



GUIDE TO **FEEEDING** *your* **PETS**



At DogChannel and CatChannel, we know how much your pets and their safety mean to you. With the recent and ongoing pet food recall, we understand how hard it is to decide what's safe to feed your cat or dog. That's why we've created this comprehensive Guide to Feeding Your Pets.



Tips to Avoid Tainted Pet Foods

A veterinary specialist gives advice on how to avoid tainted foods.

Because of the recent ongoing pet food recall, many pet owners are worried and confused about what to feed their dogs and cats. Toxicologists are still investigating how the food became contaminated and trying to confirm that melamine was the cause.

“The dilemma is targeting the exact ingredient and the source, so that we can determine which products are safe and which ones are not,” says Sonja Olson, DVM, of Florida Veterinary Specialists & Cancer Treatment Center in Tampa, Fla.

So, while scientists work to pinpoint the problems, what should pet owners feed their pets? Olson offers some tips on how to avoid tainted dog and cat foods:

- Whether you feed your pet dry, canned or semimoist food, check the list of recalled products to see if that brand has been recalled, and look at the dates and codes printed on the packaging. Don't assume that because it's still on store shelves, it's safe. To date, wheat gluten

and rice protein concentrate are the ingredients that were contaminated. Avoid pet foods with these ingredients until the FDA deems them safe again.

- Consider your cat or dog's lifestyle and medical issues. Pay attention to ingredients on each bag of food. Note the amount of sodium because high sodium levels are harmful to pets with heart or kidney problems. Look at the percentage of protein versus carbohydrates for diabetic pets who need a higher protein-to-carbohydrate ratio.

- Be aware of the ingredients in treats, and apply the same principle to the treats.

- Home cooking is another option, but it is important that you work with your veterinarian to ensure that homemade food is balanced. You can find pet food cookbooks online or at bookstores. Cats are very sensitive to vitamin D deficiency and might need a supplement to make sure their home-cooked meals are complete.

- Natural foods are not necessarily better than others. Read the ingredients list on

Keep Informed About Pet Food Recalls

- Review the Food and Drug Administration's (FDA) website at www.fda.gov.
- Visit www.menufoods.com/recall.
- Check pet food manufacturers' websites.
- Visit CatChannel.com and DogChannel.com daily for updates.

every bag of food you purchase.

- Talk with your veterinarian about your pet's food. Your vet knows your pet's history and lifestyle, and will be up-to-date with the latest on the recall and any ingredients of concern. It's also a good idea to check online for recall updates on a regular basis.

“This is a huge wake-up call to the pet food industry, to veterinarians and to pet owners. The problem can only make us better,” Olson says.

Signs of Possible Toxin Exposure

- Loss of appetite
- Nausea
- Vomiting
- Lethargy
- Increased water intake
- Increased and frequent urination

If you see any of these symptoms in your cat or dog, consult your veterinarian.

‘No clear research supports any one way to feed cats, and veterinarians and pet food companies use many theories and studies when making dietary recommendations to owners.’

— Elaine Wexler-Mitchell, DVM



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Uncover the Mystery Ingredients in Cat Food

What exactly is erythroic acid? Or xanthan gum? Learn why these odd names show up on your cat food ingredient list.

Food additives serve many functions such as flavor and color enhancement, product texture modification or more efficient processing.

Flavor Enhancers-Binders

Digest: Enzymatic liquefaction or hydrolysis of animal tissue used for flavor.

Erythroic acid: Prevents the heat of canning from destroying food color.

Guar gum, carrageenan locust bean gum, corn starch-modified, xanthan gum: Thickening ingredients used to hold canned food together.

Sodium tripolyphosphate: Helps to hold food together by binding water. This also keeps the food tender and helps it to come out of the can.

Phosphoric acid: Used to provide the acidic flavor cats love.

Propylene glycol, glycerin, sorbitol: Used to control water in semimoist foods.

Color Enhancers

These ingredients are used to modify the appearance of the food.

Caramel color: A brown coloring agent used to enhance and darken food color.

Sodium nitrite: Used as an antimicrobial agent to kill bacteria and to help canned food maintain a pink color after processing.

Titanium dioxide: A white powder used to lighten up food color.

Yellow 5, Yellow 6, Red 3: Food dyes used in chicken-based food to enhance color.

Preservatives

Used to extend shelf life and reduce fat spoilage called rancidity, which can lead to off flavors.

Ascorbic acid: Natural source of preservative from vitamin C.

BHA, BHT, ethoxyquin: Artificial sources of preservatives.

Mixed tocopherols: Natural source of preservative from vitamin E but does not keep food fresh as long as artificial sources.

— Lisa Kobs



Feeding Recommendations for Cats

Expert advice on how to choose the right food for your cat.

One of the most common questions veterinarians receive from new cat owners is: What should I feed my cat?

No clear research supports any one way to feed cats, and veterinarians and pet food companies use many theories and studies when making dietary recommendations to cat owners.

Feeding could take up several chapters in a book. It is difficult to find two veterinarians who totally agree on the best way to feed a cat.

The feeding charts on pet food packages are guides only and do not account for lifestyle and individual cat metabolic rates. Most cats need only eat about a ½ to ¾ measured cup of dry food total daily to maintain their weight. Three ounces of canned food often are equal to ¼ cup of dry food in calories.

Cats are natural carnivores, so feeding a higher protein diet is good for them unless a medical condition conflicts with this regimen. Canned foods tend to be higher in protein than dry foods, and higher-quality foods tend to be more calorie-dense.

In the wild, cats do not eat significant levels of carbohydrates, yet most cat foods contain several grains and fillers.

Some research shows that cats tend to maintain better body condition and weight when they eat only canned, higher-protein

food. Most overweight cats eat too much high-carbohydrate dry food. Canned food tends to satisfy cats on a per-serving basis more than dry food.

Cats also need taurine in their diet, as a deficiency can cause retinal degeneration and dilated cardiomyopathy, which is a type of heart disorder. In addition to taurine, look for specific protein sources on the label. “Chicken, lamb, tuna, salmon, or beef” are

better than generic terms such as “meat or fish.” Another vague term is “animal byproducts” or “meat and/or bone meal,” which basically means the food includes parts of meat sources that are not suitable for human consumption, such as liver, brain, blood and bone. These will not hurt your cat, but should not be the

primary source of protein nutrients in your cat’s food.

Cats not exposed to multiple diet types tend to develop finicky habits. If your cat’s digestive tract can handle a variety of foods, feed her that way.

You can also feed small amounts of plain, cooked meats or fish in addition to a balanced diet. In regard to treats, keep in mind that more than a couple treats add up to the calories of ¼ cup of dry food.

— Elaine Wexler-Mitchell, DVM, board-certified feline specialist



What's in Dog Food?

Decode common ingredients, and explore nutrient values to give your dog what he needs.

A humorous excerpt from a dog diary makes the e-mail rounds periodically. The joke? No matter the day or time, the entries are identical: “Oh, boy! DOG FOOD! My favorite!”

If only we could be as easygoing about what we feed our furry friends. In recent years, new foods and formulas seem to have debuted as often as *American Idol* hopefuls. Eye-popping packaging shouts words like “natural” and “organic.” And, as some owners explore home-prepared diets, a kind of militancy has crept in, with the implication being that if you don't feed a certain way, you're the fur-mom equivalent of Joan Crawford.

“It's just overwhelming,” agrees board-certified veterinary nutritionist Tony Buffington, DVM, Ph.D., a professor of clinical nutrition at Ohio State University Veterinary Hospital. “The pet-food industry is very competitive, so there's sort of this arms race going on.”

Here are some things to consider before pressing that nuclear button and committing to a specific brand or approach:

Beware of buzzwords

“Organic” and “holistic” sound great, but what do they mean in relation to a bag of dog food? It's murky, says William Burkholder, DVM, a veterinary medical officer with the Food and Drug Administration's Center for Veterinary Medicine. While the U.S. Department of Agriculture has a detailed definition for the word “organic” in human food, the agency is “still working on the criteria for pet foods,” he says.

As for the new-agey “holistic,” the government has no “specific, defined meaning” for it, Burkholder says. Consumers “need to make sure that what they think it means is what the manufacturer means,” and that may involve a phone call to the company's customer-service line.

Context is everything

Under the heading of “guaranteed analysis,” manufacturers are required to list minimum percentages in their foods for



protein and fat, as well as maximums for moisture and fiber. But no number is an island.

“Notice that labels do not carry information on carbohydrates, therefore, you can't look at a label and know exactly how much of a major nutrient, such as protein, fat, or carb, is in the food,” says board-certified veterinary nutritionist Joe Bartges, DVM, a professor of medicine and nutrition at the University of Tennessee College of Veterinary Medicine.

Plus, making comparisons between different forms of food can be plain exasperating. Bartges contrasts a hypothetical canned food with 75 percent moisture and 4 percent fat to a dry food with 10 percent moisture and 8 percent fat. “Which has more or less fat? From the label, you can't tell,” he says.

Watch the moving ingredients

Dog food companies are required to list ingredients in descending order of volume. So, theoretically, a food contains more of the first listed ingredient than the second — unless the manufacturer is creatively categorizing. Ingredient splitting is one way to push a certain ingredient — usually meat — to the top of the list. In turn, dividing up a grain such as corn into “ground corn” and “corn gluten meal,” for example, lowers its overall ranking on the list.

“There are too many ways to fiddle with these things if people want to,” Buffington says, although he adds that ingredient splitting doesn't tell consumers anything about the quality of the

product's contents, “or whether it's a good or bad food.”

Read the fine print

Bartges recommends scrutinizing the label for the usually inconspicuous “nutritional adequacy statement” with the hopes of finding mention of feeding trials.

One way companies can certify that their food is complete and balanced is to conduct these six-month trials, during which dogs eat the food and have their health monitored.

“This tells you that the food was fed to live animals prior to market and that these animals at least performed “adequately,” Bartges says. “In this day and age, we should at least expect the food to be fed to a dog or cat before it goes to the store.”

The other way is by chemical analysis.

Peruse the preservatives

Semantics are also at play with the antioxidants used to prevent foods from spoiling. Calling a preservative “natural” doesn't mean it's naturally produced, notes Bartges. It just means it occurs in nature.

“Natural” antioxidants such as vitamin E have been touted in recent years because of claims that synthetic ones such as BHT, BHA, and ethoxyquin can cause health problems. Bartges reminds that synthetic antioxidants “have not been shown to be detrimental or toxic when used at levels that used to be found in pet foods,” but that may be a moot point. “Most pet-food companies have switched to ‘natural’ antioxidants because of public pressure.”

(CONTINUED ON PAGE 5)

Basic Food for Dogs

Canine nutrition is a complicated but widely studied subject, and every dog owner has access to the experts.

If you are like most dog owners, you probably buy bags of kibble at the grocery store or the pet supply store, scoop the proper amount according to package directions into your dog's bowl once or twice a day, keep the water dish full, and consider that to be that. For some dogs, this nutritional strategy works. For others, it does not.

Not all dog food is the same. Are you sure the kibble or the canned or the semi-moist food you chose is providing your dog with the nutrition he needs to function at his best? Is your dog food of choice complete and balanced? Does it meet your dog's special needs?

Maybe you also supplement your dog's food with table scraps. Does this improve or compromise your dog's health? You've probably heard from some sources that a good quality commercial kibble is all your dog ever needs. Other sources say that a healthy homemade diet is best. With so much conflicting information, it can be hard to decide what type of food is reasonable, affordable, and best for your dog's health.

Dog owners typically spend more money on dog food than on any other pet-related expense. Knowing the basics of canine nutrition, how to read a dog food label, and what your dog really needs and doesn't need for good health will help you make sure that your investment in canine nutrition is wise, contributing to rather than compromising your dog's healthy life.

Fortunately, you don't have to do all the work on your own. Canine nutrition is a complicated subject, but it is also widely studied and every dog owner has access to the experts. The reputable breeder, animal shelter, or rescue group from which you adopted your dog can give you a lot of information about what your dog has been eating and how to continue feeding him. Your veterinarian knows about canine nutrition and can recommend a food that matches your dog's needs.

Some pet supply store employees also have been well-trained in the merits of different brands of dog food and may have additional information, often in the form of take-home brochures from various product lines.

A holistic pet store may have more information on natural foods, small stores may stick with the brand they have found to be superior, and larger chains may have a wide array of choices.

Even the Internet has a lot of information about canine nutrition, although reputable websites from established authorities are likely to be the most reliable. When in doubt, check with your veterinarian.

Finally, keep in mind that no one source will necessarily give you all the information you need. Gather information from several sources to make the best and most informed decision about what to feed your dog.

— *The Original Dog Bible*
(BowTie Press, 2005, \$24.95)



What's in Dog Food? (CONTINUED FROM PAGE 4)

Wet, dry, or in between?

Advocates of canned food applaud its high moisture content and the fact that some foods contain "human-grade" ingredients — another term that does not have an official definition in the pet-food industry. Kibble, by contrast, is dried using a process called extrusion, and is often more affordable and convenient to store and feed.

"You can make perfectly acceptable and perfectly unacceptable pet foods by any form of food preservation," including "soft-moist" foods that are somewhere in the middle, Buffington says. "But that doesn't tell you about the quality of the food."

Bartges agrees that the dry and wet debate is not black and white. "Dry foods are not necessarily 'bad' or 'worse' than canned food," he says. "Many dogs do very well on dry food and live long and healthy lives."

Ask around

Buffington suggests consulting your veterinarian. "He or she likely does not have a degree in canine nutrition, but experience can be a very wise teacher," he says. "When you practice, you start hearing about the same foods over and over" from clients. Inevitably, a pattern emerges, with some foods consistently landing in the thumbs-up list — and others not.

While no vet can know about every food on the store shelf, dog owners should take advantage of their anecdotal experience with one succinct question, Buffington says.

"Here's what I'm feeding. What do you think?"

— Denise Flaim



How Do I Pick the Right Food for My Pet?

Find out how pet foods are made and what to look for when choosing a diet.

With so many choices, picking the right food can be a daunting task. However, you can look for certain things. Julie Churchill, DVM, assistant clinical professor of companion animal nutrition at the University of Minnesota in St. Paul, suggests that when making a pet food selection, it is important to remember that all pet foods are not created nutritionally equal.

“There are two ways a company can substantiate a nutritional claim,” Churchill says. “First, it can claim its food was formulated to meet the Association of American Feed Control Officials [AAFCO] nutrient profiles for a particular life stage. This tells you the nutrition is in the bag, but not necessarily that it can get into the pet. A crude example of this would be to analyze a piece of shoe leather with added fat and a vitamin pill. Analytically, the nutrition is all there, but it tells you nothing about important facts such as digestibility or nutrient interaction effects that may interfere with absorption,” Churchill says.

“The second way is to undergo AAFCO

feeding trials to establish nutritional adequacy, and this is what I recommend looking for,” Churchill says. “These foods have proven that the nutrition gets into the [dog or cat].”

The Food and Drug Administration and the U.S. Department of Agriculture regulate pet food processing. AAFCO, an advisory committee, works to ensure that pet food products are safe, nutritionally balanced, and properly labeled. It defines ingredients that can and cannot be used, nutritional standards, and controls how

products are named. If statements about nutrition are printed on the label, they must meet feeding protocols determined by AAFCO.

As part of the quality control process, pet food manufacturers check ingredients for adequate nutritional levels and wholesomeness before they ever go into the food. The food is then checked throughout the manufacturing process for important components such as moisture levels, fat content, protein concentration, and ash.

— Lisa Kobs

How Much Should I Feed?

Many owners simply scoop out some food for their cats and dogs, or grab a couple of handfuls from the bag. This is not the best way to ensure that your pet gets the nutrition he needs. Nor is it likely to keep him at a healthy weight.

Feeding recommendations on the bag or can are just that — recommendations. Treat them as a starting point, then talk with your pet’s veterinarian about how much your particular feline or canine friend should eat. Some animals get more exercise or have higher metabolisms. Others don’t.

Then, keep an eye on your pet’s ribs and belly. These are the areas that will help tell you if our dog or cat is losing or gaining weight. Adjust accordingly, and you’ll keep your friend on track.

Processing Facts

Pet food is commonly found in four forms: canned, dry, semimoist, and cuts and gravy. While all four start with many of the same ingredients, they are processed in different ways.

CANNED: Canned food is made by a process called retorting. Meat is ground into very small pieces, and water is added to form a watery mixture. Dry ingredients, such as vitamins and minerals, are blended in, and the mixture is pumped into cans. Lids are applied, and the cans are put into the retort, essentially a large pressure cooker. After cooking from 50 to 90 minutes, cans are cooled and labeled. Balancing time and temperature makes retorting a complex process. Cook the food too long, and your pet won’t want to eat it. If it is not cooked long enough, it will not be safe to eat.

DRY: Dry food is made in a machine called an extruder, a machine that combines a pressure cooker with a meat grinder. The food goes into the extruder wet and is pushed along by a screw that lies in the center, much like a meat grinder. A steam jacket surrounds the food, cooking the food as it’s moved along. When the food exits the machine, it’s pushed through two plates — one still plate and one revolving. The moving plate — which determines the shape and size of the food — slices the food as it’s pushed through. A difference in pressure from inside and outside the machine causes the food to expand and puff up. Once expanded, the food can then be sprayed with tasty fat and flavor blends to make it more appealing to pets.

SEMIMOIST: Semimoist pet food is manufactured using a principle called intermediate moisture technology, which uses higher levels of water to keep semimoist foods soft and prevent spoiling. Water in the food is controlled by using ingredients that chemically bind it. Added preservatives prevent spoilage. The resulting product is a soft and chewy food that can be stored safely on the shelf. Extruders create shape and size.

CUTS AND GRAVY: This type of food is made by first grinding all ingredients together into one smooth mixture. Wheat gluten is then added to the mixture to thicken it until it becomes hard. The ingredients or mixture may be cooked at any time before the next step. By passing the solid mixture through an extruder, the food can be pumped into a particular shape, usually into a sheet. The food is then diced into chunks, and gravy is added before being canned and labeled or put into pouches.

— L.K.



Hazards of a Homemade Raw Food Diet

The raw meat diet is a topic of great controversy in veterinary medicine.

Pet owners frequently ask about preparing their own raw diets for their cats or dogs. Here are the facts:

Raw meat contains bacteria, some of which are deadly to animals. The first misconception is that cats and dogs do not get *Salmonella* or *E. coli* infections. However, both cats and dogs can suffer and die from these pathogens. Veterinary literature cites multiple reports in animal deaths from *Salmonella*, which was later cultured from the raw food that the animals ate.

The second misconception is that freezing raw meat or adding grapefruit seed extract kills bacteria in raw food. Freezing does not kill bacteria or other serious pathogens, such as toxoplasma. When put to the test, no antimicrobial activity was detected in grapefruit seed extract.

Unless tested for nutrient analysis, most homemade raw diets are deficient in various vitamins and minerals, such as calcium, phosphorus and essential fatty acids.

“[An evaluation of raw food diets demonstrated that] all the [raw] diets tested had nutrient deficiencies or excesses that could cause serious health problems when used in a long-term feeding program,” say Lisa M. Freeman and Kathryn E. Michael, veterinarians at Tufts University School of Veterinary Medicine, in the *Journal of the American Veterinary Medical Association*.

Owners who feed their pets raw diets should consult a reliable, credentialed pet nutritionist about proper dietary formulation.

Aside from deficiencies, excessive amounts of certain vitamins and minerals can also harm pets. For example, young animals fed excessive amounts of vitamin A from raw liver experienced



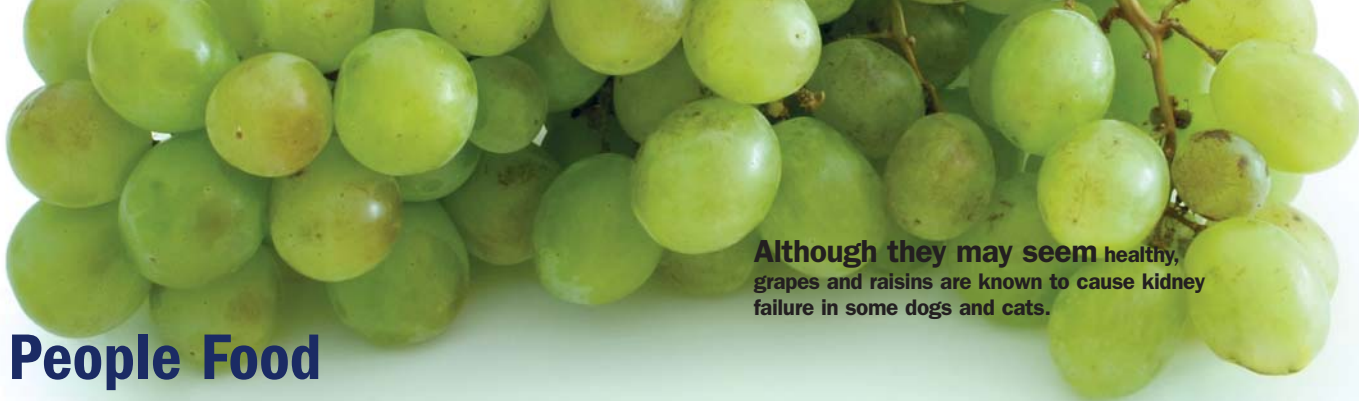
slowed growth, and older animals experienced debilitating bone and nerve problems.

Raw diets contain “good” bacteria as well as bad, but it’s much safer to add a probiotic supplement or enzyme to your pet’s cooked diet than risk the bacterial contaminants of a raw one.

Finally, though feeding raw food with bones provides dietary calcium, large pieces of bone make digestion and absorption difficult and dangerous.

As you can see, research indicates that there are many problems with feeding pets homemade raw food diets. We do not recommend it.

— Narda G. Robinson, DO, DVM, MS,
and Brenda McClelland, DVM



Although they may seem healthy, grapes and raisins are known to cause kidney failure in some dogs and cats.

People Food

Six foods you should never feed to your cat or dog.

Not everyone agrees on whether or not dogs and cats should ever eat the food we eat. Because high-quality pet foods provide a dog or cat with all the nutrients he needs in the correct proportions, many vets and pet experts advise never straying from that highly researched formula. Too many additional extras can throw off that balanced ratio of nutrients.

On the other hand, some people, particularly holistic veterinarians and other alternative healthcare experts, believe that because many of the original nutrients and enzymes in pet food are destroyed during processing, a strict diet of processed kibble isn't sufficient and is at best unnatural for dogs or cats.

They believe that the addition of healthful people food to a pet's diet won't hurt and may even provide the dog or cat with fresher, more available nutrients than those in processed pet food.

An occasional healthy snack for your pet is probably fine in moderation, but certain foods humans eat are dangerous for dogs and cats. Others, such as potato chips and ice cream, may not be toxic, but they can cause gastrointestinal upset, contribute to obesity, and provide no nutritional benefits. Avoid the following foods when giving your dog or cat treats or a homemade diet:

Chocolate: Chocolate contains two substances harmful to pets: theobromine and caffeine. Both of these substances occur in only a small amount in milk chocolate, but are much more concentrated in dark chocolate and baking chocolate. The darker and less sweet the chocolate, the more dangerous it is for dogs and cats. A little milk chocolate may result in diarrhea and offers no nutritional benefit. A lot of dark chocolate affects the nervous system and could cause hyperexcitability, restlessness, frequent urination, tremors,

and vomiting. Severe cases can result in seizures and cardiac arrest, or even death.

Onions and garlic: In large quantities, onions and garlic can cause hemolytic anemia. Eating a small amount of garlic powder is harmless; fresh garlic should be avoided. Onions are more potent. While your dog or cat may tolerate eating bits of meat cooked in onion, don't feed your pet the onion pieces or onion-infused broth.

Raisins and grapes: According to the ASPCA Animal Poison Control Center, grapes and raisins have caused numerous cases of canine poisoning for as yet unknown reasons. Dogs and cats typically experience lethargy, vomiting, diarrhea, and eventually kidney failure. While many pets eat the occasional grape without a problem, keep your dog or cat away from grape vines and from eating an entire bunch of grapes. Never feed raisins to your dog or cat; even small servings of raisins have been linked to toxic reactions, and raisins aren't good for pet dental health, either.

Alcohol: Dogs and cats absorb alcohol quickly and are prone to toxic reactions such as inebriation, seizures, heart arrhythmias, low body temperature, kidney damage, and even coma or death. Never give any form of alcohol to your dog or cat.

— *The Original Dog Bible* (BowTie Press, 2005, \$24.95)

Onions, cooked or raw, and onion-infused broth could cause serious harm if fed to your dog or cat.

Foods to Avoid Feeding Your Pet

The American Society for the Prevention of Cruelty to Animals recommends that you never feed these foods to your cat or dog.

- Alcoholic beverages
- Avocado
- Chocolate (all forms)
- Coffee (all forms)
- Fatty foods
- Macadamia nuts
- Moldy or spoiled foods
- Onions, onion powder
- Raisins and grapes
- Salt
- Whole, chopped, or minced garlic
- Yeast dough
- Xylitol-sweetened products

