

Feline Nutrition: The “Carnivore Connection”

Bolton Veterinary Hospital

Have you ever considered the differences between dog food and cat food? Or the differences between what our pet’s ancestors would have eaten, and what we feed them today? There is no species to whom this matters more than our feline friends. Both dogs and cats prefer to eat predominantly meat, but a cat’s physiology is quite different than a dog’s. Cats are considered “obligate carnivores,” meaning they would rely almost exclusively on eating prey, never plants, in their evolutionary setting. Dogs, by contrast, are more omnivorous, and can use both plant and animal sources of nutrition. Cats’ evolutionary past sets them apart in a variety of ways, and has important consequences for what we should feed them today.

What Wild Cats Eat and Why It Matters

A wild cat’s prey would be predominantly rodents and small birds. These are food sources high in protein, with moderate levels of fat, and very little carbohydrates. Cats require 2-3 times more protein than omnivores, and a kitten’s requirement is even higher. Protein and fat are used as a source of energy, to synthesize new proteins, rebuild cells, and carry out all of a cat’s normal biochemical functions. If a dog is fed a diet low in animal protein, it isn’t a critical problem; dogs, humans, and other omnivorous species can synthesize the proteins they need from plant sources and their metabolism can adapt to what is available. Cats are not able to do this, and illness will result from a severe or long-standing deficiency. It isn’t just the lack of protein that presents a problem; an overabundance of carbohydrates may contribute to obesity, diabetes, osteoarthritis, urinary tract disease, liver disease, and skin conditions.

Cats’ unique nutritional needs do not end with protein. They also have a greater need for a variety of B vitamins, as well as vitamins A and D. Healthy cats rarely run into trouble with this, but a deficiency can develop quickly if a cat stops eating.

Prey is also a major source of water for wild carnivores. Cats are evolutionarily a desert species, and as a result they do not readily feel thirsty when they are becoming dehydrated. Research has demonstrated that a cat eating kibble takes in 50% less water in the course of a day than a cat who eats canned food. Cats eating predominantly kibble may spend a significant portion of their lives dehydrated, constantly putting a strain on their kidneys.



So, What Should We Feed?

Pet food companies might have you believe that a “grain-free” diet is a “carb-free” diet. This is not the case. Carbohydrates are still present in all kibble diets, and in many canned diets too. A carbohydrate is necessary to form a kibble (think about it - trying to make kibble without a carbohydrate source is like trying to make pancakes with only eggs, milk, and oil). So how does the pet food company manage this? An alternate carbohydrate source such as potato flour will be used. It’s not a grain, but it’s still a carbohydrate! So we acknowledge that a carbohydrate source will ALWAYS appear somewhere on a dry food ingredient list, but a canned diet can be made truly carb-free.

Will your cat eat canned food? If so, great, even if she still enjoys kibble at another meal. You can mix additional water in with her canned food to make it “soupy” and increase her water intake further. Look on the ingredient list for animal-sourced proteins as the first few ingredients: meat, poultry, fish, eggs, whey, etc. Do you see something like “poultry by-product” on the label? Fear not - we have written a blog about this as well (and it may not be the wrong choice). Do plant sourced proteins (such as rice, soy protein, wheat gluten, corn starch) feature prominently on a canned food label? They do not need to be there. The lower they are on the ingredient list, the better (the ingredients on the label are listed by amount, from highest to lowest).

Does your cat prefer kibble? While it can be more challenging to meet a cat’s nutritional needs via a kibble-only diet, there is evidence that a dry food contributes less to dental disease than canned food. We can choose a variety of dry food that most closely matches the needs of an obligate carnivore by selecting one that lists animal-sourced proteins as the first 2-3 ingredients. Encourage your cat to drink plenty of water by providing multiple water bowls in different locations around the house.

The array of pet foods available may seem endless, and to help you decide what is best for your pet, we have also written an article called “What Should I Feed My Pet?” for further guidance (available on our blog). If these articles leave you still wondering exactly what to feed your cat, we hope you will talk to your veterinarian about it at your next appointment.

References and Further Reading:

The Carnivore Connection to Nutrition in Cats. Debra L Zoran, DVM, PhD, DACVIM
Original full-text article available at <http://www.catinfo.org/docs/DrZoran.pdf>
Also see www.catinfo.org

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