Diabetes and Cats

In last month's article I discussed Diabetes mellitus in general as well as how it affects dogs. This month I will discuss diabetes in cats as there are significant differences. Most dogs at the time of diagnosis of diabetes are insulin dependent and will remain so for the rest of their life. Cats are more likely to have insulin resistance which means steps can be taken to reverse insulin resistance and achieve Diabetic remission. If Diabetes is diagnosed early enough you may be able to reverse the disease process to the point where no insulin is needed, and it can be controlled with diet alone. To understand diabetes please refer to the previous month's article.

The signs of diabetes in cats are similar to that of dogs. You will notice increased drinking, urination, weight loss despite an increased appetite. Other signs may include poor hair coat and dehydration. Some cats will seem weak in the hind end and seem to stand with more of the hind limb in contact with the ground than is normal (this is known as a plantigrade stance). Cats with these signs should have blood work and a urinalysis performed. The diagnosis is made by noting higher than normal blood glucose values and glucose in the urine. Some cats can have significant increases in blood glucose due to stress (induced by coming to the veterinarian) which can make the diagnosis a little more difficult. In these cases a Fructosamine level can be run. Elevations in fructosamine are seen when blood glucose is consistently high for several weeks.

It is important to determine if the cat has complicated diabetes at the time of diagnosis. Complicated diabetes refers to the presence of other disease processes such as ketosis, ketoacidosis, urinary tract infection, pancreatitis, renal disease, and others. A cat with complicated diabetes will require treatment of the other problems or it will be difficult to regulate the diabetes. A common complication of diabetes mellitus is diabetic ketoacidosis. Untreated diabetic animals will convert fat to ketones as an alternate energy source. The ketones will continue to accumulate resulting in an acidotic state. These pets are usually

visibly sick, lethargic, and dehydrated. They will require hospitalization and fluids to stabilize them prior to starting long term therapy for the diabetes.

The good news for most diabetic cats is that they commonly have non-insulin dependent diabetes at the time of diagnosis. This means that the pancreas is still producing some insulin but it is either not enough or the cells in the body are resistant to insulin's effects. Diabetic cats are about 6 times less sensitive to insulin's effects than healthy cats. Many cats with diabetes are also overweight. Obesity is a major risk factor for diabetes in cats just as in people. Being overweight causes the cells in the body to become resistant to insulin. This means that even though insulin is present and is trying to tell the cells to use glucose as energy the cells do not listen

In a newly diagnosed diabetic cat it is important to start therapy with the goal of achieving diabetic remission (no longer requiring insulin). The best course of treatment for these pets is to start a high protein, low carbohydrate diet such as Purina DM. These are veterinary prescription diets and are a major component to achieving diabetic remission. If the cat is overweight a weight loss program should be started to achieve 1% weight loss per week. We can select the proper diet for your cat and design a feeding schedule to achieve the desired weight loss. The other major component to achieving remission is the use of long acting insulin known as Glargine. Glargine is a newer longer acting insulin used in people. In a study of 24 newly diagnosed diabetic cats all 8 of the cats started on Glargine as well as a high protein/low carbohydrate diet achieved remission. Only 5 of 16 cats using intermediate types of insulin and high protein diets achieved remission.

Owners will need to be committed to daily home treatments including twice daily injections of insulin as well as regular visits to the veterinarian for monitoring and blood work. When insulin is started most cats stay in the hospital to closely monitor blood glucose. Once blood glucose is stable given a specific dose of insulin the patient is sent home. At that time we demonstrate proper insulin injection technique, proper insulin storage and monitoring at home. We will then schedule regular rechecks and if possible slowly lower the insulin doses.

Over the next several months we may be able to stop giving insulin if the blood glucose remains normal as we decrease the dose. Once we achieve remission we will still have regular checkups to make sure blood glucose remains stable. It is still very important that these cats stay on the diabetic food to remain in remission. Owners will also need to monitor the patient closely at home. If there are any signs of increased drinking/urination or poor appetite, lethargy, vomiting a recheck will be needed. Cats that do not achieve remission or return to an insulin dependent state after remission will likely need to stay on insulin for life.

To achieve remission early detection is important. If you have a cat that is drinking and urinating a lot or you are concerned about diabetes in your pet please call 303-674-7400 to set up an appointment. You can also visit www.elkmeadowvet.com for information about our hospital.