Xylitol (sugarless sweetener in chewing gum)

Xylitol is a sugar alcohol that is used in sugar-free products such as gum and candy, as well as for baking and is used in the production of certain low-carbohydrate products now on the market.

As early as the 1960's, experiments indicated a link between the ingestion of xylitol and hypoglycemia in dogs. However, it has only been recently that the ASPCA Animal Poison Control Center has begun to receive reports of xylitol toxicosis in dogs. It is believed that this recent rise is likely due to the increased use of products containing xylitol in the United States.

Effects of Xylitol Ingestion

In both humans and dogs, the levels of blood sugar are controlled by the body's release of insulin from the pancreas. In human xylitol ingestion does not cause any significant changes in insulin levels or, therefore, blood glucose. However, in dogs, xylitol causes a fast release of insulin, which results in a rapid decrease in blood glucose (hypoglycemia).

Clinical Signs

Clinical signs of xylitol toxicity can develop in as few as 30 minutes after ingestion. Clinical signs may include one or more of the following:

* Vomiting
* Weakness
* Ataxia (uncoordinated movements)
* Depression
* Hypokalemia (decreased potassium)
* Seizures
* Coma
* Liver dysfunction and/or failure

Treatment

After ingesting a xylitol-containing product a dog may receive one of more of the following treatments, depending on the amount of time that has lapsed since the ingestion occurred. The induction of vomiting is recommended if performed very soon after ingestion of the xylitol-containing product but before clinical signs develop. Frequent small meals or an oral sugar supplement may be used to manage dogs that have not yet shown clinical signs. Following the appearance of clinical signs intravenous dextrose can be used to control hypoglycemia. It may also be necessary to treat the patient for low potassium levels (hypokalemia), if indicated. Treatment should be continued until the blood glucose levels return to normal levels.

For more information on this and other poison control questions the ASPCA Animal Poison Control Center can be reached at 888-426-4435 or on the web at www.apcc.aspca.org.