

Understanding  
Food Allergy in  
Pets

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# Food Allergies

Diagnosis and management

# What if my pet is allergic to food?

The most common allergens responsible for food allergy in dogs include beef, chicken, fish, dairy and soy proteins. Frequently the food has been part of their diet for a long time.

The symptoms can appear at any age, but in many cases first signs are seen when they are 1 year old. Food allergy symptoms are mainly present throughout the year (non-seasonal).

Besides the typical symptoms of allergy, between 10% and 15% of dogs with food allergy also seem to have gastrointestinal complaints, such as vomiting, diarrhea, weight loss and abdominal discomfort.



## How can it be diagnosed?

The only way to diagnose food allergy is through a food elimination trial.

This trial consists by introducing a new diet (known as elimination diet) and should be followed for at least 6-8 weeks. If there is an improvement noticeable after this time, the previous (old) diet should be reintroduced for a maximum of 3 weeks to see if the symptoms reoccur.

If they do reoccur, then return to the new diet. If your pet improves again, the diagnosis of food allergy is confirmed.



It is very important that your dog does not consume any treats, snacks or flavoured medication during the food elimination trial

# Clinical Signs

Dogs suffering from AFR generally present with dermatological or gastrointestinal signs, or combination of both.

Dermatological signs are varied, and often indistinguishable from those associated with atopic dermatitis, although the presence of an unusual distribution or concomitant gastrointestinal signs may raise suspicion for an adverse food reaction.

When pruritus is not corticosteroid-responsive, a food allergy should be considered (if pruritus responds to corticosteroids that does not rule out the possibility that a food allergy is present).

Generalized or localized non-seasonal pruritus (face, ears, paws, axillae, inguinal and perineal regions) is the most frequently described dermatological sign. It is also possible for the effects of a food allergy to be below the 'itch threshold' and only observe flares of



- Non-seasonal pruritus
- Signs of allergic dermatitis
- Gastrointestinal signs
- Corticosteroid non-responsive

pruritus with the addition of environmental allergens during high pollen season. Otitis externa and recurrent pyoderma with or without pruritus has also been associated with AFR in dogs.

Gastrointestinal signs may include vomiting, diarrhea, weight loss, and abdominal discomfort.

## Ears

**Appearance:**  
Waxy discharge; redness; odor  
**Behaviour:**  
Scratching or rubbing ears with paws or against furniture

## Face

**Appearance:**  
Inflammation; redness; conjunctivitis; swelling  
**Behaviour:**  
Scratching or rubbing face with paws or against furniture

## Skin

**Appearance:**  
Reddened; possibly with crusts or scales; odor with secondary infections  
**Behaviour:**  
Scratching and licking sides/belly, elbows, groin

- + Otitis externa
- Recurrent pyoderma
- Vomiting
- Diarrhea
- Weight loss
- Abdominal discomfort
- Flatulence

## Feet

**Appearance:**  
Inflammation, redness, odor, brown discoloration where licking has occurred  
**Behaviour:**  
Licking and chewing of feet/pads

## Hair & Coat

**Appearance:**  
Bald spots; brown discoloration where licking has occurred  
**Behaviour:**  
Scratching sides/belly, rubbing face against furniture or carpet, licking



# Diagnosis

Currently, the definitive diagnosis of food allergy in dogs is only possible through a food elimination trial followed by a food challenge test. The recommended length of this trial is at least 6-8 weeks.

Complete or partial improvement of pruritus during the trial is the main criterion for suspected food allergy. The diagnosis is confirmed by the recurrence of clinical signs when the food given previously is reintroduced. As animals may be multi sensitive, it may be necessary to attempt dietary restriction more than once.

The elimination trial can be done with a homemade diet, a commercial diet with hydrolyzed protein, or a commercial diet with proteins unusual for the dog.

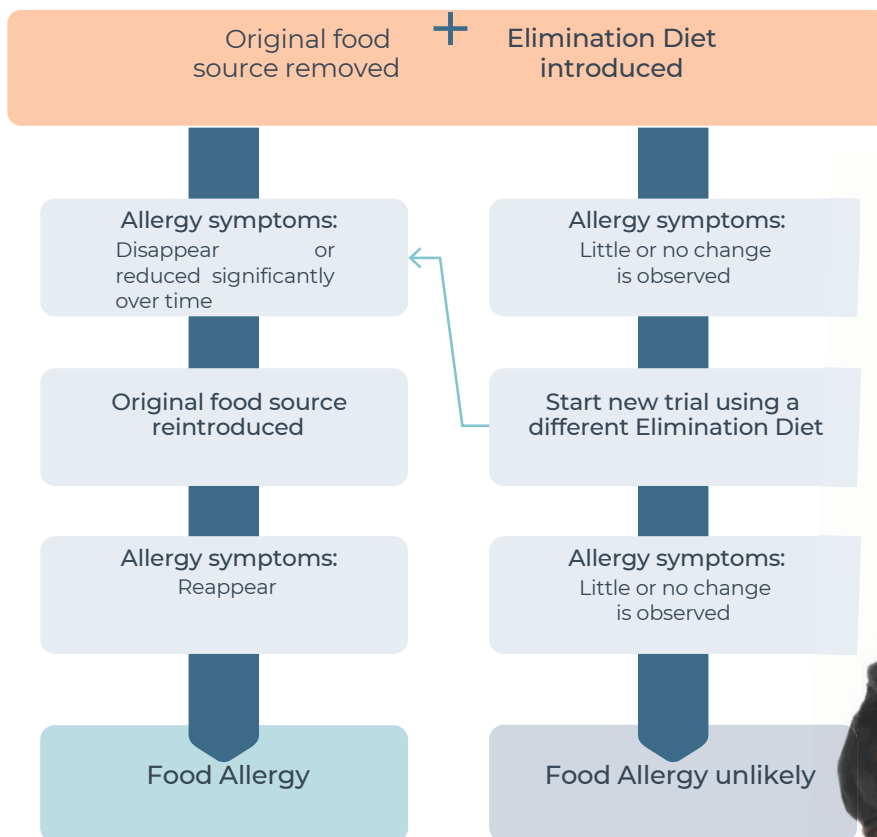
Commercial diets often contain larger protein molecules capable of inducing clinical deterioration in some dogs<sup>6,7</sup> or protein sources not declared on the label<sup>8,9</sup>.

There are conflicting studies on the effectiveness of hydrolyzed diets for allergic patients, with 10% to 40% of patients allergic to the basic protein continuing to show clinical signs on a hydrolyzed version<sup>7</sup>.

Home cooked diet is thus regarded as the most reliable diagnostic option, however less practical.

During the elimination diet, the dog must not receive any other food, treats, medications, vitamins, or supplements with any protein other than the one chosen for the diet.

## Food elimination Trial - Food Challenge



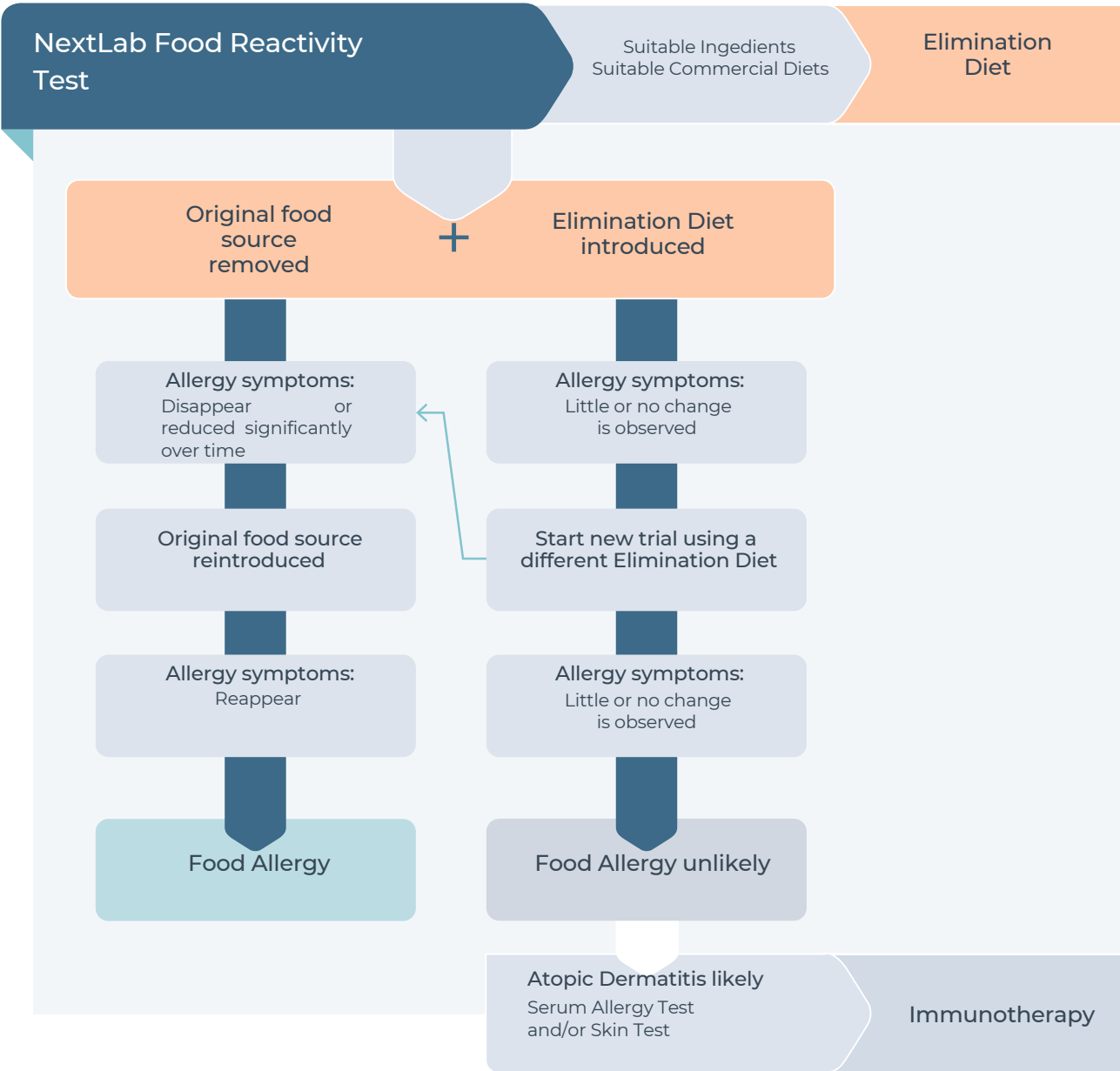


# Management

Once food allergy is established, strict avoidance of allergen is the gold standard. Taxonomic relationship between protein sources should be considered to avoid the risk of cross-reactivity.

If the trial appears to have been performed correctly, but the patient did not improve or slightly improved, then it is likely suffering from atopic dermatitis and reacting to environmental allergens. NextLab Serum Test and/or an Intradermal Skin Test can identify these

environmental allergens that your patient is reacting to and help you putting together an appropriate immunotherapy to treat the cause of the allergy.



# Which new diet can I give?

A food elimination trial can be done with a home-cooked diet, a commercial diet with hydrolysed proteins or a commercial diet that contains proteins your pet has not previously tried. It is not easy to determine a right option when it comes to selecting which elimination diet to use.

Commercial diets, even if with new proteins for your pet, can sometimes contain protein sources not declared on the label. In two studies, undeclared proteins were found in 83% and 90% of the tested foods.

In commercial diets containing hydrolysed proteins, these proteins have been broken down into smaller pieces in order to prevent a reaction. There are conflicting studies on the effectiveness of hydrolysed diets, with 10% to 40% of patients who are allergic to the basic protein continuing to show symptoms on a hydrolysed version.

Vegetable-based diets such as Solo Vegetal are another option for elimination trials and are beneficial because they do not contain any meat, fish, dairy or soy which are often considered the allergens most likely to trigger symptoms.

Home cooked diets are the most reliable option, however more time consuming and less practical.



Conducting an  
elimination diet  
trial

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# Diet Trials



## DIET TRIAL INSTRUCTIONS FOR DOGS

The only way to diagnose a food allergy is by conducting a diet trial (also known as food trial or elimination diet) and this in itself should be seen as a diagnostic test. The results of your dog's serum food test will guide the selection of the appropriate ingredients to be used in the diet trial.

### FOOD TEST RESULTS

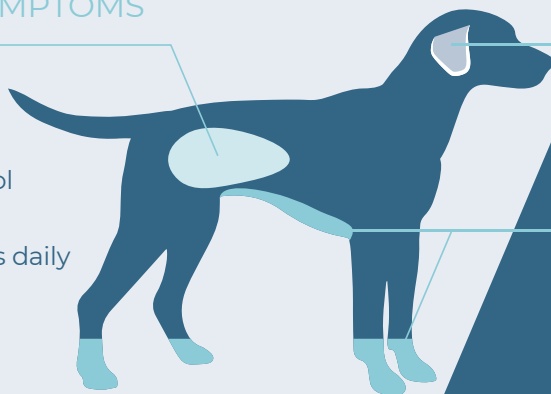
PROTEINS Mammalian	Candidate for Dietary Trial	Class Score	
		IgE	IgG
Beef		4	4
Cow's milk	✓	2	3
Lamb		0	1
Pork		3	1
Rabbit		4	1
Venison		1	1
Avian	✓	0	0
Chicken	✓	0	0
Duck	✓	0	0
Turkey		0	0
Whole egg		0	0

## WHAT IS A FOOD ALLERGY?

A food allergy involves an immune reaction to one or more specific ingredients in the diet. The food in question is incorrectly viewed by the animal's immune system as a threat, resulting in the production of antibodies (part of the body's natural defence) against it. This can cause digestive symptoms, ear symptoms or skin symptoms, which may occur on their own or in combination, as shown below.

### DIGESTIVE SYMPTOMS

- Diarrhoea
- Loose stools
- Excess gas
- Jelly on / with stool
- Vomiting
- More than 3 stools daily



### EAR SYMPTOMS

Appearance: Smelly, irritated and inflamed, scabs  
Behaviour: Scratching, rubbing

### SKIN SYMPTOMS

Appearance: Smelly, irritated and inflamed, areas of hair loss, dandruff / scabs, greasy, skin colour change  
Behaviour: Scratching, rubbing, persistent licking, chewing or nibbling

## WHY HAS MY DOG BEEN PUT ON A DIET TRIAL?

It is impossible to tell just from their symptoms whether an itchy dog has a food allergy, an allergy to something in their environment, or both, because the symptoms can look exactly the same. Likewise, there are many other possible reasons for dogs to have digestive symptoms.

As part of the process to reach a diagnosis for the symptoms your dog is displaying, it is important to either rule-in or rule-out a food allergy. For dogs with skin symptoms this is normally done after infections (bacterial, yeast and fungal) and ectoparasites (fleas, mites and lice) have already been ruled-out and / or treated for. Those with digestive signs may have already had blood tests and / or a sample of their stool sent for analysis to rule out other causes.

## WHY CAN'T I JUST USE MEDICATION?

For some dogs with food allergies, removing the problem foods from their diet will mean that their symptoms will completely resolve, preventing the need for life-long medication. Other dogs with skin and ear signs will have both a food allergy and other allergies in addition (usually to things in their environment), so you may only see a partial improvement when the problem foods are removed. This is still very beneficial though, because allergy is a life-long condition and the dietary changes may reduce the amount of medication they need. Food allergies are common, especially in dogs with skin or ear problems, so while it's important to recognise many dogs will not improve during the diet trial, the potential benefit for those that do makes it an essential part of the diagnostic work-up and well worth doing.





## WHAT DOES A DIET TRIAL ENTAIL?

Conducting a diet trial means that for up to 8 weeks you will feed your dog a very strict diet consisting of only water, and:

- **The agreed food(s)** – this will either be a home-prepared or a commercial diet.
- **Necessary medications** – this may include treatment for the skin, ear or digestive symptoms. Follow your vet’s advice on appropriate use during the diet trial. If any medications contain flavourings, alternative options may be recommended.

If your dog’s symptoms improve, the original diet is given again to see if they return; only then do we know it was the diet that caused the improvement rather than something else (just a coincidence). Ideally, further investigation will then occur to identify which individual ingredient(s) in the diet are causing the reaction, so they can be permanently removed. In a small number of dogs, where there is no response to the initial diet trial, your vet may recommend a second diet trial using a completely different food.

## HOW DO WE SELECT AN APPROPRIATE FOOD?

**STEP 1:** With your vet’s support, identify ingredients that your dog has never eaten before; you can help find these by:

- 1 Using serum food test results – only consider negative scoring foods, where possible.
- 2 Completing a full dietary history – list all foods (commercial or otherwise) known to have been eaten by your dog.
- 3 Avoiding similar foods to those previously eaten - e.g., if beef has been fed, also avoid lamb, cow’s milk and venison, as they could also trigger a reaction (your vet can help provide further guidance based on your dog’s history).

**STEP 2:** Using the information gathered in step 1, choose the right type of diet to suit you and your dog from the choices below.

## DIFFERENT TYPES OF DIET

HOME-PREPARED DIET	COMMERCIAL DIETS	
	HYDROLYSED	SINGLE PROTEIN
<p>This involves selecting one protein source and one carbohydrate. You will need to either regularly prepare this diet freshly for your dog or batch cook and freeze.</p> <p><b>BENEFITS:</b> Very palatable, can be tailored to your dog’s preferences, very limited number of ingredients and complete control of these, unusual ingredients can be used.</p> <p><b>DRAWBACKS:</b> Substantial time commitment, can be expensive (depending on size of dog / ingredients), needs nutritionally balancing if feeding long-term or for growing dogs (the 8-week trial period is fine for most dogs but your vet will advise), a reaction to the food is still possible.</p>	<p>In a hydrolysed diet, the proteins have been broken down to a small enough size that they are unlikely to stimulate the dog’s immune system.</p> <p><b>BENEFITS:</b> Originally designed for diet trials, but are also suitable for long term use, minimal chance of causing a reaction, useful if dietary history unknown / eaten wide variety of foods, most are suitable for growing dogs.</p> <p><b>DRAWBACKS:</b> Expensive, variable palatability, a reaction to the food is still possible.</p>	<p>These diets contain limited and / or unusual protein sources.</p> <p><b>BENEFITS:</b> Palatable, can be less costly than hydrolysed diets, usually suitable for long-term feeding of adult dogs, some contain other ingredients that can benefit the skin / gut.</p> <p><b>DRAWBACKS:</b> Often contain many ingredients overall, so increase the chance of causing a reaction. As a result, these diets are often used for long-term management rather than for the food trial. May be unsuitable for growing dogs.</p>

Please note, the term **hypoallergenic** is used for many different sorts of commercial diets; some of these may be hydrolysed or a single / novel protein but many are unsuitable for a diet trial. Your vet will be able to provide guidance.

**IMPORTANT:** A successful diet trial requires your full commitment. Be upfront and realistic when discussing options with your vet, both at the beginning and throughout, so that it can be adapted or modified to suit you and your dog.

## STARTING THE DIET TRIAL

To minimise the chance of a digestive upset, gradually introduce the new diet over a period of 5 - 7 days. Slowly give more of the new diet and less of the old until it is completely replaced. If your dog has any digestive upset (vomiting / diarrhoea), refuses to eat the new diet, seems to be losing weight, does not have a bowel movement for more than 24 hours, or you are concerned for any other reason about the diet, please contact your vet.

Like any diagnostic test, a diet trial must be run properly in order to generate meaningful results, so it is very important to follow your vet's instructions completely. Below are some tips on making your dog's diet trial a success.



## TIPS FOR A SUCCESSFUL DIET TRIAL

### TREATS

- For treats during the diet trial there are a few ideas below; or you can use small amounts of the new agreed food as it is.
- If using a commercial diet, kibble can be soaked in water and baked to make your own treats.
- If using a home-prepared diet, use small amounts of the fresh, pre-agreed ingredients to make treats.
- Some commercial treats may be suitable if they contain just a single ingredient (e.g., 100% duck); check with your vet before you buy to make sure.

### HIDDEN INGREDIENTS

- Avoid flavoured items such as supplements, toothpastes, toys and chews. Ask your vet for alternatives.
- Avoid using food to give medication during the diet trial, unless it has been agreed with your vet.
- Always check the additional ingredients listed on the packaging of any food used (commercial or home-prepared) to ensure they do not contain traces of the ingredients you are trying to avoid.

### ACCIDENTAL EXPOSURE

- If possible, feed any other pets in the household the same diet. If not, feed them separately and remove their feeding bowls immediately afterwards.
- Avoid cross-contamination by thoroughly washing bowls, chopping boards, pans, utensils and your hands before preparing food. Use ceramic, stainless steel, or glass bowls, especially if skin symptoms are mainly around the face.
- Don't let your pet scavenge on walks or at family meal times and ensure they do not have access to bins or food cupboards. Consider using a basket muzzle if they are prone to scavenging. Ask your vet how to introduce your dog to a muzzle so that it is a positive experience.

### GET EVERYONE INVOLVED

- Ensure everyone in the house, or involved in looking after your dog, fully understands the importance of following the rules, in order to make the results count.
- Use the diary on page 4 to record everything consumed by your dog during the trial, as well as any symptoms or changes in condition, to help you and your vet monitor their progress.







## THE ALLERGY JOURNEY

## UNDERSTANDING ALLERGY & ALLERGY MANAGEMENT

For more information on allergy including what causes it, how to diagnose and treat it as well as lots of other useful information please scan the QR code or visit:

<https://go.nextmune.com/theallergyjourney>



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