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Feeding Cats

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Cats Are Obligate Carnivores

Unlike dogs and people, which are omnivores and gain nutrition from both plants and meat, cats are obligate carnivores. This means that they get most of their nutrients from animal products. One scientific study demonstrated that when cats in the wild live on prey (i.e., animals, such as mice, that they hunt and kill), their diet is primarily protein (55%), some fat (45%), and only a very small percentage of carbohydrates (1-2%). Another study showed that an ideal cat's diet consists of 54% protein, 36% fat, and 12% carbohydrates. While these are pretty specific numbers, the important thing to note is that cats need diets that have



Photo by Natalie Rowe

high amounts of protein, moderate amounts of fat, and low amounts of carbohydrates.

The reason behind these nutritional percentages is that a cat's diet is based on the methods by which their body breaks down and metabolizes foods. Cats are simply not suited for digesting high amounts of starches and sugars. Thus, if they eat a diet high in carbohydrates, they can't break down and absorb those nutrients nearly as well as a diet higher in animal protein.

Are Carbs Bad for Cats?

It is important to understand that carbohydrates are not bad for a cat. Cats have trouble processing too much grain, sugar, and starch; however, depending on their life stage as well as the type of carbohydrate and how it is manufactured, cats are capable of digesting an appropriate amount efficiently, and small amounts are necessary for their diets.

All Meats are not Equal

Fish-based diets can sometimes have an imbalance of phosphorus and magnesium, which are important nutrients for cats. Feeding a diet made almost entirely of canned tuna can cause vitamin E deficiency as well. It is also important to consider parts of animal tissue being fed other than musculature. Feral or wild cats eat more than just the muscle tissue of an animal they kill. Thus, a cat's diet needs to contain more than choice cuts of meat- organs, and fat are important too. The key is balance and ensuring all nutritional needs of a cat are met.

Additional Nutritional Needs of a Cat

In addition to cats' protein requirements, they are also deficient and/or can't make certain nutrients that are needed for their survival. Instead, they must get these nutrients from the foods they eat. Important dietary nutrients include the amino acids arginine, taurine, methionine, and cysteine, as well as vitamins such as vitamin B (niacin) and vitamin D. Many of these important nutrients are primarily obtained from animal products (e.g., liver, protein, fat), which further highlights the importance of a diet high in animal protein. When researching commercial cat foods, it is important to ensure that these nutrients are part of the ingredients. If you are unsure if your cat's current diet contains these nutrients, ask your veterinarian.

Water

Another way that cats tend to differ in nutritional needs is their water intake. The domestic house cat is believed to be descended from wild desert cats. They can survive on less water than some other animals, such as dogs. This is great for survival but can be a problem long term because they have less of a drive to seek water when their body needs it. This lack of water can lead to a variety of issues over time. For example, if cats don't get enough water, they produce urine that is more concentrated with the body's waste materials, and this can lead to problems such as urinary tract issues (e.g., feline lower urinary tract disease (FLUTD), idiopathic cystitis).

This information leads many researchers to recommend canned food because of its higher water content (70%-80% water) over dry food (10%-12% water). Other ways to ensure your cat gets enough water include offering more options for drinking, such as multiple water bowls throughout the house, a kitty water fountain, or letting a faucet drip on occasion to entice them to drink.

Canned Food vs Dry Kibble

Overwhelmingly, research shows that canned commercial diets (wet food) that are high in protein and low in carbohydrates are likely the best type of diet for cats. Veterinarians have also frequently noted that common issues in feline medicine such as urinary tract disease and chronic gastrointestinal (GI) issues are much more frequently seen in cats on dry diets.

Another benefit of canned food over dry is that the water content helps maintain the sensation of feeling full, so your cat won't consume too many calories. Many vets will switch an overweight cat that has been eating dry food to a canned food diet as the first step toward weight loss.

Raw Diets

Raw diets aren't ideal for any pet, even for the carnivorous cat. It is difficult to formulate a raw diet properly to ensure all necessary nutrients, vitamins, amino acids, proteins, fats, and carbohydrates are balanced correctly. Raw meat can also contain bacteria and parasites that can make not only your cat sick but you as well (e.g., *Salmonella*). Outdoor and feral cats that eat only prey animals may have a slightly decreased risk of this issue because the kill is fresh, but they can still catch diseases such as toxoplasmosis from eating raw prey. Most name-brand commercial diets have done a significant amount of testing and research to ensure that the food is well-balanced and appropriate for a pet. Your veterinarian will likely have diet suggestions that would work for your cat.

When to Feed

Many feline species found in the wild tend to be grazers, eating multiple small meals throughout the day and night. This tendency is thought to be associated with the types of prey they hunt. Domestic cats are exactly the same, even if they are eating commercial cat

food. Leaving an appropriate amount of dry food out all day so that cats can eat as they need to works pretty well for most cats. If using canned food, or if your cat is on a calorie-restricted diet, you can offer smaller, more frequent meals throughout the day to help keep them on their body's natural schedule.

How Much to Feed

How much to feed depends on what you are feeding. Many commercial cat foods have a list on the can or bag describing the recommended amount per weight, such as "for a 10-pound cat, feed X cups/cans a day". These recommendations are general guidelines from the manufacturer, but not an exact recipe for success for all cats. Make sure you are feeding the amount your cat needs for a healthy weight (which should be determined by your veterinarian), not what the cat currently weighs. For example, if your cat weighs 17 pounds but should weigh 12 pounds, slowly adjust the amount of their food to an amount for a 12-pound cat. Note that if your cat does need to lose weight, discuss your concerns with a veterinarian before starting a diet/calorie restriction plan.

It is also important to measure food correctly. Be sure to use a measuring cup rather than estimating the amount. Feeding just 10 extra pieces of dry kibble a day can contribute to 10% weight gain in a year, which is equivalent in most cats to an entire pound of body weight!

Cat owners should also keep in mind that feeding an appropriate amount of food will not stop hunting behaviors. This is because in the wild, hunting often requires numerous attempts before success, so the instinct to hunt tends to be separate from a feeling of fullness. Essentially, cats get enrichment from hunting (i.e., enhanced quality of life from doing and acting on important cat behaviors), even if they don't end up consuming their prey. You can help provide your cat with this type of enrichment by letting them play with feather or mice toys to help stimulate their hunting instincts without affecting their waistlines.

Determining Quality

Always discuss your cat's nutrition concerns with your veterinarian. Veterinarians are trained in nutrition and understand the delicate balance of nutrients needed to keep a pet healthy. Your veterinarian can make food recommendations based on your pet's personal physical examination and health status. Most veterinarians keep up to date on pet food changes and issues, so they should be able to provide you with several options and choices from multiple pet food companies.



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Another way to help ensure your cat is eating a quality commercial diet is to check if the food is

formulated to meet the standards of the <u>Association of American Feed Control Officials</u> (AAFCO). AAFCO publishes yearly standards and guidelines to help maintain the nutritional appropriateness of pet foods. These standards and guidelines are created through scientific evaluation and testing. AAFCO is not a government regulatory body, but it is made up of state and government officials. Unfortunately, these standards cannot be used to certify or approve pet foods, but they are a good way to get a general idea of the food's adequacy as a diet.

Avoiding a Picky Eater

Not surprisingly, cats tend to develop preferences for certain textures, flavors, smells, and temperatures of food. Preferences are fine, but extreme pickiness can make changing diets or getting a sick cat to eat difficult. Consider offering high-quality cat food options to your cat in early adulthood to help avoid becoming stuck on certain options.

Tips for helping a picky eater transition to new foods include:

- Maintaining a safe space for your cat to eat (e.g., low noise, no concern with other pets trying to eat the food or bother your cat while eating).
- Ensuring a picky appetite is not a poor appetite because of illness (e.g., nausea from stomach upset, pain from arthritis).
- Consider warming wet food to enhance smell and taste, but make sure it's not too hot. Cats probably favor warmed food because it mimics fresh prey.
- Mixing the old food with the new food and transitioning slowly.
- Cats often refuse new diets when stressed but will eat them under normal conditions, so ensure a stress-free atmosphere during the transition.

Medical Management through Food

Certain prescription and commercial diets have been formulated to address medical problems in cats. Some medical disorders that can be helped with specific diets include renal or kidney disease, dental disease, thyroid disease, diabetes, urinary tract disorders, gastrointestinal diseases, and pancreatitis. If your cat is experiencing a medical illness, especially one that is chronic or ongoing, talk to your veterinarian about whether a prescription diet might be helpful.

Using Food Behaviors to Enhance Daily Life

In addition to meeting nutritional and calorie needs, food can provide enrichment for cats, especially indoor cats, by stimulating their predatory impulses. This helps them live a happier, less stressful, and more cat-like life. Examples of enrichment through food are hiding meals in food puzzles and letting cats play with food-containing toys in a way that stimulates a cat's natural predatory instinct of hunting for food.

Remember that if a cat is on a restricted diet, you can use toys that stimulate the cat's predator response such as small, mouse-sized toys that squeak or make high-pitched noises. Toys that move unpredictably are especially fun for cats. This type of feeding or playing can help increase your cat's activity, decrease their stress level, and may help keep them more physically fit.

Common Myths about Food

While many misconceptions exist about cats and food, a few common ones are listed below. You already know the truth about the most important one, that cats are not omnivores but in fact, are carnivores.

One interesting misconception is about taste. Believe it or not, cats are not capable of tasting sweet flavors. That type of flavor is not part of the chemical receptors in their taste buds. This is likely associated with them being carnivorous as very few animal products or by-products are sweet, so they likely just don't need the flavor profile.

Another common misconception is about milk. Many adult cats are lactose intolerant. They usually develop this intolerance after maturity. Even small sips of any kind of milk or small bites of cheese can cause a tummy ache, loose stool, and excess gas.

An additional common myth about cats is that they only eat what they need. While this may be true for some cats, others are just as likely to overindulge as people are. Some research indicates that certain cats will eat when they are stressed, similar to the way that certain people jokingly state that they "eat their feelings." Pet owners need to understand this so that they can ensure their cat is fed the proper amount of food for their body's metabolic and physiologic needs, rather than their emotional needs.

Lastly, dry kibble does not significantly reduce the risk of dental tartar and dental disease, except for a few that have been proven to help (discuss with your veterinarian). The most effective way to prevent dental tartar is to brush your cat's teeth every single day. Thus, if you are avoiding switching to wet food to help keep your cat's teeth healthy, no worries! If you are still concerned, offer crunchy dental treats as an alternative.

Bottom Line: Feed Canned High Protein, Low Carbohydrate Diets

Cats are not like people or dogs. They are carnivores and are adapted to eat a diet high in protein whenever possible. Their overall health can be significantly improved if this high-protein diet is in the form of canned food to help maintain good hydration and satiety (i.e., a feeling of fullness after eating). Talk to your veterinarian about switching diets and ask which diet is best for your pet.

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