

## Feline Diabetes Demystified

**CatChannel veterinary expert, Arnold Plotnick, DVM, discusses normal blood sugar levels in diabetic cats.**

*By Arnold Plotnick, DVM*

Posted: June 6, 2008 2 a.m. EDT

**Q:** My cat has been diagnosed with insulin dependent diabetes. The vet measured his blood sugar at 700. When they measured my cat, he hadn't eaten yet and had not had his insulin yet.

I was wondering what levels his numbers should be, including what they should be just before he eats and gets his medication.

He has lost four pounds and had to be hospitalized for three days. He is not doing well, and I have tried two different types of insulin so far. Any ideas?

**A:** A normal cat has a blood sugar somewhere between 65 and 160 throughout the day. When a cat becomes diabetic, his pancreas can no longer tightly regulate the sugar levels. We have to do that for the cat by providing insulin from an outside source (i.e. twice daily injections).

Our goal is to try to maintain the blood sugar somewhere between 100 and 300 throughout the day. Typically, the blood sugar would be the highest in the morning, before the cat has had his morning meal. Ideally, it would be around 300. You would then administer the insulin, and four to six hours later, when the insulin exhibits its peak effect, the blood sugar would be around 100. It then would slowly rise, and about six hours later, we'd expect to see it again around 300, at which time you'd administer the evening dose. This would be the perfect scenario.

A morning blood glucose of 700 is frighteningly high. A number this high cannot be due to insulin deficiency alone. There has to be a significant amount of dehydration present for the blood sugar to become this elevated. There is a condition that is seen in some diabetic cats called nonketotic hyperosmolar diabetic syndrome (NKHDS).

Diabetic cats with this condition are very dehydrated and require hospitalization and intravenous fluid and insulin therapy for several days until they're feeling better. Of course, without examining your cat, I cannot say if this is what is occurring.

Regardless, a blood sugar of 700 is a dangerous sign, and your cat will need to be hospitalized and monitored closely until your cat's hydration status normalizes. Once that occurs, it will become easier to control your cat's diabetes using the standard insulin preparations available for cats.