REFERENCES


Key Research Findings and Supporting Studies

Diamond CARE pet foods are designed based on proven research and carefully curated studies. This document is a synopsis of the key findings that guided the formulation of Diamond CARE Sensitive Skin Formula for Adult Dogs.

**Allergic skin disease is commonly seen in veterinary practice.**

In 2015, the top four medical conditions that caused pet owners to go to the veterinarian were skin allergies, ear infections, benign skin masses and hot spots. The true incidence of allergic skin disease is unknown and variably reported, but makes up a significant number of clinical cases seen in veterinary practice.

**Adverse food reactions may be true food allergies or could be food intolerances.**

Adverse food reactions can either be hypersensitivity reactions (immune mechanisms) or intolerance reactions (pharmacological factors such as histamine). It turns out that many diagnoses of “food allergy” are not truly immunologically mediated but due to a food intolerance.

**Polyunsaturated fatty acids play an important role in mediating the symptoms of allergic skin disease.**

Essential fatty acids are effective for ameliorating the clinical symptoms of atopic dermatitis. Feeding an EFA-enriched fish and potato diet improves clinical lesions and pruritus in a significant number of dogs with atopic dermatitis. EFA-enriched diets can be an important part of the therapeutic intervention for atopic dermatitis. Diets with enhanced PUFA content can modulate allergic skin disease through modulation of eicosanoid production, inhibition of cellular activation and an increase in epidermal barrier function. Diets formulated with hydrolyzed protein and enhanced PUFA content led to improvement in pruritus and CADESI scores in some cases of atopic dermatitis. Omega-3 fatty acids have been shown to decrease the production of circulating inflammatory cytokines in dogs.

**Allergic skin diseases caused by environmental allergens are closely related to those caused by food.**

There is some evidence that dogs with cutaneous adverse food reactions may be predisposed to developing atopic dermatitis. Food allergy is often concurrent with environmental allergies, with incidence reported between 33% and 49%.

**Long-term use of diets formulated for allergic skin disease is critical to success.**

Diet is an effective component for strategic management of atopic dermatitis. Studies suggest that a period of up to 12 weeks may be required for the plasma fatty acids to stabilize following changes in the levels of fatty acids in the diet. Clinical symptoms of pruritus did not change in the first 21 days of the study, suggesting that longer-term dietary therapy is required for clinical effects.

**Food allergy can present with a variety of symptoms.**

Food allergy can present as generalized pruritus but also can present as recurrent superficial pyoderma and pruritic papular eruptions of the trunk and head. In addition, recurrent otitis externa is present in 56 to 80% of the cases. Food allergy can present not only with cutaneous symptoms but also with intermittent gastrointestinal symptoms such as vomiting and diarrhea.

**Hydrolyzed protein in diets can be beneficial for managing allergic skin disease.**

Hydrolyzed diets may eliminate the need to identify a novel protein source, which is becoming increasingly difficult with the variety of proteins used in commercial pet foods today. Dogs with a known corn allergy improved when fed a diet made up of amino acids, potatoes and corn starch, and symptoms returned when corn was reintroduced.