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# Feeding Your Canine Athlete

By **Gretchen Reynolds** August 20, 2014 12:01 am

Gretchen Reynolds on the science of fitness.

Many people who run or walk with their dogs treat them like human running partners, offering them sips of Gatorade or half of a sports bar during a workout. But the latest science about performance nutrition for canines underscores that dogs are not people. They have more fur and cellular mitochondria, the small structures in cells that generate energy; lower body weights; and fewer fecal-related inhibitions than their human companions, each of which affects their nutritional needs.

To learn more about sports nutrition for dogs, I spoke recently with Dr. Joseph Wakshlag, a professor of clinical nutrition and sports medicine at Cornell University College of Veterinary Medicine in Ithaca, N.Y., and the author of a comprehensive new review about nutrition for active dogs, published this month in *Veterinary Clinics of North America: Small Animal Practice*. Among its many tidbits of knowledge, the article notes that dogs are endowed with more endurance-related muscle fibers than cats, making them better running companions; competing in a Frisbee or agility competition is, for a dog, glorious fun but relatively little exercise, requiring only about 25 percent more calories than lying on a rug; and consuming sports drinks tends to cause dogs to empty their intestines soon afterward, often with little warning.

This is all useful information, as were Dr. Wakshlag's replies to my questions. What follows are excerpts from our conversation.

Q.

How much exercise qualifies a dog as an athlete, and do canine athletes have special dietary needs?

A.

It's similar to human athletes. There are sprinters, acrobats, marathon runners, all with different nutritional considerations. On the one hand, you have earthdogs — the dachshunds and such — designed for fast, short sprints, and then there are sled dogs that run 50 miles or more. Your typical running companion would be somewhere in between. In general, I'd say that if a dog is running continuously for more than 30 minutes, you should probably take a look at its diet, in terms of performance.

Q.

Does that mean feed it like a human runner?

A.

No. Humans and dogs fuel exercise very differently. When we run, we start out burning mostly glycogen, which is stored carbohydrates. Dogs don't, partly because they have more mitochondria in their muscles than we do. Dogs burn fat as their primary endurance fuel, and carbohydrates are not very important for them.

Q.

So there's no reason to give a dog a sports bar, which is full of carbohydrates, during a run?

A.

No. Same for those gel packets. I see people sharing them with their dogs. The dog may like it, but it's not helping its running. Fat is the fuel for performance dogs.

Q.

So should an athletic dog's diet contain lots of fat?

A.

That's a good question. For dogs jogging along with you for 20 minutes a few times a week, a normal commercial dog food containing about 15 or 16 percent fat should be fine. But if you and your dog run five or 10 miles a day, that dog likely needs a slightly higher-fat diet.

There are special high-performance dog foods now that contain as much as 20 percent fat. Or you can just add a teaspoon of olive oil to your dog's kibble. That increases fat intake by 1 or 2 percent, which can be plenty. On the other hand, fat is somewhat indigestible and can lead to greater fecal mass. So if you increase your dog's fat intake, be prepared to carry an extra plastic bag or two when you go running.

Q.

What about protein? How important is it?

A.

Vital. Athletic dogs need protein to build and maintain muscle. In general, their diet should consist of at least 25 percent protein, preferably from meat. In one study, dogs fed plant-based soy protein experienced far more musculoskeletal injuries than dogs consuming meat protein.

Q.

And treats? Are they a good idea?

A.

It depends on what else your dog is eating. The biggest health problem for most dogs is overweight. If you took your dog for a two-mile walk and reward him with a Milk-Bone, you've just given him more calories than he burned. A pat on the head would be healthier.

Q.

Do you recommend raw-food diets, which have become popular for dogs?

A.

The raw-food diets available at pet stores are fine, if expensive. I do not recommend that people create their own raw-food diets at home. It's difficult to include all of the necessary nutrients, and there can be food-borne illnesses.

Q.

Any advice on hydration for exercising dogs?

A.

Dogs don't sweat like we do. They pant to cool themselves. But they do lose fluids during activity. On the other hand, they are much better than most people at

rehydrating. We did a study with search-and-rescue dogs working in 90-degree heat. They replaced their fluid losses almost drop for drop.

My advice would be to make sure that water is available if you'll be running with your dog for more than 30 minutes. But don't share your Gatorade. Dogs don't need carbohydrates or electrolytes, and the only study I know of that tested sports drinks in dogs found that the main outcome was gastrointestinal distress.

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