



DIABETIC KETOACIDOSIS

ABOUT THE DISEASE

Diabetic ketoacidosis (DKA) is a life-threatening metabolic disorder caused by unregulated diabetes mellitus. Please see the [Diabetes Mellitus](#) document for additional information on the general disease.

When diabetes mellitus is not diagnosed, or if a patient is not well regulated with insulin therapy, the body cannot utilize sugar (glucose) for energy. This causes the body to shift from a glucose metabolism to a fat metabolism to create energy. As this process advances, a fat metabolism will lead to the formation of ketones. Ketones are highly acidic and will change the acidity (pH) of the blood, which is extremely dangerous and life threatening.

While many **DKA** patients have the same symptoms as diabetes mellitus patients, **DKA** patients will have significant dehydration, lethargy, weakness, fast heart rate, slow-deep breathing pattern, and sometimes vomiting/diarrhea/abdominal pain.

OBTAINING A DIAGNOSIS

Urine testing is often the easiest test to determine the presence of ketones in the body, which then filter into the urine.

A blood test called a blood gas will help determine the patient's blood acid level (pH).

Full blood work is often utilized to determine if the patient has other concurrent diseases like liver issues, kidney failure, electrolyte disturbances, and/or pancreatic inflammation (pancreatitis).

TREATMENT

DKA patients require hospitalization with intensive care therapy, 24 hours per day, for 2-4 days. Being left unattended overnight at a veterinary hospital, or attempts to treat at home, are unsuccessful and place the patient at risk.

Intensive fluid therapy is the first cornerstone of therapy but is then coupled with initiation or adjustments in insulin therapy to transition the body back to a glucose metabolism and stop ketone production.

TIPS FOR SUCCESS

- **DKA** patients need to be hospitalized at a 24-hour intensive care facility.
- Maintain regular recheck appointments of **DM** patients to ensure ongoing insulin therapy is appropriate.
- Treatment of current illnesses, like kidney/bladder infections, pancreatitis, adrenal/thyroid disease, or liver disease will help improve success of treatment.