

# What's the Best Treatment for Feline Diabetes?

An estimated 600,000 cats in the US are diagnosed with diabetes, and about 125,000 go untreated because of the complexity of options. The first oral medication to treat feline diabetes has just been approved but know what's behind its blackbox warning before requesting a prescription.

**Analysis by Dr. Karen Shaw Becker**

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## STORY AT-A-GLANCE

- The FDA recently approved the first oral medication to treat diabetes in cats who are not being treated with insulin
- The drug, called Bexacat, carries an FDA black box warning due to its potential to trigger adverse reactions, including ketoacidosis (which can be fatal)
- Obesity is the greatest risk factor for feline diabetes, along with a dry food diet; other risk factors include vaccinations, indoor confinement coupled with inactivity, and corticosteroid therapy
- To help reduce the risk of diabetes in your cat, keep him at a healthy weight, switch from kibble to a fresh meat-based diet, offer him safe access to the outdoors, opt for vaccine antibody titers and avoid corticosteroid therapy unless it's absolutely necessary
- Treatment of feline diabetes is complex, time consuming, and costly, and the condition takes a toll on both the health and quality of life of cats, which is why prevention is the very best "treatment" for this devastating disease

In early December 2022, the FDA approved the first oral medication to treat "otherwise healthy cats with diabetes mellitus not previously treated with insulin."<sup>1</sup> The drug, called Bexacat, is produced by Elanco Animal Health Inc. to improve glycemic control in cats with diabetes who've never been treated with insulin.

Two field studies showed that the drug was over 80% effective in improving glycemic control in cats suffering from the disease, again, providing they haven't previously been treated with insulin, aren't currently receiving insulin, or have insulin-dependent diabetes mellitus, as serious adverse reactions can occur.

According to Michael Breer, Elanco's senior director for U.S. pet health consulting veterinarians, an estimated 600,000 cats in the U.S. are diagnosed with diabetes (no timeframe given), and research shows that around 125,000 of those go untreated "due to the complexity of today's options."

Bexacat comes with a boxed warning about the extreme importance of appropriate patient selection and the possibility of certain adverse reactions such as potentially fatal ketoacidosis. A "boxed warning" on any medication, also called a "black box warning," is the strictest (highest level) warning the FDA issues.

Per the FDA, any cat given Bexacat should have blood tests at regular intervals to help mitigate safety concerns of the medication.

If you have a feline family member with diabetes, my strong recommendation is to give careful consideration to the information below before asking for a drug for your cat that carries a black box warning.

## **Study Evaluated Over 2,000 Cats With and Without Diabetes**

Diabetes mellitus in cats is similar in many ways to Type 2 adult-onset diabetes in humans. In both cases there's a deficiency of insulin secretion along with insulin resistance. Known risk factors in both kitties and people include being overweight, lack of physical activity, and age.

Scientists have been studying environmental risk factors for human diabetes for years, and fortunately, researchers are now also looking more closely at potential contributors to the disease in cats.

In 2017, a team of researchers at the Swedish University of Agricultural Sciences published the results of a study to assess the associations of environmental risk factors with diabetes in cats.<sup>2</sup> A major finding from their study is that dry diets are a significant risk factor.

*"Through our research we found that while obesity is a very important and prominent risk factor for diabetes mellitus in cats, there is also an increased risk of diabetes among normal-weight cats consuming a dry food diet," said Malin Öhlund, DVM, a Ph.D. student of the department of Clinical Services at the Swedish University of Agricultural Science and lead researcher on the study.*

*"This correlation, compared to normal-weight cats on a wet food diet, is a new and interesting finding that warrants further research, as a dry food diet is commonly fed to cats around the world."<sup>3</sup>*

The 'aha moment' for these researchers was the appearance of a link between dry diets and diabetic cats who aren't overweight. This is not a surprise to me, or to anyone who understands basic feline biology. I don't understand why the scientific community is so hesitant to link diet to disease. It's incredibly frustrating.

The case-control study involved 396 diabetic cats and 1,670 non-diabetic cats of the same age. The owners of the kitties filled out an online questionnaire about their cats' diets, physical activity, body condition, and other lifestyle measures.

Most of the cats were domestic (81%) and spayed/neutered (98%), and were fed either an entirely dry diet, or a mixed diet. About two-thirds of the kitties nibbled at their food throughout the day; 15% were "greedy eaters" that gobbled up their meals immediately.

## **Factors That May Affect Your Cat's Risk for Diabetes**

Based on questionnaire responses by cat owners, the researchers identified 8 factors that seem to increase the risk for feline diabetes:

- Male

- Vaccinated
- Overweight
- Indoor confinement
- Greedy eating behavior
- No other household pets
- Predominantly dry food diet
- Previous corticosteroid treatment

The researchers also identified 6 factors that seem to decrease the risk:

- Female
- Underweight
- Outdoor access
- Ad libitum feeding (free feeding)
- Dog in the household
- Rural living environment

The questionnaires also revealed that compared with domestic cats, Burmese and Norwegian breeds had a higher risk of diabetes, whereas Maine Coons, Persians, and Birmans had a lower risk. Additional information on risk factors:

- Overweight cats are at higher risk for diabetes regardless of their diet
- Normal weight cats fed dry vs. wet food are at increased risk
- Indoor-only, moderately active, and inactive cats are at increased risk
- Inactive cats with some access to the outdoors are at decreased risk
- The risk for indoor-only active cats is not affected

The Winn Feline Foundation sums up the study results this way, and I couldn't agree more:

*"It does appear that the burgeoning incidence of human and feline DM [diabetes mellitus] is one of the side effects of civilization.*

*Cats and people with inactive lifestyles that promote weight gain and insulin resistance, who are consuming high carbohydrate diets developed for convenience, and who have fast, greedy eating styles that may be potentiated by stress and boredom, experience similar risk factors for the development of this complicated and potentially life-threatening metabolic disease."<sup>4</sup>*

## **6 Ways to Dramatically Reduce Your Cat's Diabetes Risk**

In reviewing the 8 risk factors listed above, it's clear there are steps cat parents can take to minimize the risk their pet will develop diabetes:

1. **Don't over-vaccinate** — See my recommendations for vaccinating your cat. Performing vaccine antibody titers helps prevent vaccinating indoor housecats unnecessarily.
2. **Keep your cat lean and fit** — Obesity is hands down the biggest cause of feline diabetes. The majority of cats in the U.S. are fed a high-calorie, high-carbohydrate diet loaded with grains or starch they have no need for, such as corn, wheat, rice, soy, millet or quinoa.

Grain-free dry foods also contribute to obesity and diabetes because they're calorie-dense and contain starchy, high glycemic potatoes, chickpeas, peas or tapioca that require a substantial insulin release from the body.

All the carbs (starches) in your cat's food — which can be as much as 80% of the contents — break down into sugar. Excess sugar can trigger diabetes. Keep the carbs ideally less than 10% and wean your cat away from dry food and onto lower carb canned and then gently cooked or raw food. You can help your cat stay trim by feeding a portion-controlled, moisture-rich, balanced and species-appropriate (ultra-low starch) diet.

3. **If possible, give your cat safe access to the outdoors in nice weather** — You can teach kitty to take walks with you on a harness and leash, or you can build or buy a safe outdoor enclosure.
4. **Curb greedy eating behavior** — If your cat gobbles up every meal, see these tips for putting the brakes on greedy eating.
5. **STOP. FEEDING. KIBBLE** — It's a fact that many diabetic cats improve significantly once they're transitioned to a low-carbohydrate diet. Many stop needing insulin altogether; others require much less than when first diagnosed. Unfortunately, many veterinarians recommend prescription diets for diabetic cats that are wholly inappropriate and sometimes prevent possible resolution of their condition.

As cat nutrition expert Dr. Lisa Pierson points out, these diets "... are expensive, low in quality, contain species-inappropriate ingredients and are not necessarily low in carbohydrates."<sup>5</sup>

*"Feeding a high-carbohydrate diet to a diabetic cat is analogous to pouring gasoline on a fire and wondering why you can't put the fire out," says Pierson.*

*"While some cats are more sensitive to the detrimental effects of carbohydrates than others, the bottom line is that cats are obligate carnivores and are not designed by nature to consume a high-carbohydrate diet or one that is water-depleted (dry kibble)."*

There are two general guidelines for selecting the best diet for cats with diabetes, and to prevent the disease in a healthy cat:

- Avoid dry food (kibble), including treats
- Calories from carbohydrates (starch, which becomes sugar) should be less than 10% of the total calories consumed each day

The starch content of commercial cat food won't be found on the package label. However, calculating the approximate amount of carbs in a dry diet is easy to do. Just add up the percent of protein, fat, fiber, moisture, and ash and subtract the total from 100.

As an example, let's take a look at the guaranteed analysis for Blue Buffalo's BLUE Freedom® Grain-Free Adult

## Indoor Chicken Recipe:<sup>6</sup>

- Crude protein = 32%
- Crude fat = 14%
- Crude fiber = 7%
- Moisture = 9%
- Ash = N/A

Now let's plug those numbers into our formula:

$$100 - 32 - 14 - 7 - 9 = \mathbf{38\% \text{ carbohydrates (aka sugar)}}$$

That's four times the amount of carbs a cat should be eating each day. It's very important to understand that many grain-free dry foods have a higher carb (starch) content than regular dry cat food, and you can't count on the pet food manufacturer to disclose this fact.

The ideal nutrition for cats is whole, fresh and unprocessed animal meat, organs and bones, with a small amount of vegetables. Unfortunately, the majority of middle-aged and senior kitties with diabetes are completely addicted to processed pet food, usually kibble.

Despite what many cat guardians believe, it's possible to transition almost any kitty from kibble to a high-quality canned food and/or raw diet with patience and persistence. It can take weeks and even months, in some cases, to make the full transition.

For step-by-step guidelines on how to get it done, see my two-part video/article series "How to Win the Healthy Food Battle with Your Fussy Feline," part 1 and part 2, or watch the condensed version (my Facebook Live) [here](#).

Some diabetic cats are always hungry, which works in your favor when transitioning to a better diet. Others don't have much appetite, and it can feel like mission impossible to convince a finicky cat who feels lousy to sample a new type of food. I recommend sticking with it as long as your cat is eating adequately each day.

6. **Don't allow your cat to receive unnecessary steroid therapy** — There are a number of synthetically produced corticosteroids (also called glucocorticoids), including prednisone, prednisolone, dexamethasone and betamethasone.

On the positive side, these drugs are extremely effective at treating a wide range of symptoms (not the root cause of the problem), from itchy skin to the painful and debilitating inflammation associated with serious diseases like cancer.

But the downside of synthetic steroid hormones is they have a very long list of side effects, some of which can, over time, create more serious health problems than the problem they were prescribed to treat.

Pets receiving steroids most often have an inflammatory condition (conditions that often end in '-itis'), including dermatitis (inflammation of the skin), enteritis (inflammation of the small intestine), and colitis (inflammation of the colon).



A cat with a gastrointestinal (GI) tract disorder falling into the general category of inflammatory bowel disease (IBD) is often prescribed steroids, as are kitties with allergies, inflamed gums or eyes, and asthma or another upper respiratory condition. The goal is to use drugs with significant side effects for as short a duration as possible, allowing for the opportunity to identify the "why."

If your cat has a health challenge, the goal should be to identify and treat the root cause while relieving symptoms, long term, with non-toxic therapies. Natural alternatives to corticosteroids exist, but unfortunately, only certain holistic and integrative veterinarians who have had additional education beyond veterinary school are familiar with them.

For example, I use plant-derived sterols and sterolins instead of synthetic steroid hormones when my patients require ongoing inflammation management. I also incorporate proteolytic enzymes, nutraceuticals, Chinese herbs, and acupuncture into protocols, which can reduce the dose and frequency of drugs needed to control the symptoms.

If your kitty has allergies, as so many pets these days do, I strongly encourage you to try to determine the allergic triggers. Is it her diet? Are dust mites or seasonal allergens the issue? Is it a reaction to a chemical in her environment, perhaps a household cleaner or aerosol spray? If her skin is red and itchy, what's causing it?

Under certain circumstances, but much less often than the current trend of overuse, steroid therapy for a pet is necessary and advisable, for example, in cases of acute head trauma or immune-mediated diseases. But regardless of why the drug is given, it's important to ensure your cat isn't receiving steroid treatment for extended periods of time, or repeatedly, or for symptoms of an unknown underlying condition.

## **The Best Treatment Is Prevention**

Feline diabetes is most often seen in overweight and obese adult cats fed dry food diets. And since dry food is biologically inappropriate nutrition for cats (high in carbs and deficient in high-quality protein and moisture), it makes sense that years of eating kibble could cause diabetes in mature kitties.

If your cat's diabetes is diagnosed early and you're committed to bringing the disease under control, it's possible to normalize blood glucose levels and put the diabetes into remission, which means your kitty will no longer need to be on insulin or other medications (including the new one with the black box warning, Bexacat).

Unfortunately, in cats who have been diabetic for a significant period of time, the cells in the pancreas may be worn out and unable to secrete insulin any longer. In this case, the animal may require lifelong insulin therapy.

Treatment of diabetes in cats is complex and time consuming. It involves regular monitoring of blood glucose levels, ongoing dietary adjustments, insulin given by injection or oral glucose-regulating drugs, and keeping a constant, careful eye on your sick kitty.

Frequent veterinary visits are essential, and the cost of checkups, tests, medical procedures, and insulin therapy add up fast. One estimate: treatment for diabetes, including regular blood work and long-term medication, can cost in excess of \$10,000 over the life of the animal.

Needless to say, the toll the disease takes on your kitty's health and quality of life can be devastating. So, for the sake of your furry family member, I hope you'll give serious consideration to the importance of nutrition, exercise, and maintaining your pet at a healthy weight in preventing diabetes and other serious diseases.

## Sources and References

<sup>1</sup> [Reuters, December 8, 2022](#)

<sup>2</sup> [Journal of Veterinary Internal Medicine, Volume 31, Issue 1, January/February 2017, Pages 29-35](#)

<sup>3</sup> [Veterinary Practice News, January 24, 2017](#)

<sup>4</sup> [VetVine, June 13, 2017](#)

<sup>5</sup> [CatInfo.org](#)

<sup>6</sup> [Blue Buffalo](#)

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