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Cat Tips

Your Pet's Risk for Disease — Why the Food You Feed Matters

New research shows that it really does matter what you feed your cat or dog. Your pet's gut bacteria are a direct result of the type of food he eats, and the diversity of your pet's microbiome influences his risk for gastrointestinal disorders and other chronic diseases like diabetes.

Analysis by Dr. Karen Shaw Becker

STORY AT-A-GLANCE

- A recent study confirmed that like humans with Type 2 diabetes, cats with the disease also have decreased gut microbial diversity
- In a nutshell, the less diverse your pet's gut microbes, the higher his or her risk for gastrointestinal disorders and other chronic diseases
- A growing body of research is demonstrating a direct link between fresh food diets and a healthy gut microbiome in both cats and dogs
- Feeding a nutritionally optimal, species-appropriate diet to your pets is the single most important step you can take to maintain or regain their health

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Recently, a team of researchers from the University of Copenhagen published the results of a study comparing the composition of gut bacteria in cats diagnosed with Type 2 diabetes and cats without the disease.[1] Cats were chosen because according to the researchers, they're the only animal aside from humans and primates that "spontaneously" develops Type 2 diabetes.

For the record, these animals were not born with diabetes. The vast majority of midlife or later cases of feline Type 2 diabetes I've seen did not occur "spontaneously," but as a result of a lifestyle that included, among other precipitating factors, a high-carbohydrate diet (kibble) and lack of exercise.

Existing research, including a 2017 study that suggests eight triggers for diabetes in cats,[2] agrees with me. A major finding from that study is that dry diets appear to be a significant risk factor:

> *"Through our research we found that while obesity is a very important and prominent risk factor for diabetes mellitus in cats, there is also an increased risk of diabetes among normal-weight cats consuming a dry food diet," said Dr. Malin Öhlund, a Ph.D. student of the department of Clinical Services at the Swedish University of Agricultural Science and lead researcher on the study.*

> *"This correlation, compared to normal-weight cats on a wet food diet, is a new and interesting finding that warrants further research, as a dry food diet is commonly fed to cats around the world."*[3]

But returning to the topic of the microbiome of diabetic cats, predictably, the University of Copenhagen researchers found that the composition of gut bacteria in cats suffering from diabetes is different from the composition of gut bacteria seen in healthy cats. Specifically, the diabetic cats have decreased gut microbial diversity.

The Importance of a Diverse Gut Microbiome to Pets' Health

Typically, when I discuss the importance of a healthy microbiome, I talk in terms of the good-to-bad bacterial balance in the gut. For example, if the population of pathogenic (bad) bacteria overwhelms beneficial bacteria in the lining of the small intestine, it can result in small intestinal bacterial overgrowth (SIBO), also now referred to as small intestinal dysbiosis (SID). And too few colonies of beneficial bacteria can result in maldigestion/malabsorption, which sets the stage for a myriad of gastrointestinal (GI) symptoms.

Another very important characteristic of a healthy gut microbiome is microbial diversity, as described in the 2015 Brazilian study, "Microbial Diversity: Relevance and Relationship Between Environmental Conservation and Human Health":

> *"The gastrointestinal tract of mammals maintains a highly diverse microbial population that plays an important role in nutrition metabolism, protection against pathogens, and the development of the immune system. It is estimated that at least 1000 different bacterial species coexist the human intestinal tract.*
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> *Although often considered as pathogens, the majority of microorganisms in intestinal tract have beneficial effects. They play multiple roles in the human host, as they are directly involved in the synthesis of vitamins and cofactors, help to degrade complex lipids and polysaccharides and also have detoxifying action (Kennedy 1999; Douglas- Escobar et al. 2006)."*[4]

Gut microbial diversity is so important, in fact, that according to one 2016 study, "… most of the human diseases affecting westernized countries are associated with dysbiosis and loss of microbial diversity in the gut microbiota."[5] Some of the diseases mentioned in the study include Type 2 diabetes, colorectal cancer, Crohn's, ulcerative colitis, celiac disease and allergies.

Animals Fed Fresh Diets Have a More Diverse Gut Microbiome

Not long ago, I interviewed Dr. Holly Ganz, a microbial ecologist who founded her company, AnimalBiome, after spending nearly two decades in academia studying interactions between microbes and animals. Through her research, Ganz learned that many pets with chronic health conditions have poor gut health, detected by looking at the composition of their gut bacteria.

Prior to founding AnimalBiome, Ganz ran a Kickstarter campaign called Kittybiome in which she asked people to send in their cat's poop to be sequenced.

> *"Our goal was to try to establish what 'normal' is when it comes to cats' gut bacteria," Ganz explains. "What amazed me was that nearly 20[%] of the people who supported that research project had a cat with a chronic digestive condition. They were really unhappy with what was being offered to them by their veterinarians — typically steroids and antibiotics and prescription diets. They asked us to try to come up with better solutions to help them. So that's what got us started."*

During our interview, I asked Dr. Ganz how she was able to determine an animal with an unhealthy gut from one with a healthy gut.

> *"Sometimes it turned out to be very obvious," she answered. "We've found in many cats and dogs with chronic digestive problems that they have really depleted compositions of gut bacteria. We're using sequencing to look at that.*

> *Through my work with the Kittybiome project, we began interacting with people who were very passionate about raw feeding — the fact that cats are obligate carnivores and many commercially available diets aren't biologically appropriate for them. We could actually see the benefit of raw diets as we analyzed the composition of gut bacteria. We could see the difference in microbiomes between the sick cats and the cats eating raw diets."*

I've talked to other researchers, as well, who were able to confirm what Dr. Ganz has found, which is that animals eating fresh food have a more diverse microbiome. You can visit **AnimalBiome** to learn more about Dr. Ganz's work and microbiome restorative therapy.

More Evidence of the Benefits of Fresh Food on the Microbiome

Another recent university study revealed how different types of diets affect the gut bacteria (microbiome) of dogs,[6] and it's reasonable to assume the same holds true for cats.

According to the researchers, the objective of the 28-day study was to determine fecal microbiota and metabolite concentrations in eight adult dogs fed four different diets that included two lightly cooked diets from Freshpet, a raw Freshpet diet and an extruded diet (Purina Dog Chow).

Not surprisingly, the study results showed there are indeed differences in gut bacteria depending on what diet dogs are fed. The researchers observed that the mildly cooked and raw diets were generally higher in protein and/or fat and were more digestible than the extruded diet, and also reduced blood triglyceride concentrations.

Other research on how diet impacts the canine gut microbiome has provided better insight into the benefits of feeding species-appropriate diets to dogs. For example, an Italian study published recently compared the influence of a raw meat and vegetable diet versus an extruded diet in eight healthy Boxers.

The study authors concluded that feeding a raw diet "… promoted a more balanced growth of bacterial communities and a positive change in the readouts of healthy gut functions in comparison to [an extruded] diet."[7]

In another recent study in New Zealand of 15 adult dogs, the researchers discovered that the dogs fed a raw red meat diet showed higher levels of digestibility of protein and energy than dogs fed kibble. They also produced **less poop** with lower levels of fecal volatile fatty acids.[8] As for gut bacteria, the study authors noted that:

> *"Diet significantly affected 27 microbial families and 53 genera in the faeces. In particular, the abundances of Bacteriodes, Prevotella, Peptostreptococcus and Faecalibacterium were lower in dogs fed the meat diet, whereas Fusobacterium, Lactobacillus and Clostridium were all more abundant."*

The shift in the microbiota correlates to protein and fat digestibility in the dogs. By understanding the relationship between a dog's microbiome and digestibility of the food consumed, we gain insight into the influence of diet on the overall well-being of pets.

Interestingly, the amount of healthy, indigestible fiber included in raw food diets is also a determining factor in the quantity and diversity of gut microbes. So far all of the raw food research suggests a small amount of fiber (in the form of indigestible plant roughage) is important for building a healthy microbiome, and the diets that do not include fiber create less healthy microbiota.

Healthy Diet = Healthy Gut = Healthy Pet

While there are many environmental and lifestyle factors that influence your animal companion's gut health, the diet you feed has a direct effect on the microbial diversity of his or her microbiome and is the single most important factor in preventing illness and maintaining wellness.

If you haven't already, I recommend transitioning your pet away from "fast food" (kibble), and instead feeding a nutritionally optimal, species-appropriate diet, which means food containing unadulterated, high-quality animal protein, moisture, healthy fats and fiber, with low to no starch content.

A nutritionally complete raw or gently cooked homemade diet is the **top choice for pets**, but only for those pet parents who are committed to doing it right. If you don't want to deal with balancing diets at home, choosing to feed a pre-balanced, commercially available raw food is a good alternative.

And be sure to incorporate probiotics, **fermented veggies** and a variety of fresh foods into your pet's diet, too. Blueberries, chia and hemp seeds in coconut oil, raw pumpkin seeds, fermented vegetables and kefir can provide your furry family member with a variety of nutrition and flavors.

Mercola Healthy Pets is a proud sponsor of the **CANWI AGE study** that's currently underway. The great news is this study includes evaluating the microbiomes of cats eating raw, minimally processed and highly processed cat foods, and I can't wait to share the preliminary results with you, shortly.

Sources and References

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