



Could my Pet have a Food Allergy?

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Our pets are fed a variety of foods and specific proteins (such as beef or chicken) are sometimes recognised by the immune system as foreign invaders to be attacked. The resulting inflammation may target the **gastrointestinal tract** (causing vomiting and/or diarrhoea) or the **skin** (causing excessive scratching and/or licking). Unlike many environmental causes of skin allergies, clinical signs associated with a food allergy are typically non-seasonal and can occur all-year-round.

Many people believe that food allergy signs, such as scratching, are the result of a recent change in diet. In fact, the opposite is true. **Food allergy requires time to develop and most animals have been eating the offending food for years with no trouble.**

Due to their immature immune system, it is uncommon to see food allergy signs in dogs less than 6 months of age but as the immune system matures, food allergy signs can start to emerge. Food allergy is also seen in adult pets so should be ruled out as part of the diagnostic investigation in all pets that have itchy skin or suspicious gastrointestinal signs.

Sometimes rather than a true food allergy, pets can have a food intolerance, which usually results in less severe gastrointestinal signs. On the other hand, severe food allergies affecting the gastrointestinal tract can trigger severe inflammatory bowel disease which in some cases, can be life-threatening.

What are the clinical signs of food allergy causing skin conditions in pet?

A non-seasonal intense itch is the most common sign. The itchiness can be all over the body or limited to a specific region or combination of areas such as the face, ears, feet and pinna, shoulders, on the belly or around the bottom. Some animals will present with recurrent ear infections alone or inflammation around the bottom. Cats commonly present with intense scratching or skin lesions around the face. Some animals with a food allergy have concurrent gastrointestinal signs such as vomiting or diarrhoea.

How common is pet food allergy?

Approximately 5% of dogs with non-seasonal itchiness have an adverse food reaction or food allergy as the sole cause for the skin disease. It has been estimated that food allergy accounts for 11% of feline dermatitis cases. So while not the most common cause of itchy skin in dogs and cats, food allergy as a cause of itchy skin needs to be ruled out before assuming more common causes such as atopic dermatitis, which is caused by environmental allergies.



What are the most common causes of pet food allergy?

The most common causes in the dog are proteins such as beef, chicken, mutton/lamb, dairy products and eggs. The most common causes in the cat are fish, beef and dairy products. While these may be the most common causes, any previously exposed protein can be a potential cause of food allergy.

Should I feed my pet a grain-free diet if a food allergy is suspected?

While grains are common causes of food allergy or triggers for gastrointestinal disease in people, this does not tend to be a common cause of pet food allergy, so feeding a grain-free diet in pets is rarely warranted. Further to that, veterinary cardiologists have noted that a small number of dogs have developed dilated cardiomyopathy on grain-free or diets containing a high legume content.

How is food allergy diagnosed in pets?

Unfortunately, skin testing and blood testing are not reliable for the diagnosis of food allergy in the dog and cat so we need to perform a food elimination diet trial.

Food elimination diet trial

The only way to properly diagnose a food allergy, is with a food elimination diet trial using either a ***novel protein diet*** or a ***hydrolysed protein diet***.

A novel protein diet is a type of protein (meat) that your pet has never eaten before. A hydrolysed protein diet is a diet in which the proteins have been modified to make them very small to reduce the chance that the immune system will react to them.

The chosen diet is fed for a set period of time. If the pet recovers, the ***original diet*** is fed for up to two weeks to see if itching resumes. If we see resolution of clinical signs with the test diet and then recurring itch with the original diet rechallenge, then food allergy is diagnosed.

Food allergy can either cause gastrointestinal signs (vomiting and/or diarrhoea) or skin signs (itchiness) in pets. Both require a slightly different approach in order to rule out food as a cause of their clinical signs.

1) Food allergy causing itchy skin

Instructions:

- Feed the novel protein or hydrolysed diet ***exclusively*** for ***8 weeks***



- The diet must be strictly adhered to with no other food given (including rawhide and chew toys, flavoured chewable medications, vitamins and treats)
- All family members must be on board with the trial. There can be no slipping the pet other foods when no-one is looking.
- It is recommended that all animals in the household are fed the same diet in case of food-stealing
- Challenging the pet with the old diet at the end of the trial is important, even if the pet is doing well, to confirm a diagnosis of food allergy

Clinical progress exam:

A clinical progress exam is recommended at the 6 week and 10 week points during the food trial as it is important for us to supervise and guide you through this process.

2) Food allergy causing gastrointestinal signs

Instructions:

- Feed the novel protein or hydrolysed diet **exclusively** initially for **3 weeks** then **extend to 12 weeks** if there is an improvement in clinical signs
- The diet must be strictly adhered to with no other food given (including rawhide and chew toys, flavoured chewable medications, vitamins and treats)
- All family members must be on board with the trial. There can be no slipping the pet other foods when no-one is looking.
- It is recommended that all animals in the household are fed the same diet in case of food-stealing
- If there is a reduction in gastrointestinal signs after the first 3 weeks, extend the food elimination diet trial to a total of **12 weeks**

Clinical progress exam:

A clinical progress exam either face-to-face or via telehealth consultation is recommended after the initial 3 weeks as it is important for us to supervise and guide you through this process.



What is a suitable diet to use for a food elimination diet trial?

Puppies and kittens

For dogs and cats under 12 months of age, or for giant dog breeds under 18 months of age, it is important to ensure the diet is balanced for growth. Our recommendation in these cases is **Royal Canin Hypoallergenic** dry food as it is a suitable hypoallergenic diet for growing dogs and cats.

Adult dogs and cats

Home-made novel protein diets:

It is important to choose a meat protein that your pet hasn't had before. Suggestions for a novel protein include **goat, duck, rabbit, crocodile**. Choice of meat should be cooked (whole meat only, no mince).

Cats are obligate carnivores, whereas dogs require a **carbohydrate source** in their food elimination diet trial. Suggestions for a novel carbohydrate source include **sweet potato, pumpkin, kidney beans, lentils**. During this period, your dog can be fed vegetables (except corn, onion and white potato). **Do not feed pasta or rice if possible.**

Quantity guidelines for feeding novel protein diets:

Below is a guide for the quantity of protein and carbohydrates required daily by **dogs** during a home-made novel protein diet trial.

WEIGHT	PROTEIN SOURCE (meat)	CARBOHYDRATE SOURCE (vegetable)	DAILY TOTAL
5kg	130g	270g	400g
10kg	200g	400g	600g
15kg	260g	540g	800g
20kg	400g	800g	1200g
30kg	520g	1080g	1600g
50kg	830g	1670g	2500g
70kg	1200g	2300g	3500g



Cats require approximately 300g cooked protein daily.

The table above is approximate feeding guidelines only. These home-made food elimination diets are not suitably balanced for long-term use as they are not complete, so are generally used for the duration of the food trial only. If your pet appears to be losing or gaining weight then please contact us.

Commercial novel protein diets:

Dogs

- Prime100 crocodile and tapioca fresh roll
- Prime100 duck and sweet potato fresh roll
- Prime100 wild boar and pumpkin

Cats

- Prime100 fresh kangaroo
- Delicate Care Skin or Stomach Cat Food duck and kangaroo
- Ziwi Peak Mackerel and Lamb Recipe
- Hills d/d dry food venison & green pea recipe

Commercial hydrolysed diets:

Dogs

- Royal Canin Anallergenic dry food
- Hills Z/D dry and/or wet food
- Proplan HA Hydrolyzed Canine dry food

Cats

- Royal Canin Anallergenic dry food
- Hills Z/D dry and/or wet food
- Proplan HA Hydrolyzed Feline dry food

Give your pet fresh water to drink rather than milk.

What should I look for during the food elimination diet trial?

It is helpful to record any changes in your pet's clinical signs whilst being fed the special diet. For pets with gastrointestinal signs, it is helpful to monitor your pet's bowel motions and note if there is any vomiting. Whereas for pets with itchy skin, noting the degree of itch by giving them an 'itch score' each week can help track progress on their food trial. A 0/10 itch score



means your pet is not itchy at all, whereas a 10/10 itch score would be a pet that is constantly scratching with evidence of severe self-trauma.

Can my pet take medication while on the food elimination diet trial?

Secondary skin infections caused by bacteria or yeast overgrowth occur frequently in animals with food allergies due to the inflammation that occurs. This can worsen the itch further and lead to self-trauma due to excessive scratching. So, in pets where there is a secondary skin infection, anti-microbials and/or topical therapy may be prescribed.

For pets with really itchy skin, medication can be temporarily prescribed during the first 6 weeks of the food trial but discontinued 2 weeks prior, so that there is a direct comparison of the level of itch on and off the food elimination diet.

How is a case of suspected food allergy confirmed?

At the end of the 8 week food trial, your pet will either have stopped itching or continued to itch at the same level as before. It is important to perform a **rechallenge** with your pet's **original diet for 2 weeks**. Make sure you include **all items you were previously feeding** your dog or cat. If your pet's itch worsens within 2 weeks of the rechallenge, then food allergy is confirmed. At this point we know that your pet has a food allergy but we don't yet know what he or she is specifically allergic to.

The majority of pets will be negative for food allergy, but if confirmed, the next step in the diagnostic process to investigate the source of the pruritis (itch).

Your vet may recommend a sequential rechallenge to identify the protein(s) responsible for the allergy. This will likely involve introducing individual foods for 1-2 weeks at a time to identify what can and can't be fed.

What is my pet's clinical signs were unresponsive with a food elimination diet trial?

If the food trial is **negative** (unresponsive to food elimination diet trial), then food allergy is ruled out. In itchy pets with a negative food trial, it is likely your pet has atopic dermatitis (itchy skin caused by environmental allergens). This needs to be carefully managed with a treatment plan so that you can keep your pet comfortable and free of secondary infections and have a management plan when there is a flare up. In pets with persistent gastrointestinal



signs that are unresponsive to a food elimination diet trial, there could be another underlying problem, which may require further diagnostic investigation.