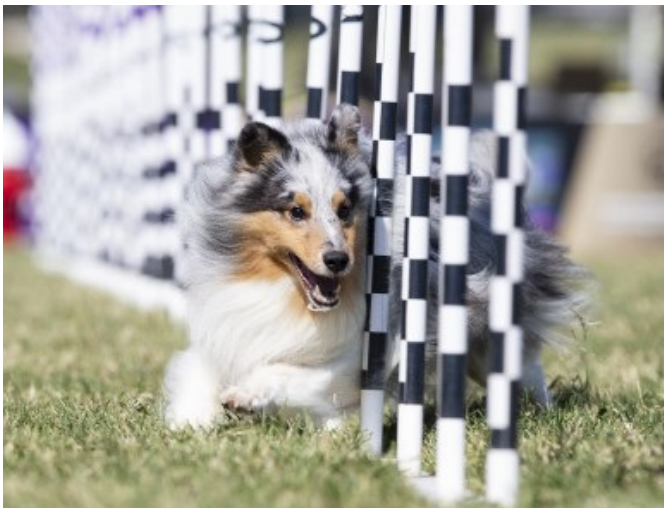
Highly Active and Working Dogs

NUTRITION FOR ACTIVE, WORKING AND SPORTING DOGS



Nutrition, when matched to the type of work or sport, can help highly active, working and sporting dogs successfully perform to their genetic potential and training.

Key Messages

- The energy needs of working and sporting dogs vary widely (see table), because each activity has unique performance requirements that influence energy and nutrient needs of individual dogs.

Anticipated energy requirements of selected canine working and sporting activities
Adapted from Shmalberg (2014) and Wakshlag & Shmalberg (2014)

LOW[a] (<25% increase in energy needs)	**MODERATE**[a] (25%–100% increase in energy needs)	**HIGH**[a] (>100% increase in energy needs)
Agility	Bikejoring (2–10 miles)	Sled dog racing (>20 miles)
Obedience or conformation	Carting (2–10 miles)	Bikejoring (> 10 miles)
Disc dog	Field trials	Carting (>10 miles)
Dock jumping	Herding	Hunting (>3 hours)
Greyhound racing	Hunting (<3 hours)	
Earth dog	Search and rescue	
Low-activity service	Weight pulling	
Coursing	Sled dog racing (<20 miles)	
Flyball	High-activity service	

a The exercise amounts for many of these activities have not been reported. In general, short periods of activity, even if vigorous, have small effects on total calorie requirements. The moderate and high categories depend greatly on the distance traveled and the ambient temperature. This is based on typical active dog lifestyle maintenance energy requirements of 132 x ($BW_{kg}^{0.75}$).

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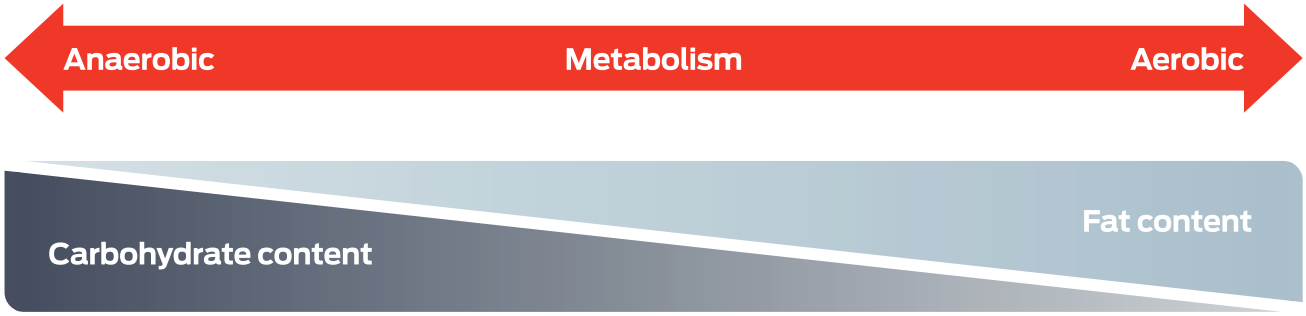
Key Messages (continued)

- Exercise intensity and duration determine whether a dog's metabolism relies predominantly on fatty acids, glucose or both (see figure). This information can help guide appropriate diet selection.



- Sporting and working dogs perform their best when maintained in lean body condition (4 to 5 on a 9-point scale).
  - Regularly monitor body condition (e.g., ribs, waist and tummy tuck) at home and adjust food amounts as needed to keep dogs from becoming too thin or too heavy.
  - The amount of calories provided may need to be adjusted seasonally – during the off-season, during training and during frequent activity.
- Not all active working and sporting dogs need a performance dog food.
  - Some dogs, such as sprinting dogs, perform well on a high-quality, highly digestible adult maintenance food that is balanced with moderate protein, fat and carbohydrates.
  - Dogs involved in endurance activities may need a performance formula that is higher in fat and protein, especially palatable and highly digestible so they can physically eat enough.
- Dehydration can reduce performance in exercising and hard-working dogs.
  - Hydration is important in exercising dogs for two reasons:
    - Exercise is a heat-producing activity.
    - Water is required to help dissipate heat and to remove the byproducts of energy metabolism.
  - All exercising dogs require more water than dogs at rest.
  - Dogs lose water quickly during panting, which is how they cool themselves.
  - The amount of water required by an exercising dog will depend on a dog's body weight, the ambient temperature and humidity, efficiency of evaporative water loss during panting, and exercise duration and intensity.

Additional Resources

Hill, R. C. (2004, July 31). Feeding dogs for agility [Presentation]. University of Florida College of Veterinary Medicine 8th Annual Dog Owners & Breeders Symposium, Gainesville, FL, United States. http://www.rrcus.org/health/pdf/Feeding_For_Agility.pdf

Shmalberg, J. (2014). Canine performance & rehabilitative nutrition part 1: Canine performance nutrition. *Today's Veterinary Practice*, 4(6), 72–76. https://todaysveterinarypractice.com/acvn-nutrition-notes-canine-performance-nutrition/

Toll, P. W., Gillette, R. L., & Hand, M. S. (2010). Feeding working and sporting dogs. In M. S. Hand, C. D. Thatcher, R. L. Remillard, P. Roudebush & B. J. Novotny (Eds.), *Small animal clinical nutrition* (5th ed., pp. 321–358). Mark Morris Institute.

Wakshlag, J., & Shmalberg, J. (2014). Nutrition for working and service dogs. *Veterinary Clinics of North America: Small Animal Practice*, 44(4), 719–740. doi: 10.1016/j.cvsm.2014.03.008

Zanghi, B. M., Robbins, P. J., Ramos, M. T., & Otto, C. M. (2018). Working dogs drinking a nutrient-enriched water maintain cooler body temperature and improved pulse rate recovery after exercise. *Frontiers in Veterinary Science*, 5, Article 202. doi: 10.3389/fvets.2018.00202

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