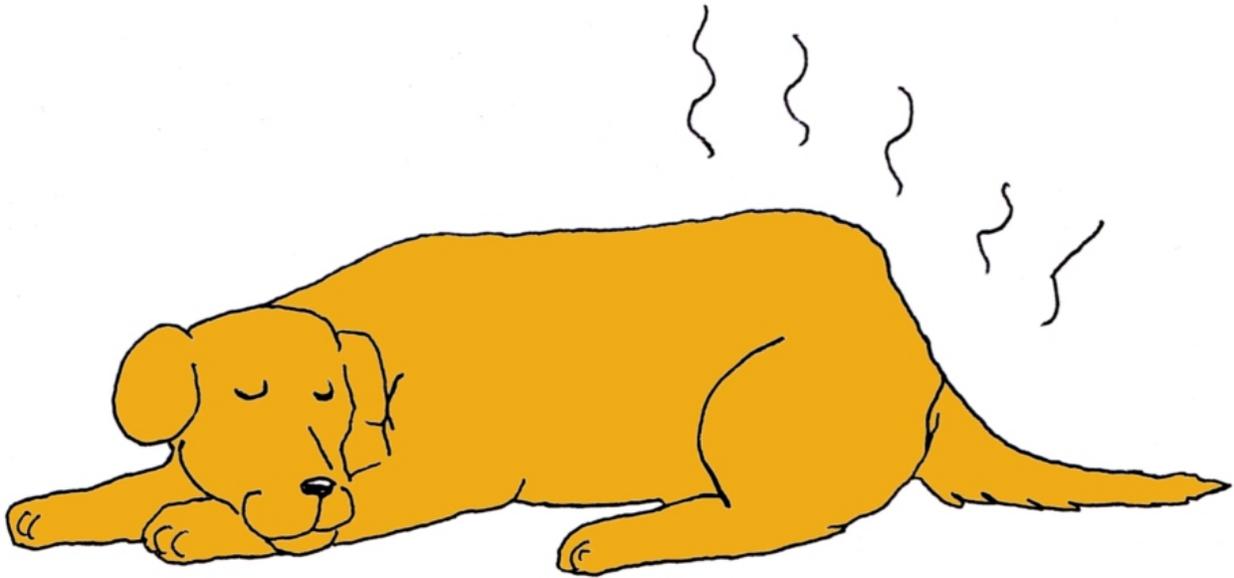


# Flatulence



Imagine everyone is gathered together for a relaxing evening of snacks and television when gradually there is no way to avoid or ignore the odors being emitted by the otherwise happy family dog. Jokes abound but really what one wants is a solution to this problem, especially if it is ongoing.

## THE SCIENCE OF FLATULENCE

Flatulence comes from an excess of gases in the intestinal tract. These gases may represent air that has been swallowed, gas produced in the biochemical process of digestion, gas diffusion from the bloodstream, or gases produced by the bacteria that populate the intestinal tract. Over 99% of the gases that pass from the intestinal tract are odorless; the gases with objectionable odors are typically those containing hydrogen sulfide.

Flatulence is a normal biological function. A surprising amount of air is swallowed with the simple act of eating and if this is not burped out, it must exit through the other end. The amount of air swallowed tends to be increased when dogs feel they must eat quickly or in the brachycephalic breeds who tend to breathe more by mouth rather than by nose. Swallowed air tends not to have objectionable odor.

The really stinky gases are produced by colon (large intestine) bacteria. Dietary fiber in pet food is not readily digestible by the pet's own enzyme systems but is readily digested by the gas-producing bacteria of the colon. As these fibers are broken down, gases are produced. A diet heavy in fibers tends to favor these gas-producing organisms. The more supportive the intestinal environment, the more bacteria there will be and ultimately more gas will be produced.

## WHAT TO DO ABOUT IT

The following are easy changes that can be made in the management of the pet:

- Feed smaller meals several times daily instead of one larger daily meal.
- Feed a mixture of dry and canned foods.
- Discourage rapid eating by placing an over-turned small bowl inside the pet's regular food bowl. This prevents the pet from taking as large a mouthful. Commercial puzzle feeding bowls are also available for this same purpose.
- Avoid soy and peas in the diet.
- Avoid any treats containing milk, cheese or other forms of lactose.
- Avoid fresh or dried fruit treats.
- Change to a high digestibility/low residue diet. There are therapeutic diets sold at most veterinary offices that would be perfect. Ideally, rice would be the diet's carbohydrate source.
- If possible, take the dog for a walk within 30 minutes of eating so as to encourage passing gases outside.
- Avoid canned foods containing the texturing ingredient "carrageenan."
- Encourage regular exercise as this keeps intestinal gases moving and prevents intestinal gasses from pooling/building up.



### *Prescription Low Residue Diets*

Changing to a low residue diet means that most of the nutrients of the food are digested and absorbed by the pet before they reach the colon where the gas-forming bacteria are. This means there will be less food for the gas-forming organisms which will ultimately mean fewer gas-forming organisms and less gas formed. Sometimes just going through a case and/or bag of such a low residue diet solves the problem and the pet can return to a regular food afterwards. If necessary, the therapeutic diet can become the pet's regular food.

## SOMETIMES MEDICATION IS NEEDED

A “carminative” is a medication that reduces flatulence. There are an assortment of available products but unfortunately most are not helpful or not even labeled for animal use. Changing the diet and ruling out actual intestinal disease are of primary importance in addressing flatulence. If further therapy is needed, the following products have some basis to suspect they might work:

### ***Yucca shidigera* supplementation**

Presently this extract is labeled as a flavoring agent for pet food but it is also available as an oral supplement. Several studies have shown that it helps decrease the odor in flatulence.

### ***Zinc Acetate* supplementation**

Zinc binds to sulfhydryl compounds in flatulence ultimately serving to deodorize the gas.

### ***Non-absorbable Antibiotics***

Such antibiotics serve to kill the gas-forming bacteria of the colon and may be helpful as long as their use is not ongoing.

### ***Probiotics***

There are many ineffective probiotics being marketed so it is important to use one that has been shown to actually contain live cultures and that its cultures actually withstand stomach digestion so as to populate the small intestine with beneficial bacteria. It is unknown if this type of product would really help in flatulence as it is asking a great deal for such bacteria to travel all the way to the colon and attempt to displace the gas-forming resident bacteria. That said, there are several veterinary products that are felt to be reputable: Prostora<sup>®</sup> Provable<sup>®</sup> Visbiome<sup>®</sup> and Fortiflora<sup>®</sup>. Fortiflora, Purina's product, has been shown to be effective in reducing flatulence.

## QUESTIONABLE PRODUCTS

### **Activated charcoal tablets**

Charcoal works by binding material in the intestinal tract such that the material in question is not absorbed into the body, or in this case, so that the material in question is sequestered away from gas-forming bacteria. The idea is to make nutrients unavailable to gas-forming bacteria. Unfortunately, activated charcoal tablets are not likely to be effective as the charcoal binding sites are filled on the journey from mouth to colon and by the time the tablet sees the gas-forming large bowel bacteria, it has essentially been used up and cannot adsorb any more material.

### **Simethicone**

May control the volume of gas produced but not the odor. It is an antifoaming agent that reduces gas bubbles.

### **Pancreatic Enzyme supplementation**

In the absence of exocrine pancreatic insufficiency, it is unlikely that a patient would be helped by extra digestive enzymes. Further, this treatment is relatively expensive for something that only might be helpful.

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## Mar Vista Animal Medical Center

3850 Grand View Blvd., Los Angeles, CA 90066 • (310) 391-6741 • Fax: (310) 391-6744  
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<http://www.marvistavet.com>