotics to enhance digestion, immune function and prevention of disease.

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WCA CHIC REPORT - Quarter 1

Animal	Date	New/Update	CHIC #	Reg #	Owner
STONEPOINT'S THE MISSING LINK	1/7/2011	NEW	70183	UG219869	APRIL & J. R. MALLON
STARBUCK'S TINA QUIK AND CLEVER	1/20/2011	NEW	70456	SR52321509	HENRIETTA JENRETTE JACK E. SAPPENFIELD II
GRAYANGEL LADY ELLA VON GAUL	3/31/2011	NEW	72084	SR02354502	MICHELLE NOWACKI NICHOLAS AMBULOS
QUIKSILVR BELIEVE IN MAGIC	3/31/2011	NEW	72085	SR49374603	STACY & ERIC LIBOW BABETTA A. BREUHAUS
WAGER N SWEETHAVEN QUEEN OF HEARTS	3/31/2011	NEW	72086	SR47690302	MARY ANN RICHARD