



# NUTRITIONAL MANAGEMENT OF REPRODUCING DOGS

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*Professional breeders are highly interested in the health and fitness of their studs and dams because they understand that optimal management goes hand in hand with successful pregnancies, good litter sizes, vigorous pups and long-term health of both the parents and offspring.*

45  
YEARS  
of  
HEALTH  
NUTRITION

## BODY CONDITION SCORE CHART

(Example shown medium breed, 23-55 lbs)



## QUESTIONS OFTEN ARISE ABOUT FEEDING DOGS THROUGHOUT THE REPRODUCTIVE PROCESS

How much food should I be offering? How often? Is there a best diet to feed? What if my dogs are overweight or underweight? How much weight should a dam gain during gestation? How can I prevent excessive weight loss during lactation? This article will provide an overview of nutrition and reproduction. However, it is important that you work closely with your veterinary healthcare team during the whole process as there is much individual variation and sometimes general advice is not appropriate for all dogs.

Before breeding, both sires and dams should be in excellent physical condition and free of any medical disorders, parasites, stress and of course any negative behavioral or genetic traits. The body condition score (BCS) should be lean to normal, or four or five on a nine-point scale. Your veterinarian can help you determine your dog's BCS if you are unsure. Obese male dogs may have trouble with mounting. Female dogs that are significantly overweight

should not be bred right away, as large fetuses and dystocia (difficulty in whelping) are more common. Instead, gradually transition to a complete and balanced diet that is formulated for active weight loss. At the same time, try to increase exercise to help reduce body fat and maintain lean muscle. If you delay the breeding until the next estrous cycle, usually four to six months later, that will usually be enough time to achieve a healthy BCS. Likewise, underweight dogs should be evaluated for any underlying medical disorders. If they are otherwise healthy, then gradually increase the amount fed or number of meals per day (for example, three instead of two). You may also need to transition to a diet that is more energy-dense (has more calories per cup or can).

Starting three to four weeks before breeding, the dam should be transitioned to a diet that is appropriate for gestation and lactation. Look for one of the following statements on the pet food label:

“\_\_\_\_ is formulated to meet the nutritional levels established by the AAFCO Dog Food Nutrient Profiles for gestation/lactation (or All Life Stages.”

“Animal feeding tests using AAFCO procedures substantiate that \_\_\_\_ provides complete and balanced nutrition for gestation/lactation (or All Life Stages.”

These sentences indicate that the product is intended for use in breeding females. Avoid foods that are labeled for “maintenance” because that term refers to adult dog requirements, not the special needs of reproduction. Dog foods that meet these requirements are generally higher in protein, fat and certain minerals than regular adult foods. They may also be more energy-dense which helps the dam maintain body condition during the stress of pregnancy and lactation. However, energy-dense dog foods may predispose to unwanted weight gain if overfed. You should determine the calorie content of

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the previous and the new foods and adjust the amounts fed (in other words, a cup of one food may have much higher or lower calories than a cup of a different food).

After successful breeding, the dam's food intake should remain the same for the first five weeks of gestation. Although fetuses are rapidly developing, during early- to mid-gestation the energy and nutrient needs are not higher. After the fifth week, her food intake should gradually increase by 25-50% depending on her BCS, breed and predicted size of litter (larger litters mean higher food intake is needed). For example, if she is eating three cups of food daily and maintaining a healthy weight, then during week six offer 3 ½ cups/day; week seven, 4 cups/day; weeks eight and nine, 4 ½ cups/day. This is an illustration only and individual dogs will vary. The goal is to have her eating approximately 50% more food by the end of gestation than at the beginning. Because her uterus is expanding and putting pressure on her stomach, she may not be able to eat two large meals a day. It is helpful to offer three or four smaller meals per day so that she can eat comfortably. However, if she is mildly

overweight (for example, a BCS of six out of nine) do not attempt to restrict food or put her on a "diet." This could result in nutrient and energy deficiencies.

If you are weighing the dam regularly, you will expect her to gain 15-25% of her starting body weight during gestation. For example, if her healthy body weight is 40 pounds, then she should weigh 46-50 pounds at the end. Approximately 12 hours before whelping, she will stop eating and not resume until about 24 hours after the puppies are born. First-time dams may need to be coaxed to eat after whelping as their inexperience may cause anxiety.

Lactation, or nursing, is the most challenging time of the reproductive process. Depending on the size of the litter and amount of milk production necessary to feed all of the puppies, the dam may need to eat double or triple her normal food intake. She'll also need to drink much more water than usual. Continue to offer the same food as during gestation – this is not the right time to abruptly switch diets. During the first week of lactation, her energy needs will increase about 25%. In the second

and third weeks, continue increasing the amount fed so that she is eating about three times as much as during gestation. Weeks four and five are the most demanding and some dams with large litters will actually eat up to four times as much food as normal. In order to achieve this high a food intake, you will need to offer meals four to six times a day. If she is only given two or three meals per day, she will feel full too quickly on the large portions and may not eat enough.

Weaning generally starts between four and five weeks of lactation and should be complete by week six. As the puppies start to eat solid food and nurse less often, the dam's food can be gradually decreased to the amount fed in early lactation (week one) and then after complete weaning she can resume her pre-pregnancy feeding amount. If desired, the dam can then be slowly transitioned back to her normal maintenance diet.

## TO SUMMARIZE:

Always work with a veterinarian who is experienced with canine reproduction and nutrition and who can advise you on specific details for your situation. Choose a diet from a reputable pet food company that is appropriate for reproduction. If you have any questions about diet options, contact the manufacturers and ask which diets are intended for breeding. Do not overfeed during early- to mid-gestation. Instead, offer more food toward the end of pregnancy and then be ready to feed approximately two to four times more than usual during lactation. For optimal health and the best chance at successful reproduction, maintain dogs at a lean body weight year-round.



## THIS ARTICLE WAS PROVIDED BY FEATURED ROYAL CANIN VETERINARIAN

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Dr. Craig Datz has over 25 years of experience as a practicing veterinarian and is a specialist in veterinary clinical nutrition. His areas of expertise include research and scientific communications, nutritional consultations, and relationships with specialists and colleges of veterinary medicine.



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