

# Causes Your Pet's Cells to Starve to Death, Even While Surrounded by Nutrients

Is your precious pet a sitting duck for this agonizing condition? Causes cellular starvation, even while surrounded by the very nutrients she craves. If your pet harbors any of these three predictors of trouble, nip them in the bud now. You know what they say about an ounce of prevention.

Reviewed by [Dr. Becker](#)

## STORY AT-A-GLANCE

- Diabetes mellitus in U.S. dogs and cats has been rising sharply in the last decade
- Caring for a dog or cat with diabetes can involve lifelong treatment and constant monitoring, and can cost as much as \$10,000 over the lifetime of the pet
- Obesity, another epidemic among pets, is closely associated with Type 2 diabetes
- The primary causes of Type 2 diabetes in dogs and cats are high carbohydrate diets, lack of exercise, and over-vaccination
- Most cases of diabetes in pets are entirely preventable

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Given the alarming pet obesity epidemic in this country, it comes as no surprise that diabetes in dogs and cats is also on the rise. According to a study of 2.1 million dogs and 450,000 cats, diabetes mellitus increased by 32% in dogs and 16% in cats over a six year period from 2006 to 2011.<sup>1</sup>

Pet insurance provider Trupanion reported an astonishing 106% increase in diabetes claims in a single year (2009 to 2010).<sup>2</sup>

Since pets in the U.S. continue to get fatter by the day, it's safe to assume diabetes rates have also increased significantly since the above statistics were reported. According to Dr. Mark Peterson, a veterinary endocrinologist and Association of Pet Obesity Prevention (APOP) board member:

*"The soaring rate of feline and canine obesity is taking a terrible toll on our animals' health. There is a vast population of overweight cats and dogs facing an epidemic of diabetes.*

*The best preventive measure a pet owner can make is to keep their dog or cat at a healthy weight. Diabetes is far easier to prevent than treat, especially when twice daily insulin injections are needed."*<sup>3</sup>

Diabetes in dogs and cats is a chronic disease that requires lifelong treatment and management, and can cost more than \$10,000 over the life of the pet, according to Trupanion. Left untreated, the disease can cause weight loss, urinary tract infections, hormone imbalances, and organ failure.

## If Your Pet Is Diabetic, It Means His Cells Are Starved for Nutrients

Type 1 diabetes, the form of the disease that strikes the young, is actually quite rare in companion animals. Cats and dogs are much more likely to develop Type 2 (adult-onset) diabetes in their middle aged or senior years, as a result of a lifestyle that has led to decreased production of insulin or the inability of the body to use insulin efficiently.

Insulin is an anabolic hormone whose job is to move sugar, amino acids, electrolytes and fatty acids into the cells of your pet's body. A lack of insulin will cause these vital substances to remain outside the cells. This causes the cells to starve while surrounded by the very nutrients they need to survive.

If there is enough insulin being produced in your dog's or cat's body, but the cells don't use the nutrients they receive properly, the result is the same — cells starved for nutrients.

## Symptoms of Diabetes

The symptoms of diabetes can develop very gradually, and include the following:

1. **Increased urination and thirst** — The first thing that often happens is blood sugar levels become so high outside the cells of your pet's body that it spills into the urine, increasing urine production. You might notice your dog or cat is urinating more frequently or is having accidents in the house.

Increased urination will in turn cause an increase in thirst, so you might also notice your pet emptying his water dish more often. Increased thirst and urination are hallmarks of a diabetic condition, so those are things you'll want to watch closely for, especially as your pet ages.

Unfortunately, increased thirst and urine output are also signs of other serious health problems, so regardless of the age or condition of your dog or cat, you should make an appointment with your veterinarian if you notice these symptoms.

2. **Increased appetite** — Another symptom you might notice is increased appetite. Your pet will be hungrier because the amino acids needed inside the cells aren't getting there, or aren't being used appropriately.
3. **Weight loss** — When the cells of your pet's body are being starved of essential nutrients, the result is often an increase in appetite. But because the energy from food is not being used efficiently by the body's cells, your pet can lose weight even though he's taking in more calories.
4. **Tiredness and lack of energy** — Other symptoms you might notice in your dog or cat are lethargy and lack of energy. When the cells of your pet's body are deprived of blood sugar, he will often exhibit a general lack of desire to run, take a walk with you, or engage in play.

Lack of activity and an increased need for sleep are typical in animals suffering from Type 2 diabetes.

5. **Vision problems** — Another symptom of diabetes in companion animals is blindness, which is seen primarily in dogs, but cats can also develop blindness as a result of diabetic cataracts.

6. **Weakness in rear limbs (cats only)** — This symptom is unique to kitties with diabetes. It's called the plantigrade stance. Instead of walking high up on the pads of his feet, which is the way cats normally walk, a cat with plantigrade stance will drop his hind quarters low and actually walk on his back ankles.

This is a very obvious and unnatural way for a kitty to walk, so it's something you'll notice immediately. Fortunately, this symptom can be reversed once your kitty's diabetes is under control.

7. **Urinary tract infections** — It's not at all uncommon for diabetic dogs and cats to acquire secondary urinary tract infections. This happens because the more sugar there is in the urine, the greater the likelihood that bacteria will grow in your pet's bladder.

8. **Kidney failure** — kidney failure, especially in cats, is also a common secondary symptom of diabetes. Often the first diagnosis for a diabetic kitty is chronic renal insufficiency or acute kidney problems. The sugar that is meant to be retained in your pet's bloodstream but spills over into the urine is very damaging to the kidneys.

## Causes of Diabetes in Pets

- **Obesity/high carbohydrate diets** — Obesity is by far the biggest reason pets develop diabetes mellitus. The majority of pets in the U.S. consume a high calorie, high carbohydrate diet, even though dogs and cats have no physiological requirement for grains like corn, wheat, rice, soy, millet or quinoa as sources of energy.

“Grain free” dry foods have made feeding pets even more confusing and also contribute to the obesity and diabetic epidemics we are experiencing.

Although grain free, these diets are calorie dense and contain high glycemic potatoes, chickpeas, peas or tapioca, which require a substantial insulin release from the body.

All the carbs (starch) in your pet's food — which can be as much as 80% of the contents — break down into sugar. Excess sugar can result in diabetes.

You can help your dog or cat stay trim by feeding him a portion controlled, moisture rich, balanced, species-appropriate diet consisting of a variety of unadulterated protein sources, healthy fats, low starch veggies and fruit in moderation, and specific nutritional supplements as necessary.

- **Sedentary lifestyle** — Another lifestyle-related reason pets develop diabetes — one that often goes hand-in-hand with poor nutrition - is lack of exercise.

Companion animals often lead the same sedentary lifestyle their humans do. It's not a total lack of movement — just not nearly enough of the kind that's beneficial for health.

Both you and your pet need regular heart-thumping, muscle-toning, calorie burning exercise.

If your dog or cat is lying around the house all day while you're at work — even if she can get out to your fenced yard through a doggie door to get some fresh air and sunshine — her heart rate is not being elevated for the 20 minutes per day she needs to achieve good cardiovascular conditioning.

Unless you're actively exercising your dog or cat, her exertion will be anaerobic — short bursts of energy followed by long periods of rest. Anaerobic exercise won't condition your pet's heart or muscles or burn the calories she consumes. A minimum of 20 minutes of daily aerobic exercise is good for your pet.

- **Too many vaccines** — There is a growing body of research that connects autoimmune disorders to Type 2 diabetes, especially in dogs. If your pet's immune system attacks his pancreas, he can develop diabetes.

Dogs, in particular, are prone to immune system attacks on the pancreas, or more specifically, the cells that secrete insulin in the pancreas. This situation points to an autoimmune component in the development of Type 2 diabetes in canines.

Immune-mediated or autoimmune diseases are thought to be caused by overstimulation of the immune system. One of the primary ways your pet's immune system can be overstimulated is through repetitive yearly vaccinations against diseases he is already immunized against.

If your pet had his full set of puppy or kitten shots on schedule, there's a high likelihood his immunity to those diseases will last a lifetime. Each time a fully immunized pet receives a repetitive set of vaccines, it increases the risk of overstimulating his immune system.

Find an integrative or holistic veterinarian who runs antibody titer tests to measure each animal's antibody response from previous vaccinations. Titer results will tell you whether re-vaccination is necessary, and for what disease.

## **Type 2 Diabetes in Pets Is Entirely Preventable in Most Cases**

Treatment of diabetes in a family pet is complex and time consuming in the vast majority of cases. 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 pet.

Frequent vet visits are a way of life, and the cost of checkups, tests, medical procedures and insulin therapy add up fast.

Needless to say, the toll the disease takes on your pet's health and quality of life can be devastating. That's why you should do what you can to remove any obstacles in the way of a lifetime of good health for your four-legged family member.

### **Sources and References**

[KBTX Channel 3, January 8, 2016](#)

<sup>1</sup> [Banfield Pet Hospital State of Pet Health 2011 Report Volume 1 \(Archived\)](#)

<sup>2</sup> [Trupanion May 16, 2011 \(Archived\)](#)

<sup>3</sup> [Association for Pet Obesity Prevention \(Archived\)](#)

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