

# FELINE ATOPY: ALLERGY TO ENVIRONMENTAL SUBSTANCES



**CAN PETS REALLY HAVE ALLERGIES?** Yes. Allergies are just as common in dogs and cats as in people – up to 27% of dogs are affected, as well as 1 in 10 cats. Some breeds of dogs are more prone to allergies than others and this may be true of cats as well. Environmental allergy, called atopy, is the most common form of allergy.

**HOW DO PETS SHOW THEIR ALLERGIC SYMPTOMS?** Unlike people, whose symptoms of hay fever involve the eyes, nose and throat, symptoms in dogs and cats usually involve the skin. Itchy face, feet, legs, abdomen and ears are common signs. Some cats will have sneezing or conjunctivitis (eye inflammation). The most serious form of atopy in cats is lung inflammation – asthma and allergic bronchitis.

In cats, itching causes overgrooming. Those little barbs on a cat's tongue pull out the hair or barber it down to stubble, leading to patches of baldness. Hairball vomiting may then become a problem from swallowing all that hair. If the itching occurs where a cat can scratch, they will sometimes claw themselves raw, leading to scrapes and scabs. Bacterial infection can set in secondary to the skin being inflamed, which can lead to crusting or oozing skin. Itching, redness and hair loss can eventually spread to the entire body. Sound miserable? It's distressing for the cat as well as the owner who is watching their pet do this to itself.

Signs of allergic bronchitis and asthma are, as you would expect, wheezing, coughing and labored breathing.

**WHAT CAUSES PETS TO HAVE ALLERGIES?** The tendency to develop allergies is inherited. Once your pet develops an allergic sensitivity to a substance, he or she will be allergic to it for life. Any time exposure to the substance occurs, an allergic reaction is triggered and symptoms appear. Common allergens (substances which trigger allergies) include pollens, mold and mildew spores, dust mites and wool. Dogs and cats can also develop allergies to foods, to substances they lay on, or substances that contact the skin. These forms of allergy are less common.



**WHEN DO THESE REACTIONS DEVELOP?** Allergy symptoms typically begin to appear at 2-3 years of age. Once the immune system is sensitized, the reaction itself can begin within a few minutes of exposure to the allergen. Most pets are allergic to more than one thing. Pollen allergies often wax and wane with the seasons. Allergies to substances present in the home, like dust mites, molds and mildews, are more likely to be year round. **Allergies gradually worsen with time.** Unlike atopy, food, insect and contact allergies can begin at any age.



**HOW CAN I TELL IF MY PET IS ALLERGIC?** Some cases are easier to diagnose than others. Skin mites, ear mites, flea allergy and many other problems can show similar signs. Sometimes the secondary problems such as skin infection are severe enough to mask the underlying allergy problem. Your pet's doctor will need a detailed history of your pet's symptoms; age at onset;

seasonal occurrence; first signs of trouble; subsequent signs; and any correlation between the sensitivity and the amount of the exposure to various allergens.

Sometimes, the first experience with inhalant allergies corresponds with plant pollination - ragweed is a very common allergen in pets just as in people, so your cat may only overgroom during late summer and fall, when ragweed is blooming. In time, however, seasonal patterns may be lost as the patient becomes sensitive to dusts and other materials. Observations of flare-ups will help to determine which allergens are important.

**HOW DO ALLERGENS GET INTO MY CAT?** Recent research has led to a change in our thinking about the way pets actually are exposed to the substances that trigger allergy symptoms. For years it was assumed that inhaling these substances was the most important factor in triggering allergies, because that is what triggers hay fever in humans. We are now coming to understand that, in dogs at least, this is not the case. The primary route for allergens to enter the body and trigger the immune system in dogs is actually through the skin itself. Because cats groom themselves, pollen and other allergens on the fur are ingested, so exposure may be different in cats. It may be that oral absorption of allergens contributes to allergic reaction.

Inflammation from allergic reactions damages the skin barrier, the layer of cells and oils that prevents the outside world from invading under the skin. Once the skin is unhealthy, it is permeable to allergens and becomes a main route of exposure. This means we are focusing a lot more on bathing, therapeutic shampoos and fatty acids than we used to. The idea is to physically remove allergens from the pet's body so they cannot penetrate the skin, and to try to restore the lipid (oil) barrier that helps keep the skin moist and healthy. Using these products is more difficult in cats but some will tolerate these treatments.

If you wipe your allergic pet down with a wet cloth at least daily, paying particular attention to the areas of overgrooming, that may be helpful. Don't use the same cloth every day without washing it or you will be rubbing allergens you removed previously back onto the skin.

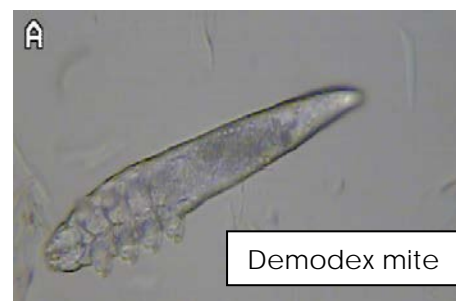
## ALLERGY IS COMPLICATED

**HOW IS ATOPY DIAGNOSED?** Diagnosis is based on history, clinical signs and exclusion of other diseases with similar symptoms, such as mites, fleas or food allergy. Often there is more going on than just atopy. We will need to rule out some or all of the following alternative or contributing causes.

**1) Mites:** Several species of mites are very common in cats and can cause intense itching. Most cats harbor some of these mites all their lives. It is only when a cat becomes allergic to them that itching occurs. We prescribe Bravecto™, a topical parasite-control product, for most itchy cats. This is to kill any mites they may be carrying. All other pets in the household must also be treated at the same time, otherwise the untreated pets can give mites back to the one who is allergic, starting the allergy all over again.

**2) Biting insects:** Cats can develop allergy to mosquito and/or flea bites. Bravecto kills fleas but it's hard to prevent mosquito bites in cats that go outdoors. Mosquito bite allergy tends to be worse around the face and feet, while flea allergy dermatitis (FAD) is usually worst on the face, lower back, thighs and tail.

**3) Infection:** Secondary yeast and bacterial infections are common as well. We will need to check for these and treat them along with the atopy itself in order to get your pet comfortable again.



**4) Ringworm:** Cats can also have ringworm as part of their skin disease. Ringworm is not a worm at all, it's a fungal infection of the skin. New testing is available to detect ringworm more easily. If your cat does not respond quickly to Bravecto and allergy treatment, ringworm testing is one of the next steps.

**5) Food allergy:** We may need to test for food allergy, to see if this is part of the picture. When the itching primarily involves the face, we think about food allergy, mosquito bite allergy and a specific species of *Demodex* mite. Food allergy is diagnosed and treated with a prescription hydrolyzed diet that is fed for 2-3 months to determine whether itching improves. If this is a possibility for your cat we will give you a separate handout on this problem.

**CAN ATOPY BE CURED?** Atopy is a disease that cannot be cured, It can only be managed.

Successful long-term management of atopic dermatitis often requires a combination of therapies used together. **If allergies seem well controlled for a time and then worsen, we will want to see your pet to re-evaluate the symptoms and our treatment plan.**

**DO ANTIHISTAMINES WORK?** We often are asked about antihistamines such as Benadryl. In general, oral antihistamines work poorly in dogs and cats. Pets don't produce very much histamine for antihistamines to work against. Antihistamines also don't penetrate skin cells very well, whereas they can be absorbed easily into the cells that line the nose and throat in humans. The effect on the skin inflammation in dogs is no better than a placebo. Antihistamines taste bitter, which makes it difficult to administer them to cats, who tend to salivate profusely when they taste something bitter.

## **WHAT CAN BE DONE TO GIVE MY PET RELIEF?**

**1) Avoidance:** This, unfortunately, is not always possible. Three hundred miles out on the open ocean there are still pollens in the air! However, pets with allergies do best in homes with air conditioning, which filters the air and means more closed windows. They also do better with wood or tile floors that catch less dust than carpeting. Feathers, aerosols and smoke are examples of things to avoid.

**2) Corticosteroids** such as prednisone, methylprednisolone and triamcinolone work very well for severe allergy symptoms in cats. Because of long term side effects, they are best for short term use. Cats are very resistant to steroid side effects, much more so than dogs and humans, but even cats will eventually develop problems from long-term use of these drugs. For seasonal itching, steroids are great. If allergy is present year-round, we need to find a better way.

Prednisolone comes in a tablet that many cats will eat crushed into food. We can also order it in a liquid form.

Methylprednisolone comes in a long-acting injection. If a cat will not eat the prednisolone and the pet owner has difficulty administering it as a tablet or liquid, we usually start with a Depo-medrol injection. We cannot give more than a few injections in a row (once a month for three months) without risking the patient becoming diabetic, so these injections are only for short-term use.

**3) Apoquel™:** There are several types of chemical messengers involved in allergic reactions. These are called cytokines. One type of cytokine is histamine. As previously mentioned, histamines are the big players in humans, so antihistamines work well in humans. Cats and dogs primarily make other inflammatory chemicals. Apoquel is a medication that blocks the receptors for two cytokines, called JAS1 & JAS3. Cats and dogs that have the genes that program for these two cytokines, JAS1 and JAS3, should have significant relief in allergy symptoms after a few days of Apoquel. Pets that produce JAS2 instead will not get better on Apoquel.

The idea is to try Apoquel for 1-2 weeks to see if it works. If it does, it can be used for an entire allergy season with fewer side effects than steroids such as prednisone, triamcinolone or cortisone. When it works, it should be much more effective than antihistamines usually are for dogs.

Apoquel is metabolized very quickly in cats, so it must be given twice a day at a higher dosage than dogs need. This can make it an expensive option.

**4) Fatty Acid Supplements:** Omega 3 fatty acids are very helpful for some pets, providing anti-inflammatory effect. Even if you don't see a lot of improvement from them in and of themselves, they often help enough that we can reduce the dosages of more expensive medications. This saves both money and undesirable side effects. Fatty acids come in capsule or liquid form. The dosage needed to control itching is fairly high, usually twice the label dosage. Prescription pet foods made for skin problems also have good Omega 3 levels.

Be aware that all fatty acid supplements are not created equal. Coconut oil is popular right now but contains Omega 6 fatty acids, which actually worsen itching. Flax seed oil is a good source of Omega 3s in people but dogs and cats lack the enzyme needed to digest it, so flax is useless for pets. Fish oil must be from wild-caught fish because farm-raised fish don't eat the algae that supplies the Omega 3 fatty acids to the fish. Some fish oil supplements are contaminated with mercury. Others, including one sold by 1-800 Pet Meds, contain PCBs. You need to choose a product that will be helpful instead of making things worse. We sell safe and effective fish oil supplements at Best Friends.

**5) Atopica™/cyclosporine:** Cyclosporine is an immune-modulating drug that works differently than corticosteroids. It is effective at reducing allergy symptoms in 60-80% of patients, and can be used along with or instead of other allergy treatments. Its main drawbacks are cost and the fact that Atopica takes weeks to gradually become effective. It is not a drug that provides immediate relief of symptoms. For seasonal allergies, we do a trial to see if it works and then we try to start the pet on it a few weeks before their itchy season starts. It comes in a liquid formulation made for cats but it doesn't taste very good, so it can be difficult to administer.

**6) Hyposensitization:** Also known as immunotherapy, hyposensitization is considered the most successful and safest approach to life long management of severe atopy. It is used when a patient's allergies span the seasons or are year round; when symptoms are not controlled by reasonable amounts of medication; when allergies start at a young age and get rapidly worse; or when corticosteroids cannot be used for other health reasons. Allergy testing is first done, via blood or skin tests, to determine what substances the pet is allergic to. Then the pet is given "allergen" injections or oral drops by the owners at home to override the allergy response to those substances.

Hyposensitization is effective about 80% of the time but it can take months for it to gradually become effective. Both the testing and the medication are fairly expensive as well, so immunotherapy require commitment.

In humans it has been shown that immunotherapy can alter the course of allergy development. Ordinarily, allergies slowly worsen with time. The younger a pet is when symptoms become obvious, and the more severe those symptoms are, the more likely we will recommend hyposensitization. When started early, the hope is we can prevent the symptoms from becoming as severe. In other words, if your pet is itchy year 'round, and especially if he or she is young, immunotherapy is best.

The longer therapy is delayed, the higher the risk for an incomplete response and the higher the likelihood for frustrated owners. Given its low risk for long-term adverse health consequences and the ultimate success with utilizing it, immunotherapy is considered the preferred treatment in all young canine patients with non-seasonal allergies.

Older patients will often benefit from immunotherapy too, usually in conjunction with other treatments. Case management is one of the key factors that will impact success with

immunotherapy. Reported success is higher for patients that receive a customized immunotherapy protocol. This means we will talk with you often to adjust the dose and frequency of allergen administration to fit the pet's response to treatment.

Immunotherapy requires time to start working; while the majority of patients will respond within a few months, it can take others up to 9-12 months to improve. During this initial period, other medications may be used along with immunotherapy to help pet owners manage their pet's symptoms, with the goal of discontinuing these medications in the future. Overall, immunotherapy is considered the most successful and safest way to manage canine atopic dermatitis for the life of the patient.

**WHAT IS THE BEST COURSE OF THERAPY FOR MY PET?** Therapy varies widely from patient to patient. A good working relationship between the pet owner and the veterinarian is needed to find the treatment regimen that works the best for particular dog or cat. There are so many different treatments available, and so many complicating factors such as fleas and bacterial infections, that there is no one best way to treat atopy.

**Please call if you have any questions about your pet's allergies, or if you think he or she is not responding**

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