CANINE HA **HYPOALLERGENIC**[™]

Complete dietetic pet food for puppies* and adult dogs for the diagnosis and management of food allergies and intolerances, with hydrolysed protein and selected carbohydrate sources.





to help maximise the natural anti-inflammatory processes

Provides a lipid energy source which is much easier to digest and absorb Contains MCFA (medium-chain fatty acids)** Supports dogs with compromised GI function by ensuring improved nutrient absorption Thanks to high protein, carbohydrate and fat digestibility Helps maintain the epidermal integrity Enhanced levels of zinc, omega-3 and -6 fatty acids and vitamin A Helps ensure long-term compliance Good palatability

Formulated for dogs of all life stages including puppies Suitable for nutritional management during growth from 14 weeks onwards and maintenance

* Only suitable for puppies >14 weeks of age ** Dry formula only.

OVERVIEW

CANINE VETERINARY DIETS & RELATED PRODUCTS

VETERINARY DIETS & RELATED PRODUCTS

SUPPLEMENTS

MAINTENANCE NUTRITION - DRY

MAINTENANCE NUTRITION – WET

CANINE HA HYPOALLERGENIC[™]

Corn starch[#], hydrolysed soya protein^{##}, minerals, coconut oil, sugar[#], rapeseed oil, cellulose, glycerine (from vegetable origin), soya oil, fish oil.

Purified carbohydrate sources.## Hydrolysed protein source.

COMPOSITION (CAN)

Pea starch[#], cellulose[#], hydrolysed soya protein^{##}, oils and fats (coconut oil, soybean oil, fish oil), minerals, various sugars[#].

Carbohydrate sources. ## Hydrolysed protein source.

| KEY NUTRIENT VALUES* | | | | | | | |
|--|--|---------------------------------------|--|--|--|--|--|
| | Dry | Wet | | | | | |
| Moisture | 8.0% | 74.3% | | | | | |
| Protein | 21.0% | 6.2% | | | | | |
| Fat - Omega-6 fatty acids - Omega-3 fatty acids - Medium chain fatty acids - EPA + DHA | 10.5% 2.0% 0.5% 1.3% 0.10% | 3.7% 0.89% 0.17% - 0.066% | | | | | |
| Carbohydrate | 51.5% | 11.6% | | | | | |
| Crude fibre | 2.0% | 2.1% | | | | | |
| Crude ash | 6.0% | 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 (ME) ¹ | 364 kcal/100g | 94 kcal/100g | | | | | |

FEEDING GUIDELINES

* Typical analysis in the final product as fed. ¹ Calculated following NRC 2006 equations.

The initial recommended period of use is 3 to 8 weeks. If signs of allergy or intolerance resolve, the diet can initially be fed up to one year, although it is complete and balanced for long term use where appropriate. It is recommended that a veterinarian's opinion be sought before use and before extending the period of use. Suitable for puppies over 14 weeks of age.

| PUPPY GROWTH - AGE IN MONTHS | | | | | | | | | |
|------------------------------|--------------------------------|-----|-----|----------------------------------|-------|-------|-------|-------|--|
| Adult weight (kg) | Dry | | | Wet | | | | | |
| | 4 | 6 | 9 | 12 | 4 | 6 | 9 | 12 | |
| | Daily feeding quantity (g/day) | | | Daily feeding quantity (can/day) | | | | | |
| 2.5 | 95 | 95 | 85 | 75 | 1 | 1 | 3⁄4 | 3/4 | |
| 5 | 145 | 150 | 135 | 120 | 11/3 | 1½ | 11/3 | 11⁄4 | |
| 10 | 215 | 230 | 200 | 195 | 2 | 21⁄4 | 2 | 2 | |
| 15 | 280 | 300 | 265 | 250 | 2 3⁄4 | 3 | 2 ⅔ | 2 1/3 | |
| 25 | 360 | 455 | 415 | 360 | 3 1/2 | 4 1/3 | 4 | 3 1/2 | |
| 35 | 420 | 485 | 560 | 455 | 4 | 4 3⁄4 | 5 1⁄2 | 4 1/2 | |
| 45 | 440 | 495 | 585 | 500 | 4 1/3 | 4 3⁄4 | 5 ¾ | 5 | |
| 70 | 580 | 705 | 840 | 700 | 5 ¾ | 7 | 8 1/4 | 6 3/4 | |

ADULT MAINTENANCE

| Body weight (kg) | Daily feedir | ng quantities | Dry + Wet (mixed feeding) | | |
|---------------------|--------------|---------------|---------------------------|---------|--|
| | Dry (g⁄day) | Can/day | Dry (g/day) | Can/day | |
| 2.5 | 70 | 3/4 | 35 | 1/3 | |
| 5 | 110 | 1 | 60 | 1/2 | |
| 10 | 175 | 1¾ | 75 | 1 | |
| 15 | 230 | 2 1/3 | 130 | 1 | |
| 25 | 325 | 31/4 | 225 | 1 | |
| 35 | 410 | 4 | 310 | 1 | |
| 45 | 485 | 4 3/4 | 385 | 1 | |
| 70 | 650 | 6 1/2 | 450 | 2 | |

For dogs over 70 kg: for each additional 5 kg of body weight, feed an additional 30g of pet food or 1/3 can. When feeding dry and wet Canine HA, for each addition of 200g wet, reduce by 50g dry kibble.

CANINE VETERINARY DIETS & RELATED PRODUCTS

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DIETS 8

The diagnosis of cutaneous adverse food reactions (CAFRs) in dogs relies on the performance of dietary restrictionprovocation trials. Knowing the most common offending allergens in these species helps determine which food challenges should be performed first to faster confirm the diagnosis of CAFR! As published by Olivry & Mueller (2017) the prevalence of CAFR in dogs is around 1 to 2% and among those with skin diseases, it ranges between 0 and 24%. The range of CAFR prevalence is similar in dogs with pruritus (9 to 40%), those with any type of allergic skin disease (8 to 62%) and in dogs diagnosed with atopic dermatitis (9 to 50%)².

A novel protein or hydrolysed diet containing a limited antigen content may help minimise adverse food reactions (AFRs) and be helpful both in the diagnosis and management of AFRs. It is important to note that the only way to accurately diagnose an AFR is an elimination diet trial; serology testing for food-specific IgE and IgG shows low repeatability and has a highly variable accuracy¹, and thus should not be routinely recommended.

DIAGNOSING FOOD ALLERGIES OR INTOLERANCES



- 1. Mueller RS, et al. (2016) Critically appraised topic on adverse food reactions of companion animals (2): common food allergen sources in dogs and cats. BMC Vet Res. 12: 9.
- 2. Olivry T, et al. (2017) Critically appraised topic on adverse food reactions of companion animals (3): prevalence of cutaneous adverse food reactions in dogs and cats. BMC Vet Res. 13: 51.
- 3. Carlotti D. (2017) Food Allergy in Dogs and Cats: Current Dermatological Perspectives.

SUPPLEMENTS

MAINTENANCE NUTRITION - WET

APPENDIX

NUTRITIONAL MANAGEMENT **OF FOOD ALLERGY IN DOGS**

Food allergy (food hypersensitivity) is widely recognised in dogs, and results in clinical signs affecting the skin, gastrointestinal tract, or both. Food allergy is reported to be responsible for to up to 20-25% of cases of non-seasonal allergic dermatoses, and for many cases of gastroenteritis.

Food allergens are almost exclusively proteins or glycoproteins and in dogs the most commonly reported allergens are: beef, dairy products, chicken, and wheat¹. The size and structure of the protein helps determine its ability to induce hypersensitivity:

- Most allergens have a molecular weight above 20 000 Daltons - large enough to have sufficient complexity to interact with antibodies or T-cell receptors.
- Proteins also have to be small enough to pass through the mucosal barrier and are usually less than 70 000-80 000 Daltons.

The best approach to the diagnosis of canine food allergy is to use a food where the potential allergens have been broken down and denatured to render them harmless and non-immunologically reactive by hydrolysis. Excessive hydrolysis of proteins in hypoallergenic diets is not necessary as it might contribute to the risk of osmotic diarrhoea. It is essential for an effective food trial that the diet used is fed exclusively.

★ CLINICALADVANTAGES WITH THE USE OF CANINE HA HYPOALLERGENIC™

PURINA® PRO PLAN® VETERINARY DIETS HA Hypoallergenic[™] provides:

- A single protein source hydrolysed to low molecular weights - hydrolysing proteins to less than 18 000 Daltons helps render them immunologically inert, and alters their structure to further reduce antigenicity
- An exceptional digestibility of all ingredients to reduce the antigenic load and help manage any GI signs
- Purified starch source and sucrose. from which virtually all intact protein has been removed. This dramatically reduces the risk of allergic responses
- Long-chain omega-3 fatty acids to help reduce inflammatory responses. These are incorporated into cell membranes in place of a proportion of arachidonic acid. Long-chain omega-3 fatty acids subsequently compete with arachidonic acid as a substrate for eicosanoid production and thereby maximise the natural anti-inflammatory process



Degranulation of mast cells requires the binding of an antigen to at least two epitopes to two adjacent IdE antibody molecules.

Histamine granules



Small hydrolysed peptides are not able to bind to two adjacent IgE of the mast cells and thus are not able to induce degranulation.

Mast cell

Other relevant literature:

- Tapp T, et al. (2002) Comparison of a commercial limited-antigen diet versus home-prepared diets in the diagnosis of canine adverse food reaction. Vet Therapeutics. 3: 244-51.
- Hall EJ, et al. (2000) Diseases of the small intestine: dietary sensitivity. In Ettinger SJ, Feldman EC (eds). Textbook of Veterinary Internal Medicine, 5th edition, W. B. Saunders Co. Philadelphia, 1230-3.
- Marks SL, et al. (2002) Dietary trial using a commercial hypoallergenic diet containing hydrolyzed protein for dogs with inflammatory bowel disease. Vet Therapeutics. 3: 109-18.