NUTRITIONAL SUPPORT FOR THE MANAGEMENT OF INGREDIENT INTOLERANCES

Decades of research have helped PURINA® scientists formulate a hydrolysed soya diet to support cats and dogs with ingredient sensitivities.

PURINA®
PRO PLAN®
VETERINARY DIETS

PURINA® Your Pet, Our Passion.®

Introducing the PURINA® PRO PLAN® VETERINARY DIETS HA Hypoallergenic™ range, including a dry and a mousse format for dogs - giving a texture variety to help with owner compliance - and a dry format for cats. Both are formulated with hydrolysed soya and purified carbohydrates.

Make food allergy diet trials less of a challenge

Diagnosing and managing food allergies can be challenging for vets, owners and sometimes for pets. The most common clinical signs associated with food allergies are dermatological and gastrointestinal (figure 1).

These signs can have a number of underlying causes; therefore, ruling food allergies in or out is an important step in getting to a diagnosis. However, knowing you are recommending nutrition based on proven science can make it a smoother, easier experience for all concerned.

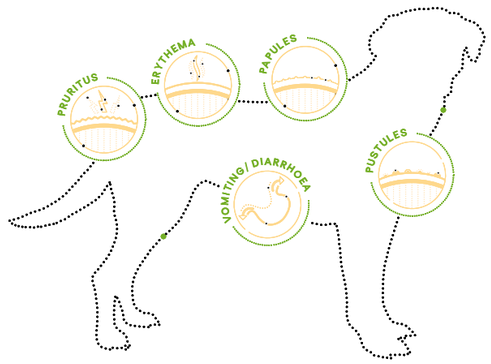


Figure 1. Common clinical signs associated with food allergies

Understanding allergies

How do allergies develop?

Food allergies are the result of an inappropriate immune reaction to an antigen, usually a protein. Over time, often months or years, the immune system can become sensitised to an antigen, developing specific Immunoglobulin E (IgE) antibodies, which bind to mast cells. After sensitisation, when next eaten, the antigen causes cross-linking of these IgE antibodies, resulting in degranulation of the mast cells and histamine release[1]. This leads to inflammation, which causes the dermatological and/or gastrointestinal signs.

Common allergens

As prior exposure is required for an allergy to develop, **the most common allergies are to those proteins often found in pet food, including beef and chicken[2]** (figure 2). Proteins can also cross-react; for example, animals that are allergic to chicken may also react to other poultry such as turkey and duck[3] (figure 3). **Therefore taking a thorough dietary history is very important when considering testing for food allergies**, as it allows selection of the most appropriate diet for a diet trial.

Figure 2. Common food allergens.

Figure 3. Different proteins may have the potential to cross-react.

Diet Trial

Supporting accurate allergy diagnosis

The only reliable way to diagnose a food allergy is by performing a diet trial, using:

- A novel protein diet
- A hydrolysed protein diet (could also be novel)
- A home cooked diet[4]

In some animals, it can take a number of weeks for clinical signs to resolve, so diet trials are often a lengthy process, lasting 9-10 weeks[5]. During this time, the owner must not feed anything else – including human food, treats and even some flavoured medications, as they may trigger a flare up and interfere with the trial.

To reach a specific diagnosis, once clinical signs resolve, the pet can be challenged with the original diet and then individual proteins, until signs recur.

The success of a diet trial depends on two factors: choosing a diet specially formulated to minimise antigenicity as well as encourage compliance from both pet and owner.

1. Noli C., Foster A., Rosenkrantz W., (2013)) Veterinary Allergy, Wiley and sons. P15
2. Mueller RS., Olivry T., Prélaud P., (2016) Critically appraised topic on adverse food reactions of companion animals 2. Common food allergen sources in dogs and cats, *BMC Veterinary Research*, **12:9**, 1-4
3. Nuttall T. (2018), Allergy testing and allergy specific immunotherapy- is it still relevant? *BSAVA Congress Proceedings*
4. Verlinden A., Hesta M., Millet S., Janssens G., (2007) Food Allergy in Dogs and Cats; A Review, *Critical Reviews in Food Sci. and Nutr.* **46(3)**, 259-273
5. Carlotti D. (2017) Food Allergy in Dogs and Cats: Current Dermatological Perspectives, http://www.ddlzagreb.hr/wp/content/uploads/2015/06/food-allergy-in-dogs-and-cats.pdf

Managing allergies

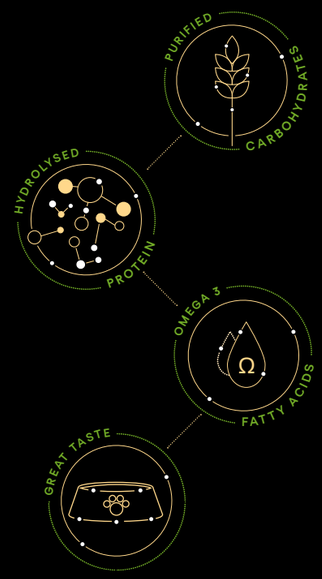
Why choose a hydrolysed diet?

Hydrolysed diets are a popular choice for a diet trial because:

- It can be challenging to find a novel protein that the animal hasn't been exposed to and doesn't cross react. Even with a comprehensive diet history it is difficult to ensure you are aware of every protein a pet has ever eaten
- They are easy to feed compared to a home cooked diet and are nutritionally balanced

Most food allergens have a molecular weight >18000 daltons – large enough to cross-link IgE antibodies on mast cells. Hydrolysation breaks a protein down to a small molecular weight, reducing the risk of an allergic reaction[6].

PURINA® PRO PLAN® VETERINARY DIETS HA Hypoallergenic™ is lower than 18,000 Daltons in size, reducing the likelihood of detection by the immune system.



Why choose PURINA® PRO PLAN® VETERINARY DIETS HA Hypoallergenic™?

- Formulated with **hydrolysed soya** as the single protein source; a less common allergen than many animal proteins[2]
- Studies showed that **soya-sensitised** dogs did not respond when fed **hydrolysed soya protein**[7,8]
- **Strict manufacturing** methods are in place to prevent cross contamination
- **Purified carbohydrate sources** are used to minimise the chance of a reaction
- Contains **omega-3** fatty acids to help maximise natural anti-inflammatory processes
- Has a **high palatability**
- Suitable for **puppies and kittens***

*Canine HA (dry and wet) is suitable for puppies > 14wks.
Feline HA is suitable for kittens of all ages.

6. Guilford WG., (1992) What Constitutes a Hypoallergenic Diet? ACVIM Proceedings
7. Puigdemont A, Brazis P, Serra M, Fondati A (2006): immunologic responses against hydrolysed soy protein in dogs with experimentally induced soy hypersensitivity. AJVR, 67(3), 484-488.
8. Jackson, Hilary & Jackson, M & Coblentz, L & Hammerberg, Bruce. (2003) Evaluation of the clinical and allergen specific serum immunoglobulin E responses to oral challenge with cornstarch, corn, soy and a soy hydrolysate diet in dogs with spontaneous food allergy. Veterinary dermatology. 14. 181-7. 10.1046/j.1365-3164.2003.00338.x.

Innovative nutritional solutions

PURINA® PRO PLAN® VETERINARY DIETS

HA Hypoallergenic™

3kg and 11kg 400g

Recommended for:

- Hydrolysed elimination diet for food trials
- Long-term management of food allergy
- Dermatitis and/or gastroenteritis associated with food allergy
- Inflammatory bowel disease (IBD)
- Food intolerance
- Exocrine Pancreatic Insufficiency (EPI)*
- Hyperlipidaemia*
- Lymphangectasia*
- Malabsorption*
- Protein losing enteropathy
- Chronic diarrhoea (associated with food intolerance)
- Small Intestinal Bacterial Overgrowth (SIBO)

Key benefits

Single hydrolysed protein with low molecular weight to help avoid allergic responses

Purified carbohydrate sources to help avoid allergic responses

With omega-3 fatty acids to help maximise the natural anti-inflammatory processes

Key nutrient values**	Dry	Wet
Moisture	8%	74.3%
Protein	21%	6.2%
Fat	10.5%	3.7%
– Omega-6 fatty acids	2%	0.89%
– Omega-3 fatty acids	0.5%	0.17%
– Medium chain fatty acids	1.3%	–
– EPA + DHA	0.10%	0.066%
Carbohydrates	51.5%	11.6%
Crude fibre	2%	2.1%
Taurine	1986 mg/kg	1204 mg/kg
Zinc	149 mg/kg	37 mg/kg
Vitamin A	21920 IU/kg	5309 IU/kg
Vitamin E	301 IU/kg	138 IU/kg
Metabolisable energy***	364 kcal/100g	94 kcal/100g

PURINA® PRO PLAN® VETERINARY DIETS

HA Hypoallergenic™

1.3kg and 3.5kg

Recommended for:

- Adverse Food Reactions (AFR)
- Elimination diet for food trials
- Long-term management of food allergy
- Dermatitis and/or gastroenteritis associated with food allergy
- Inflammatory bowel disease (IBD)
- Food intolerance
- Exocrine pancreatic insufficiency (EPI)
- Hyperlipidaemia
- Lymphangectasia
- Malabsorption
- Protein losing enteropathy
- Chronic diarrhoea (associated with food intolerance)
- Small intestinal bacterial overgrowth (SIBO)
- Pancreatitis
- Triaditis

Key benefits

Limited hydrolysed protein with low molecular weight to help avoid allergic responses

Purified carbohydrate sources to reduce potential antigenicity of the diet and help avoid allergic responses

High palatability thanks to high quality ingredients and a palatability booster

Key nutrient values**	Dry
Moisture	6.5%
Protein	35%
Fat	10%
– Omega-6 fatty acids	4.0%
– Omega-3 fatty acids	0.7%
– EPA + DHA	0.169%
Carbohydrates	37.5%
Crude fibre	3.0%
Vitamin E	561 IU/kg
Metabolisable energy***	364 kcal/100g

*Recommended only for dry formula **Typical analysis in the final product as fed ***Calculated following NRC 2006 equations

Please note that all indications for PURINA® VETERINARY DIETS mentioned on this brochure are for the dietary support of the dog (or cat) with the listed condition and do not preclude appropriate medical management. The veterinary diets should be used under veterinary supervision.

Proven results

Studies evaluating hydrolysed soy protein fed in a hypoallergenic diet

Study 1

Puigdemont A, Brazis P, Serra M, Fondati A (2006): Immunologic responses against hydrolysed soy protein in dogs with experimentally induced soy hypersensitivity. AJVR, 67(3): 484-488.[7]

A double-blinded controlled trial that assessed whether dogs with induced type 1 hypersensitivity would respond to soy hydrolysate after **intradermal and oral challenge exposure.**

Sensitised dogs had a **reduced inflammatory response** after intradermal injection and no clinical response after an oral challenge exposure compared with challenge exposure with native soy protein.

No signs or reactions appeared after the oral challenge exposure with **hydrolysed soy protein** diet.

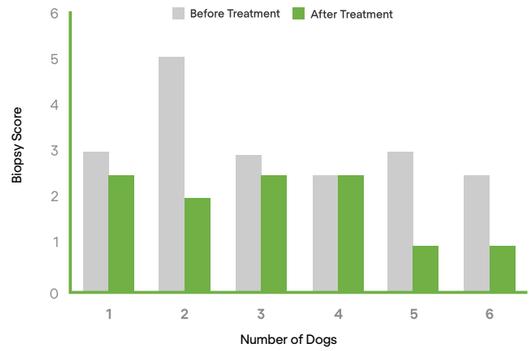
Study 2

Marks S, Laflamme DP, McAloose D (2002): Dietary trial using a commercial hypoallergenic diet containing hydrolysed protein for dogs with inflammatory bowel disease. Vet Ther, 3(2): 109-18.[8]

Six dogs with IBD received a commercially available hypoallergenic diet containing **hydrolysed soy protein**. Five of the six had been refractory to various controlled diets; four had failed to respond to previous medical therapy.

Gastroduodenoscopy and biopsy were performed on Day 0 and at the end of the study. Dietary management alone provided clinical improvement in four dogs, and concurrent medical treatment was required in two dogs, one of which had EPI.

Five dogs showed **mild to moderate histological improvement in duodenal biopsies** at the end of the study. Mean faecal scores improved.

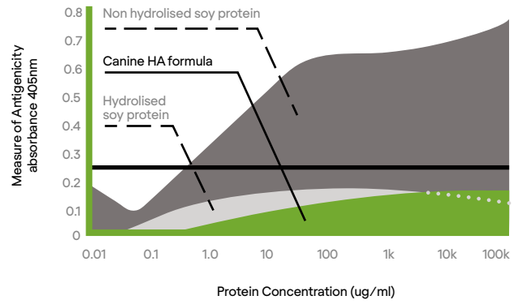


The results of this pilot study indicate a **proven clinical response to soy hydrolysate** in previously unmanageable IBD cases.

Conclusion and clinical relevance

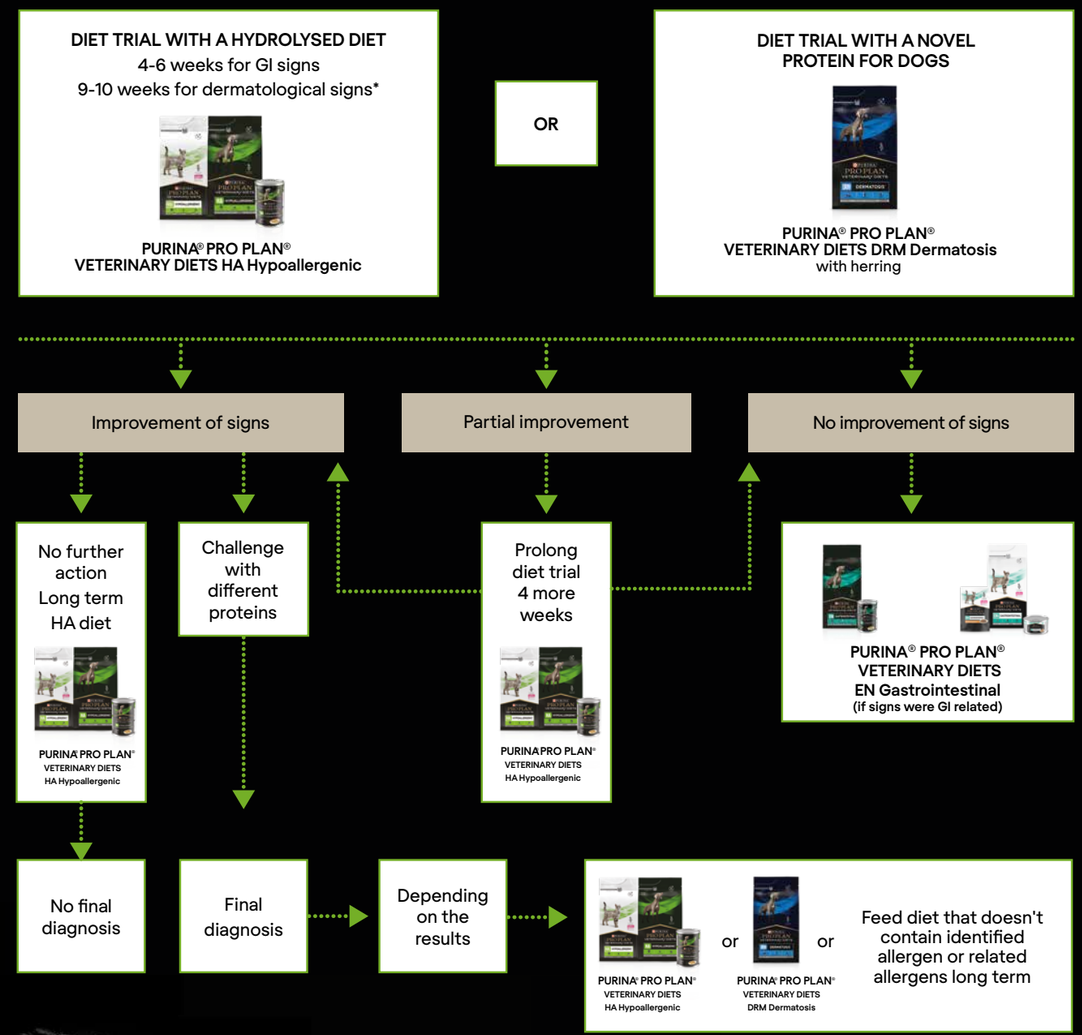
Hydrolysed soy protein may be a useful protein to be included in dog diets formulated for the diagnosis and management of adverse responses to food.

PURINA® PRO PLAN® VETERINARY DIETS HA Hypoallergenic™ provides a single source (soy) protein, hydrolysed to render it immunological inert and altering its structure to further reduce antigenicity.
Exceptional digestibility of all ingredients **reduces the antigenic load and helps manage any GI signs.**



Summary

Diagnosing adverse food reactions (food allergies or intolerances)



* If clinical signs are food allergy-related, improvements in GI signs should start to be seen within 2-3 weeks of being on 100% HA and improvements in skin signs should start to be seen within 4-6 weeks. If improvements are seen, continue until there are maximal improvements. If no improvements are seen, it suggests either clinical signs are not related to an adverse food reaction, or there is not full compliance with the diet trial.

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HA Hypoallergenic™

PURINA®
PetCareteam
For advice on any aspect of pet care, just ask our experts
UK: 0800 212 161 ROI: 1800 509 368
Monday-Friday 8am-6pm. Or contact us online at
www.purina.co.uk | www.purina.ie

Please contact your PURINA® representative or call the Petcare Team on 0800 212 161 for more information.

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