

## Vet's Corner

Dr. Janet received her B.S. (1982), D.V.M. (1984) and M.S. in Pathology (1984) from Kansas State University. Upon graduating, she worked as a small animal intern at KSU College of Veterinary Medicine Teaching Hospital until she and her family relocated to Raleigh, NC in 1984. From 1984 to 1988, she worked as a dermatology intern at the North Carolina State University College of Veterinary Medicine and as a full-time associate veterinarian at Six Forks Animal Hospital in Raleigh. She later worked as a full-time associate veterinarian at Cobb Animal Clinic until she founded Adams Farm Animal Hospital P.A. in 1989. She has been a clinical investigator for multiple pharmaceutical trials and enjoys all aspects of clinical veterinary practice, although her primary interests are in dermatology, internal medicine and surgery. She is a member of AVMA, AAHA, AAEP, NCVMA, and GCVMA and volunteers with the Feral Cat Assistance Program. Her personal interests include traveling, spending time with her family (which includes two Jack Russell Terriers and a DSH cat) and Tar Heels Basketball. After 33 years in practice, she still looks forward to helping her patients and their families enjoy the human-animal bond and lead happy and healthy lives!



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## FOOD ALLERGY, ADVERSE FOOD REACTIONS AND DIETARY TRIALS

An adverse, immunologic reaction to a normally harmless food protein is abnormal, and it is still unknown why some animals develop allergies or adverse reactions to food proteins while others do not. Cutaneous (chronic itching) and gastrointestinal symptoms (chronic and recurrent vomiting and/or diarrhea) are common symptoms associated with food adverse reactions (“FAR”). In some studies, 57% of documented feline cases and 20% to 40% of documented canine cases of chronic itching and/or GI symptoms have been attributed to “food allergies.” A reaction to a dietary allergen can be classified as a food allergy (an immune-mediated adverse reaction to a food antigen), adverse food reaction (an abnormal response to a dietary constituent), or food intolerance (food poisoning or an idiosyncratic or metabolic reaction to a food). In clinical practice, the term “food allergy” is commonly used to refer to food adverse reactions.

In most cases, the classic symptoms that dogs and cats experience as a result of an immune-based reaction to dietary allergens start at a young age (less than six to nine months old) and tend to have a non-seasonal occurrence pattern. However, food allergies can develop at any time throughout an animal’s life as the type of food allergy is directly connected to dietary habits and because an animal cannot become allergic to an item that he or she has never been exposed to before. Since most of our pets eat a variety of treats and food items and their diets are constantly changing, they can develop food adverse reactions at any age. Additionally, dietary allergies by their very definition are related to previous exposure to the allergen. As such, it is very important to remember that animals can develop an allergic reaction to a food that “they have always eaten before.”

Cutaneous signs of food allergies can consist of itching around the face, ears, ventral abdomen, paws, axillary, inguinal and perianal regions. Sometimes the skin changes can be quite severe and can develop crusting, ulcerations and severe redness, mimicking immune-mediated skin disease. Gastrointestinal symptoms can involve vomiting, diarrhea, increased frequency of bowel movements, straining to defecate, excessive “scooting” and/or intermittent blood or mucus in their stool. There is a genetic predisposition to food allergies, as some dog breeds (such as Retrievers and German Shepherds) are overrepresented.

When diagnosing food allergies, a thorough examination of veterinary history and a diagnostic work up (if appropriate) is always warranted as with any other chronic conditions, as it is important to have ruled out other potential conditions before diagnosis. The symptoms of chronic itching can be related to environmental allergies (atopy) and there is also the possibility of cross-reactivity, meaning that many patients that have atopy can also suffer from

food adverse cutaneous reactions (prevalence is as high as 20%). Contact hypersensitivity, secondary bacterial (pyoderma) and yeast (*Malassezia*) dermatitis or otitis (ear infections), parasitic hypersensitivities (like flea allergy), and parasites (mites) can also contribute to chronic skin disease. Intestinal parasites, infiltrative gastrointestinal disease, inflammatory bowel disease, gastrointestinal cancer and many other GI conditions can cause chronic GI symptoms.

Dietary trials are the gold standard for diagnosis: we feed them a diet that contains a single novel (never eaten before) protein and a single (preferably novel) carbohydrate for a minimum of 12 weeks. If improvement is noted, the food allergy or intolerance should be confirmed by challenging the pet with the original diet. Hydrolyzed protein diets that are commercially available by prescription only are also a great option. The basic idea behind hydrolyzed protein diets is that the protein allergen has been “hydrolyzed” or broken down to a molecular size that is so small that is considered non-allergenic (typically chicken or soy based). This is due to the fact that the majority (98%) of the food adverse reactions are due to protein allergens. Therefore, it is critical to note that a “grain-free” diet (if it contains the same protein your pet is currently eating or has been exposed to before) is not a true limited antigen diet! Additionally, there is a risk of cross contamination during the manufacturing and packaging of many of the over-the-counter commercially available diets, so please make sure that you read the fine print on the label.

Dietary trials need to be discussed with your pet’s doctor. Your veterinarian should be familiar with your pet’s medical history and is trained in nutrition, which makes him or her a better source of information than “Dr. Google” or the retail sales representative at your local pet store. A thorough examination of veterinary history is extremely important for selection of your pet’s diet as well as proper feeding recommendations. Treats, chewable parasite preventatives, and supplements should also be discussed. In addition, it is important to note that dietary trials cannot be conducted on a “free-roaming” pet since we need complete control of what they are eating. Everyone in the family must be committed to the trial since even if it is “just a little piece of chicken”, as this can invalidate their response to the dietary trial. A good analogy I relate to my clients is peanut allergies in people: you only need to eat one peanut to have a severe reaction! Finally, if you choose to cook for your pet, you must ensure that it is nutritionally balanced and provides adequate macro and micronutrients, which means this should only be done after an appropriate nutritional consultation.

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