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The stunning differences in how dogs and cats eat:

- To the casual observer, dogs and cats look very similar as they eat from their dinner bowls
- However, there are actually many differences in their eating habits, from how they select, pick up and chew their food, to their ability to detect different tastes
- Another difference between them is the type of nutrition they require
- Cats, as obligate carnivores have unique requirements for animal protein, specific vitamins moisture-dense food

At the food bowl — Dogs versus cats

First, let's take a look at how dogs and cats [select their food](#) and how they pick it up and chew it:

Dogs

Eat one to three large meals per day

Sniffs, chooses and eats rapidly

Sticks to first choice when faced with several foods May change mind several times when faced with several foods

When it comes to the odor of food, both dogs and cats have a very acute [sense of smell](#) and are much more sensitive to odors than we are:

Dogs

200 million olfactory neurons

10% of the total weight of the brain is dedicated to olfaction

In terms of what pets see when they look in their bowls, it's important to note that while humans have trichromatic color perception, 7 million cones (which work in full light and allow colors to be seen) and 120 million rods (work in low light and allow visualization of black and white), dogs and cats have dichromatic color perception, 3 million cones and 200 million rods.

Since both cats and dogs have a limited ability to see colors and anything close to them (they can make out objects and shapes, however, and their night vision is better than ours), it's unlikely the appearance of their food is very important to them. One of the more subtle eating differences between canines and felines is their prehension, or method of grasping food, along with the way they chew. Another difference is the number of teeth they have:

Dogs

- Typically use teeth to pick up food
- When fed dry food, pick up one to seven kibbles per bite, depending on the size of the dog and the kibble
- Swallows without chewing or breaks down food with teeth
- 42 teeth, 10 molars and 16 premolars, vertical jaw movements only

Another subtle but significant variation between canines and felines is their sense of taste:

Dogs

- **1600 taste buds**
- **Can detect all five tastes: sour, bitter, salty, sweet and umami (savory)**

Cats

Eat two to 15 small meals per day

Sniffs, hesitates, takes time before eating

Cats

67 million olfactory neurons

6% of the total weight of the brain is dedicated to olfaction

Cats

- Catch food with tongue or teeth or lips
- When fed dry food, take one to two kibbles per bite
- Swallows without chewing or rolls food with tongue toward molars break it into smaller pieces
- 30 teeth, four molars and 10 molars, vertical jaw movements only

Cats

- **473 taste buds**
- **[Cannot detect sweet tastes, can only detect sour, bitter, salty and umami \(savory\)](#)**

The mouths of both cats and dogs are equipped with the receptors and neurons required to perceive all four sensory inputs: touch, pressure, cold, heat and pain.

Another eating-related difference is the diet they require

Many pet parents have at some point wondered if there's really a difference between dog and cat food, and if there's any harm in feeding the family dog a little cat food, or vice versa.

Generally speaking, a healthy dog or cat will not suffer at all from eating a meal intended for the other species. If your healthy dog snarfs a bowl of cat food while your back is turned, or you need to offer your cat some of your dog's food in a pinch, there's no need for concern.

With that said, the reason dog food differs from cat food is because each species requires its own nutrient profile for optimal health. Felines and canines are both carnivores (meat eaters), but with a very important distinction. Cats are [obligate carnivores](#), whereas dogs are scavenging carnivores. **The 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)."*²

Dogs are scavenging, or **facultative carnivores**, which in general terms means 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 grow vigorously. To survive means simply to stay alive.

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, they can easily transition to a meatless diet. This is a dangerous misconception.

In fact, I often see dogs referred to as omnivores rather than carnivores. I strongly disagree with this assumption. [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 unique requirements for animal protein, certain vitamins and moisture-dense food

As obligate/true/strict carnivores, cats must eat animal meat and organs to meet their nutritional needs, and plant-based proteins (grains and vegetables) simply aren't a good substitute. Cats lack the specific enzymes necessary to use plant proteins as efficiently as animal proteins.

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, who are omnivores, have 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 two to three times the amount adult dogs require. In addition to their increased need for protein, cats also have a higher requirement for certain specific amino acids found naturally in animal tissue.

Since cats evolved hunting a different set of prey species than dogs did, their dietary requirements are different than dogs. 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. Vitamin A is essential for maintenance of vision, growth of bone and muscle, reproduction and the health of epithelial tissues.

Cats also require five times more dietary thiamine (vitamin B1) than dogs do. 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're eating very [fresh food](#). Arachidonic acid is an omega-6 fatty acid that dogs can make themselves, but cats must get from their diet.

Another distinctive biological feature of cats is their need to get most of their water intake from the food they eat. Domestic cats, having evolved from desert-dwelling ancestors, are not 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 what 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-appropriate diets are the best option for both dogs and cats

Bottom line: cats can't thrive on a diet designed for dogs. Dogs may be able to survive on cat food, it's 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.

Again, 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 to offer your canine or feline family member species-appropriate, [safe human food](#) until you can home prepare or purchase more of his regular food.

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