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Ah, peanut butter—so yummy, but so unhealthy for you. Some peanut butter companies have tried to make peanut butter healthier by reducing the amount of fat within their peanut butter. Other brands are trying to cut out the sugar within their peanut butter to help reduce the glycemic index and calorie count. That means a few companies are replacing that sugar with a sugar-free substitute, xylitol.

What does xylitol in peanut butter mean for dog parents?

If you own a dog, you should be very careful buying sugar-free peanut butter containing xylitol as it can be poisonous to your dog! *[Editor's note: When in doubt, always be sure to check the ingredients list as some sugar-free peanut butter brands don't say they're sugar-free on the front of the label.]*

Some specific brands that currently list xylitol as an ingredient include, but are not limited to:

- Nuts 'N More
- Go Nuts
- Krush Nutrition
- Hank's Protein Plus Peanut Butter
- P28

Xylitol, a "sugar alcohol," is a sugar-free substance used as a sugar substitute. While it's a natural product (it's naturally found in certain fruit in small amounts), and is totally safe for humans, it is very poisonous to dogs. Xylitol has gained recent popularity because it is sugar-free, reducing caloric intake in humans.

As an emergency, critical-care, veterinary specialist, I have yet to see a case of xylitol poisoning from peanut butter. So while I don't want to blow it out of proportion, I want pet owners to be aware of this less commonly known source of xylitol, especially if you like to use peanut butter to fill your dog's Kong!

NOTE: Xylitol is found in more common household or food products such as:

- Candy, gums and mints
- Diabetic snacks
- Diabetic foods
- Baked goods (e.g., muffins, cakes, etc.)
- Dental products such as mouthwashes and toothpastes
- Certain prescription human medications (e.g., gabapentin, a pain medication)
- Certain prescription veterinary dental products
- Chewable, sugar-free multivitamins or prenatal vitamins
- Nasal sprays
- Over-the-counter medications (e.g., melatonin)

When xylitol is accidentally ingested by dogs, it results in a sudden insulin release from the pancreas, which causes a life-threateningly low blood sugar (hypoglycemia). With large ingestions of xylitol, acute hepatic necrosis (severe liver failure) can be seen in dogs.

Signs of xylotol poisoning

Some signs of xylitol poisoning include:

- Walking 'drunk'
- Lethargy
- Not being able to get up or appearing very weak
- Vomiting
- A racing heart rate
- Panting
- Trembling or tremoring
- Seizures

In severe cases or with very toxic ingestions that can result in liver failure, the following signs can be seen:

- Elevated liver enzymes (based on blood work)
- Jaundiced gums
- Black-tarry stool
- Diarrhea
- Abnormal clotting (e.g., bruising)
- Abnormal mental activity
- Death

What to do if you think your dog might have xylitol poisoning

If you think your dog was accidentally poisoned by a sugar-free product, first, read the ingredients to see if the product contained xylitol. The general rule is that if xylitol is listed in the first 3-5 ingredients (listed typically in order of the amount that they appear in the food or product), it is going to be poisonous!*

**If your dog does get into something sugar-free, always check the ingredient list. Note that other sound-a-likes like sorbitol, maltitol and erythritol are not poisonous to dogs. Likewise, other sugar-free products such as stevia, saccharin, sucralose, aspartame, etc. are also not poisonous to dogs. If your dog gets into one of these other sound-a-likes, it's not poisonous. No need to worry, as long as you're positive there's no xylitol!*

With xylitol poisoning, it is imperative to calculate whether a toxic dose has been ingested. In dogs, doses > 0.1 g/kg are considered toxic and result in profound, sudden problems. Higher doses (> 0.5 g/kg) of xylitol have been associated with acute hepatic necrosis. Unfortunately, not all sources are disclosed by the peanut butter companies (e.g., how many grams of xylitol may be in each serving of peanut butter) due to a proprietary nature, so sometimes it's hard to calculate a toxic dose.

Xylitol treatment

If your dog did ingest a poisonous dose of xylitol, treatment includes:

- Checking a stat blood sugar level at your veterinary clinic. If it's normal and the ingestion was recent (within a few hours), your veterinarian may induce vomiting.
- If your dog has a low blood sugar, a stat bolus of intravenous (IV) dextrose (sugar) is a must, followed by hospitalization. Treatment will include IV fluids with sugar supplementation (dextrose) for a minimum of 12-18 hours. If your dog is able to maintain his blood sugar as the dextrose supplementation is weaned down over time, then your dog can go home!
- If your dog just had vomiting induced, your veterinarian will likely skip giving activated charcoal–no need for your veterinarian to give activated charcoal (a black liquid product that binds up some poisons). Charcoal does not reliably bind to xylitol, so it's not necessary with xylitol poisoning.
- If a toxic dose was ingested and not vomited back up, your veterinarian will recommend hospitalizing your dog for IV fluids, dextrose supplementation, and symptomatic, supportive care.
- Careful monitoring of blood work (including the liver enzymes, electrolytes and blood sugar) is imperative.
- If your dog ingested a dose approaching the liver-toxic amount of xylitol, the use of liver protectants (e.g., SAMe, milk thistle, n-acetylcysteine) is warranted. Most dogs are sent home on liver protectants for several weeks, while rechecking liver enzymes frequently over the next few days at your veterinary clinic, to be on the safe side.

When in doubt, if you think your dog got into xylitol, contact your veterinarian or *ASPCA Animal Poison Control Center* right away for life-saving care. They can help calculate and determine whether or not the amount of xylitol ingested was poisonous or not. When in doubt, always keep these products or foods out of reach of your pets.

Be sure to avoid buying xylitol-containing peanut butter if you own a dog.

If you have any questions or concerns, you should always visit or call your veterinarian -- they are your best resource to ensure the health and well-being of your pets.