ROYAL CANIN®

INCREDIBLE IN EVERY DETAIL

HEALTHY SKIN COMES FROM WITHIN

Tailored nutritional solutions to support cats and dogs with skin issues

20% OF THE AVERAGE VET'S CASELOAD ARE PATIENTS WITH SKIN DISEASE[1]

CUTANEOUS ADVERSE FOOD REACTION (cAFR) IS NOT RARE IN CATS AND DOGS

THE PREVALENCE OF CAFR IN DOGS REACHES NEARLY 20% IN CASES OF PRURITIC DISEASE OR ALLERGIC SKIN ISSUES[1]

	Prevalence of cAFR in different cases (median, in %[2])				
	All diagnoses	Skin diseases	Allergic skin diseases	Pruritic diseases	Skin lesions suggestive of atopic dermatitis
CAT	0.2%	5%	10%	16%	No data
DOG	1-2%	6%	20%	18%	29%

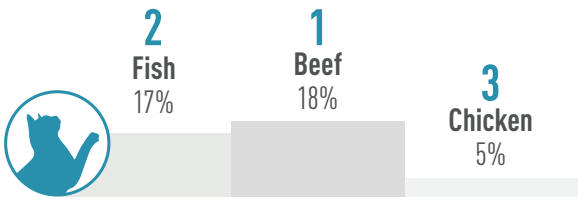
1.Hill PB, Lo A, Eden CA, Huntley S, Morey V, Ramsey S, Richardson C, Smith DJ, Sutton C, Taylor MD, Thorpe E, Tidmarsh R, Williams V. Survey of the prevalence, diagnosis and treatment of dermatological conditions in small animals in general practice. Vet Rec. 2006 Apr 22;158(16):533-9.

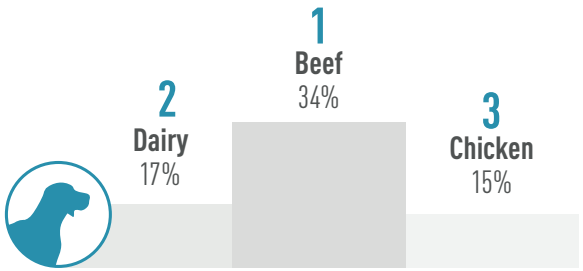
2. Olivry T, Mueller RS. Critically appraised topic on adverse food reactions of companion animals (3): prevalence of cutaneous adverse food reactions in dogs and cats. BMC Vet Res. 2017 Feb 15;13(1):51.

SKIN PROBLEMS

- Nutrient intolerance, food allergy or Adverse Food Reaction (AFR)
- Environmental atopic dermatitis
- External parasites (fleas, demodex etc.)
- Endocrine disorders and auto-immune diseases

TOP 3 ALLERGENIC PROTEIN SOURCES[3] IN cAFR ARE DIFFERENT IN CATS AND DOGS





AN ELIMINATION DIET IS THE MOST **ROBUST TOOL** TO HELP IDENTIFY A NUTRIENT INTOLERANCE

An elimination trial is **the only reliable method** to help identify a nutrient intolerance in cats and dogs.[4]

Other tests such as serology (IgG and IgE), intra-dermal, saliva or hair tests are considered unreliable for the diagnosis of a food allergy, in cats and dogs, to date.[4,5]

Hydrolysed protein diets have been reported to be **effective and well tolerated** when used as elimination diets in cats and dogs.

HYDROLYSED DIETS: **AN OPTIMAL SOLUTION** FOR THE LONG-TERM MANAGEMENT OF PATIENTS WITH NUTRIENT INTOLERANCE

Feeding a complete, palatable, hydrolysed diet helps to secure pet owner compliance.

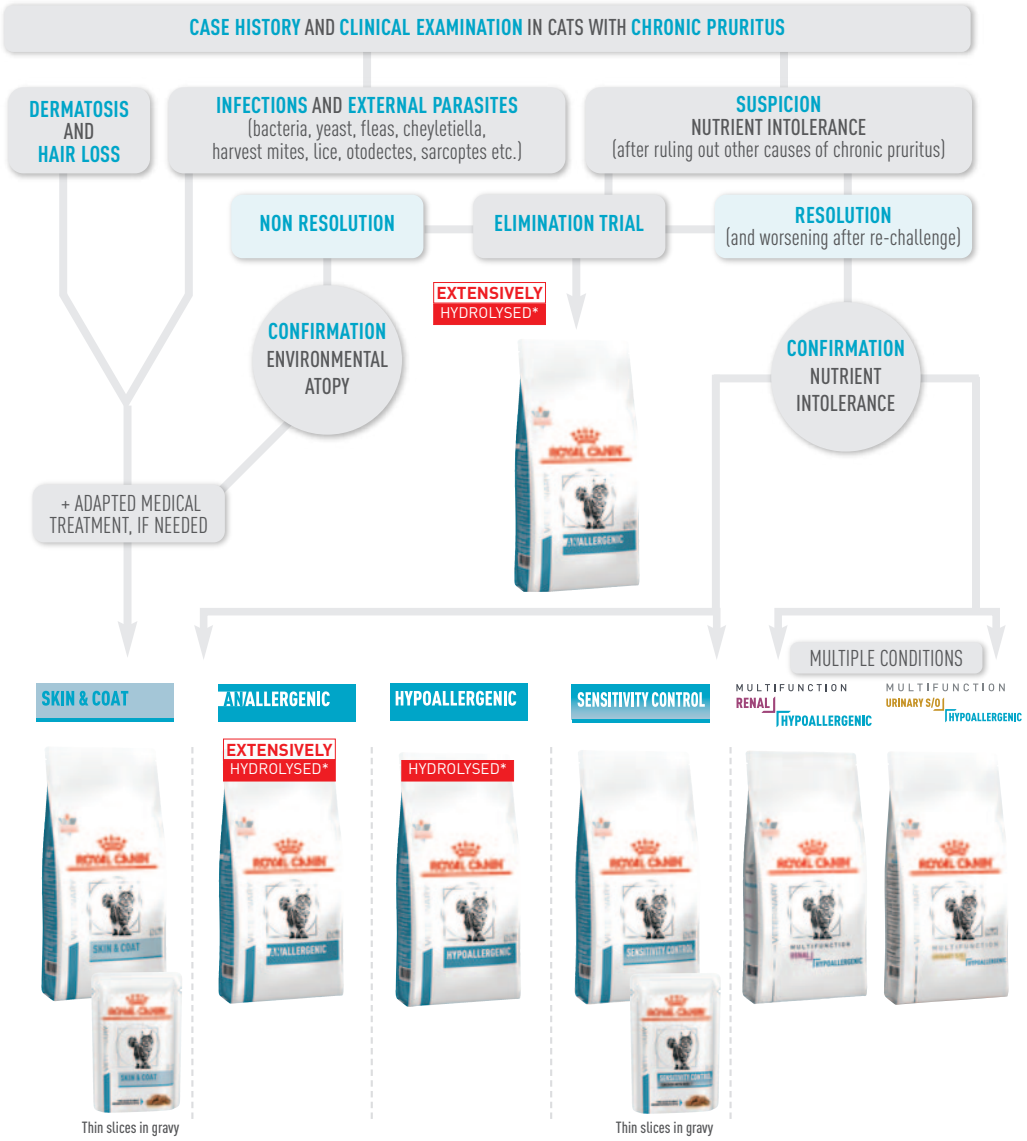
Compliance with your nutritional recommendation will help avoid any clinical relapse and retain your client's trust.

3. Mueller RS, Olivry T, Prélaud 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.

4. Mueller RS, Olivry T. Critically appraised topic on adverse food reactions of companion animals (4): can we diagnose adverse food reactions in dogs and cats with in vivo or in vitro tests? BMC Vet Res. 2017 Aug 30;13(1):275.

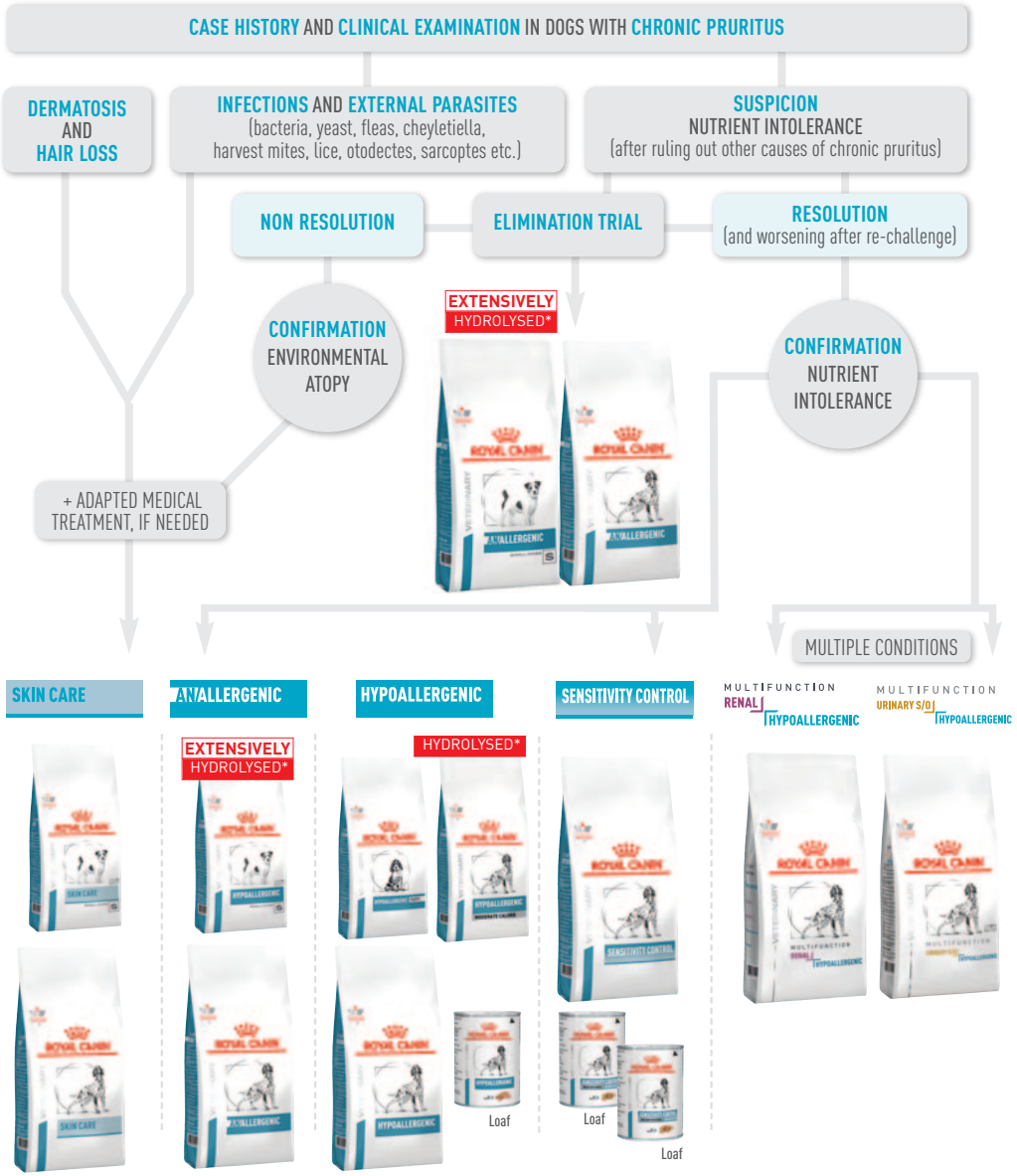
5. Coyner K, Schick A. Hair and saliva test fails to identify allergies in dogs. J Small Anim Pract. 2019 Feb;60(2):121-125. doi: 10.1111/jsap.12952. Epub 2018 Oct 29. PMID: 30371955.

NUTRITIONAL SUPPORT FOR FELINE DERMATOLOGICAL CASES



** Hydrolysis level for the major protein source*

NUTRITIONAL SUPPORT FOR CANINE DERMATOLOGICAL CASES

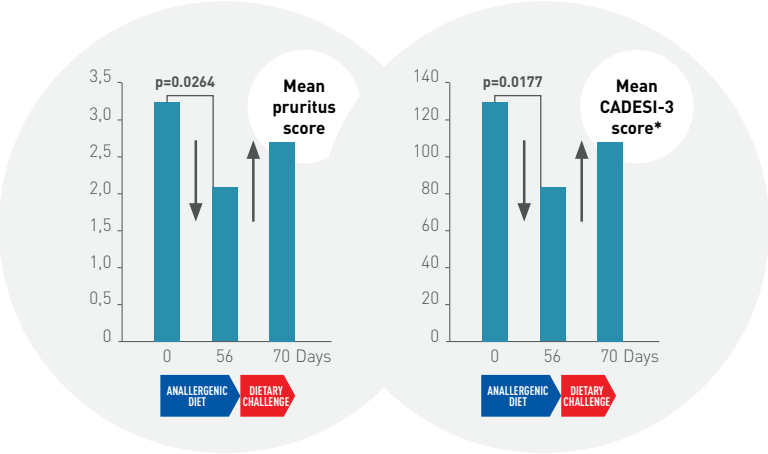


** Hydrolysis level for the major protein source*

CLINICALLY PROVEN ELIMINATION DIET

ONE RESPONSE WITH OUR EXTENSIVELY-HYDROLYSED PROTEIN DIET

BENEFITS OF ANALLERGENIC FOR ELIMINATION TRIALS



Canine Atopic Dermatitis Extent and Severity Index (CADESI-3)[6]

Your gold standard in food elimination trials for cats and dogs[7] thanks to its extensively hydrolysed protein source.

ROYAL CANIN® ANALLERGENIC: TOTAL CONFIDENCE DUE TO THE LOWEST ALLERGENIC POTENTIAL

- **Extensively-hydrolysed feather-based protein** (88% of protein as pure amino-acids and 99% finished product protein <6KDa)
- **Formulated with purified starch** instead of whole cereals
- **Produced in controlled facilities with systematic and thorough cleaning** of the production lines
- **Proven absence of cross-contamination** thanks to state-of-the-art DNA and proteomics analyses[8]
- **Non-allergenic power of Anallergenic protein & carbohydrate sources**
  No IgE-mediated immune recognition of Anallergenic extensively-hydrolysed feather protein and Anallergenic corn starch from dogs previously sensitised to chicken[9], cats previously sensitised to poultry[9] and both previously sensitised to corn[10]

COMPLETE AND BALANCED DIETS
WITH A PROVEN EXCELLENT EFFICACY

CHICKEN-ALLERGIC DOGS[11,12]:

- No pruritic flares
- Improvement of stools

COMPLEX OR REFRACTORY AFR CASES[11]:

- Dogs previously fed classical diets recommended for nutrient intolerance, but not fully stabilised, e.g. occasional flare-ups needed to be treated with medications such as steroids
- Significant improvement of pruritus and skin lesions
- Anti-pruritic medications were not deemed necessary during the trial
- Good digestive tolerance

Safe for long term use as demonstrated by the Association of American Feed Control Officials (AAFCO) trial (Lesponne I et al. Nutritional adequacy of an extensively hydrolyzed protein-based canine maintenance diet. ESVCN congress, sept 2021)

- Equivalent efficacy for the management of nutrient intolerance compared to ANALLERGENIC [13]
- Good food acceptance and digestive tolerance

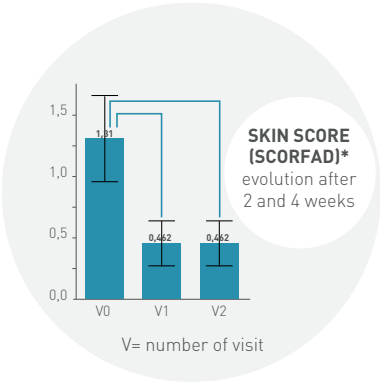
COMPLETE AND BALANCED DIET
WITH PROVEN EFFICACY

IMPROVEMENT OF SKIN CONDITION, IN ADULT CATS[14]:

- Significant improvement of skin lesions, in stabilised cats with nutrient intolerance seen as early as 2 weeks [14]
- 92% of the veterinary investigators evaluated the efficacy of the test diet as very good

SAFE FOR LONG TERM USE[15]:

- Good weight maintainance
- Excellent digestive tolerance: the faecal score, assessed during 182 days, was very stable over the study and faeces well formed
- Good general acceptance of the diet by cats
- Good blood results, in line with AAFCO criteria
- Significant improvement in stabilised feline cats with nutrient intolerance.



*SCORFAD was used to score each type of lesion from 0 to 4 depending on severity and extension. The total SCORFAD score is marked out of (16).

6. Olivry T, Marsella R, Iwasaki T, Mueller R; International Task Force On Canine Atopic Dermatitis. Validation of CADESI-03, a severity scale for clinical trials enrolling dogs with atopic dermatitis. Vet Dermatol. 2007 Apr;18(2):78-86.

7. Cadiergues M.C., Muller A., Bensignor E., Héripret D., Yaguiyan-Colliard L., Carlotti D.-N., Mougeot I. Diagnostic value of home-cooked and an extensively hydrolysed diet (Anallergenic™, Royal Canin, France) in the diagnosis of canine adverse food reaction: a randomized prospective multicenter study in 72 dogs.

8. Lesponne I., Naar J., Planchon S., Serchi T., Montano M. DNA and Protein Analyses to Confirm the Absence of Cross-Contamination and Support the Clinical Reliability of Extensively Hydrolysed Diets for Adverse Food Reaction-Pets. Vet. Sci. 2018; 5, 63 https://www.mdpi.com/2306-7381/5/3/63.

9. Olvry T., Bexley J., Mougeot I. Extensive protein hydrolyzation is indispensable to prevent IgE-mediated poultry allergen recognition in dogs and cats. BMC Vet. Res. 2017; 13:251 https://bmcvetres.biomedcentral.com/articles/10.1186/s12917-017-1183-4 - Sera from dogs and cats with naturally occuring chicken-specific IgEs.

10. Olivry T., Bexley J. Cornstarch is less allergenic than corn flour in dogs and cats previously sensitized to corn. BMC Vet. Res. 2018; 14:207 https://bmcvetres.biomedcentral.com/articles/10.1186/s12917-018-1538-5 - Sera from dogs & cats with naturally occuring corn-specific igEs.

11. Mougeot I. and al. Royal Canin ANALLERGENIC: clinical efficacy in an AFR dietary management pre-clinical trial (Europe, 2011). Royal Canin R&D center, Aimargues, France, data on file NB: another study was done to confirm efficacy in management, in Japan (ref=Muramoto M., Mougeot I., Biourge V. Royal Canin ANALLERGENIC: clinical efficacy in an AFR dietary management trial (Japan, 2012). Royal Canin R&D center, Aimargues, France, data on file) BUT the text mentioned in the detailed relates only to the european study.

12. Bizikova P, Olivry T. A randomized, double-blinded crossover trial testing the benefit of two hydrolysed poultry-based commercial diets for dogs with spontaneous pruritic chicken allergy. Vet Dermatol. 2016 Aug;27(4):289-e70.

13. Data on file Royal Canin 2022.

14. In a clinical trial which involved 15 cats fed diets recommended for nutrient intolerance. Their condition was clinically stabilised but 2/3 of these cats manifested minimal residual signs at inclusion.

15. As demonstrated in an AAFCO trial (26 weeks, n= 10 cats).

16. Steffan J, Olivry T, Forster SL, Seewald W. Responsiveness and validity of the SCORFAD, an extent and severity scale for feline hypersensitivity dermatitis. Vet Dermatol. 2012 Oct;23(5):410-e77.

TIPS THAT MAY HELP IMPROVE THE COMMUNICATION WITH PET OWNERS

Explaining to pet owners the benefits of an elimination trial and how to implement it can be challenging.
We developed this guide to support your communication during all stages of a dietary trial, to help ensure owner compliance.

5 STEP GUIDE TO AN ELIMINATION TRIAL

1 A VERY IMPORTANT TRIAL

Try to plan a dedicated timeslot to explain to the pet owner that the elimination trial is the only reliable way to identify a nutrient intolerance. It is important that it is carried out correctly and must be taken seriously.

2 GET COMMITMENT

The whole family, and involved neighbours, should "play the game"; **their full commitment is crucial to obtain reliable results from this trial,** and consequently the only way to get to understand the long-term management needs of the pet.

3 FEED ANALLERGENIC EXCLUSIVELY

It is important that your clients understand that their pet **has to be fed ANALLERGENIC exclusively for 6-8 weeks.** This means no treats, chews or leftovers.

4 TRANSITION PERIOD

As with any diet change, pet owners **must allow a 5-7 day transition period** from their pet's current diet to **ANALLERGENIC**. This transition will ensure optimal palatability and digestive tolerance.

5 DIETARY CHALLENGE

Remind your client to **save a portion of their pet's current diet** for the later dietary challenge.

FOLLOW-UP

Regular contact with your client during the elimination trial is essential to provide support and help ensure optimal compliance. This can be achieved with both phone calls and/or regular visits.

PROGRESS

Close monitoring will allow you to confirm, via expert clinical examination and adapted questions, any improvement in the pet's condition. Taking pictures of the skin lesions can help to show an objective evolution to pet owners. Following the evolution of lesional and pruritus scores can show progress and help maintain the pet owners' full engagement.

DIETARY CHALLENGE

A dietary challenge must be performed with the previous original diet (or the suspected ingredient). **It is important to emphasise on the importance of this phase**, as some owners may be reluctant to switch back to their previous food, fearing reappearance of original signs. **Therefore, explaining why this second step is essential is key,** and some additional tips may be given, depending on your own experience of what works well in dogs or cats (elizabethan collar, low dose drugs to allow clinical signs to show, but at minimal level, etc.)

The reintroduction of the previous diet should be done progressively, start by feeding 10-20% of the daily calorie needs from the previous diet and slowly increasing this every one to two days.

RETURNING TO THE ELIMINATION DIET

Clinical signs usually recur within just a few days, but in rarer cases it can take up to 2 weeks, especially in cats. **As soon as clinical signs recur, stop the original diet and continue feeding ONLY the elimination diet.** The pet should improve again quite quickly.

RECOMMENDATION

Recommending a hydrolysed protein diet such as **ROYAL CANIN® HYPOALLERGENIC** or a selected protein based diet such as **SENSITIVITY CONTROL** will ensure the pet is fed a complete and balanced diet that **will help to manage the pet's nutrient intolerance, in the long term.**

LONG TERM MANAGEMENT

Some pet owners may be reluctant to change from their usual diet for the long term. **Your expertise and the trust-based relationship with them is what will help them understand the rationale behind this decision,** and that nutrient intolerance is potentially a life-long condition.

NUTRITIONAL SOLUTIONS
TO HELP IN THE LONG-TERM NUTRITIONAL MANAGEMENT OF YOUR DERMATOLOGICAL CASES

The ROYAL CANIN® Dermatology range includes diets to help in the management of cats and dogs with nutrient intolerance and environmental sensitivities.

NUTRIENT INTOLERANCE

FELINE

ENVIRONMENTAL ATOPY, DERMATOSIS AND HAIR LOSS

CANINE

ROYAL CANIN® HYPOALLERGENIC PUPPY: SUPPORTING THE HEALTHY GROWTH OF PUPPIES WITH NUTRIENT INTOLERANCE

PRODUCT BENEFITS:

- Hydrolysed protein with low molecular weight for very low allergenicity.
- Formulated to support the skin's natural protective barrier for optimal skin health.
- Specially adapted levels of nutrients (including protein and calcium) to meet the nutritional needs of growing puppies and satisfy their fussy appetites.

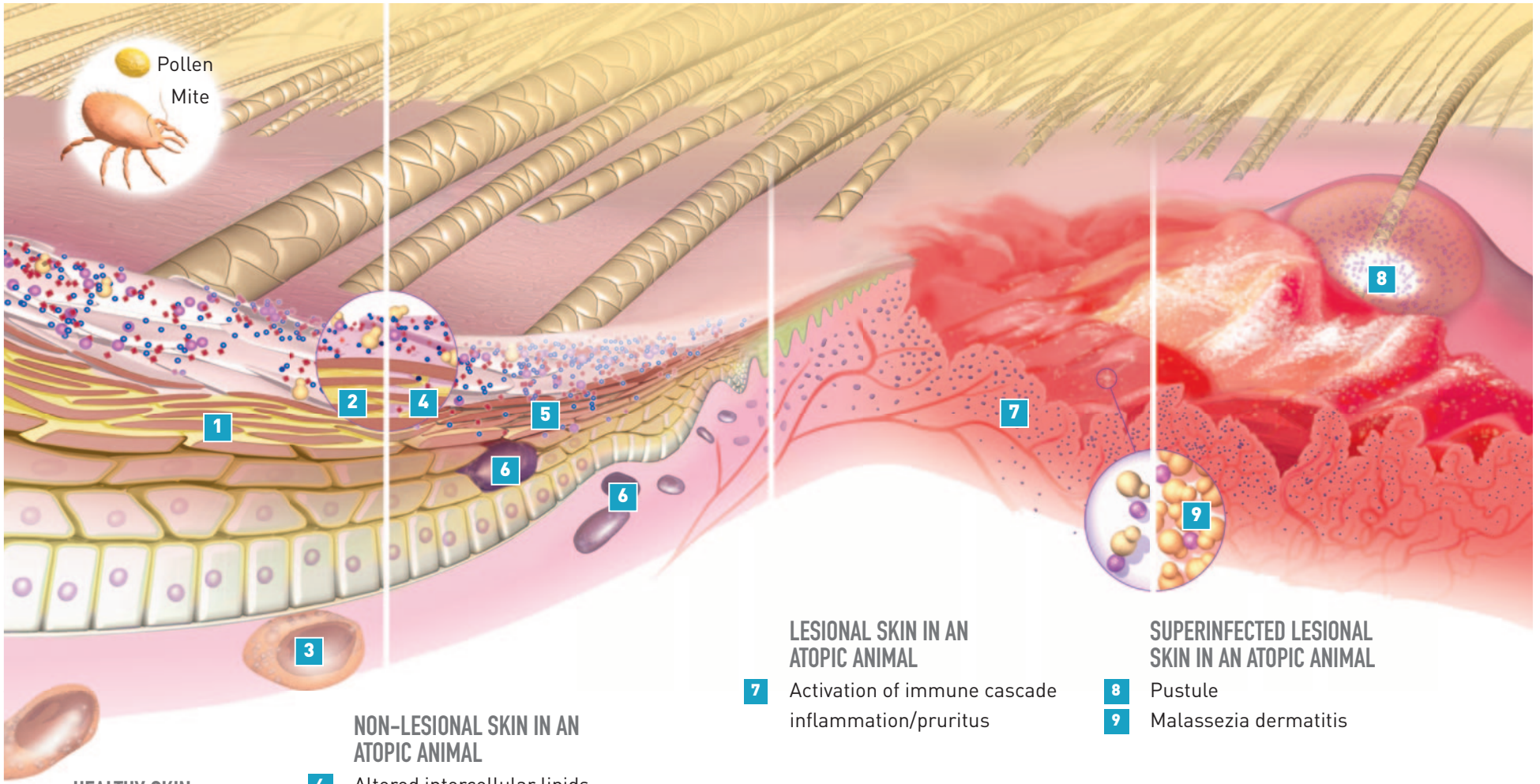
RECOMMENDED FOR PUPPIES FROM 6 MONTHS OLD WITH AN ESTIMATED ADULT WEIGHT OVER 4KG.

A PRECISE DIET FOR PUPPIES IN CASES OF SUSPECTED AND IDENTIFIED NUTRITIONAL INTOLERANCE

- The diet utilises the same highly hydrolysed protein source used in HYPOALLERGENIC adult to support the transition between diets. HYPOALLERGENIC PUPPY also contains a single source of carbohydrate.
- Precisely controlled combination of nutrients to support digestive health
- To meet the nutritional needs of growing puppies the diet is formulated with specially adapted levels of nutrients including protein, calcium and phosphorus.
- Formulated to support the skin's natural protective barrier for optimal skin health.

ATOPIC DERMATITIS:
SECONDARY TO AIRBORNE ALLERGENS

- Yeast [Malassezia]
- Coccus-shaped bacterium
- Rod-shaped bacterium
- Allergen [Mite]
- Allergen [Pollen]



HEALTHY SKIN

1. Stratum corneum
2. Intercellular lipids
3. Inflammatory cells

NON-LESIONAL SKIN IN AN ATOPIC ANIMAL

4. Altered intercellular lipids
5. Allergens passing through the skin barrier
6. Altered inflammatory population

LESIONAL SKIN IN AN ATOPIC ANIMAL

7. Activation of immune cascade inflammation/pruritus

SUPERINFECTED LESIONAL SKIN IN AN ATOPIC ANIMAL

8. Pustule
9. Malassezia dermatitis

ROYAL CANIN® SKIN CARE:
COMPLETE AND BALANCED DIETS WITH PROVEN EFFICACY

IMPROVEMENT OF SKIN CONDITION, IN ADULT DOGS[17]

- A significant reduction in mean CADESI-03 score was observed over the trial phase.[fig 1]
- After re-introducing the previous diet after the 4th monthly visit, a recurrence of signs was seen by visit 5 (V5) in 19 of the 47 dogs in the study.[fig 1]

OTHER BENEFITS:

- A specially adapted small dog version tailored to meet the needs of small dogs
- Good digestive tolerance
- Good weight maintenance
- Good general acceptance of the diet

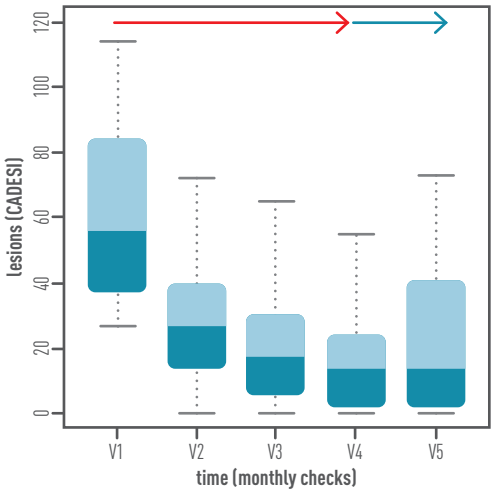


Figure 1[17]:
Box plot showing the evolution of lesions (CADESI-03 scores) for dogs included in the study. The dogs were evaluated at monthly veterinary visits V1-V5. (V1-V4 = monthly veterinary visits during 3-month diet trial phase (Skin Care diet), V5 = final veterinary visit after 1-month post-test phase, after dogs had been placed back on their previous food). **The decrease in CADESI-03 score from the start to the end of the diet trail phase (V1-V4) is significant.** (Exact Wilcoxon Signed-Rank Test p<0.0001, n=47)

Figure 2:
Case Example: Ekin, male Siberian Husky, 11 y.o. with allergic dermatitis (Spain), Monitored monthly (v=monthly visit)

[17] Lesponne I, Deswarte G, Biourge V. Significant improvement of canine pruritic dermatitis with dietary intervention. Proceedings of SEVC congress, oct 2021.
[18] Lesponne I, Boutigny L et al. Nutritionally-based improvement of cats'skin& coat health, in Non-Flea, Non-Food-Induced Hypersensitive Dermatitis. BSAVA congress, april 2021, online.

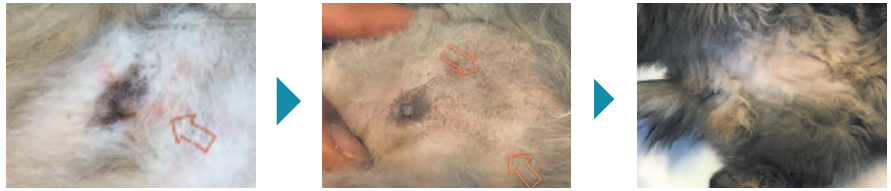
ROYAL CANIN® SKIN & COAT: FORMULATED TO SUPPORT SKIN & COAT HEALTH IN CATS*(18)

INCLUDING CATS WITH NON FLEA NON-FOOD-INDUCED HYPERSENSITIVE DERMATITIS (NFNFIHD)

CLINICAL STUDY: KEY FACTS

- **15** Cats included at study outset
- 11 cats completed the whole study
- **93%** European cats
- **67%** Female cats
- **5** Years of age on average
- Cats with indoor and outdoor lifestyles included

Clinical Case: Nala, Domestic short-haired, neutered, male, 5.9 y.o, with NFNFiHD



SCORFAD 10/16 → SCORFAD 0/16

IMPROVEMENT OF SKIN CONDITION, IN ADULT CATS

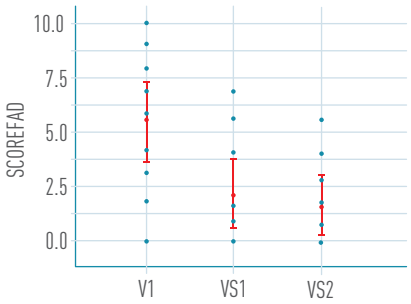


Figure 3: Evolution of skin lesions (average SCORFAD)
V1-VS2 (4 weekly veterinary visits during 3-month trial phase. VS1 and VS2 represent 4 and 8 week evaluation after starting the diet.)

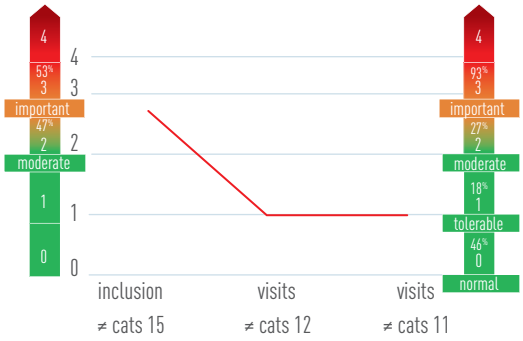


Figure 4: Evolution of pruritus (average score, and shares for each score at the start and end)

- **Lesions improved: SCORFAD** significantly decreasing after 4 weeks [fig3]
- **Significant decrease** of average pruritus score [fig4]
- **An improvement** in pruritus and lesional scores was seen in 100% of cats [fig 3]

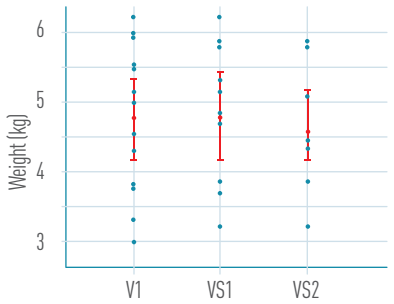


Figure 5: Maintenance of body weight (average evolution during the study)
V1-VS2 (4 weekly veterinary visits during 3-month trial phase. VS1 and VS2 represent 4 and 8 week evaluation after starting the diet.)

- **Palatability and digestive tolerance were good**
- **Body weight and body condition score maintained** [fig5]

ROYAL CANIN®

YOUR COMPREHENSIVE DERMATOLOGY PARTNER

Discover the **ROYAL CANIN® Dermatology range** of tailored nutritional solutions, developed to address the underlying causes of pets' skin problems.

EXTENSIVELY HYDROLYSED PROTEIN

ELIMINATION DIET TRIAL FOR NUTRIENT INTOLERANCE

DERMATOSIS, HAIR LOSS & ENVIRONMENTAL ALLERGIES

DERMATOLOGY

NUTRIENT INTOLERANCE

HYDROLYSED PROTEIN

SELECTED PROTEIN

MULTIPLE CONDITIONS, NUTRIENT INTOLERANCE AND OTHER CONDITIONS

HYDROLYSED PROTEIN