

What is

Hyperglycemia?

Hyperglycemia is elevated blood glucose.

Some causes of hyperglycemia are:

- ◊ Not enough insulin in the body
- ◊ Eating too much or the wrong kind of food
- ◊ Somogyi Effect (chronic rebound or hypoglycemia induced hyperglycemia)
- ◊ Stress
- ◊ Infections, and chronic or acute illness

What Are the Symptoms of Hyperglycemia?

Some symptoms of hyperglycemia are:

- ◊ Unusual fatigue or lethargy
- ◊ Polyphagia (extreme hunger)
- ◊ Polydipsia (extreme thirst)
- ◊ Polyuria (excessive urinating)
- ◊ Peripheral Neuropathy (weakness in hind legs or wrists)

What Are Ketones?

Ketones, or ketone bodies, are a fatty acid by-product obtained when your cat's body metabolizes fat for energy. Large amounts of ketones in the bloodstream are extremely dangerous.

Some causes for producing too many ketones are:

- ◊ Not enough insulin in the body
- ◊ Not eating enough food or eating the wrong type of food
- ◊ Infections, and chronic or acute illness

It is important to note that hyperglycemia does not "cause" ketones, and a cat may develop ketones without having hyperglycemia.

However, since both the formation of ketones and hyperglycemia can be caused by lack of insulin or infections, ketones and hyperglycemia often appear at the same time.

What is Ketonuria?

Ketonuria is the presence of ketones in the urine.

To determine if your cat has ketonuria, you or your vet must use special strips [such as Bayer Keto-Diastix (tm) strips] to check your cat's urine. Ketonuria is a sign that your cat's body is producing too many ketones, and the excess is spilling into the bladder. Once your cat has developed ketonuria, she is at high risk for developing diabetic ketoacidosis (DKA).

You should test for urine ketones when:

- ◊ You adjust your cat's insulin dose or skip a shot (always discuss changes in dose with your veterinarian)
- ◊ Your cat does not eat normally, vomits, or has diarrhea
- ◊ Your cat's blood glucose values are consistently over her target range (ask your vet what range is safe for your cat)
- ◊ Your cat has an infection or is otherwise ill
- ◊ Your cat does not seem normal to you

What is DKA?

Diabetic Ketoacidosis (DKA) is a condition that occurs when your cat's body produces too many ketones to be safely metabolized. Because ketones are fatty acids, large amounts in the bloodstream cause the pH of the blood to drop, thus making the blood acidic. This is referred to as "acidosis." The "acids" can quickly damage major organs, especially the liver and kidneys. DKA is very serious and should be treated as an emergency. **If you suspect that your cat has DKA, take her to your vet or an emergency veterinary clinic immediately!**

What are the Symptoms of DKA?

Some symptoms of DKA are:

- ◊ Ketonuria
- ◊ Extreme fatigue or weakness
- ◊ Polydipsia (extreme thirst)
- ◊ Polyuria (excessive urination)
- ◊ Vomiting
- ◊ Diarrhea
- ◊ A sweet or fruity smell on the breath
- ◊ Rapid, deep breathing
- ◊ Unconsciousness
- ◊ Seizures or convulsions

If you suspect that your cat has developed DKA, take her to your vet or an emergency veterinary clinic immediately! Do not attempt to treat DKA at home. A cat experiencing DKA requires IV fluids, insulin, and very close monitoring of her blood glucose levels.