

**LePar Animal Hospital
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Diabetic Ketoacidosis

Your pet has been diagnosed with diabetic ketoacidosis (DKA). This is a severe form of diabetes mellitus, or sugar diabetes, and requires hospitalization and intensive care. It cannot be treated at home. Your body's cells use glucose (sugar) as an energy source. Glucose enters the cells when insulin acts as a "key" to open the cells and allow the glucose in. When an animal is diabetic, they are not making enough insulin or the insulin isn't working correctly. As a result, glucose cannot get into the cells, and blood glucose rises as the glucose accumulates in the blood (outside the cells). Further, the body is tricked into thinking it needs MORE glucose, since insulin is not working to allow the sugar into the cells. The cells think they are starving, even though there is plenty of glucose floating around. The body tries to make more energy by producing it through other pathways in the body.

In diabetic ketoacidosis, a pet may have developed some other illness or source of stress such as a urinary tract infection, pancreatitis, pyometra, liver disease, or cancer (among other conditions). This leads to an increase in other hormones in the body that worsen the already existing diabetes. As a result, the body is tipped over into production of ketone bodies, an alternate energy source. In DKA, the presence of diabetes and illness leads to a massive production of ketones. In large quantities, these cause a drop in blood pH (acidosis), nausea and vomiting, and severe dehydration.

DKA is life-threatening and requires intensive care. DKA patients often have severe electrolyte abnormalities that need to be managed carefully (specifically potassium and phosphorous are often dangerously low). Patients are also severely dehydrated and require intensive IV fluid therapy. Insulin therapy is initiated once the patient is rehydrated. Most patients are in the hospital for no less than several days, some as many as a week or more. The expense can be significant. The prognosis for survival is guarded depending on how severely ill the pet is at presentation and what other illnesses are present. Diabetes is a life-long condition that must be treated with insulin injections twice a day, lifestyle modifications (weight loss, exercise, dietary changes), and close monitoring with your veterinarian.