

## Understanding Food Allergies and Diet Trials

Food allergies account for about 10-15% of all the allergies seen in dogs and about 40% of all allergies seen in cats. It is the third most common allergy after flea bite allergies and atopy (inhaled allergies). The entire process of a pet being sensitized to a particular agent in food and the complicated antibody response that occurs in the intestinal tract in pets with food allergies are not very well understood. Despite our lack of understanding of the actual disease process, there are many things that we do know including the symptoms, how to diagnose food allergies, and also how to treat them. Unlike atopy, there is no strong link between specific breeds and food allergies. Food allergies affect both males and females and neutered and intact animals equally. They can show up as early as three months and as late as 16 years of age, though the vast majority of cases occur between 2 and 6 years. Many animals with food allergies also have concurrent inhalant or contact allergies.

**Common food culprits:** Several studies have shown that some ingredients are more likely to cause food allergies than others. The most common offenders in dog foods are beef, dairy products, chicken, lamb, fish, chicken eggs, corn, wheat, and soy. These are the most common ingredients in dog foods. This correlation is not a coincidence. While some proteins might be slightly more antigenic than others, the incidence of allergic reactions is probably associated with the amount of exposure.

**Symptoms:** The symptoms of food allergies are similar to those of most allergies seen in dogs and cats. The primary symptom is itchy skin affecting primarily the face, feet, ears, forelegs, armpits and the area around the anus. Symptoms may also include chronic or recurrent ear infections, hair loss, excessive scratching, hot spots, and skin infections that respond to antibiotics but reoccur after antibiotics are discontinued. There is evidence that dogs with food allergies may sometimes have an increased incidence of bowel movements. One study showed that non-allergic dogs have around 1.5 bowel movements per day where some dogs with food allergies may have 3 or more per day.

It is impossible to distinguish an animal suffering from food allergies from an animal suffering from atopy or other allergies based on physical signs. However, there are a few things that increase the suspicion that food allergies may be present.

- recurrent ear problems
- very young dogs with skin problems
- year-round symptoms or if the symptoms begin in the winter.
- very itchy skin that does not respond to steroid treatment.

**Diagnosis:** The diagnosis for food allergies is very straightforward. But due to the fact that many other problems can contribute to symptoms, it is very important that other problems are properly identified and treated prior to undergoing diagnosis for food allergies. Parasite diseases and yeast or bacterial infections can all cause similar symptoms as food allergies. A food trial is often started while other secondary problems or possible diagnoses are being treated.

**Food trials and elimination diets:** A food trial consists of feeding the patient a food with novel sources of protein and carbohydrates for at least 8 weeks. A novel food source would be a protein and carbohydrate that the animal had never eaten before. Examples are rabbit and rice, kangaroo and oat or venison and potato. There are a number of such commercial diets available on the market. In addition, there are specialized diets that have the proteins and carbohydrates broken down into such small molecular sizes that they no longer would trigger an allergic response. These are termed 'limited antigen' or 'hydrolyzed protein' diets. Homemade diets are sometimes used, as the ingredients can be carefully restricted. Regardless of the diet used, it must be the only thing the animal eats for 8 weeks. This means no treats, no flavored medications, no rawhide or pig's ears; absolutely nothing but the special food and water.

We used to think that a pet only needed to be placed on a special diet for 3 weeks but studies show that only 26% of dogs responded by day 21 of a diet trial. However, the vast majority of pets respond by 8 weeks. Therefore, it is very important to keep the pet on the diet for at least 8 weeks. If there is a marked reduction or elimination of the symptoms, then we challenge with the original food. This is called 'provocative testing' and is essential to confirm the diagnosis. If the symptoms return after going back on the original diet, the diagnosis of a food allergy is confirmed.

**Blood and Skin Testing:** There is no merit to these tests whatsoever for the diagnosis of food allergies. The only way to accurately diagnose food allergies is with a food trial as detailed above. While the intradermal skin testing is excellent for diagnosing atopy (inhalant allergies) it is inaccurate for food allergies. If you want to diagnose and treat food allergies you must do a food trial.

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### Food Trial Tips

ONLY the recommended diet should be fed.

NEVER give:

- Treats
- Rawhides
- Pigs Ears
- Cow hooves
- Flavored medications (including heartworm preventives) or supplements
- Flavored toothpastes
- Flavored plastic toys
- Any type of food when giving medications

A food trial consists of feeding a dog a novel food source of protein and carbohydrate for at least 8 weeks.

When starting the new diet, mix about 25% of the new diet with 75% of the old for 2 days. Then mix the two foods equally for 2 days, then 75% new diet and 25% old diet for 2 days. After 6 days the pet should be on only the new diet. Be sure to clean any dishes, food storage bins and scoops so you don't contaminate the new food.

If you want to give a treat, use the recommended diet or specially recommended treats. (Hint: canned diets can be frozen in chunks or baked, and these can be used as treats.)

If possible, feed all your pets the same diet. If this is not possible, feed other pets in an separate location than the patient, and do not allow the patient access to that food.

Do not allow dogs to access the cat's litter box.

No 'people' food is allowed. Keep your pet out of the room at meal times. Even a few small amounts of food dropped on the floor or licked off of a plate can void an elimination trial and require you to start over. Wash the hands and faces of any children after they have eaten.

Do not allow your pet to roam. Keep dogs on leashes when outside.

Keep a journal in which you can record the date and any foods, treats, etc. your pet may have accidentally eaten.

**Treatment:** The treatment for food allergies is avoidance. Once the offending ingredients have been identified through a food trial, then they are eliminated from the diet. Short-term relief may be gained with fatty acids, antihistamines, and steroids, but elimination of the allergens from the diet is the only long-term solution.

Once the allergies are controlled, the pet can be challenged with new ingredients to determine which ingredients are causing the food allergy. For example, if the animal's symptoms subsided on a diet of rabbit and potatoes, then you could add beef to the diet for two weeks. If the animal showed no symptoms, then they could then add chicken for two weeks. If the pet began to show symptoms, then it could be assumed that chicken was one of the things the pet was allergic to. The chicken could be withdrawn and after the symptoms cleared up, a different ingredient could be added and so on until all of the offending ingredients were identified. A diet could then be chosen that was free of the offending food sources.

If homemade diets are used long term, it is essential that they be balanced, with correct amount of ingredients, vitamins, and minerals. Homemade diets for such long term use should be developed by a veterinary nutritionist. Home cooked diets are not recommended long term, especially for cats.

Be aware that some pets with food allergies may develop allergies to new foods if they are fed those foods long enough. If you see signs of food allergies returning, please call.