Any foreign substance that breaks into the body is normally rejected. That is what happens when you prick yourself with a thorn, or in case of organ transplantation. It is the immune system, which is in charge of defending ourselves against any external aggression that is responsible for these reactions. Happily, the body is normally able to make a difference between foreign substances essential for life, and others that threaten its integrity. This is why we usually tolerate very well the different kinds of foods which make up our diet.

For allergic people and animals, the tolerance is more selective: some foods are not “recognized” as being safe, and abnormal reactions arise. Dietary allergies are usually directed against the proteins of specific ingredients.

**Symptoms of a dietary allergy**
A dietary allergy is first characterized by intense itching. The animal itches so much that they mutilate themselves, inducing severe lesions. In dogs and cats, the most affected areas are the head, the ears, the neck, and forelimbs. Sometimes, digestive troubles are observed: diarrheas, vomiting, abdominal pain, etc. These allergies are non seasonal, and respond poorly or not at all to steroid treatment.

**Dietary allergy diagnosis**
Dietary allergies are rare diseases: they represent less than 10% of allergies in general, and are responsible for about 1% of dermatology problems in dogs and cats. Food allergy is often confused with dietary intolerance. This is also an adverse reaction of the body to an ingredient or a food additive, but it does not involve the immune system. For example, it may be:

- a milk or a cereal intolerance due to a lack of the specific enzymes (lactase or amylase), necessary for the digestive process
- a reaction linked to direct intake of pro-inflammatory substances, without any previous sensitization period (i.e.: histamine in low quality ingredients)
- excessive fermentation in the large intestine, inducing the release of toxic substances (i.e.: very low-digestibility proteins).

To start diagnosing a food allergy, the clinical signs must be associated with the ingestion of a special type of food (a certain ingredient/s). To investigate this, the animal is fed “an elimination diet,” or “hypoallergenic diet,” exclusively composed of a restricted number of ingredients that the dog or cat has never been exposed to in their diet.

As lamb meal used to be an uncommon ingredient in pet foods, it was often proposed for elimination diets. It does not mean, however, that an animal cannot progressively become allergic to lamb proteins. In fact, these types of allergies have already been seen. Moreover, in lamb (and rice) products, the lamb is usually not the single source of protein. They often include protein from egg, corn, chicken (chicken digest or chicken flavoring), wheat, or fish. This type of product is often not useful in the diagnosis and treatment of dietary allergies.

In cases of food allergies, dermatological signs disappear within 1-3 weeks in 25% of cases, 4-6 weeks in 50% of cases, and sometimes, 9-16 weeks are even necessary in other cases. The cat recovers more quickly than the dog. Even if itching disappears, a diagnosis of food allergy will be confirmed only if a “re-challenge test” is performed.
Progressively, each of the previous ingredients likely to be responsible for the allergy is reintroduced. Normally, a setback of the clinical signs will occur within 1-2 weeks.

All the most common ingredients of pet food diets are likely to cause an allergy problem. The most often involved food products are: chicken, beef, fish, egg, milk, wheat (in the Irish Setter) and soy. 60 % of allergic dogs react to more than 2 different proteins.

This protocol is quite long and disappointing for the owners who often refuse to perform the re-challenge test to identify the specific allergen, when a new diet brings satisfying improvement. Then, some immunologic tests can be proposed, but they are not yet reliable.

**Treatment of a dietary allergy**
The animal must be fed a diet free of the proteins causing the allergy. However, let’s point out the fact an animal can get sensitized again towards one of the components of the new diet. The whole thing is then to be done again.

There are diets available which are designed with very small proteins. Since the protein has to be a certain size to elicit an allergic reaction, these diets have promise, and may be better for the long term remission of food allergy symptoms.

**Conclusion**
Dietary allergy is an uncommon problem, and is very difficult to identify precisely. In most cases, this is a dietary intolerance, and switching to a higher quality food makes the dermatology and/or digestive troubles disappear.

Other possible allergies which can mimic the symptoms of food allergies:

- Inhalant allergy
- Insect bite allergy
- Contact allergy

**Bibliographic references**