## barkEwhiskers

Dog Tips

# Got Cats and Dogs? Do This in a Pinch, but Don't Make It a Habit 

You're more likely to do this if you have both a cat and a dog, but making a habit of it could mean stunted growth and a failure to thrive. And surely, you don't want to jeopardize their health over this common misconception.

## Analysis by Dr. Karen Shaw Becker

## STORY AT-A-GLANCE

- If you have both a cat and a dog in the family, you may have done some "diet switching" in a pinch, when you ran out of food for one or the other
- For healthy dogs and cats, a bite of the other's food, or even a full meal once in a while isn't cause for concern
- It's important to realize, however, that cats and dogs are different species, and as such, require speciesspecific nutrition to be optimally healthy
"Is it okay for my cat to eat my dog's food?" According to veterinarian Dr. Megan Keller, this is a common question from pet parents during vet visits.
"The short answer is yes, a cat can eat a small amount of dog [food] and not have any toxicity or lasting effects," writes Keller in an article for PetMD. "However, the longer answer dives into the species-specific differences between our feline and canine friends. While a nibble of stolen dog food will not harm cats, it will definitely not help them achieve their best possible health."

Many people with both canine and feline family members wonder if there's really a difference between dog and cat food. This question often arises when an owner runs out of one type of pet food and wonders if there's any harm in feeding the dog a little cat food, or vice versa.

This question can also come up when a particularly picky dog walks right by his own food and dives headfirst into the cat's food bowl.

In my experience, a healthy dog or cat will not suffer from eating a meal intended for the other species. If your healthy dog gobbles up a bowl of cat food while your back is turned, or vice versa, there's no need for concern (other than potentially some loose stools).

## Cat Diets vs. Dog Diets

The reason we feed dogs differently than cats is because each species requires its own nutrient profile for optimal health. Felines and canines are both carnivores (meat eaters), but with one very important distinction: cats are obligate carnivores, whereas dogs are scavenging carnivores. The New World Encyclopedia definition of an obligate carnivore:

An obligate carnivore (or true carnivore) is an animal that must eat meat in order to thrive (Syufy 2008). They may eat other foods, such as fruits, honey, grains, and so forth, but meat must be included in their diet.

True carnivores lack the physiology required for the efficient digestion of vegetable matter, and, in fact, some carnivorous mammals eat vegetation specifically as an emetic.

The domestic cat is a prime example of an obligate carnivore, as are all of the other felids (Pierson 2008). ${ }^{1}$

According to Keller, "Dogs ... are actually omnivores. An omnivore has a more flexible diet and can easily eat both meat and vegetables." I agree dogs can digest both meat and carbs, but I disagree that dogs are fundamentally omnivores, or they would healthfully thrive eating high carb diets, but they don't.

Dogs develop conditions like diabetes, obesity and dilated cardiomyopathy (DCM) when fed high carb, meat-deficient diets. Dogs are scavenging, or facultative carnivores. They are primarily meat-eaters but can survive on plant material alone if necessary. The key word here is "survive." To survive is not to thrive. To thrive is to flourish with optimal vitality and disease resistance. To survive means simply to stay alive (and over time develop medical problems from preventable degenerative disease).

One of the arguments for feeding dogs grain or plant-based or even vegetarian diets seems to be the distinction between obligate and scavenging carnivores. It's assumed, since dogs aren't strict carnivores like cats are, they can easily transition to a meatless diet. This is a dangerous misconception.

Just because dogs fed plant-based diets are able to stay alive doesn't make them omnivores. Taxonomically, dogs are in the Order Carnivora and the family Canidae along with other carnivorous mammals.

## Cats Have a Unique Requirement for Animal Protein

Cats must eat animal meat and organs to meet their nutritional needs, and plant-based proteins (grains and vegetables) aren't a sufficient substitute. The proteins derived from animal tissue contain a complete amino acid profile. Amino acids are the building blocks of protein. Plant-based proteins don't contain all the amino acids critical for the health of an obligate carnivore.

Humans are omnivores, with the physiological ability to turn plant proteins into the missing pieces needed for a complete amino acid profile. To a very limited extent dogs can do this, but a cat's body isn't equipped for it whatsoever.

Cats also need much more protein in their diet than other animals. Kittens require 1.5 times more protein than puppies. Adult cats need 2 to 3 times the amount adult dogs require.

One of the reasons for this is because while other mammal species use most of the protein they consume for growth and body maintenance, cats use protein for those purposes and also as a source of energy.

When other species of animals are fed a low-protein diet, their bodies make adjustments to conserve amino acids to manage the deficit. But a cat's body must continue to use protein even when there's not enough in the diet, which is why protein malnutrition happens quickly in sick or injured cats, and cats suffering from anorexia.

In addition to their increased need for protein, cats also have a higher requirement for certain specific amino acids found naturally in animal tissue.

One of the amino acids missing in plants is taurine, which is found in animal muscle meat, in particular the heart and liver. Taurine deficiency causes serious health problems in cats. Keller writes:
"Cats (and humans) are among a few of the mammals that don't have the ability to make taurine, so they must get this essential element from their diet.

Cats that lack taurine in their diet can have:

- Weakened hearts (dilatated cardiomyopathy)
- Loss of vision
- Digestion problems

All commercially available cat food today has taurine added; however, it is rarely included in dog foods."

Dogs can make their own taurine, if provided adequate amounts of amino acids in their food.

## Cats Also Require Certain Vitamins, Nutrients

Cats evolved hunting a different set of prey species than dogs, so their nutrient requirements are different. They have a special requirement for vitamin A , which is available naturally only in animal tissue. They lack the intestinal enzymes necessary to convert B -carotene in plants to the active form of vitamin A effectively. Vitamin A is essential for maintenance of vision, growth of bone and muscle, reproduction, and the health of epithelial tissues.

Cats also lack the ability to convert vegetable sources of omega-3 fatty acids into EPA and DHA essential for health, they must consume these long-chain fatty acids directly from their food. Cats also require 5 times more dietary thiamine (vitamin B1) than dogs do.
"Animal tissue is the most common source of niacin in cat food; but plants do have low levels of niacin," writes Keller. "But a food containing a lower content of animal tissue and higher contents of plant tissue, such as grains, may not give cats the proper levels of niacin they need."

A thiamine deficiency can result in a poor-quality coat, loss of appetite, hunched posture, neurologic problems including seizures, and even death. Unfortunately, thiamine isn't stable in commercial pet foods and levels drop significantly the longer the food is stored, so many cats may be deficient unless they are eating very fresh food.

Vitamin $D$ is also essential in the diets of all mammals. Cats (and dogs) must consume vitamin $D$ in their diet (they can't synthesize it through their skin). The liver and fatty tissue of prey animals is rich in vitamin $D$.

Arachidonic acid is an omega-6 fatty acid that dogs can make themselves, but cats must get from their diet.

## Finally, Cats Need a Moisture-Rich Diet

Another distinctive biological feature of cats is their need to get most of their hydration from the food they eat.

Domestic kitties - evolved from desert-dwelling wild cats - aren't as responsive as other animals to sensations of thirst or dehydration. Unlike dogs who drink frequently from their water bowls, when fed a diet devoid of moisture (e.g., kibble), cats aren't driven to search for another source of water to make up the difference between what their bodies require and their diet provides.

This can result in chronic mild dehydration, a condition that will ultimately result in disease, especially of the feline lower urinary tract and kidneys.

## Species-Specific Diets Are Always the Best Option

Obviously, cats can't thrive on a diet designed for dogs. And while dogs may be able to survive on cat food, it's certainly not an optimal diet for them.

Diets designed for kitties are significantly higher in calories, protein, and fat than dogs require. A steady diet of cat food fed to even a very healthy dog may ultimately result in an overweight pet who suffers bouts of diarrhea and vomiting, and is at increased risk for pancreatitis, which can be life-threatening.

Take-home message: in a pinch, a healthy dog can eat a meal of cat food, or a healthy cat can eat a meal of dog food. But a better option is actually to offer your dog or cat species-specific safe human food until you can home prepare or purchase more of his regular food.

## Sources and References

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${ }^{1}$ New World Encyclopedia

