

### **AAFCO Feeding Trials**

#### *What is an AAFCO Claim?*

Dog and cat foods labeled as "complete and balanced" must meet standards established by the AAFCO either by meeting a nutrient profile or by passing a feeding trial. Cat and dog food nutrient profiles were last updated by the AAFCO's Feline Nutrition Expert Subcommittee (1991–1992) and the Canine Nutrition Expert Subcommittee (1990–1991), respectively. The updated profiles replaced the previous recommendations set by the National Research Council (NRC). The NRC published new recommendations in 2006; AAFCO is currently (2010) in the process of updating the nutrient profiles.

#### *AAFCO "Nutrient Profile" Statement Requirements*

Products formulated with ingredients to meet the established nutrient profile would include the following statement, "(Name of product) is formulated to meet the nutritional levels established by the AAFCO Cat/Dog Food Nutrient Profiles." There are two separate nutrient profiles - one for "growth and reproduction" and one for "adult maintenance". The nutritional adequacy statement would include information on the life stage(s) for which the product is suitable. A product labeled as "for all life stages" must meet the more stringent nutrient profile for "growth and reproduction". Products labeled as "intended for intermittent or supplemental feeding" do not need to meet either profile.

#### *AAFCO "Feeding Trial" Statement Requirements*

Products found to be "complete and balanced" by feeding trials bear the label statement "animal feeding tests using AAFCO procedures substantiate that (name of product) provides complete and balanced nutrition." The protocol requires six of eight animals complete a 26-week feeding trial without showing clinical or pathological signs of nutritional deficiency or excess. The cats' or dogs' general health is evaluated by a veterinarian before and after the test. Four blood values (hemoglobin, packed cell volume, serum alkaline phosphatase and serum albumin) are measured after the trial, and the average values of the test subjects must meet minimum levels. No animal is allowed to lose more than 15% of its starting weight.

Neither of the two AAFCO Statements is a guarantee of a diet's quality, safety, or efficacy, the statement simply tells you that a formula follows certain guidelines.

So, why do we have a nutrient profile statement and not a feeding trial statement? Royal Canin spends millions of dollars on research, testing, quality control, etc.... RC's internal feeding trials are more in depth and give more information about the diet in question than an AAFCO trial would. However, AAFCO feeding trials are very specific, and 'alternative' feeding trials cannot be substituted for AAFCO trials on bag claims. AAFCO feeding trials are also very expensive to run. At this time it is not logical to spend money on AAFCO feeding trials when they would not give us any additional information about our products and how they perform.

#### *And now for my analogy....*

Say you have 2 toothbrushes, an electric one, and a manual one your dentist sent home with you after your last cleaning. (in this analogy, the toothbrush from your dentist represents an AAFCO feeding trial. The electric toothbrush represents the more in depth research, clinical trials, and feeding trials performed through the kennel/cattery, veterinarians, breeders, and consumers). You use the electric one because it gets your teeth cleaner. The next time you go to the dentist, he tells you he'll only check off in your chart that you brush your teeth at home if you are brushing with the toothbrush he gave you.

#### *Do you:*

- a) just keep using the electric one because it works better and have your chart not say that you brush your teeth (ie: Royal Canin does research and feeding trials, but without AAFCO feeding trials the bag cannot have a feeding trial claim printed on it)
- b) use his toothbrush instead even though it doesn't work as well as the electric toothbrush
- c) use both the electric toothbrush as well as his toothbrush, even though his toothbrush is not making your teeth cleaner, and it takes additional valuable time out of your day? (or in the case of feeding trials... Requires more animals in order to perform feeding trials and makes the diets cost more to produce, making them more expensive to purchase, for no added benefits)

## FOOD ALLERGIES

Food allergies are a hot topic in the pet food industry, and everywhere you look; in pet stores, online, and everywhere else, you will find recommendations for managing pet food allergies. In fact, food allergies are not that common, only an estimated 1% of skin conditions presented to Veterinarians (itching, scratching, and biting) are a result of food allergies *Verlinden A. 2006. Food Allergy in dogs and cats: A review*. So why is it such a hot topic?

If consumers can be convinced that their animal has a food allergy, they can easily be convinced there is a need to feed a particular food. Food allergies are not that common, but there are a number of companies that want you to believe they are so they can sell their product.

*Pet Food companies will take one of 2 approaches to market their product:*

### 1) Nutrition

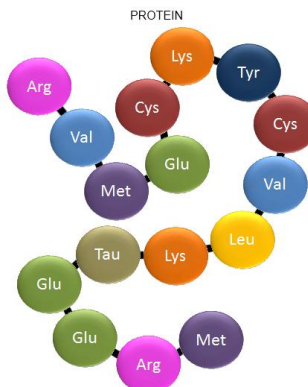
Look at the NUTRIENTS a dog needs to survive (levels of protein, levels of specific amino acids, vitamins, minerals, etc..... basically, essential nutrients fall within AAFCO ranges). Choose ingredients based on the nutrients, quality and digestibility they provide. Then, look at what happens when you “tweak” levels of nutrients, or add in non-essential but highly beneficial nutrients, like antioxidants, or EPA/DHA, or glucosamine, or increase digestibility, or adjust fibre levels, and aim to improve quality of life beyond mere ‘survival’.

### 2) Marketing

Look for the most convincing story, and work hard to sell it. Choose ingredients that make the diet appealing to the owner. Currently, biggest story is grain free.... but if you’ll notice, as more companies jump on the ‘grain free’ bandwagon, the story continues to expand. First, there were diets that were “corn free”. Then “corn and soy free”. Then “corn, grain and soy free”. Now there are starting to be diets that are “corn, soy, grain and chicken free”, and the “rotational diet” recommendation is emerging. They keep adding more to the list as more companies take this approach. Instead of focusing on what they DO have and offer, these companies are trying to sell you with what they DON’T have. These companies need consumers to believe that common ingredients cause allergies, in order to differentiate themselves from the competition.

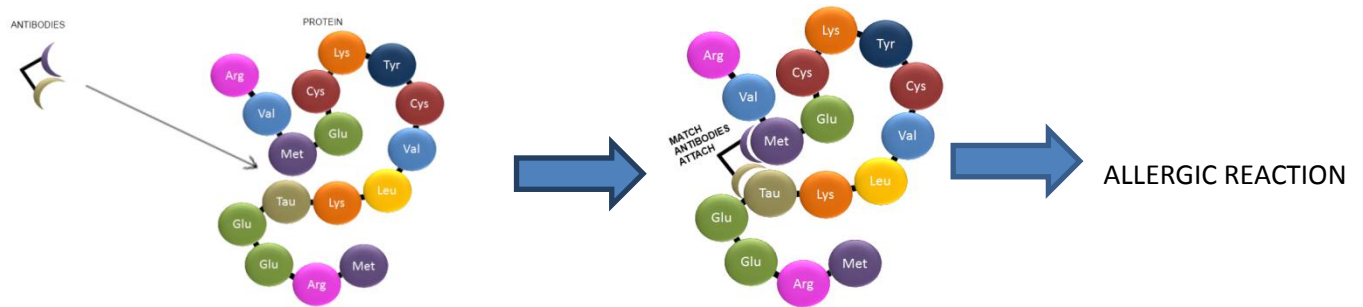
### What are food allergies?

An allergy is the body’s immune system reacting to something foreign. All food we consume is foreign to our bodies. In a food allergy, the most common reaction is to a specific protein arrangement.



Proteins are made up of strings of amino acids, which fold into complex 3-D structures determined by the identity of the amino acids and the sequence they are in.

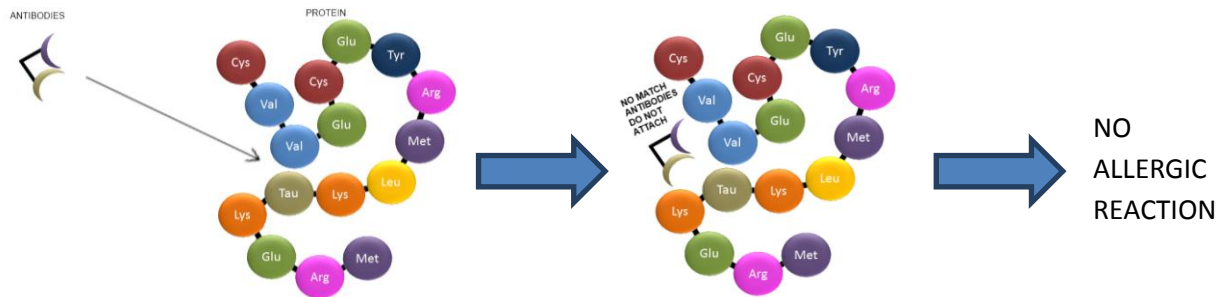
The most common food allergies are the most commonly eaten foods, *Roudebush P, “Ingredients associated with adverse food reactions in dogs and cats”, Adv Small Anim Med Surg 2002;15(9):1-3* because the body must be exposed to it before it can become allergic to it. An allergy is a body's reaction to the specific shape of the protein. Once these pieces are in the bloodstream, the body's immune system attaches to them and develop antibodies, the next time the body is exposed to that amino acid sequence, the body develops an “allergic reaction” to it, causing inflammation which leads to signs such as chronic ear infections, soft stool, etc....



*Current Veterinary Dermatologist recommendations for food allergies*

1) Novel Protein Diets

A novel protein is a protein which the dog or cat has never eaten before. For example, if a dog has eaten chicken all its life and never eaten venison, then venison is a novel protein. If a dog has eaten beef all its life and never eaten chicken, then chicken is a novel protein. The reasoning is this: because you must be exposed to a protein in order to develop an allergy to it, you cannot be allergic to something you've never eaten.

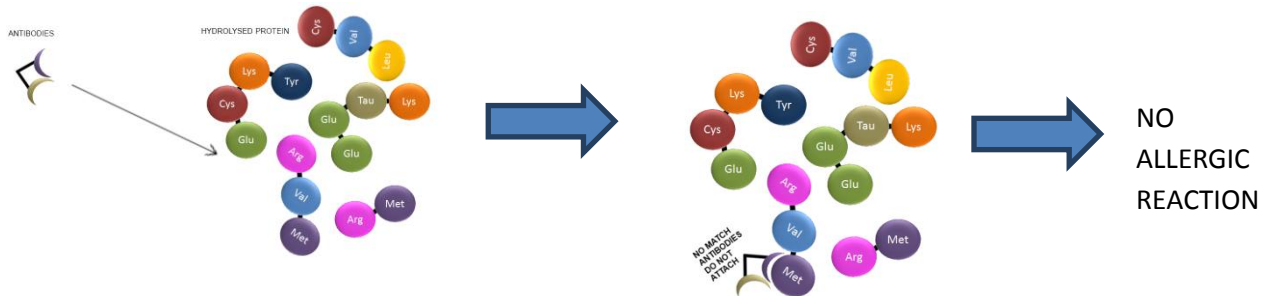


There are a number of diets available through pet stores that claim to be “hypoallergenic diets”.

This study: *Raditic D et al (2011). ELISA testing for common food antigens in four dry dog foods used in dietary elimination trials. J Anim Physiol Anim Nutr* looked at 4 “OTC Novel Protein Diets” and found that none of them were appropriate for use as a novel protein diet because they either contained multiple common protein allergens in the ingredient label, or were contaminated with these proteins even though the ingredient label didn't list them (How could this happen?? If the food is made in a facility that also makes food containing the “allergenic” protein and they don't use proper cleaning techniques in between runs, then even the food that doesn't contain the protein source on the label may contain an allergenic potential in that dog or cat).

2) Hydrolysed Protein Diets

A hydrolysed protein is a protein that has been broken into tiny pieces. The reasoning is if you separate the amino acids so that they are no longer sitting next to each other, you alter the structure of that protein and therefore the body will no longer have an allergic reaction. Royal Canin's Hypoallergenic HP is a hydrolysed protein diet.

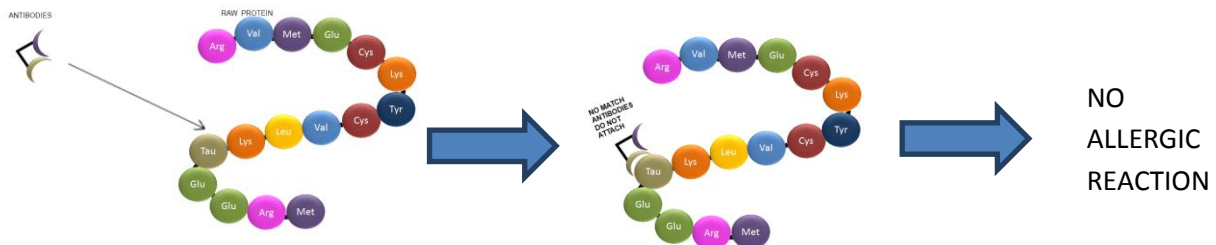


Other 'recommendations' for food allergies, **NOT** currently recommended by Veterinary Dermatologists

### 1) Raw Feeding

The theory: an animal may react to a cooked protein source but not to the same protein source presented raw.

This is possible, and the reverse is also possible. If you cook a protein, the charges in the protein change, which changes the *shape* of the (protein) amino acid sequence (the sequence itself doesn't change, chicken is still chicken whether it's raw or cooked), but when the shape changes, you won't have the same amino acids sitting next to each other, which is what initiates an allergic reaction. So, switching to raw in an allergic animal can have similar results to trying a novel protein diet, however it brings with it the risks of a raw diet including contamination risks, nutrient imbalances, quality of ingredients, consistency, etc.



### 2) Rotation Diets

The "Rotary Diversified Diet" was first developed in 1934 by Dr. Herbert J. Rinkel. It was developed to help humans who suffered from or were suspected to be susceptible to developing multiple food sensitivities. The theory is this: If you remove a food before the body has a chance to develop an allergy, you won't become allergic to it.

*The drawback(s):*

- this was developed for humans. Humans evolved to eat a variety of foods, so it is natural for them to 'rotate' regularly. Dogs and cats do not have the same level of diversity in their digestive systems. They evolved to eat the same thing every day.
- there is no literature to support using this approach in dogs or cats (there is also no literature against using it). However, there is a lot of literature supporting the use of novel protein or hydrolyzed protein diets in cases of confirmed food allergies.
- there is no way to know how long it will take an individual to develop an allergy to a protein. Sensitivity to new proteins can develop in as little as 4-7 days, other patients may develop sensitivity over a couple of months-years, and the majority will never develop food allergies, so how do you determine if and how often a food should be rotated?
- if a pet does develop an allergy to food, how do you choose a novel protein to feed it? If the animal has been exposed to many protein sources, none of those proteins are candidates for an elimination diet trial.

*Bottom-line-*

According to a number of Veterinary Dermatologists polled by our Technical Services Team as well as the opinion of our very own Internal Medicine Specialists; The Rotation Diet approach doesn't make sense- and in fact in terms of current knowledge this strategy would likely make things more challenging in terms of ongoing management of food allergy/inflammatory bowel disease cases, and could potentially also worsen the risk of food allergy and response to a potential allergen (if re-exposed).