

## Are Ferret's Seizures A Sign Of Insulinoma?

**A ferret owner wonders if her ferret's seizures and low blood sugar could be signs of insulinoma.**

*By Karen Rosenthal, DVM, MS*

Posted: April 4, 2008, 3 p.m. EST

**Q:** I have a 4-year-old male, albino ferret named Frost that just started to have seizures in January 2008. We took him to the vet, who took blood and noted that he had normal but low blood sugar. We had an ultrasound done on his liver, pancreas and other organs in February to see if he had insulinoma. The technician said, "He is the healthiest ferret I have ever seen." There were no signs of hypoglycemia and all of his glands were normal.

At first, he stopped eating his food but is now back to doing so but he still requires two doses of strawberry Ensure (for the sugar) to help him through the day. He is also currently on liver supplements (although I do not know which is helping him). Are you able to tell me what else is causing my ferret's seizures? I love my boy and I would do anything for him. I also should mention that he likes to stick his head between the cage wall and the tube that goes between floors just for fun. Although he is doing better he still "crashes" and for the past week it has happened three times.

**A:** It is possible that Frost has something unusual, but I am not entirely convinced about the status of his pancreas. You state he has normal but low blood sugar, which is strange. Bloodwork should show normal blood sugar or low blood sugar – it can't really be both. That statement makes me think your ferret has an insulinoma because of his low blood sugar. If he requires a sugar supplement to get through the day, that is another reason to consider he may have an insulinoma.

An ultrasound is always a great idea but even the most talented and skilled ultrasonographer may only find the pancreatic nodules that make up the insulinoma about 10 percent of the time. So a normal ultrasound does not prove an insulinoma is not present in your ferret.

At this point, it seems that the next easy step is to do a two or four hour fast on Frost. Blood is then taken at the two- or four-hour mark. It should be normal. If is low, it is likely that your ferret has an insulinoma.

If Frost truly does not have an insulinoma, very few other diseases cause seizures in a 4-year-old ferret. To diagnose your ferret, the first thing is to make sure the complete blood count, the biochemistry panel and urinalysis are all normal. The next step is to take radiographs of the whole body, including the heart. An electrocardiogram of the heart may need to be done to rule out an underlying heart condition.

If all of these tests are normal, there is little left to do besides test for toxins and then get images of the brain. Toxins would include heavy metals and some types of rodent poisons. If everything is still normal, then an MRI of the brain is probably the last test to consider. At the same time, an analysis of the cerebrospinal fluid may be done. Along with all of this, you should make sure that this is not a form of canine distemper. In a 4-year-old ferret that is properly vaccinated, however, it is highly unlikely to be distemper.

See all Ask The Doc questions and answers»