



Food for thought

Dr Karen Davies is asked the right time to feed a gun dog when a hunt is on, and sets out the science and research that provides a better understanding of canine nutrition.

With regard to the question posted, feeding immediately before or during a hunt can lead to an energy drain caused by meeting the requirements for digestion.

To give a quick burst of energy that is not going to sit in the stomach or require significant energy spent on digestion, try an electrolyte solution (Vytrate and Lectade) containing glucose, which can be absorbed to meet energy requirements without the need for digestion. It also has the added benefit of replacing electrolytes.

More broadly, there is significant information suggesting feeding a hard-working dog is optimal when the food is provided well in advance of hunting or training for the day, and not immediately before or during.

Knowing that it takes 20 to 24 hours for your dog's meal to be completely digested and eliminated as a bowel movement, we can then decide what and when to feed.

Nutrition studies have previously shown a dog's endurance can be as much as double when on an empty stomach

as compared to having eaten within four hours prior to exercising.

Fat in the diet will release more energy per gram and contains double the amount of calories than found in carbohydrates. However, fat requires longer to be digested and must be fed significantly earlier than a carbohydrate-based diet for that energy to be available to the muscles.

If energy is to be derived from the fat content in the meal, it is best fed 12 to 18 hours prior to exercise. When a carbohydrate-based energy source is the mainstay of the diet, then this should be fed six to eight hours prior.

Because of the lead times required for digestion and the use of higher-fat diets, we often recommend once-daily feeding.

If you are planning to work your dog, feed preferably 18 hours prior to the hunt and use a diet higher in fat (20–22 per cent). Performance diets take this into consideration, such as Royal Canin Endurance 4800.

If you are using a maintenance diet (this

will have about 10 per cent fat), the bulk you will need to feed may mean the animal needs seven to eight cups per day. This is too great a quantity to be fed in one meal, so split feeding may be required.

Bear in mind, all dry formulations swell in the stomach as they are digested.

Most pellets will swell to double the size, meaning your dog will feel bloated and nauseous when a large, carb-based meal is fed all at once. It is also widely recognised that hunting animals fed high-carb diets are at increased risk of lactic acid build-up and "tying up" in the hours/days after the hunt.

If you are on a multi-day hunt, it is important to let the dog rest at the end of the working day before feeding. Concentrate on getting the dog's breathing back to normal and rehydrating it. Leave feeding for at least an hour after the end of the hunt. This will also lower the risk of "bloat" or gastric dilation/torsion.

Homemade diets are a bit hit and miss. While many hunters and breeders



develop and swear by their own diets that they have “used for years”, we know from experience that more than 95 per cent of these diets are nutrient deficient.

While you allow for protein/fat/carb quantities, when tested, these diets are often deficient in fibre and micro-nutrients such as EFAs (essential fatty acids), vitamins and minerals.

The right amount of fibre and the right type of moderately digestible fibre is essential for good gut health. Insufficient fibre means poor gut health.

Constipation is not uncommon in dogs with insufficient fibre.

The gut bacteria also produce SCFA (short chain fatty acids), essential for both gut and overall health. Gut bacteria produce many of the B group vitamins and neurochemicals required for brain function.

Poor-quality fibre will result in greater numbers of fermentative bacteria, and we have all been on the end of that problem (usually as a captive audience with all the windows up). Beet pulp is a great source of moderately digestible fibre.

It is extremely important to use a balanced vitamin and mineral supplement and some quality sunflower/safflower oil or coconut oil in the food to supply EFAs. The ratio of omega 6 to omega 3 is also critical and additional vitamin E will be required to utilise the omega 3. These nutrients are not only essential for the demands of a high-intensity athlete but

also for repair and regeneration of tissues damaged during exercise.

Overwhelmed yet?

Now you are beginning to understand just how tricky it is to balance a homemade diet, even more so when you are training an elite athlete. I am not a fan of grain-free diets for hunting dogs (unless they have a medical problem that means they cannot handle grain) because they are a good source of carbs and fibre, essential in any diet for short-term energy requirements.

It is essential you DO NOT USE vitamin and mineral supplements intended for human use. They are almost all made with artificial sweeteners such as Xylitol, which will destroy your dog’s kidneys. No Kidneys=No Dog.

My recommendation is to use a premium commercially prepared diet that takes all the nutritional requirements of your pet into consideration. I have been using the Royal Canin Endurance 4800 for several years and had great results.

It is equally important to reduce the calorie load and nutritional content of your dog’s meals when you are not hunting. There is nothing pretty about chubby hunting breeds and the risk of injury is greatly exacerbated.

During the off-season, (assuming your preferred form of hunting has one), it is important the dog’s calorie intake is reduced to match the decrease in intensity

of activity.

The diet should be about 10 per cent fat, higher in protein for muscle maintenance and tissue regeneration and to give the feeling of fullness, higher in digestible fibre to again make them feel full for longer and minimise the “I’m dying of starvation” episodes, with that woeful look.

Calorie content should be about the 3500–3800 calories per kilo for your maintenance diets. In addition, remember to keep up the exercise; you cannot go from sitting on the couch to flat-out and not expect problems.

If you are feeding a pup, again it is imperative you use a balanced diet suitable for a pup of the breed size you are raising. Beagles need a medium-breed diet, pointers and labs a large-breed diet and bull arabs and wolfhounds a giant-breed diet, for example.

Protein and calorie levels required for growth, and calcium for the development of bones are the main differences in puppy diets.

Please do not feed large amounts of meat to pups as muscle meat is high in phosphorus, which competes with calcium for absorption and can lead to brittle bones and increased risk of fractures.

Calcium supplements can be fed, but again, a premium-balanced diet will achieve all of these things without you needing to go out and get a degree in canine nutrition and your own laboratory.