

Don't Rush the Process! Diabetes Patients Require Patience



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Q Diabetes can be a challenging condition to manage in both dogs and cats. What are some of the primary obstacles veterinarians and clients must overcome?

A I tell my students that one of the most challenging aspects of working with owners of diabetic pets is communicating the need for patience. The idea of living with a diabetic pet and giving insulin injections twice a day can be so overwhelming to owners. Dogs with uncontrolled diabetes are especially hard to live with; due to the polydipsia and polyuria associated with the disease, owners must frequently let their dogs outside or clean up accidents in the house.

While owners — and veterinarians — are highly motivated to get their pet's diabetes under control quickly, it can take 30 days or more to achieve this, and the process requires patience. I've seen many cases where veterinarians who are anxious to provide relief for their clients start patients on insulin, then change the dose two days later if they haven't seen improvement. This is counterproductive, because the patient needs seven to 14 days¹ to equilibrate to the dose before the full effects can be seen.

The first couple of months following a diabetes diagnosis are crucial. If the veterinarian can achieve control of the patient's condition in this time frame, median survival is approximately 1.5 years in cats and 2 years in dogs.^{2,3} The key is to be patient and not expect to achieve control in just a few days.

Q What other advice do you have for veterinarians who are managing pets with diabetes?

A Forming a good relationship between owner and veterinarian is paramount. Along with educating owners about monitoring and management, veterinarians need to talk with owners about how the dog or cat is doing so they can correctly interpret the lab data. With cats in particular, lab tests can't be viewed in isolation. For example, with my own diabetic cat, I was unable to obtain an accurate glucose curve in the hospital because he suffered from severe stress hyperglycemia. Despite these numbers, I knew his diabetes was controlled because his urination habits had returned to previous levels, his appetite had normalized and his weight had stabilized. It's imperative that veterinarians consider both lab tests *and* clinical signs when monitoring patients.

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Q What are your priorities for dietary management of cats and dogs with diabetes?

A High-protein, low-carbohydrate diets play a role in both management of affected cats and the potential for remission, which is the ultimate goal. Losing weight also contributes to remission, especially if the cat is severely obese.

With dogs, the most important dietary factor is consistency. While people with diabetes can adjust their insulin doses based on what they're eating, we aren't equipped to make those calibrations in veterinary medicine. It's really important to feed the same amount of the same diet at the same time every day. Because obesity causes insulin resistance and reduces the action of both endogenous and exogenous insulin, weight management is also important in diabetic dogs.⁴

Q What future developments might help improve the management of pets with diabetes?

A Some exciting things on the horizon include new insulins and incretin drugs, as well as increasing understanding of continuous glucose monitors that enable pet owners to do glucose curves at home. Innovations like these offer hope of further improving our ability to manage patients with diabetes.



¹ Roomp K, Rand JS. Management of diabetic cats with long-acting insulin. *Vet Clin North Am Small Anim Pract* 2013;43(2):251-66.

² Callegari C, Mercuriali E, Hafner M, Coppola L, Guazzetti S, Lutz TA, Reusch CE, Zini E. Survival time and prognostic factors in cats with newly diagnosed diabetes mellitus: 114 cases (2000-2009). *JAVMA* Vol 243, No. 1, July 1, 2013, 91-95.

³ Fall T, Hansson H, Hedhammar A, Kämpe O, Egenvall A. Diabetes Mellitus in a Population of 180,000 Insured Dogs: Incidence, Survival, and Breed Distribution. *J Vet Intern Med* 2007;21:1209-126.

⁴ Mattheeuws D, Rottiers R, Kaneko J, Vermeulen, A. (1984). Diabetes mellitus in dogs: relationship of obesity to glucose tolerance and insulin response. *Am J Vet Res* 1984; 45(1), 98-103.

Helping Cats Give Insulin the Boot



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Studies have shown remission rates for cats with diabetes mellitus can run from 15 percent to 100 percent.¹ The earlier we implement appropriate medical and dietary management, the more likely the diabetic cat is to respond favorably to eventual withdrawal from insulin.²

Achieving remission depends on several factors. Is the patient overweight? Does he or she have concurrent diseases? Will the owner be compliant with medication and diet? Administering insulin is a must to stabilize diabetic patients. It's important for clinic staff to educate clients about the correct way to store insulin, how to handle a syringe and how to inject insulin properly.

Another critical factor is the extent of damage to pancreatic beta cells. Cats diagnosed late in the disease process may have cell damage so severe that insulin may be required indefinitely. Cats with conditions such as acromegaly, chronic renal disease, thyroid disease and chronic pancreatitis are likewise poor candidates for remission.

Nutritional management

The goal with any feline diabetic patient is to stabilize glucose levels. In addition to determining the appropriate insulin dose, we need to ascertain what nutritional regimen will work best. High-protein, low-carbohydrate diets have been shown to be optimal for cats with diabetes,³ as well as for promoting retention of lean body mass.⁴ Intake of carbohydrates should be limited because they may contribute to hyperglycemia and glucose toxicity.

Many diabetic cats are also obese — a factor that further impairs the cats' ability to achieve remission. I believe weight loss should be prioritized in feline patients with a body condition score of 8 or greater on a 9-point scale.

According to AAHA guidelines, the optimal food for a diabetic cat in any



Feeding the Feline Diabetic Patient

According to the 2018 AAHA Diabetes Management Guidelines, a high-protein, low-carbohydrate, low-fiber diet is optimal for cats with diabetes.

body condition is a formula that is high in protein, low in carbohydrates and low in fiber.¹ With this in mind (and remembering that every patient is unique), I'll most often recommend Purina® Pro Plan® Veterinary Diets DM Dietetic Management® Canned Feline Formula for my diabetic patients. If I have a patient that is overweight as well as diabetic, I'll strive to maintain control of the diabetes with any of the DM formulas after a healthier weight is achieved. My goal is to help reduce insulin requirements by providing more appropriate glycemic control.

Once the patient is at a healthier weight and responding well to insulin

therapy with a series of stable glucose curves, I can begin the process of slowly weaning the cat off of insulin — always with close monitoring and the support of a compliant owner — to see if this option works for them.

- 1 Behrend E, Holford A, et al. 2018 AAHA Diabetes Management Guidelines for Dogs and Cats. *J Am Anim Hosp Assoc.* 2018;54:1-21.
- 2 Roomp K, Rand J. Intensive blood glucose control is safe and effective in diabetic cats using home monitoring and treatment with glargine. *J Feline Med Surg.* 2009 Aug;11(8):668-82.
- 3 Zoran D, Rand J. The role of diet in the prevention and management of feline diabetes. *Vet Clin North Am Small Anim Pract.* 2013 Mar;43(2):233-43.
- 4 Laflamme D, Hannah S. Increased Dietary Protein Promotes Fat Loss and Reduces Loss of Lean Body Mass During Weight Loss in Cats. *Intern J Appl Res Vet Med.* 2005;3(2):62-68.

It Takes a Team: Tackling Diabetes Management Together



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Feline diabetes presents both medical and emotional challenges to veterinary professionals and clients. While client education is key to successful disease management, the way the information is delivered can make a significant and positive difference for both clients and patients.

Reducing the risk: empower the client

Education starts with the owners of at-risk cats. The subtleties of feline behavior and symptoms of diabetes can make it difficult to tell something is wrong. We ask owners to watch for the most common outward signs of diabetes, including increased appetite and thirst and more frequent urination, and also explain why routine lab workups and physical exams are critical.

While obesity is a well-known risk factor for feline diabetes, few clients welcome the idea of a weight-loss plan. Diet is essential, but teaching clients to also incorporate more calorie-burning play into their cats' lives can be a positive way to address the challenge.

Sharing the news: take a step-wise approach

When a diabetes diagnosis appears imminent, I initially just say that I'm "highly suspicious" that a cat has diabetes. Once I have lab results in

hand, I call clients with the diagnosis. At this stage, it's essential to maintain a positive outlook and stress that diabetes is a chronic but *manageable* condition.

Because clients typically feel overwhelmed by the news of a diabetes diagnosis, I am careful not to burden them with too much detail at this point. Instead I give them a day or two to process the information, then schedule a free follow-up consultation. I have found this approach can help prevent delays in starting a treatment plan and improve compliance.

Formulating the plan: create it together

During the consultation, we cover the basics, both verbally and in writing, to prevent information overload. In addition to explaining serious complications such as diabetic ketoacidosis and neuropathy, I describe what can happen if the insulin dose is too high or too low.

We start our feline diabetic patients on insulin and gradually transition them to Purina® Pro Plan® Veterinary Diets DM Dietetic Management® Feline Formula. Because medication and diet are both vital, we make sure clients understand the importance of:

- Scheduling regular feeding times
- Monitoring food intake
- Understanding when to call the veterinarian

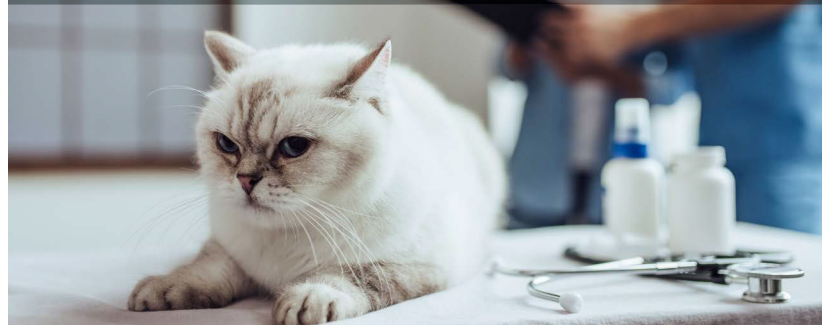
Many clients fear the idea of needles and injections. I like to have all family members present during the initial consultation to help dispel "injection anxiety." We demonstrate the injection first, then have the client practice with sterile water. Seeing that the cat does not react to the injection helps build confidence.

I always stress the valuable role of diet. Diabetic remission is possible for some patients; even when it isn't, we can often reduce the insulin requirement to a very low level, which helps reduce the risk of hypoglycemia. We are fortunate that something as straightforward as changing a cat's diet to the appropriate therapeutic formula can make such a difference in the lives of diabetic cats.

Key Takeaways

- While most owners and veterinarians are anxious to get their pet's diabetes under control quickly, it can take 30 days or more to achieve this with medication and diet.
- High-protein, low-carbohydrate diets have been shown to be optimal for managing cats with diabetes, as well as promoting retention of lean body mass.
- Managing the medical and emotional challenges of pet diabetes requires a close working relationship between veterinarian and owner.

Because owners often feel overwhelmed by a diabetes diagnosis, it is important to not overburden them with information upon breaking the news.



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