

Energy Requirement Calculations

$$\text{RER} = \text{BW}_{\text{kg}}^{0.75} \times 70$$

$$\text{MER} = \text{RER} \times \text{life stage factor}$$

Example for a 10 lb neutered dog:

$$\text{RER} = 4.5^{0.75} \times 70 = 216 \text{ kcal/day}$$

$$\text{MER} = 216 \times 1.4 = 302 \text{ kcal/day}$$

Nutritional Assessment Factors	Feline Life Stage Factors*	Canine Life Stage Factors*
Neutered adults	1.2–1.4	1.4–1.6
Intact adult	1.4–1.6	1.6–1.8
Inactive/obese prone	1.0	1.0–1.2
Weight loss	0.8	1.0
Gestation	1.6–2.0	3.0 (for last 21 days)
Lactation (based on number of offspring and weeks of lactation)	2.0–6.0	3.0 to ≥6.0
Growth	2.5	<4 mo: 3.0 ≥4 mo: 2.0
Work		Light: 1.6–2.0 Moderate: 2.0–5.0 Heavy: 5.0–11.0

*The above life stage factors are general guidelines for estimating caloric intake. Sedentary and/or indoor pets may require less caloric intake than indicated above. Adjustment of caloric intake should be done by monitoring BW and BCS.

BCS, body condition score; BW, body weight; MER, maintenance energy requirement; RER, resting energy requirement.

Calculate $\text{kg}^{0.75}$ by using a scientific calculator on most smartphones:

1. Open the calculator app.
2. Turn the phone sideways. This should reveal a scientific calculator.
3. Type the weight in kg. *In this example, it would be 4.5.*
4. Press the x^y button.
5. Type in 0.75, then press the = button.
6. The answer is $\text{kg}^{0.75}$. *In this example, it is 3.09.*

The **2021 AAHA Nutrition and Weight Management Guidelines for Dogs and Cats** are available at aaha.org/nutrition.

These guidelines were prepared by a Task Force of experts convened by the American Animal Hospital Association (AAHA) and were subjected to a formal peer-review process. This document is intended as a guideline only, not an AAHA standard of care. These guidelines and recommendations should not be construed as dictating an exclusive protocol, course of treatment, or procedure. Variations in practice may be warranted based on the needs of the individual patient, resources, and limitations unique to each individual practice setting.

