

Feeding Directions and Body Condition

Feeding instructions on pet food labels provide only a rough estimate as a starting point when first using a particular brand. The owner should make adjustments based on the animal's body condition response to the amount of food intake.

Food requirement is a reflection of calorie requirement. The amount of food required by a dog or cat is determined by the animal's energy requirement and energy value of the food. A lower amount (weight) of food is needed to meet the energy requirement when diets with higher energy contents are fed. At the same time, the dietary concentrations of essential nutrients have to be proportionately higher to ensure their adequate, absolute intakes. This highlights the relevance of proper essential-nutrient:energy ratios in a complete food that can be used as sole source of nutrition.

For commercial foods, dosage estimates are given in the feeding guidelines on the product label. For adult animals, estimates of the quantity of food are usually given for several different ranges in body weight and sometimes also for degree of activity as an extra determinant. For an individual animal, feeding guidelines are of limited value. The recommended amount is a starting point that may have to be adapted depending on the animal's body condition.

Food Dosage Calculation

Dosage estimation consists of three steps:

1. Calculate daily energy requirements for the intended animal category with different ranges in body weight;
2. Determine for the food in question the amount of energy per unit of weight; and,


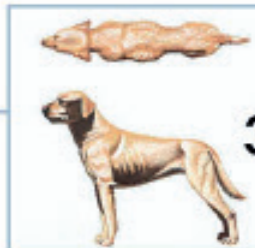
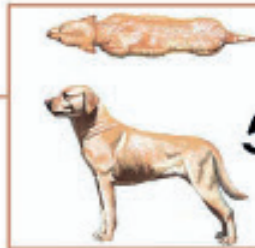
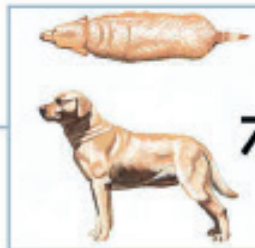
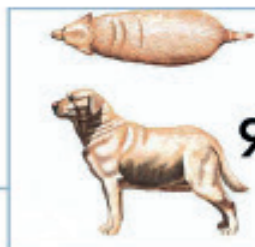
3. Divide the various energy requirements by the energy density of food to obtain dosages. Throughout, the energy available to metabolism is the standard.

Energy requirements are calculated with body weight and physiological state (growth, gestation/lactation, maintenance, physical activity) as determinants. Measurement of food energy in feeding trials with dogs or cats is most accurate, but it is usually computed using the proximate dietary contents and assumed energy values of fats, proteins and available carbohydrates. For each calculation, different formulas may be used. It is clear that the dosage numbers in a feeding guideline are markedly influenced by the choice of formulas.

Portion Size Measurement

Food dosage expressed as grams per day may be weighed with kitchen scales, but some owners may find this laborious. Many owners that feed dry food use a measuring cup supplied by the manufacturer. Such cups are marked with their own graded scale, but they may be inaccurate. When using calibrated cups to measure out a desired portion of 100 grams, the actual amount can be 15 percent lower or higher. Evidently, there are potential errors in the graded scale of a cup and in the process of measuring.

Between comparable, individual dogs or cats there can be sizeable differences

TOO THIN	1	Ribs, lumbar vertebrae, pelvic bones and all bony prominences evident from a distance. No discernible body fat. Obvious loss of muscle mass.	
	2	Ribs, lumbar vertebrae and pelvic bones easily visible. No palpable fat. Some evidence of other bony prominence. Minimal loss of muscle mass.	
	3	Ribs easily palpated and may be visible with no palpable fat. Tops of lumbar vertebrae visible. Pelvic bones becoming prominent. Obvious waist and abdominal tuck.	
IDEAL	4	Ribs easily palpable, with minimal fat covering. Waist easily noted, viewed from above. Abdominal tuck evident.	
	5	Ribs palpable without excess fat covering. Waist observed behind ribs when viewed from above. Abdomen tucked up when viewed from side.	
TOO HEAVY	6	Ribs palpable with slight excess fat covering. Waist is discernible viewed from above but is not prominent. Abdominal tuck apparent.	
	7	Ribs palpable with difficulty; heavy fat cover. Noticeable fat deposits over lumbar area and base of tail. Waist absent or barely visible. Abdominal tuck may be present.	
	8	Ribs not palpable under very heavy fat cover, or palpable only with significant pressure. Heavy fat deposits over lumbar area and base of tail. Waist absent. No abdominal tuck. Obvious abdominal distention may be present.	
	9	Massive fat deposits over thorax, spine and base of tail. Waist and abdominal tuck absent. Fat deposits on neck and limbs. Obvious abdominal distention.	

Nestlé Purina body condition system

in the amount of dietary energy needed, and thus in the required portion size of a certain food. For maintaining body weight of adult animals of the same breed and age, and with similar environmental conditions and physical activity, the amount of energy needed may vary between 30 percent below or above the group mean.

Body Condition

Food dosages are affected by the calculation formulas used. The measuring of helpings has a significant margin of error and the inter-individual

variation in energy requirement is substantial. For a single animal, body condition is the compass for portion control.

Prevention of overweight may increase the life span of dogs. In a study, Labrador Retrievers were monitored from weaning until death. Half of the dogs had unlimited or liberal access to a dry food, whereas their counterparts received 25 percent less of the same food. On the 1-9 scale shown, group-mean body condition scores were about 6.5 and 4.5 for the unrestricted and restricted-fed dogs

when they were 10 years old. On average, the restricted-fed dogs lived about two years longer.

Restricted feeding may promote longevity in dogs that tend to overeat. However, dogs with forced ideal body conditions may not be happy dogs. Dietary restriction causes continuous craving for food and may strain the owner-dog bond.

Dr. Beynen will be writing this exclusive column on dog and cat nutrition and nutrition-related items every month.



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