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Diabetic Dog Diet

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By now you know that diabetes mellitus is about a lack of insulin and a need to balance insulin given by injection with dietary nutrients, especially sugars, fats and proteins. Regardless of the patient's species, there are some basic principles that hold true for the dietary management of diabetes mellitus. First, the obvious: the pet must like the food and reliably eat it. For most diabetic dogs, the excessive appetite typical of the disease ensures this but after regulation is achieved and appetite is more normal, it is important that the dog eats on a dependable schedule. Insulin is typically given only after the pet has eaten so the food should taste good and the pet should want to eat it. Second, the food must be of quality and quantity to maintain a good body condition so that the dog is able to build muscle and a healthy amount of body fat. Some diabetic dogs are very thin while others are too fat. It is important to tailor the diet to the individual rather than to adhere to rigid dietary rules.

Additional Resources

- Diabetes Mellitus: Introduction
- Cataracts in Diabetic Dogs
- Diabetic Ketoacidosis in Dogs and Cats
- Diabetic Cat Diet
- Glargine (Lantus) and Detemir (Levemir) Insulin
- Insulin Administration in Cats
- Insulin Administration in Dogs
- Insulin Alternatives
- Monitoring Glucose Regulation in Dogs and Cats
- Hard to Regulate Diabetic Cats
- Hard to Regulate Diabetic Dogs
- Home Testing of Blood Glucose for Diabetic Cats

The ultimate goal is to feed the dog two similar meals a day, approximately 12 hours apart, with less than 10 percent of the total nutrients for the day coming from treats. Insulin is given within an hour of eating each meal and this schedule should be maintained with as much regularity as possible.

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Fiber

Fiber comes in two types: soluble and insoluble. Soluble fibers, such as beet pulp, guar gum, psyllium and fructooligosaccharides form a gel that holds water inside the bowel contents potentially softening stool. They also serve as probiotics, which means they resist digestion higher in the tract and are presented to the bacteria of the large bowel. These large bowel

bacteria break down the fiber-containing nutrients to feed not only themselves but also to feed the animal's colon cells, improve bowel circulation, and generally contribute to bowel health. The problem is that viscous stool leads to a higher post-meal sugar surge in the bloodstream, which is exactly what we do not want. Insoluble fibers, such as cellulose, bulk up the stool, which can be stimulating to the colon. Insoluble fiber is not digested by the colon bacteria and does not offer calories to the pet that has consumed them.

After a meal, the starches and sugars taken in with the food lead to a postprandial surge in blood sugar level. Since the diabetic dog is dealing with runaway blood glucose levels 24 hours a day, meals, as necessary as they are, raise blood sugar even further. Our goal with dietary therapy is to blunt this effect. Insoluble fiber in the diet helps accomplish this by slowing the digestion and transit of the food in the gut. Too much insoluble fiber, however, will give the pet a false sense of being full and reduce appetite, which may not be what we want if the pet is underweight. So what are we looking for in a food? If the dog is overweight, we probably want a higher fiber diet (say greater than 15 percent of the dry matter as fiber) but for a more average dog we want a moderate amount of fiber (5-15 percent of the dry matter). The fiber content noted in the guaranteed analysis will likely not specify if the fiber is soluble or insoluble; you will need to check the ingredient list to be sure.

To calculate the percentage of fiber in a diet on a dry matter basis, look for the crude fiber and the moisture content amounts on the guaranteed analysis on the food label. The moisture content is the amount of water in the food on an as fed basis expressed as a percent (what percent of the food you are feeding is actually just water). Take the moisture content and subtract from 100 to get the dry matter content of the food (the part of the food that is actually food and not water). For example, if the moisture content is 75 percent (typical canned food) then the dry matter is 25%. Now take the crude fiber value from the guaranteed analysis on the label and divide by the percent dry matter. Example: crude fiber on the label is 2%, moisture content is 75%. This means dry matter is 25 percent and 2 divided by 25 = 0.08 or 8 percent. Our hypothetical canned food is 2% fiber as fed but 8% on a dry matter basis. When comparing foods, always compare on a dry matter basis so as to compare apples to apples.

High Digestibility Diets: Probably not the Best Thing

There are numerous diets on the market designed for dogs with sensitive stomachs. These foods typically are designed for easy digestion and absorption. While this is helpful to the dog with digestive issues, easy digestion and absorption amounts to higher blood glucose levels after eating. This is probably not the best thing for a diabetic dog.

Similarly, soft moist foods are preserved and flavored with sugars. These, as you might guess, raise postprandial blood sugar readily and are poor choices. These diets are not as common as they once were and should not be confused with canned foods.

Low Fat

A common issue that accompanies diabetes mellitus is elevated triglycerides (fats) in the bloodstream. In humans, this is the doorway to vascular disease, cholesterol deposits, heart disease, and stroke. Dogs do not generally have to contend with these issues but dietary fat becomes more relevant if the dog is one of the 30% for whom pancreatitis is believed to have damaged the pancreas and led to the diabetes in the first place. If pancreatitis is in play or if the patients circulating triglyeride level is high, then fat restriction is going to be a must. Further, L-carnitine supplementation may also be of benefit as this nutrient is helpful in fat transport and metabolism. Fat-restricted diets may not be a good idea for very thin diabetic dogs, however.

Other Concepts

As long as the diet is consistent, it is generally possible to work with it in achieving diabetic regulation. Here are some additional tips:

- If the dog has an additional medical problem that requires a specific diet in its management, then this trumps the suggestions for diabetic management.
- As long as a reputable food that has passed AAFCO feeding trials is being fed, it should not be necessary to add nutritional supplements.
- Ideally, a brand of food with a fixed formula is preferred to one with an open formula. Foods with an open formula stick to their prioritized ingredient list on the label and to the guaranteed analysis minimums and maximums, but the exact ingredient amounts are not fixed. A fixed formula food uses specific amounts of each ingredient every time in every lot. In general, non-prescription diets are open formula diets.

Your veterinarian can help you choose the most appropriate food for your diabetic dog. There are several commercial diets made just for this purpose or you may elect to find one on your own. You can also contact a commercial pet nutrition service for further help. Ask your veterinarian if you need assistance.

Related resources

- Insulin Administration in Cats - *February 18, 2021*
- Insulin Administration in Dogs - *January 19, 2021*
- Hard to Regulate Diabetic Dogs - *September 2, 2020*
- Diabetic Ketoacidosis in Dogs and Cats - *August 31, 2020*
- Monitoring Glucose Regulation in Dogs and Cats - *March 31, 2020*
- Insulin Alternatives - *October 15, 2019*
- Cataracts in Diabetic Dogs - *August 25, 2019*
- Glargine (Lantus) and Detemir (Levemir) Insulin - *August 6, 2019*
- Diabetes Mellitus: Introduction - *May 19, 2019*
- Hard to Regulate Diabetic Cats - *August 20, 2018*
- Diabetic Cat Diet - *July 17, 2018*
- Home Testing of Blood Glucose for Diabetic Cats - *November 24, 2014*