

Adverse food reactions in dogs and cats

Almost all dogs suffer from an adverse reaction to foodstuff sometime during their lifetime. In a small number of animals these symptoms persist or return regularly. The cause can be either a food intolerance or a food allergy.

Many animal owners show a growing interest in foodstuffs and allergies triggered by them. The veterinary practitioner must be able to meet this demand with sound knowledge and sophisticated diagnostic tools.

What are adverse food reactions?

The term adverse food reaction summarizes all clinical manifestations due to the ingestion of food, regardless of whether an immune response occurs (food allergy) or not (food intolerance). Often the term intolerance is used incorrectly for an IgG - mediated type IV hypersensitivity reaction.

Adverse food reactions can be categorized as follows:

Allergies, pharmacological reactions, idiosyncrasy, toxic reactions and metabolic disorders.

Bacterial overgrowth in the intestine or disturbances of the eating behavior are not considered as adverse food reactions.

What is a food allergy?

Food allergy is a hypersensitivity reaction to antigens (allergens) foreign to the bodies immune system. Cause is therefore an immune reaction based on either IgE – mediated type I hypersensitivity reactions or IgG – mediated delayed type IV reactions. While immediate allergic reactions are diagnosed quite easily, the

delayed response can make the connection between clinical signs and diet quite difficult to establish.

Food allergies are said to be the cause of about 10-15% of all gastrointestinal clinical symptoms.

What are the symptoms?

The symptoms of an allergy to foodstuffs or their components are generally non-specific and appear in a multitude of different illnesses. The food allergy can also occur in combination with other disorders or allergies. Symptoms in cats

with food allergies appear as skin disorders such as pruritus, alopecia and dermatitis, generally localized around the head, neck and ears (65%).

The most common symptoms are:

Systemic symptoms	Dermatological symptoms	Gastrointestinal symptoms
Anorexia	Pruritus (generally non-seasonal, localized or generalized)	Vomiting
Lethargy	Papulae, Pustulae, Erythema	Diarrhea (containing blood/mucous)
Anaphylaxis	Otitis externa	Szeizures
Urticaria	secondary Pyodermia	Bloating, Flatulence
Failure to thrive	Dandruff, Seborrhoea	
Weight loss		

Diagnostics of food allergies

The most effective method of diagnosing an allergy to food components is an **elimination diet** followed by a **provocation test**.

However, this method has several important and **well known disadvantages**:

1. duration of diagnostic trial of up to 12 weeks
2. lack of understanding by animal owner concerning necessity of strict

diet (no goodies, chewing snacks etc.)

3. lack of owner's compliance
4. identification of only a limited number of tolerated food components (no identification of the triggering agents)

Diet management: “ only very few components contained in the elimination diet are permitted”

Sensitest – a new allergy test

The alternative in diagnostics is a newly developed serum test (EIA) which indicates the immediate type I hypersensitivity reaction (IgE) as well as the delayed IgG-mediated type IV reaction (IgG). This food test named **Sensitest** has been on the British market for years and is being supported by Prof. Halliwell.

The advantages are apparent:

1. rapid identification of problem causing food components
2. detection of IgE- and IgG- titers facilitate the distinction between immediate IgE-mediated and delayed IgG-mediated hypersensitivity reactions
3. semi-quantitative antibody titers for tested allergens
4. flexibility in combining the patient's diet increases the owner compliance

Diet management: “ all but components that have been tested positively are permitted as food”

In the past there was a lack of information about the significance of traceable antibody levels for clinical symptoms:

A study performed in England, using sera of 100 dogs, showed good to excellent improvement in 90% of the animals with dermatological or gastrointestinal symptoms whose owners complied with a strict diet in accordance with the test results. The majority of the tested animals had suffered from clinical symptoms for more than a year.

The owner's compliance was extraordinarily high and 95% of the owners would recommend the test. Data collected by the Bristol University support these results.

What exactly is being tested?

16 of the most important food components are being tested for IgE and IgG simultaneously. To perform the test we need 1 ml serum and approx. 3 days.

Protein components	Carbohydrate components
Beef	Wheat
Pork	Soybean
Lamb	Barley
Duck	Rice
Chicken	Potato
Turkey	Corn (Maize)
Egg	Oats
White fish	
Cow's milk	

The Sensitest is available for cats also. Testing is done for IgG only.