

## **Dermatology Service**

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## **Atopic dermatitis Information Handout**

Your pet is suspected or has been diagnosed as having atopic dermatitis (also known as atopy). This is a genetic condition that results in formation of an allergy to environmental or food allergens such as housedust mites, pollens and moulds. Although we cannot cure this disease we can manage it to make sure your pet is comfortable longterm. The closest comparable disease is eczema in people.

Not only to pets develop an allergy they also have a poor skin barrier function which can allow the allergens easier access to the body. Patients also have a overactive immune system which results in a vicious circle of inflammation, itch and infection. If we can improve or control the immune reaction we can reduce the inflammation, itch and infection.

Treatment options include avoiding the allergen, immunotherapy, immunomodulatory drugs, steroid, antihistamines, essential fatty acids and topical (on the skin) treatment such as shampoos. Often we utilise a combination of these to improve barrier function as well as to reduce the overactive immune system.

This handout contains advice allergy avoidance options but it should be noted that not all of these will be possible or required in each pet. It can, therefore, be considered a guide.

## **Allergen avoidance**

Many of the allergens are throughout the environment and it can be difficult to limit the contact that your pet has with them such as grasses, trees and pollens. However we can try to limit the exposure to allergens such as house dust mites, storage mites and house dust. Note this is not to say your home environment is unclean, it is simply that your pet is allergic. As yet we have no information on the level of allergen that can be considered 'safe' for a pet or allergic human therefore perform whatever is practical or reasonable.

Housedust/storage mites:

- Keeps pets out of the bedroom and off bedding.
- Consider changing to solid plastic beds with removal bedding of manmade fabrics such as VetBed® fleeces and polyester. House dust mites love to live in natural materials such as cotton and feather bedding therefore removing these from your pets environment may help.
- Wash bedding weekly at 60oC.
- If this is not possible then use house dust mite impermeable covers such as those suitable for people with allergies.
- Use a vacuum with a HEPA filter otherwise allergens will go straight through the vacuum and back in the household environment.
- Keep pets out of rooms for 2-3 hours after vacuuming
- Avoid steam cleaning- dust mites love humidity!
- Ventilate house well and keep temperature to 22oC or less

- Where practical allow your pet to spend time outdoors
- Avoid stuffed toys (unless these can be washed)
- Soft furnishings including carpets, rugs and fabric furniture can also harbor high dust mite populations so consider this if redecorating.
- Anti-mite treatments are available commercially such as Acclaim®, Indorex® and RIP flea® spray. It is important to follow the instruction's carefully and use frequently (every 4-6months) to reduce burden.

#### Pollens:

- You can check the pollen count levels on various websites including those used by hayfever sufferers such as PollenUK, BBC and University of Worcester
- Rinse your pets feet off using water or a moisturising dog shampoo after exercise in grassed areas. We are happy to recommend suitable products for frequent use.
- You can also use a flannel to clean the face, feet and abdomen if shampooing is not practical.
- Keep your pet indoors in early morning and early evening when the pollen count is highest.
- Pollen counts are lower in mountainous areas and on moorland as the vegetation in these areas is less allergenic. Coastal areas tend to have less pollen also. Inland areas, especially those near arable agriculture, will have more pollen.
- Scotland and Wales have shorter pollen seasons as well as higher rainfall which decreases the pollen level.
- Avoid flowering plants or cut flowers indoors.
- Keep windows closed when there is a high pollen count.

#### Moulds:

- Transfer dry foodstuffs to airtight containers. Clean out thoroughly between batches of food.
- Avoid old or dusty food stuffs
- Avoid damp rooms such as bathrooms, cellars, outbuildings etc
- Use chlorine bleach solutions to reduce the mould levels within the household
- Consider use of a dehumidifier or air conditioner and frequently empty, change filters and clean.

#### Other allergens:

There may be other allergens or irritants that you suspect in your pets skin disease. Please contact us if you have any concerns.

#### **Treatment of atopic dermatitis**

##### **Immunotherapy**

Immunotherapy is made on the basis of the results from the intradermal allergy test or blood sample. It allows us to give a small amount of purified allergen to induce tolerance of the immune system. This works either by using an **injectable formulation or sublingual (under the tongue)**. The injectable form can be given by us, your own vet or we can show you how to perform safe injection

technique. Injections are usually every 2-4 weeks. The sublingual form is given twice daily. This is continued lifelong if effective.

Recently there has been scientific studies performed looking at injecting immunotherapy into the lymph node of patients. By injecting directly into the lymph node large numbers of immune cells are targeted simultaneously. Early studies have shown that patients treated require fewer injections and the effects can be longer lived than the standard protocol. If you are interested in considering this form of immunotherapy for your pet please discuss this with your veterinary dermatologist.

Immunotherapy helps in about 70% of cases with effects seen from 6-9 months after starting treatment. It is a safe and effective treatment- reactions are rare after the induction course. Whilst the induction course is being performed your pet should be monitored for 30mins in the veterinary practice after each injection to check for signs of reaction. These can include redness, increase in itching, hive-like lesions or swelling. Life threatening reactions such as anaphylaxis are extremely rare. Early indications of anaphylaxis include breathing difficulty, vomiting, diarrhea or collapse. If you notice these contact your vet immediately. Once your pet is on maintenance therapy the above signs are very rare but please contact your own vet or ourselves if you are concerned. For this reason we advise giving injections during normal veterinary clinic opening hours in case of emergency.

Immunotherapy usually takes 6-8 weeks to arrive after ordering. We can provide you with an estimate of the cost of both forms of immunotherapy. Once you have decided you wish to pursue this form of treatment contact us at the Dermatology service.

### **Immunomodulatory drugs**

These are drugs that act to change the way the immune system responds to allergens and try to reduce the levels of inflammation and itch that occurs when an allergy is encountered. The two current forms available in the UK are ciclosporin (Atopica®, Cyclavance® and Sporimmune®) and oclacitinib (Apoquel®).

Ciclosporin is available in a capsule or oral solution. This acts to modulate the immune response and decrease inflammation. This medication has now been available on the veterinary market for 15 years and as such we have an array of safety data on its use. Side effects are rare and can include vomiting, diarrhea, excessive hair growth and excessive gum growth. These side effects are reversible on cessation of the medication.

Oclacitinib is available as a tablet. It acts to modulate the immune response as well as block an itch pathway. Side effects can include vomiting and diarrhoea as well as increased risk of infections and behaviour change. Longer term use has been associated with red and white blood cell change. Therefore with oclacitinib treatment we advise baseline blood and urine sample and these to be checked at 1 month, 3 months and then every 6 months after starting treatment to monitor for any changes.

### **Steroid**

This is a very effective and fast acting treatment at controlling the signs of allergy. We will often use these to treat a flare of skin disease or severe inflammation such as in the ear canal. Many pets respond well to steroid therapy and, used with veterinary supervision, can significantly improve itch and discomfort. However some side effects can be seen with short term use such as excessive thirst and urination, increase appetite, restlessness, panting, and weight gain. We will only use steroids when we consider them the most effective treatment for your pet but please let us know if they suffer any side effects or you are concerned.

### **Antihistamines**

These can help with some patients and control of their clinical signs before they flare. They are best used in combination with other drugs. Anti-histamines block histamine which is only one of the chemicals responsible for inflammation and itch. Anti-histamines are best used before your pet starts to scratch so they can be used as a preventative treatment as well as to lower the need for medications such as steroid. Chloramphenamine, promethazine and clemastine as some of the anti-histamines that are used. Side effects are usually mild and can include sleepiness or wobbliness.

### **Essential fatty acids**

These can be used to help improve the skin barrier function (the brick and cement of the skin). They must be given daily in order to be effective. This can allow us to reduce the dose of some of the more potent medications we may use. There are many different supplements available please ask us for details.

### **Topical treatments**

We may prescribe shampoos, wipes, rinses, creams, ointments or foams for your pet for you to apply for treatment of their skin disease. These can help remove allergens as well as treat bacterial and yeast infections or overgrowths. We will recommend a product that we think is best suited to your pet's skin. It is important to use veterinary products that are pH balanced for your pets skin. Most shampoos require a contact time of 10mins to be effective. Please let us know if you do not feel your pet would be a good candidate for shampoo therapy.

### **Any questions??**

This handout is designed to be used as a guide for you and your family. Not all of the treatment options may be applicable and there are many more we may use to treat your pets disease. Please do not hesitate to contact us if you have any concerns regarding your pets condition.