

## Atopy

- Atopy is a common cause of skin problems in dogs, but it is less common in cats.
- Atopy usually develops in animals younger than 3 years, but older pets can also be affected.
- Depending on the underlying cause, clinical signs may occur seasonally or year-round.
- Atopy may respond to medical management, but long-term treatment is often required.
- Hair loss from repeated biting, licking, chewing, and/or scratching
- Skin rash, infections, and irritation
- Scabs and bleeding
- Unusual odor
- Skin thickening and color changes
- Ear infections
- Scales and crusts on the skin

### What Is Atopy?

Atopy, or atopic dermatitis, is sometimes called *allergic inhalant dermatitis*. Atopy occurs when allergens that are inhaled or that contact the skin cause an allergic reaction in the body. In dogs (and less commonly, cats), this allergic reaction is focused largely in the skin. Animals with atopy become very itchy; the resultant scratching leads to skin injuries and secondary (subsequent) skin infections. Atopy is usually first noticed in dogs younger than 3 years, although older pets can also be affected. Unfortunately, pets that develop atopy are usually plagued by skin problems throughout their lives.

Many types of allergens can cause a pet to develop atopy. A wide variety of pollens, grasses, danders, insect proteins (such as in cockroaches), molds, and even house dust can cause animals to develop atopy. Animals can even develop allergies to multiple allergens at the same time. Once an animal develops atopy, the condition will continue as long as the animal is exposed to the allergen that is the source of the problem.

### Signs of Atopy

Although atopy technically involves the entire body, clinical signs tend to involve the skin. Affected areas commonly include the face, armpits, groin, ears, and feet. Persistent itching causes the pet to lick, chew, scratch, and/or rub the skin, causing injury. Secondary bacterial or yeast skin infections are also common in pets with atopy. Clinical signs of atopy can include the following:

- Generalized scratching and rubbing
- Redness of the skin

Some animals may have several of these clinical signs, whereas others may have only one—perhaps an ear infection.

### Diagnosis and Treatment

Diagnosing atopy can be complicated, partly because other skin problems (such as flea allergy dermatitis) can look very similar. Your veterinarian will likely ask you questions about your pet's medical history to try to determine how long the problem has been going on and whether the problem seems to be seasonal or year-round. Your veterinarian may also want to discuss your pet's diet and any products that

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you may be using on your pet or in your home that could be involved. By considering your pet's medical history, physical examination findings, and medical test results to help rule out other skin conditions (such as skin mites or flea allergy), your veterinarian may be able to make a tentative diagnosis of atopy.

### Allergy Testing and Immunotherapy

Allergy tests can help identify the specific allergens that may be at the root of a pet's atopic dermatitis. The two types of tests are an intradermal skin test and a serum allergy test.

## Common Conditions

### ***Intradermal Skin Testing***

Intradermal skin testing can sometimes be performed at your veterinarian's office. However, because the allergens used for this test are very specific (they vary depending on your region of the country), your veterinarian may refer you to a veterinary dermatologist for this test to be performed. Usually, an area of fur is shaved from your pet to expose enough skin to perform the test. Tiny amounts of each test allergen are injected using very small needles just under your pet's skin in different areas. After a brief waiting period, your veterinarian will examine the injection sites to measure the degree of local allergic response (redness or a small hive). Allergens that your pet is not allergic to will not cause a reaction, and allergens that your pet is allergic to will cause a reaction that corresponds to the severity of the allergy. Pets are monitored carefully during the procedure in case a serious reaction occurs and treatment is required.

### ***Serum Allergy Testing***

The other type of allergy testing, serum allergy testing, is becoming more popular. The test is performed at a laboratory using a small blood sample taken from your pet so that your veterinarian does not need to shave your pet or have special allergens on hand. As with intradermal skin testing, the results of serum allergy testing can reveal which allergens are not causing an allergic reaction in your pet, which ones are causing a mild reaction, and which ones are causing a more serious reaction.

Depending on which type of allergy test is performed, you may need to discontinue your pet's allergy medications for a period of time before the test. Otherwise, the test results may be affected. Your veterinarian will tell you which medications can be used and which ones may need to be discontinued.

Once a list of "problem" allergens is identified, a specialized serum containing small quantities of these allergens can be formulated specifically for your pet. Through injection of small amounts of the allergy serum over time, many pets experience a reduced response to the allergens. This treatment, called *immunotherapy*, generally must be continued for several months to years to achieve results. With

immunotherapy, the pet owner generally administers the allergy serum injections at home. If you are uncomfortable with giving the injections, ask your veterinary care team if the injections can be given at your veterinarian's office. The first injections are

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more diluted, and each following injection has a slightly higher concentration of the allergens. Your veterinarian will schedule the injections according to specific guidelines—more frequently in the beginning, and eventually tapering to one injection every few weeks. Many pets respond to this program. Others may not, especially if they have other underlying conditions.

### ***Other Treatments***

Atopic dermatitis tends to be a long-term condition. Often, a combination of therapies is needed to provide comfort for pets with this condition.

### ***Removing Allergens From the Environment***

Ideally, if your pet is allergic to a specific item, such as wool, removing this item from your pet's environment may be enough to resolve the allergy. Unfortunately, this is not always possible or practical, as some grasses and trees may be so common where you live that there is no way to reduce or eliminate your pet's exposure to them. However, in many cases, helpful steps can be taken. For example, if your pet has a dust mite allergy, you should make your home environment as clean and dust free as possible. Some air filters can also help remove dust, pollens, and other airborne allergens from the home. Controlling other factors that can aggravate allergies is also recommended, such as consistent use of flea control products to reduce your pet's exposure to flea bites.

### ***Treating the Symptoms***

For pets with atopic dermatitis, the itching can be relentless. Immunotherapy and other management

## Common Conditions

options take time to work, so pets need relief in the meantime. Your veterinarian may want to discuss using the following medications to help control your pet's itching:

- **Steroids**—Drugs like prednisone or dexamethasone, which are called *corticosteroids*, are often used as the first line of defense to relieve itchy skin because they tend to be very effective and safe for short-term use. These medications can be given by injection, by mouth, or as topical ointments or shampoos. Corticosteroids can provide immediate relief but may have undesirable side effects, such as increased appetite, thirst, and urination. In some cases, repeated or long-term use of steroids can be associated with an increased risk of medical problems such as liver problems, adrenal gland problems, and diabetes. For pets with atopy, steroids can often provide excellent short-term relief, but be sure to speak with your veterinarian about long-term options for your pet.
- **Antihistamines**—Drugs like diphenhydramine (Benadryl, Johnson & Johnson) have few side effects compared with corticosteroids. However, some pets will not respond to antihistamines alone.

- **Fatty acid supplements**—Special fatty acid supplements may help reduce skin inflammation and are often used in combination with other medications.
- **Topical treatments**—Medicated shampoos, leave-on conditioners, and ointments can relieve your pet's itching or help with secondary conditions such as fungal infections, bacterial infections, and scaling. Treatment should be repeated frequently for best results, but be sure to follow all label directions carefully. Avoid the use of human products on pets unless they are recommended by your veterinarian.

### Specific Treatment

Cyclosporine can be used to control atopic dermatitis in dogs and allergic dermatitis (including atopy) in cats. The medication is given once a day for 4 weeks (4 to 6 weeks in cats, based on response). After that, the dose can be tapered to every other day or twice weekly, as needed to maintain effectiveness. Researchers estimate that over 70% of dogs and cats respond to this treatment; however, cyclosporine can be costly, and its side effects may include stomach upset and diarrhea. Ask your veterinarian if cyclosporine may be a good choice for your pet.