Troublesome Treats

This is the second in a series of articles on feeding your Tibetan Mastiff. In this article, we will look at foods or other ingestible substances that may create a health hazard for your Tibetan Mastiff.

A number of common foods are toxic to dogs. Some of them are very toxic, possibly even deadly, while others have little or no impact if ingested in small quantities. The most common toxic foods your TM may come in contact with are: Xylitol in sugar-free products; grapes; raisins; chocolate; macadamia nuts; coffee or coffee grounds; tea; cola;, and any products that contain caffeine, tobacco products, and alcohol.

Xylitol

You may not have heard of xylitol but it is one of the most common artificial sweeteners present in such products as breath mints, baked goods, cough syrups, children's and adult chewable vitamins, mouthwash, toothpaste, some peanut and other nut butters, over-the-counter medicines, dietary supplements, and sugar-free desserts including "skinny" ice cream. Xylitol is one of the most toxic compounds your TM may be exposed to.

A toxic dose of xylitol is only about 50 milligrams per pound of body weight. One specific brand of sugar free gum contains about 1 gram of xylitol. Eating only 4 pieces of this gum would result in severe hypoglycemia, while eating 20 pieces could result in complete liver failure for a 100 lb TM.

In both humans and dogs, the level of blood sugar is controlled by the release of insulin from the pancreas. Xylitol does not stimulate the release of insulin from the pancreas in humans, and hence, it is a good alternative for those who are diabetic. However, when non-primate species like dogs eat something containing xylitol, the xylitol is quickly absorbed into the bloodstream, resulting in a potent release of insulin from the pancreas. This rapid release of insulin causes a fast and profound decrease in the level of blood sugar (hypoglycemia), an effect that occurs within 10-60 minutes of eating the xylitol. Untreated, this hypoglycemia can be life-threatening.

No amount of xylitol is safe for your TM. Be sure to read ingredient labels for the presence of xylitol. A few sticks of gum or a pack of breath mints that your TM gets out of your pocket of purse could be fatal.

Grapes and Raisins

Of all the common toxic foods, grapes and raisins are the most dangerous because of their potency and availability. They are highly toxic to your TM. Grapes and raisins will cause kidney damage if ingested by a TM. The amount of grapes that are toxic to a TM is unknown. The substance that causes the toxicity has not been identified, and it seems that the lethal amount of grapes varies dramatically between dogs. One publication estimated the lethal dosage of grapes at 0.14–0.3 oz/pound of body weight (J Vet Emerg Crit Care 14(3):203–212, 2004). That would put the lethal dosage for a 100 pound TM at about ¾-1 lb of grapes. While grapes are 90% water, when grapes are dried to form raisins, the toxic compounds in grapes are concentrated 10 fold. As little as 1.4 ounces of raisins could be lethal to a 100 pound TM. These values are bases on very limited data. In reality, there is no way to determine how sensitive your TM is to the toxic compounds in grapes. Even a small amount of fresh grapes or dried raisins could cause kidney damage and less than a hand full of raisins could kill your TM. Don't assume any amount is safe.

Chocolate, Coffee, and Caffeine
Methylxanthines are the toxic compounds present in chocolate. Caffeine is a type of methylzanthine. Any caffeine containing food is dangerous to your TM. Keep your TM away from coffee, tea and any caffeine containing drinks, including most sodas and all energy drinks. Chocolate comes in many forms and the amount of toxin in the chocolate depends on its form. Sweet cacao powder itself is more dangerous than many of the other forms of chocolate. Just 0.3 ounces per pound body weight can be deadly. About 1.5 pounds of cacao will kill a 100 pound TM. This may sound like a lot, buy a TM can scarf down a 1 lb box of Valentine chocolates in a heartbeat. This is a good time to remind us all to never leave food of any kind sitting out on the counter, table, bedside stand, or any place a TM can reach, which is pretty much everywhere.

A note regarding food labeling: There are "natural product" compositions sold for dogs to pep them up in the show ring. One products ingredient lists states "Proprietary Blend of: Guarana Seed Powder, Maca Powder, Bee Pollen Powder, Red Raspberry Fruit Powder, Flax Seed Powder". Guarana is a Brazilian plant native to the Amazon basin. Its seeds contain about twice the concentration of caffeine (2-4.5% caffeine) found in coffee seeds. The recommended dosage listed by the manufacture for a 100 pound TM is 26 grams of their mixture per day. Based upon their label, the least amount of guarana present in 26 grams of the mixture would be 5 grams. The amount of caffeine in 5 grams of guarana is 0.1 - 0.225 grams. The single median lethal dosage of caffeine for dogs is 120-200 mg/kg or 5.4 – 9 grams of caffeine for a 100 pound TM. To put things into prospective, the recommended daily dosage of this mixture is similar to the amount of caffeine in 1 to 2 Red Bull energy drinks, which have caused heart arrhythmias and deaths in people. I have to wonder how many people would use this product if caffeine were listed as the main ingredient rather than guarana. If a 100 pound TM were to ingest a full 35 gram tube of this formulation at one time, it would experience a serious reaction and most likely die. One should be careful in keeping any dog safe from accessing medications or supplements as well as known toxic foods. Expectably, most are formulated with things like liver to make them more palatable and attractive to our pets.

Macadamia Nuts
The mechanism of macadamia nuts toxicity is not known. Dogs have shown signs of illness after ingesting 0.05 oz. of nuts per pound of body weight. Dogs experimentally dosed with commercially prepared macadamia nuts at 0.3 oz per pound of body weight developed clinical signs of poisoning within 12 hours and were clinically normal without treatment within 48 hours. Even if not lethal, macadamia nuts will make your dog very sick and should never be given to a TM.

Tobacco
Tobacco is toxic to human and TMs because it contains the poison nicotine. The amount of nicotine present in a single cigarette is about 12 milligrams. The toxic dose for nicotine in pets is 1/2-1 mg per pound of pet body weight. The lethal dose is 4 mg per pound of body weight. A 100 pound TM would get very sick after eating one or two cigarettes. It would take about 30 cigarettes to kill a 100 pound TM. This is not unthinkable, since TMs may grab a pack of cigarettes in play and eat the contents, especially with some of the flavored cigarettes and cigars that are now available on the market.

Alcohol
A dog's liver is not designed to process alcohol, and dogs are more sensitive to alcohol than humans. Added to the basic health issues of alcohol, a dog that has consumed alcohol will also suffer emotional stress because it does not understand what is happening. The median lethal dosage for a 100 pound TM is about four beers consumed in a short period of time. When you see a YouTube video of someone laughing and having a good time while they watch their dog lap up beer out of a bowl, consider the character of the person in the video.

All of the before mentioned substances provide no nutritional benefit. They are toxic to dogs and will harm your TM. You should take into consideration that just because a TM may survive poisoning, long term damage to their liver, kidneys, or neurological system may have occurred.

Garlic, Onions, Chives, and Leeks

There are a few substances considered toxic to dogs but are used in dog foods. The amount present and how they are processed impacts their toxicity. Garlic belongs to the Allium family (which also includes onion, chives, and leeks) and is poisonous to dogs and cats. Garlic is considered to be about 5 times as potent as onions and leeks. Certain breeds and species are more sensitive, including cats and Japanese breeds of dogs (e.g., Akita, Shiba Inu). Toxic doses of garlic can cause damage to the red blood cells (making them more likely to rupture) leading to anemia. GI upset can also occur (e.g., nausea, drooling, abdominal pain, vomiting, and diarrhea). Other clinical signs of anemia can also occur including lethargy, pale gums, increased heart rate, increased respiratory rate, weakness, exercise intolerance, and collapse. Signs of garlic poisoning can be delayed and not apparent for several days. While tiny amounts of these foods are safe for dogs, large amounts can be toxic.

Garlic is considered to be toxic but it has been used as a worming agent for dogs. It is also used as a flea and tick replant by some natural medicine proponents. There is one specific study on garlic toxicity in dogs, Am J Vet Res. 2000 Nov;61(11):1446-50. Dogs were feed the equivalent of half a pound of garlic a day for 7 days. At this level, garlic ingestion caused a decrease in hemoglobin concentration, but no dog developed hemolytic anemia. I found no information on TM sensitivity to garlic. It is not known if TMs are as sensitive to garlic as some of the Japanese dog breeds. I would conclude that the small quantity of garlic present in some dog foods and occasional ingestion of a small amount of garlic would not impact a TM. That does not mean a teaspoon quantity of garlic or other Allium family foods could not cause minor gastric related issues with your TM. Feeding your TM garlic as a flea and tick repellant (as directed) may be more or less safe but monitor them for gastric issues.

Raw Eggs

Raw eggs are another food that may cause a health issue when feed in large amounts. The only possible (minimal) risk to dogs from eating raw eggs is they would ingest large quantities of a protein called avidin that is found in raw egg white. Avidin deactivates biotin (also known as vitamin B7 in the U.S. or B8 in Europe) by binding with it, causing a biotin deficiency in dogs. The symptoms of a biotin deficiency include inhibited cell growth, inhibited fatty acid metabolism and loss of skin and coat condition. You would have to feed your TM at least 8 raw eggs a day on a continual basis for them to develop a deficiency. Heat destroys avidin's ability to bind biotin. Cooking an egg not only destroys avidin's ability to bind with biotin, but it can also release previously bound biotin present in the egg white. Avidin is only present in the white of the egg. If you want to feed your TM eggs on a regular basis, you could cook the eggs or feed them only raw egg yolks, which do not contain avidin. Egg is an excellent nutrient source and a well-balanced source of proteins. Including some egg in a TM's diet is a nutritionally sound practice, just be sure not to go overboard with raw eggs whites.

Black Walnuts and other nuts

Black Walnuts are toxic to dogs. If a dog ingests old walnuts that have fallen off of a tree, they can have a mold present on them that contains penitrem A. The penitrem A can cause your TM to experience tremors and have seizures. Your TM eating a piece of walnut dropped on the floor should not be cause for a visit to the veterinarian. The two main problems with non-toxic nuts are fat and possible obstructions. With large breeds like TMs, the chance of a nut causing an obstruction is minimal. As with any other high fat source, too much fat in a dog's diet will lead to health problems. Consider peanut butter based (xylitol free) treats as a treat and not a food.

Salt

You should not feed your TM salty foods like chips or pretzels. Eating too much salt can make your dog seriously thirsty. That means a lot of trips to the fire hydrant and it could lead to sodium ion poisoning. Symptoms of too much salt include vomiting, diarrhea, depression, tremors, high temperature, and seizures. It may even cause death. I was not able to verify the mount of salt that is lethal to a dog. Dog food manufactures say dry food contains about 0.3% sodium. That amounts to about 2.3 grams of table salt per 300 grams of dry dog food. I used 300 grams as the average amount of a quality dog food a TM would eat a day. The dog food

sites suggest 0.5% sodium is a safe maximum limit or 3.8 grams of table salt per 300 grams of dry food. The amount of sodium in potato chips varies greatly. One ounce of your average potato chip has about 0.180 grams of salt. A 300 gram serving of dog food and a 3 ounce serving of chips would put your TM sodium input at the maximum suggested amount of sodium. Keep in mind that substances like baking powder and baking soda contain sodium and need to be kept out of reach of your TM. Bread, crackers, and other baked goods contain a fair amount of sodium from the baking powder used in their formulations. Best thing to do is give you dog proper treats and keep them away from people snacks.

Milk

Milk is on some "do not feed this to your dog" lists. The problem with milk is that some dogs are lactose intolerant or have a milk allergy. I have seen more than one video taken in Tibet where TMs are feed a diet of tripe, yak milk, and barley. Having yak milk as part of the traditional TM diet, one would think the TM breed would not be lactose intolerant because of the natural selection process. Yak milk is easier to digest than cow milk so there is a small possibility that a TM could consume yak milk but have digestive issues with cow's milk. Yak milk is lower in lactose than the cow's milk traditionally consumed by westerners, and so is goat's milk, and this may account for the better tolerance. There is a dog treat made from yak milk called Himalayan yak chews that are given to TMs in Tibet and is available elsewhere as well. However, there are many imitations made from cow's milk that are not as suitable. Most TMs, however, are able to tolerate some amount of cow milk, cheeses, and yogurt without a problem. As with all of the other food discussed, quantity and the individual TM's response to cow's milk would have to be evaluated on a case by case basis. Yak chews and other Yak milk products should not create any problems.

This is by no means a complete list, so before you give in to those big pleading eyes begging for a bite off your plate, please, check to make sure what you are eating is safe for dogs. It is easy to check by simply googling "Is _____ toxic to dogs?" If you are unsure, the ASPCA Animal Poison Control website has a reference list on their website, and a Poison Control Hotline in case of an emergency: https://www.aspca.org/pet-care/animal-poison-control.

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