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Dog Tips

Dished Out Like Candy by Veterinary Docs, but It's Horrible for Your Pet

There's a preponderance of evidence showing harm. While sometimes medically necessary, it should never be a go-to option. It triggers proliferation of pathogenic bacteria, adds flab and much more. It's just plain bad medicine to use it like this.

Reviewed by Dr. Becker

STORY AT-A-GLANCE

- The healthier your dog's gut microbiome, the healthier she is overall, since the majority of her immune system resides in her digestive tract
- There are many factors that negatively influence your dog's microbiome, and some are almost unavoidable in today's world
- One of the worst influences on the microbiome of all animals (including humans) is antibiotics, which are massively overprescribed in veterinary medicine
- Most dogs today can benefit from dietary supplementation with beneficial bacteria in the form of probiotics and/or fermented vegetables
- When selecting a probiotic supplement for your dog, make sure it's high-quality and formulated specifically for pets

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If you're a knowledgeable pet parent, you're probably aware of how important your dog's immune system is to his health and longevity. But what you might not realize is that around 70% of his immune system resides in his gut. The healthier his gut microbiome, the healthier your dog will be overall, because it's his immune system that needs to defend against disease.

There are many causes of lowered immune status in dogs today, but most fall into the category of age- or lifestyle-related stressors, or naturally occurring stressors. Some stressors are unavoidable, and each plays a role in reducing the ability of your dog's immune system to defend his body against foreign invaders. This results in increased susceptibility to infections, autoimmune disorders and diseases, including cancer.

Given that your dog's immune system will be affected by various forms of stress throughout his life, and since a large percentage of his immune system resides in his gastrointestinal (GI) tract, it's easy to see why the health of his gut microbiome is so crucial to his well-being.

Factors That Influence the Health of Your Dog's Microbiome

There are two categories of bacteria that reside in your dog's gut:

- Friendly (good) bacteria that promote the normal, healthy function of the GI tract and therefore, the immune system
- Pathogenic (bad) bacteria that disrupts gastrointestinal function and compromises immune function as well

When your dog's gut microbiome is healthy, it means there's an optimal balance of good-to-bad bacteria present. When an imbalance occurs that allows an overgrowth of pathogenic bacteria, your dog will often develop problems in his GI tract first, followed eventually by other health conditions resulting from the inability of his immune system to function as it should.

The gut microbiome can be influenced by a number of factors — everything from emotional stress to an unhealthy lifestyle. Some of these include:

- Sudden change in diet
- Vaccinations
- Poor-quality or biologically inappropriate diet
- Surgery
- Pica (eating nonfood items such as feces, sticks, rocks, etc.)
- GI disease (e.g., inflammatory bowel disease)
- Drinking contaminated water
- Travel or boarding
- Ingestion of fertilizers, insecticides or pesticides
- Emotional stress (often caused by a change in routine or environment)

When physical or emotional stress upsets the bacterial balance in your dog's digestive tract, it can trigger a cascade of nutritional problems, including poor nutrient absorption and intermittent or chronic diarrhea. It also opens the door to leaky gut syndrome (dysbiosis) in which partially digested amino acids and allergens escape from the GI tract and enter the bloodstream. This in turn can create a host of other health problems, from allergies to autoimmune disease.

Antibiotics and Other Drugs Also Do Major Damage to the Microbiome

Among the most powerful influences on your dog's gut bacteria are antibiotics. These drugs are designed to kill harmful bacteria that cause illness, but they work indiscriminately. They kill healthy bacteria right along with disease-causing bacteria. In addition, antibiotics are overprescribed in both human and veterinary medicine.

Laura Cox, Ph.D., of New York University's Langone Medical Center, has studied the impact of early-life antibiotic therapy on body composition. According to Cox, several researchers have proved that altered microbiota (the collection of microorganisms that live in and on the body), which can result from antibiotic use, can cause obesity through processes that create inflammation or change metabolic activity in the gut. These processes can result not only in **obesity**, but also diabetes and fatty liver disease.[1]

According to Cox, research suggests that antibiotics disrupt early development of microbiota. Studies involving production animals that received low doses of antibiotics to promote growth show that the earlier in life the antibiotics are given, the more profound the effect.

Similar studies conducted with mice have produced an increase in fat mass. Cox's studies have shown that exposure to antibiotics in early infancy changes the composition of the microbiota, leaving it more vulnerable to disruption. In the mice studies, the animals not only gained weight, they also accumulated more visceral and liver fat.

Many veterinarians are entirely too quick to prescribe antibiotics for health issues that can (and should) be treated more successfully by other means.

Unless your dog has a confirmed bacterial infection (not a "probable" bacterial infection) and if necessary, your vet has performed culture and sensitivity testing to determine which drug will be most effective, it's bad medicine to put your pet on antibiotic therapy unless there is no other means of resolving the infection.

Most Dogs Today Benefit from Supplementation with Beneficial Bacteria

Because your dog's gut microbiome needs to maintain a healthy level of good bacteria to support the immune system — and because dogs today deal with a variety of stressors throughout their lives — it's a good idea to supplement their diets with beneficial bacteria (probiotics) to discourage pathogenic bacteria from overtaking the GI tract.

When your dog's gut bacteria are in balance with the right amount and type of healthy bugs on board, there is symbiosis. Good things happen inside the body — vitamins are made, vegetable fiber is processed efficiently, harmful bacteria are kept in check and toxins are well-managed.

A healthy GI tract is selective about what is absorbed by your dog's body. Nutrients are taken in and non-nutritive substances, including toxins, are filtered out.

We tend to view probiotics as being primarily beneficial for digestive issues. But studies in both humans and pets indicate the therapeutic effects may reach far beyond the gut to a wide range of health conditions, including allergies, diabetes, obesity, liver disease, and mood and behavior disorders. Studies also suggest there are no side effects of probiotic therapy, and that supplementation is safe and easy to administer in pets.

Selecting a High-Quality Probiotic for Your Dog

When choosing a supplement for your dog, avoid human probiotics, and probiotics added to commercial pet food. Probiotic formulas used by humans are developed specifically to fortify the bacterial species found in the human GI tract. Pets have specific strains of bacteria unique to them, so they do best with a customized probiotic.

A few strains have been shown to benefit both people and pets, and emerging research suggests sporebiotics may also be beneficial for animals, but no matter the supplement, it's important to evaluate its viability. The bacteria in a probiotic need to be live and able to reproduce in order for it to be beneficial. That's why commercial pet foods containing probiotics aren't worth the money.

Tests on dog foods claiming to contain probiotic microorganisms showed the manufacturing process kills too many of the live bacteria, rendering the probiotic effect useless by the time the food is packaged and shipped. When selecting a high-quality pet probiotic, look for the following five important characteristics:

1. The correct strains of bacteria beneficial for pets, not people
2. Easy to give to your dog
3. The ability to survive the acidic environment of your dog's stomach
4. Enough live organisms to colonize the intestines
5. Product stability under normal storage conditions

And remember that your dog should receive the majority of her nutrients from a fresh, whole food diet that is nutritionally balanced and species-appropriate. Also consider adding some **fermented veggies** to her diet if she'll eat them. Fermented vegetables provide a wider variety of beneficial bacteria than probiotic supplements and far more of them.

Thankfully, if you're interested in evaluating the health of your pet's microbiome, AnimalBiome can perform individualized evaluations.

Sources and References

PetMD March 25, 2016 (Archived)

[1] dvm360 October 1, 2014 (Archived)