

# Atopic Dermatitis

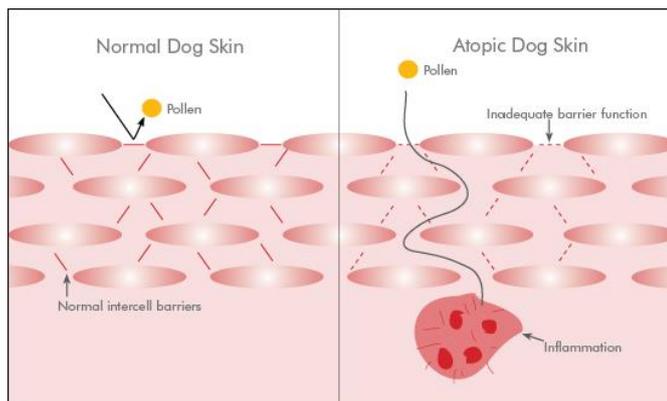
## What is atopic dermatitis?

Atopic Dermatitis is an allergic skin disease with a genetic basis. Dogs with atopic dermatitis have generalised sensitivity to environmental allergens. These dogs are itchy. Atopic dogs have a poor skin barrier. Treatment to improve the skin barrier can reduce symptoms. Atopic Dermatitis cannot be cured, but we can control the symptoms.

## What is the skin barrier, and why is it important in Atopic Dermatitis?

The skin barrier consists of a layer of skin cells. Surrounding these cells are proteins and fats that hold them together. This skin barrier forms an impervious layer on the surface of the skin. This prevents bacteria and allergens from penetrating into the deeper layers. It retains moisture in the skin, preventing skin from drying and flaking. It retains moisture in the skin, preventing skin from drying and flaking.

When the skin barrier is compromised, the skin is unable to retain moisture, and becomes dry. Allergens such as pollens, and grasses can penetrate, and cause irritation. Bacteria and yeast are able to invade the deeper layers. These infections and allergens lead to inflammation in the skin, and this leads to itching.



The primary problem in Atopic Dermatitis is a skin barrier malfunction. These dogs do not have enough good fats and proteins in the skin to form a nice barrier. This leads to the symptoms of itching and the secondary infections.



# All Creatures On Hoddle

## How can we improve the skin barrier?

The skin barrier can be improved via a number of treatments. Improving the skin barrier will reduce the amount of medication needed. It will also reduce the frequency of vet visits, and will reduce long term cost of treatment.

### Diet

Adding Essential Fatty Acids to the diet will improve the fat layer in the skin, and reduce inflammation. Most dogs will have at least some improvement in itch levels with this simple change. The correct balance of omega 3 and omega 6 will give the optimum improvement. Dogs with atopic dermatitis do not have enough of these fats in their skin. These pets need more of these fats in their diet than dogs without skin disease. Regular dog food often does not contain enough of these fats for Atopic dogs. This means these patients may require a change of diet. It will take 6-12 weeks to notice an effect from a change of diet in skin quality, so patience is required.

### Commercial Dog Foods

Some diets for dogs with sensitive skin will contain high levels of these fats. Hills Prescription Diet "DermDefense", and Delicate Care "Skin and Stomach" are the main brand we recommend



here. They have been formulated to improve skin barrier function. The "DermDefense" also contains ingredients designed to act like an anti-histamine in the skin. This reduces itch, inflammation, and thickening of the skin. Many other brands of food designed for sensitive dogs will also contain high levels of good fats. If you are unsure about you food, please discuss this with a vet.

### *Dietary Supplements*

If you would prefer not to change your dog's food, it is possible to add these fats to your dog's current diet. Commercial products such as Blackmore's Paws "Megaderm", and "Fish500" are poured onto your dog's dinner. These are easy to use and it possible to measure an accurate amount to ensure a beneficial effect. If you do not want a commercial product Canola and sunflower oils also contain a fairly good balance of omega 3 and omega 6 fats.

### **Topical treatments**

A variety of topical treatments are available to improve skin barrier function, and remove allergens from the skin.

### *Topical omega 3 and 6*

If you are not supplementing your dog's food with omega 3 and 6, there are topical products that can be used instead. Blackmores "Essential 6" is a spot on product that can be used as an alternative means of adding these good fats to your dog's skin. This is a suitable alternative for animals prone to pancreatitis that cannot handle a high fat diet.

### *Shampoo and conditioner*

Many shampoos and conditioners designed for sensitive dogs also improve the skin barrier. These complement food additives.

Paw's Nutriderm range contains oatmeal colloids, ceramides and other plant oils. These products restore the skin surface. They also wash away allergens that contribute to itch.

### **Why is bathing important for treating Atopic Dermatitis?**



When we wash a dog, the shampoo lathers and retains many of the microscopic particles that are on the skin. This should be followed with a thorough rinse (5 minutes of running water). Rinsing removes these itch causing particles from the skin surface. This long rinse also reintroduces water to the skin layer. When followed by a conditioner, this provides effective moisturisation for dry, atopic skin.

In dogs with atopy, there is often some level of infection with bacteria or yeast. Use of a gentle medicated shampoo will treat these infections. This may eliminate the need for antibiotic or antifungal medications. We recommend Blackmore's "Mediderm" shampoo in mild cases. It is effective on the most common causes of skin infections. It is less drying or irritant than other medicated shampoos. It has a prolonged antibacterial effect. In mild cases of infection, this shampoo can provide an alternative to antibiotics. If a dog has atopy severe enough that we get skin infection, then we should follow the bath with a conditioner. This reduces the skin drying caused by washing, and rehydrates the superficial layers. Blackmore's "Nutriderm" conditioner can be used as a rinse, or can be left on, making it easy to use.

### **What other non-medical treatments may help Atopic Dermatitis?**

#### **Food**

In some dogs food allergies can contribute to atopic dermatitis. Even in dogs where itchy ears are the only symptom, food allergies may be contributing. The most common ingredients to cause food allergy are the proteins in the food. In order of frequency, the most likely causes of food allergies in dogs are: Beef, Chicken, Dairy, Lamb and Wheat. In general other grains are unlikely to be causing allergies in dogs. Preservatives and other additives almost never cause allergies in dogs. Dogs with food allergies might also have periodic vomiting or diarrhoea. Not all food allergic dogs will have these signs.

A wide range of novel protein and hypoallergenic diets are available depending on your preference. Hydrolysed diets are processed in such a way that the molecules are too small for the immune system to recognise them. Novel protein diets work by being a meat or protein to which the immune system is not sensitised. The body does not recognise the protein as an irritant. Some dogs respond better to hydrolysed diets than novel protein diets. The main hydrolysed diets we use are Hills Prescription diet z/d, and Royal Canin Hypoallergenic. Novel protein diets include Hills Prescription d/d (Venison and pea based) and Royal Canin Sensitivity (duck and soy), and Delicate Care "Skin and stomach"



(kangaroo, duck and sorghum based). Many other foods are suitable for allergy control – if you have questions about the food you are currently using please discuss this with a vet.

### Parasite Prevention

Dogs with atopy can relapse when affected by parasites, especially fleas. Atopic dogs are far more sensitive to parasites than normal dogs.



Good, regular, flea prevention helps prevent relapse. A wide variety of flea preventatives are available. To decide which one suits you best discuss this with the vet. It is recommended to keep up to date with an effective parasite prevention if your dog has sensitive skin.

I have tried all of the above, and my dog is still itchy. What medical treatments are available?

### Immunotherapy

Immunotherapy is allergy testing, followed by allergy vaccinations. Some atopic dogs may be allergic to a small number of allergens, and benefit from allergy vaccines. Unfortunately, many atopic dogs are mildly reactive to a wide variety of allergens. There are too many environmental sources of allergens to design a good vaccine. These dogs get less benefit from allergy vaccine.



### Antihistamines

Some dogs respond very well to antihistamines to treat their atopic dermatitis. This is variable between dogs. If appropriate antihistamines are used, they are quite safe for long term use.

Always check with a vet prior to starting antihistamines. This will ensure not only that the dose is appropriate, but that the medication is safe. While some human antihistamines can be used safely in dogs, others cannot. Possible side effects of the wrong antihistamines including heart arrhythmia.

### Antibiotics and Antifungal Medications

These dogs often develop secondary infections with bacterial and/or yeast. From time to time they need antibiotics or antifungals to control the signs. Medicated bathing may avoid or reduce this need. If infections are deep or widely spread, oral medication is recommended.

### Corticosteroids (cortisone)

Cortisone is great for reducing itch and inflammation short term. If used long term there are a wide variety of serious side effects. We may often prescribe short courses of this medication when your dog has a bad flare. In general it is better to use other treatments for long term control.

### Cyclosporine (Atopica)

This medication is an immune modulating drug. It dampens the activity of the immune cells that contribute to the itch and inflammation in the skin. It does not improve the skin barrier, but will reduce itching. Cyclosporine can take 4 weeks to achieve maximum effect. Cyclosporine is excellent at controlling Atopic dermatitis. It is however, expensive. All of the previously mentioned control methods may eliminate the need for this drug, or at the least would be expected to reduce the required dose. As it does affect the immune system, regular blood tests to check white blood cell numbers is recommended (1-2 times per year).



### Oclactinib maleate (Apoquel)

Apoquel is a new drug in Australia for Atopic Dermatitis. It is cheaper than Cyclosporine (but still quite expensive), and starts working faster. It works in a different way to the other drugs to reduce itching at the skin and nerve levels. In most dogs it is very effective. However anecdotally, some patients we have started on this have not improved as much as we would like. As with Cyclosporine, this medication does not alter the skin barrier, and by following the earlier recommendations you may avoid the need for this medication, or reduce the dose required.