

<sup>®</sup>**COATEX**

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Management of optimal  
skin and coat health for  
dogs and cats



**VetPlus** A Global Leader in Veterinary Nutraceuticals

# Management of optimal skin and coat health for dogs and cats

## Background

**The skin represents the largest organ in the body and can be broken down into three broad layers.**

**EPIDERMIS** – outermost skin layer, which is further subdivided into four additional layers. The epidermis is composed of keratinocytes, melanocytes, Langerhans cells and Merkel cells. This layer is constantly renewed through a process known as keratinisation, in which new skin cells migrate upwards through the epidermis and dead cells are eventually shed from the surface.

**DERMIS** – separated from the epidermis by the basement membrane, this layer supports and provides nutrition to the epidermis, due to the presence of blood vessels. The dermis also contains nerves, hair follicles, immune cells and sebaceous glands.

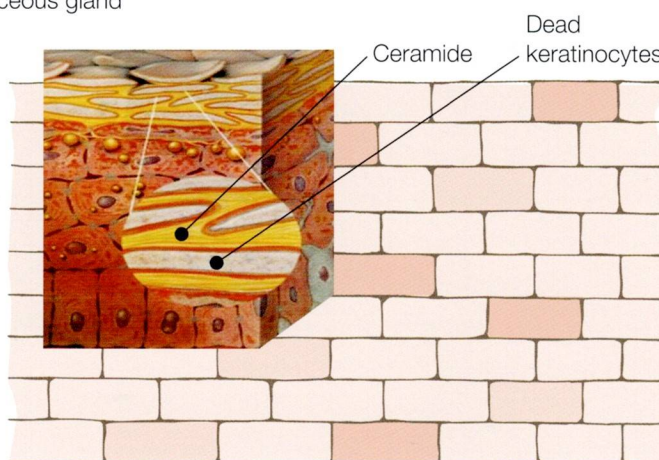
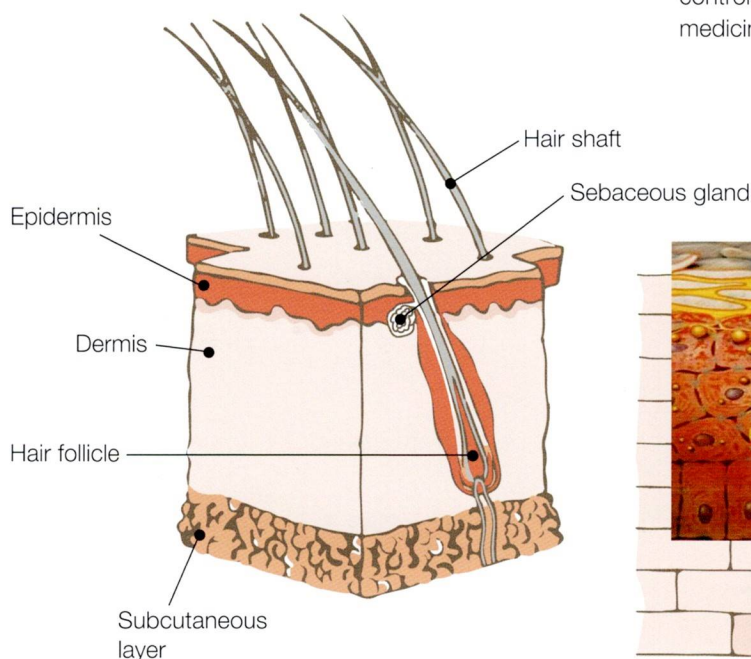
**SUBCUTANEOUS LAYER** – the deepest layer of the skin is the subcutis, or subcutaneous layer, consisting mainly of fat for insulation.

The outermost layer of the epidermis is known as the stratum corneum. This layer is composed of dead, flattened keratinocytes, surrounded by an intracellular “glue” composed of lipids, most importantly ceramides. This can be thought of as a brick wall with the dead keratinocytes representing the bricks and the ceramide layer the cement, holding together the keratinocytes.

The main omega 6 essential fatty acid (EFA) found in healthy ceramide 1, is linoleic acid. When the body is deficient in linoleic acid, oleic acid may be substituted, leading to suboptimal ceramide and reduced barrier function<sup>1</sup>.

A healthy stratum corneum is vital for the protective barrier function of the skin, helping minimise the penetration of potential allergens and pathogens, whilst reducing trans-epidermal water loss<sup>1</sup>.

It has been found that ceramide levels are reduced, even in non-lesional skin of atopic dogs, compared to healthy controls, which is consistent with findings in human medicine<sup>1</sup>.



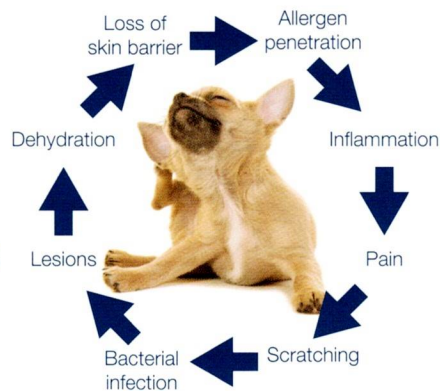
# COATEX

## Prevalence of skin disease

Skin disease is very commonly seen in general practice, with 15.5% of dogs<sup>2</sup> and 10.4% of cats<sup>3</sup>, presenting for dermatological disorders in England.

There are a wide range of skin diseases that can affect companion animals and, therefore, a comprehensive dermatological work up is generally required, to determine the underlying primary and any secondary issues present.

## Vicious cycle of pruritus in atopic dermatitis



## Common causes of pruritis

The most common causes of pruritis seen in veterinary practice are:

- Atopic dermatitis
- Cutaneous adverse food reactions
- Ectoparasites
- Malassezia dermatitis
- Bacterial pyoderma

Malassezia and bacterial infections are typically found secondary to an underlying pruritic disease and can, therefore, complicate the diagnosis and management of these patients.



# Oral EFAs can help to improve and support the skin barrier

## Atopic dermatitis

Atopic dermatitis is an inherited, chronic, inflammatory and pruritic skin disease, which involves skin barrier defects and cutaneous inflammation, secondary to environmental allergens<sup>4</sup>. Commonly there are secondary staphylococcal and Malassezia infections present on the skin and/or ears<sup>4</sup>. Some atopic patients may also have concurrent food allergy and similarities in clinical signs and distribution of skin lesions, can make differentiating these cases challenging<sup>5</sup>.

Diagnosis of atopic dermatitis involves ruling out other causes of pruritis first and then looking for relevant criteria. If dogs have 5 of these criteria, atopic dermatitis is likely<sup>6</sup>:

- Onset of signs < 3 years of age
- Dogs living mostly indoors
- Glucocorticoid-responsive pruritus
- Pruritus without lesions at the onset
- Front feet affected
- Pinnae affected
- Non-affected ear margins
- Non-affected dorso lumbar area

Management of atopic dermatitis often requires a multimodal approach. Pharmaceutical products are required to control the pruritis and inflammation associated with the disease, whilst oral EFAs can help support and improve the defective skin barrier, minimising the penetration of potential allergens and pathogens, whilst maintaining skin hydration.

Topical products can also play an important role in the management of these patients. Medicated shampoos can help reduce the impact of secondary yeast and bacterial infections, whilst soothing, moisturising shampoos, can support the skin barrier.

**Borage oil is rich in the omega 6 EFAs, Linoleic acid and Gamma Linolenic acid**



## Introducing the COATEX® Range

**COATEX® EFA** contains a blend of key ingredients to support skin barrier health and aid with inflammation:

- **Omega 3 EFAs** – Eicosapentaenoic acid (EPA) and Docosahexaenoic acid (DHA), sourced from fish oil, can help aid with inflammation in the skin and support healthy keratinocyte cell membranes<sup>7</sup>.
- **Omega 6 EFAs** – Linoleic acid (LA) is a vital component of healthy ceramide layers in the stratum corneum, supporting the protective skin barrier<sup>1</sup>. Gamma linolenic acid (GLA) can aid with inflammation, working in synergy with the omega 3 EFAs<sup>8</sup>. These ingredients are sourced from a combination of borage and evening primrose oil.
- **Vitamins A, D and E** – key fat-soluble vitamins that have antioxidant effects and support healthy keratinisation<sup>9,10,11</sup>.

The product is available in gelatin capsules and also an airless pump, making administration onto food easy and helping with owner compliance. It is recommended to give essential fatty acid supplementation for at least 8 weeks, to see maximum benefits for skin support.

## COATEX® Shampoos

**COATEX® Medicated Shampoo** for dogs contains chloroxylenol, sodium thiosulphate and salicylic acid. It is a gentle, yet effective shampoo to help dogs in a variety of situations. Frequency of application depends on the condition of the skin, with application 2-3 times weekly for the first 2 weeks recommended, before reducing down to once weekly.

**COATEX® Aloe & Oatmeal Shampoo** contains glycerine, aloe vera and oat protein. It can be used for dogs or cats, where a soothing, moisturising shampoo is required. It can be applied as frequently as every week, for animals that require regular bathing.



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