

Nutritional Requirements of Large and Giant Breed Puppies

Not all puppy foods are alike. Not all pups are alike. Feeding the right diet to the right puppy is very important, especially when it comes to large or giant breed pups.

Fact: There is no universal dog food.

Proper Growth Rate

Pups grow up, but it is important that they grow at the proper rate. The framework of the body is composed of muscle and bone which have to grow in synchrony. Rapid growth rates can stress developing bones and joints resulting in skeletal malformations.



Bones that grow too quickly are less dense making the skeleton, including joints, weak. Exponential growth accompanied by increased body mass puts additional strain on bones and joints. So puppies should not get too fat!

Impacted by growth rate, developmental orthopedic disease (DOD) is more prevalent in large breed dogs. Bone and joint disorders such as hip dysplasia and OCD (osteochondritis dessecans) affect many large breed pups.

Some skeletal problems are associated with genetics and are out of your control. Diet also affects skeletal development and you CAN control what your pup eats!

Nutritional Needs of Large Breed Pups

"How fast a pup grows has to be carefully regulated."

Just like human children, puppies do best with a balanced diet of nutrients, protein, carbohydrates, and fat. However dogs vary in size way more than people do and need "size-specific" diets. Great Dane pups grow much faster than Chihuahuas so they should eat different foods.

Regardless of size, pups need high energy foods because they expend a lot of energy. They are constantly on the move and burn more calories. Caloric requirements increase drastically during the first 12 months of life, but they need to be regulated. Too many calories leads to obesity later in life which also causes orthopedic problems.

How fast a pup grows has to be carefully regulated. Large breed pups grow A LOT! But they should not grow up too fast. About half of the calories that pups consume are used in tissue growth and skeletal development. These calories must come from a balanced diet that promotes healthy bone and muscle growth. Feeding a diet that is too calorically dense (high in fat) can make a pup grow faster than his bones can accommodate resulting in skeletal abnormalities.

Protein content is also crucial. Proteins are the basic building blocks of the body and contribute to healthy muscle development. Growing pups need more protein than adult dogs. On the flip side, too much protein can be detrimental to healthy growth and result in an imbalance of calcium and phosphorus which can negatively affect bone and joint development.

Calcium is needed for strong bones, but is harmful in excess. Pups, unlike adult dogs, cannot adequately regulate how much dietary calcium they absorb from the intestinal tract. Sometimes they absorb and retain too much calcium which can cause skeletal malformations.

Excess calcium also causes deficiencies in other needed nutrients, like phosphorus. Calcium and phosphorus work together and a proper calcium to phosphorus ratio is important for healthy bones and joints. The calcium:phosphorus ratios in your pup's diet should be between 1:1 and 1.3:1. Large breed pups eating balanced diets containing recommended amounts of calcium should not be given calcium supplements. Your veterinarian can suggest diets that meet this standard.

Other vitamins and minerals impact skeletal development. Vitamin D, vitamin A, copper, zinc, and manganese are essential to healthy bones. Deficiency or excess of these nutrients may also contribute to abnormal orthopedic development.

In general, giant breed puppy foods should be lower in fat, have a good calcium content, an appropriate Ca:P ratio, and provide high quality protein. The calcium content should be around 1.5% (or 3 grams/1,000 kcal). Large and giant breed pups should consume diets that contain at least 30% high quality protein and 9% fat (dry matter basis). Remember that protein quality varies with the source, so high quality foods may cost more.

If you give your pup treats, consider the calories they add to the diet. Choose low carbohydrate treats that do not contain added calcium. Fruits and vegetables are healthy treat alternatives that add few calories to the diet. Avoid toxic fruits and vegetables such as grapes, raisins, and onions.

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Choosing a Food

With the huge variety of foods on store shelves, choosing the best one can be a daunting task. Ask your veterinarian for advice before shopping. Look for a diet specifically made for large breed pups that carries the globally recognized AAFCO seal of approval.

Verify that your pup's food has been tested in feeding trials to ensure that there are no deficiencies or excesses. Formulating the proper diet is based on science, so invest in companies that invest in research conducted by board certified veterinary nutritionists.

Make sure to purchase food from a reliable manufacturer with good quality control standards. You want the food to contain *exactly* what it says on the label.

Feeding the Food

Puppies do not practice portion control so free-feeding or ad-lib feeding is not advised. With the help of your veterinarian, calculate the total amount of food your dog should consume in a 24 hour period and divide it into two or three portions (breakfast, lunch, and dinner OR morning and evening meals).

Monitoring Growth Rate

How do you know if your pup is growing too fast? A standardized numerical guide will help assess a dog's body condition score (BCS). Similar to the human body mass index (BMI), the BCS scoring system provides an accurate overview of a pup's rate of development and body fat content.

As in people, leaner is better. On a score of 1 to 9 (1 is too thin, 9 is obese), the optimum BCS for canines is 4 or 5. An easy to read chart complete with diagrams and instructions makes assessing BCS easy. Your veterinary health care team can perform assessments at your regular visits, and show you how to perform weekly assessments at home in between appointments.

Genetic Input

The adult size of your dog may be determined by genetics; however, the time it takes for your dog to become "full grown" can be impacted by proper nutrition. Growing at the proper rate means less risk of bone and joint disease. So, exert some control over your dog's diet and help control his growth.

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