

 **PURINA**<sup>®</sup>  
**PRO PLAN**  
**VETERINARY**  
**DIETS**<sup>®</sup>

# HA

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## HYDROLYZED<sup>®</sup>

### MEDICAL INDICATIONS

Multiple Indications for a  
Wide Range of Patients

#### GASTROINTESTINAL

- ✔ Elimination diet trial
- ✔ Food allergic gastroenteritis
- ✔ Food intolerance
- ✔ Inflammatory bowel disease
- ✔ Lymphangiectasia
- ✔ Protein losing enteropathy
- ✔ Pancreatitis
- ✔ Exocrine pancreatic insufficiency
- ✔ Malabsorption

#### DERMATOLOGIC

- ✔ Elimination diet trial
- ✔ Food allergic dermatitis

#### ADDITIONAL

- ✔ Hepatic encephalopathy
- ✔ History of urate urolithiasis
- ✔ Hyperlipidemia



# CANINE ADVERSE FOOD REACTION

## INDICATION RELEVANCE

Adverse food reactions account for approximately 10-15% of all allergic skin diseases in dogs and cats<sup>1</sup>. Also, nearly 3 out of 10 dogs visiting veterinary clinics were seen because of a skin issue<sup>2</sup>. 1 out of 3 clients using vet services reported that their dog experienced a GI issue in the past year<sup>3</sup>.



## DIETARY MODIFICATION

The three most common types of allergies are atopy, flea allergic dermatitis and food sensitivities. The most common food allergens for dogs are beef, dairy, and chicken<sup>4</sup>. Adverse food reactions can include both skin and GI symptoms<sup>4</sup>. Dietary modifications can help to nutritionally manage dogs with food sensitivities by providing hydrolyzed sources of protein in a hypoallergenic diet.

<sup>1</sup>Dermatology. Blackwell's five-minute veterinary consult. Canine and Feline, Fifth Edition. P. 491 (2011). Ames, Iowa. Blackwell; <sup>2</sup>Veterinary Landscape Study, May 2015; <sup>3</sup>2011 Gastrointestinal Issues Study; <sup>4</sup>Mueller RS, Olivry T, Prélud P. Critically appraised topic on adverse food reactions of companion animals (2): common food allergen sources in dogs and cats. BMC Vet Res. 2016 Jan 12;12:9.

PURINA® PRO PLAN VETERINARY DIETS® HA HYDROLYZED® CANINE VEGETARIAN

## HEALTH BENEFITS

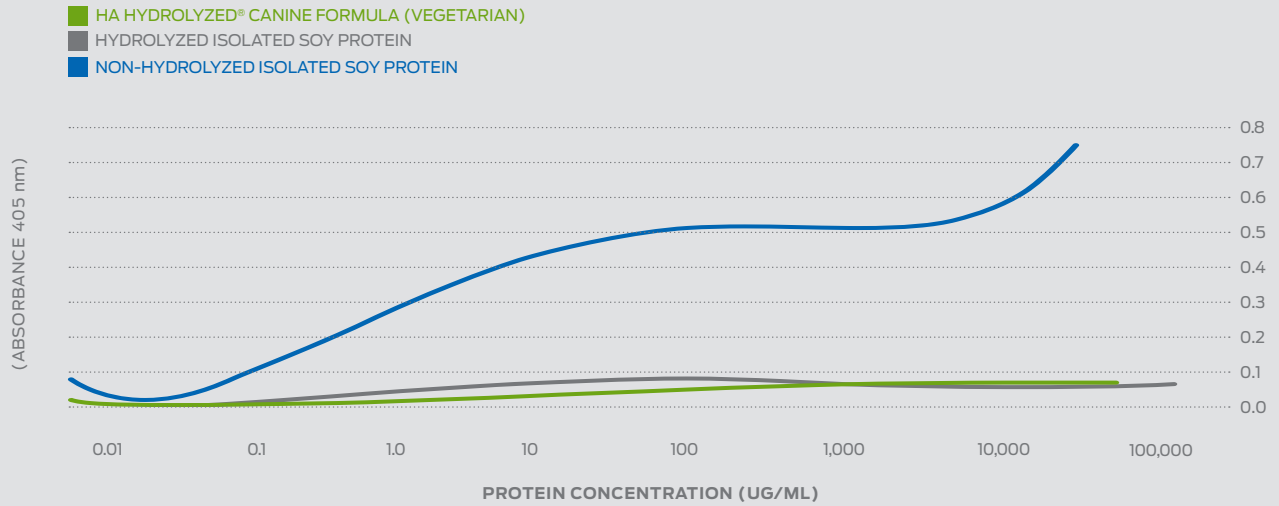
BENEFIT	INGREDIENTS	MECHANISM
<b>LOW ANTIGENICITY FORMULA</b> <ul style="list-style-type: none"> <li>Total formula average molecular weight of 11,671 daltons</li> <li>Single hydrolyzed protein source</li> <li>Single low-allergen starch source helps minimize the risk of an allergic reaction</li> </ul>	<ul style="list-style-type: none"> <li>Protein from hydrolyzed soy protein isolate</li> <li>Starch from corn starch</li> </ul>	<ul style="list-style-type: none"> <li>A truly hypoallergenic diet contains protein that has been reduced to small polypeptides through hydrolysis. Small polypeptides are not recognized as an antigen by the immune system</li> <li>The starch source in the formula is a highly refined starch that contains virtually no protein (~1%)</li> </ul>
<b>DIGESTIVE HEALTH</b> <ul style="list-style-type: none"> <li>Highly digestible formula made with high-quality ingredients and formulated to promote optimal nutrient absorption and facilitate digestion</li> <li>Formulated with a total moderate fat content, including MCTs as 16.5-26.5% of fat to facilitate fat digestion and absorption</li> </ul>	<ul style="list-style-type: none"> <li>High-quality ingredients</li> <li>Source of MCTs: coconut oil</li> </ul>	<ul style="list-style-type: none"> <li>Total formula digestibility at 89.4%</li> <li>High protein digestibility at 89.0% and CHO digestibility at 96.5%</li> <li>Total fat content at 10.67% on dry matter and digestibility at 92.9%</li> <li>MCTs need only 3 steps to digest and are absorbed directly into bloodstream, providing readily available energy</li> </ul>
<b>SKIN SUPPORT</b> <ul style="list-style-type: none"> <li>Helps maintain healthy skin with a nutrient blend of vitamins, minerals, and essential fatty acids</li> </ul>	<ul style="list-style-type: none"> <li>Canola oil and corn oil as sources of Omega-6 fatty acids</li> <li>Mineral: Zn</li> <li>Vitamin A</li> </ul>	<ul style="list-style-type: none"> <li>Omega-6 fatty acids are basic components of skin structure</li> <li>Zn is an essential cofactor in collagen formation</li> <li>Antioxidant Vitamin A supports healthy skin</li> </ul>
<b>IMMUNE SYSTEM HEALTH</b> <ul style="list-style-type: none"> <li>Helps support a healthy immune system</li> </ul>	<ul style="list-style-type: none"> <li>Vitamins A and E</li> </ul>	<ul style="list-style-type: none"> <li>Antioxidant Vitamins A and E support a healthy immune system</li> </ul>

# RESEARCH AND RESULTS

## ANTIGENICITY AND MOLECULAR WEIGHT

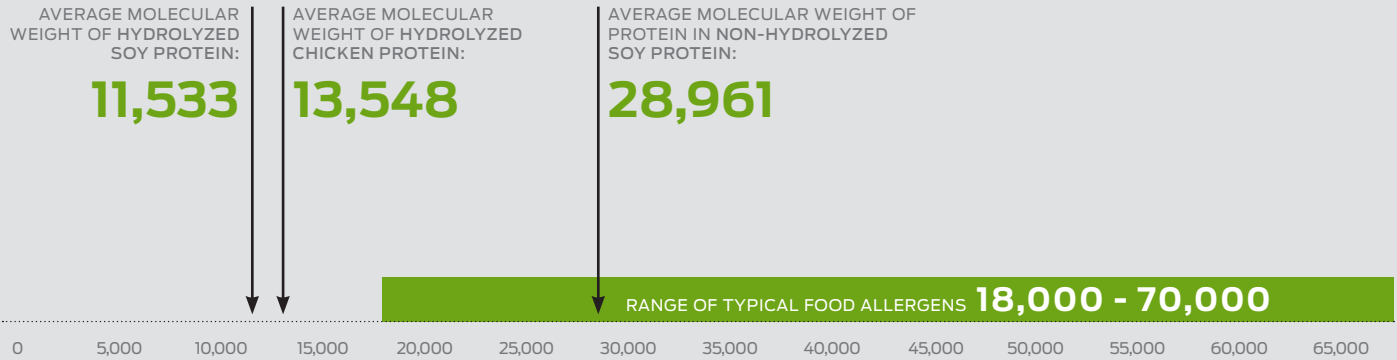
### ANTIGENICITY OF INTACT AND HYDROLYZED SOY PROTEIN

Breaking dietary protein into smaller fragments can drastically reduce its antigenicity. The hydrolyzed protein used in the HA formula is not recognized by soy-specific binding molecules.



Determined by Antigenicity Assay Methodology, NPPC Internal Data 1997

### AVERAGE MOLECULAR WEIGHT IN DALTONS



Molecular weight (dalton) determined by HPLC Methodology, NPPC Internal Data 2008-2010

# EVALUATING PATIENTS WITH SUSPECTED FOOD ALLERGY



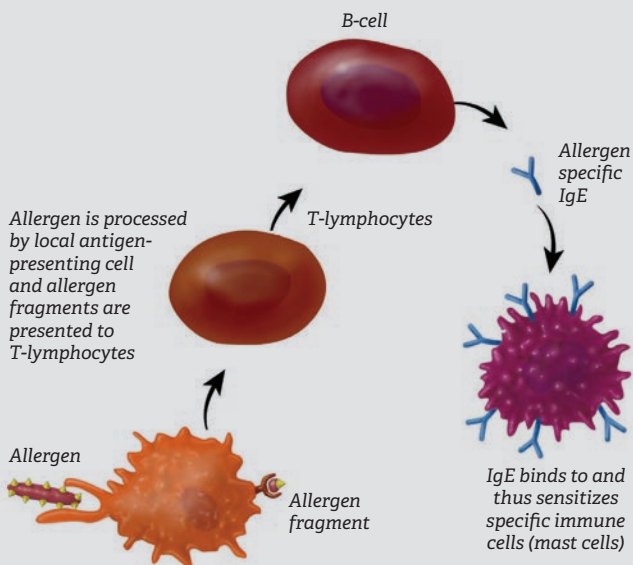
Also Available! HA Hydrolyzed® Salmon Flavour Dry and HA Hydrolyzed® Chicken Flavour Dry and Wet Canine Formulas

# A CLOSER LOOK

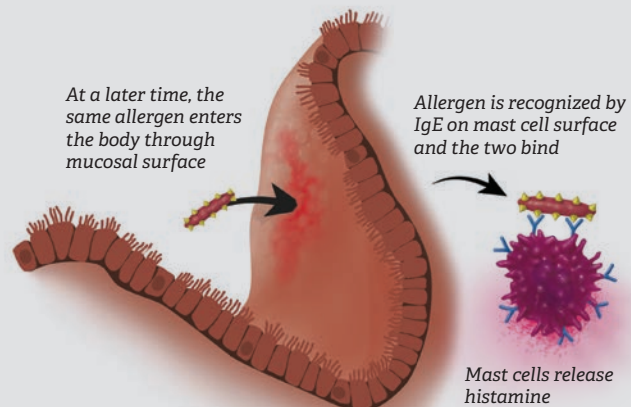
A GLIMPSE INSIDE THE SCIENCE

## HOW IS AN ALLERGY DEVELOPED AND HOW DO HYDROLYZED PROTEINS WORK?

### 1 FOOD ALLERGY - DEVELOPMENT-SENSITIZATION

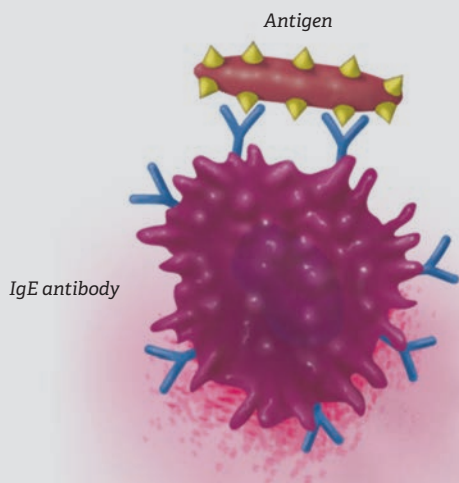


### 2 FOOD ALLERGY - RESPONSE TO ALLERGEN



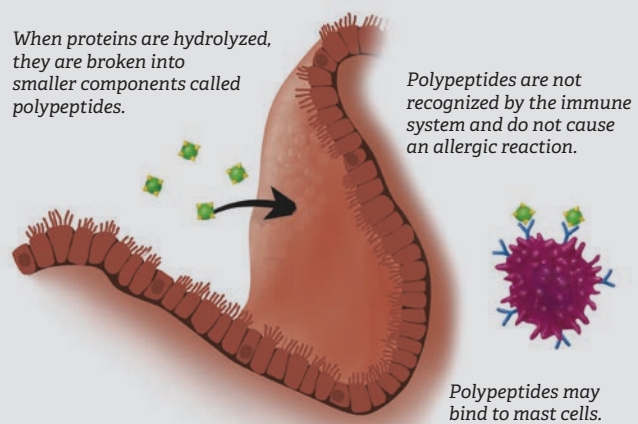
**RESULT:** Inflammation, pruritus and/or gastrointestinal disturbances

### 3 FOOD ALLERGY - SIZE, STRUCTURE AND ANTIGENICITY



Antigen must be large enough to "bridge" two IgE antibodies bound on mast cell to stimulate degranulation

### 4 HOW DO HYDROLYZED PROTEINS HELP?



**HOWEVER:**

- They cannot form cross-links
- Release of histamine is not triggered
- **NO ALLERGIC RESPONSE OCCURS**

Polypeptides still provide the same nutritional benefits as the intact protein.

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Learn more at  
[www.ProPlanVeterinaryDiets.ca](http://www.ProPlanVeterinaryDiets.ca)

For more information, visit [www.ProPlanVeterinaryDiets.ca](http://www.ProPlanVeterinaryDiets.ca)  
 or call us at 1-866-884-VETS (8387).

Have a case consult? We are here to help. Contact our Canadian Veterinary  
 Resource Centre at [canadavetconsult@purina.nestle.com](mailto:canadavetconsult@purina.nestle.com)

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