

HOT TOPIC

Protein in food allergies



Small intestine villi



In focus

Food allergies are not common in dogs and cats, but pet owners often believe that a pet's skin or intestinal symptoms are allergic reactions to specific food ingredients.

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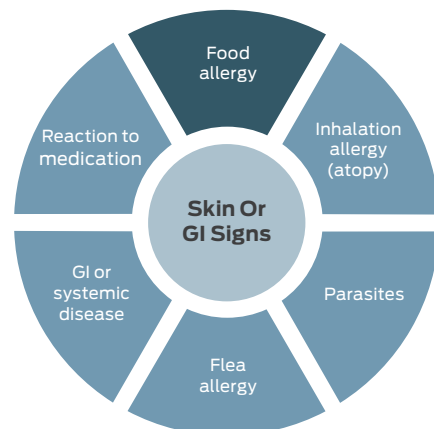
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How often do pets have food allergies?

The worldwide prevalence of food allergies is increasing among people,¹ but food allergies are considered uncommon in dogs and cats. It may seem more common in pets because many other health conditions have similar symptoms.^{2,4}

Statistics about pets' food allergy prevalence can add to that misperception because the numbers vary depending on the reason for a pet's veterinary exam: only 1% of cats seen for a general health exam were diagnosed with food allergy, yet 21% of cats presented for itchy skin had the same diagnosis.^{5,6}



Other health conditions may have symptoms similar to food allergy

What causes food allergies?

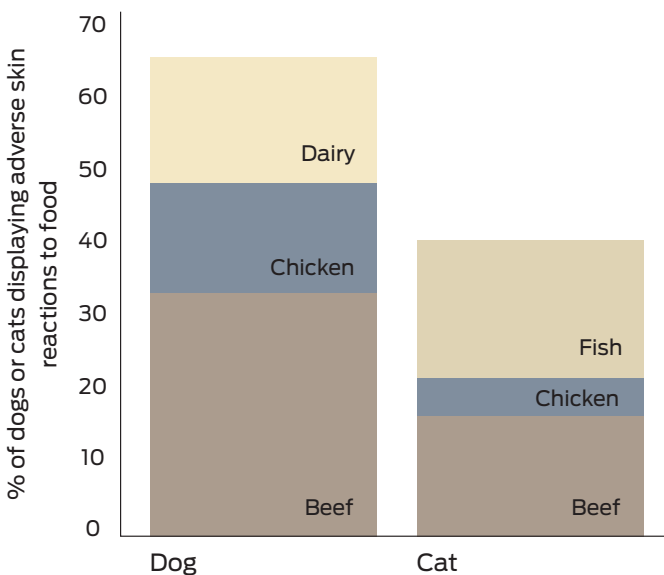
Food allergies occur when an individual’s immune system responds to a harmless food as a harmful “invader.” This immune response differentiates food allergies from dietary intolerance, or food poisoning, which do not involve the immune system.

When food allergies do occur, the most common trigger is a protein. No particular protein is hypoallergenic. An allergic response is the result of an individual’s immune reaction to the size or structure of a protein and is driven, in part, by prior exposure to the protein.^{3,7-9}

While ingredients such as grains have also been reported to cause food allergies, studies show it is the protein component of the grain that typically triggers the reaction.¹⁰

Grains are not among the most reported food allergens in either dogs or cats.

In dogs the top three food allergens are proteins from beef, dairy or chicken. In cats, the most commonly reported food allergens are from beef, chicken or fish.⁹



Adapted from Mueller et al., 2016

What role does nutrition play in food allergies?

The gold standard for the diagnosis of food allergy is a dietary elimination trial that combines one protein and one carbohydrate to which the pet has not previously been exposed.⁸ Studies show that allergy tests based on samples from skin, blood, saliva or hair produce unreliable results.¹¹⁻¹⁴

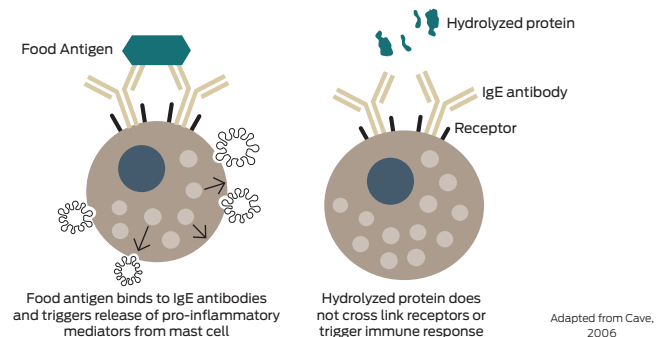
Selecting novel proteins is not always easy; new protein sources may cross-react with the original allergen, and many pets have multiple food hypersensitivities.¹⁵⁻¹⁶ Diets must also be nutritionally complete and balanced, and ideally, be easy to feed during an 8-12 week dietary trial, or for long-term maintenance.

Feeding hydrolyzed protein diets can offer a convenient, nutritionally complete and balanced strategy for reducing food allergenicity.¹⁷⁻¹⁹

How do hydrolyzed proteins help manage food allergies?

Hydrolysis is a process that breaks proteins into smaller pieces. “Ultra hydrolyzed” proteins are reduced to very small pieces. This process changes the size *and* structure of the protein—key factors in determining a protein’s allergenicity.

In general, adverse immune reactions to a food ingredient require an allergen—typically a protein—large enough to crosslink receptors on the surface of specific immune cells. The altered size and structure of hydrolyzed proteins do not crosslink these cell surface receptors to trigger an immune response.⁷



As an additional benefit, hydrolyzed proteins have increased digestibility, which can reduce inflammatory gut conditions.²⁰

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