



The Power of Nutrition



Puppies grow rapidly. At times during their rapid growth and development — until around 4 to 6 months of age — puppies require up to two or three times the amount of most nutrients and calories per pound of body weight compared to their needs as an adult dog.

The first food that a breeder introduces to new puppies should provide complete and balanced nutrition and be formulated to meet the nutrient requirements of growing puppies. With proper nutrition, puppies are more likely to develop properly with strong teeth and bones, healthy vision, a lustrous hair coat, and energy and vitality.

Though rapid growth in many breeds is finished by 6 months of age, puppies continue to grow and develop for several months longer depending on the breed or size of dog. During this period, their nutrient requirements per pound of body weight are greater than they will be as adults, and thus, they should be fed a diet formulated to meet these increased nutrient needs.

Large and giant breeds, such as the Great Dane, Saint Bernard and Neapolitan Mastiff, may not mature physically until they are nearly 2 years old; these breeds should be fed a lower energy growth diet for a longer period of time. In contrast, toy and small-breed puppies may mature before 1 year of age, and they have an increased energy need relative to their body weight.

Nutrient Balance

The nutritional health of puppies — just like adult dogs — depends on receiving the correct amounts and proportions of six essential categories of nutrients: water, protein, fat, carbohydrates, minerals and vitamins. These nutrients — except for water — must be present in the proper proportion to ensure a puppy food is balanced.

“Though fat, protein and calcium tend to get the greater emphasis in puppy foods, every single essential nutrient is key, especially during the period of rapid growth,” says Purina Veterinary Nutritionist Dorothy Laflamme, D.V.M., Ph.D., DACVN. “Deficiencies in almost any essential nutrient can lead to changes that can compromise short- or long-term health.”

Feeding a complete and balanced puppy food is important for numerous reasons. Laflamme notes problems that can happen if nutrients are not balanced:

- A zinc deficiency can contribute to compromised immune function and skin abnormalities.
- Too little protein can cause disturbed growth as well as immune compromise and increased susceptibility to various stressor and infectious agents.
- Calcium in balance with phosphorus is particularly critical for large-breed dogs. Too little or too much can lead to skeletal problems.

Keeping Puppies Fit

Along with providing complete and balanced nutrition, puppies of all breed sizes need an appropriate amount of calories during growth. This is defined as the amount that supports normal growth but not excessive growth.

Excessive weight in large dogs that may be predisposed to developmental orthopedic conditions is a definite risk factor for these conditions. “When feeding a large-breed puppy, research shows that avoiding overfeeding may help development,” Laflamme says. “A breeder or owner should monitor a puppy’s weight, adjusting food intake as necessary to maintain ideal body condition.”

Just as in adult dogs, ideal body condition means the ribs are easily palpable, with minimal fat

covering, and that the waist is easily noted when viewed from above. A puppy in ideal body condition has an obvious abdominal tuck when viewed from the side.

“Even pups not predisposed to skeletal problems should not be allowed to become overweight since fat pups often become fat dogs with increased risks for various health problems,” Laflamme says.

The Purina Life Span Study, conducted from 1987 to 2002, proved that a dog’s median life span can be extended by 15 percent — nearly two years for the Labrador Retrievers in the study — by restricting diet to maintain ideal body condition. Nutrition scientists also found that control-fed dogs allowed to eat ad libitum tended to become insulin-resistant, a marker for onset of a number of late-life diseases.

A breeder or owner needs to keep in mind that puppy foods must be balanced in regard to expected intake, which is why the relationship between individual nutrients and the energy content of the diet must be in balance. “The idea is that once the puppy has consumed the appropriate calories, he or she will have met his or her need for all essential nutrients,” says Laflamme.

Some breeds and some individual puppies may have higher or lower energy needs compared to average. “In general, a puppy should be able to consume food in 10 to 15 minutes two to three times daily so that he or she gets all of the calories needed to grow at a healthy rate,” she says. “This should provide sufficient calories for healthy growth without excess body fat.”

“Portion sizes should be controlled, if necessary, to avoid excess calorie intake. Here, matching calorie density of the food is important to provide adequate satiety,” Laflamme says. “If a puppy eats everything offered and then seems hungry after or between meals, the energy density of the diet may be too high so that he or she is getting too little volume. On the other hand, if so much food must be provided that the dog appears bloated after meals or is losing weight, the diet may be too low in calories.”

Choosing the Right Food

Most breeders know exactly which puppy food they prefer. Sometimes if a puppy is not doing well on a food — losing weight, vomiting, or has excessively soft stool for more than a few days — you should try another, Laflamme advises.

With plenty of puppy foods on the market, it can be challenging to decide which one to try. “Assuming that each of these products is complete and balanced, then the major differences are likely to be energy density and flavor or ingredient variety,” Laflamme says. “For the vast majority of dogs, the ingredient issue is not a factor for the puppy, but it may be for the owner. On the other hand, a few dogs may not fare well on one diet but do better on another. Generally, there is no pattern here, as it is based on individual variation.”

One thing to keep in mind, she says, is frequently switching foods is likely to create a pattern of pickiness and/or obesity in a puppy. “Beyond that, the key is to select a complete and balanced puppy food that matches the energy needs of the puppy,” Laflamme says.