

Environmental/Seasonal Allergy (ATOPY)



What is atopic dermatitis?

Atopic dermatitis (atopy) is a common skin condition in dogs characterized by itchy, inflamed skin. It occurs when a dog encounters an environmental protein to which it is allergic (an allergen), which sets off an immune reaction that leads to skin problems. While the incidence of atopy is hard to define due to challenges in diagnosis, approximately 10%–15% of dogs treated by veterinary dermatologists are diagnosed with atopy.

What causes atopy?

Dogs with atopy are often allergic to the same allergens that tend to affect humans: tree pollen, grass pollen, weeds, molds, and dust mites. While these allergens cause watery eyes and a runny nose in humans, dogs respond differently and often develop skin inflammation in response to these allergens. Underlying defects in the skin barrier can make individuals predisposed. Certain dog breeds are more prone to atopy, including boxers, English bulldogs, cocker spaniels, French bulldogs, fox terriers, German shepherds, golden retrievers, Irish setters, Labrador retrievers, poodles and poodle crosses, shar peis, vizslas, and West Highland white terriers. Symptoms typically start when the dog is between 2 years and 6 years of age.

What are the signs of atopy?

Affected dogs often have a history of chronic or recurrent itching, which may be seasonal or non-seasonal. Dogs with atopy also tend to have a history of recurring skin and/or ear infections. Chronic infection of the ears or skin can lead to dark, thickened, elephant-like skin. In many cases, affected dogs are so itchy that they create significant trauma to their skin. Affected dogs may have severe scratches or abrasions, reddish-brown saliva staining in itchy areas, and red skin due to chronic licking and inflammation.

How is atopy diagnosed?

Your veterinarian will begin with a thorough physical examination of your dog. Your veterinarian will also take a complete patient history, asking you a variety of questions about your dog's skin disease to better characterize the condition. From the physical exam and history, your veterinarian may begin to suspect atopy as the cause of your dog's skin disease.

Unfortunately, there is no definitive test for atopy. It is a diagnosis of exclusion, which means your veterinarian will rule out other, similar skin conditions to arrive at a diagnosis. The signs of atopy are identical to many other skin diseases. Your veterinarian will likely perform an exam to rule out skin parasites (e.g., fleas, mites, lice), bacterial skin infections, and ringworm and they may recommend a food trial to rule out food allergies as a source of your dog's skin issues.

How is atopy treated?

There is no single best treatment for managing atopy in dogs. **Allergies are managed, not cured**, and the best method varies depending on the patient and owner.

Anti-inflammatory drugs often bring relief from itching, including, corticosteroids (e.g., prednisone) and cyclosporine (Atopica®). Antihistamines are also tried sometimes, although they appear to be relatively ineffective for dogs that are already suffering from itchiness.

Newer therapies include oclacitinib (**Apoquel**®) which is a medication that inhibits some of the chemicals released within the skin that contribute to inflammation and itch. Lokivetmab (**Cytopoint**®) is another medication that is given by injection every 1–2 months.

It is an antibody that blocks interleukin-31, which is a protein that transmits itch signals. These newer medications control itch without the potential side effects of using corticosteroids.

Certain **omega fatty acids** (omega 3 and 6) provide some relief for many pets with allergic skin disease by reducing inflammatory chemicals within the skin and improving the skin barrier. Antibiotics or antifungals may be required if there is a secondary bacterial or yeast skin infection present.

Atopic dogs may also benefit from allergen-specific immunotherapy (allergy shots). This treatment involves giving the dog injections or oral drops of very small amounts of substances they are allergic to (as determined by intradermal and/or serologic allergy testing -\$600-\$1000) to build up their immune tolerance. This process takes time, and benefits are often not apparent until three to twelve months (or more) of treatment. These allergy injections result in significantly reduced itching in about half of dogs treated.

Many dogs benefit from **frequent bathing with cool water** and special shampoos, sprays, or mousses (topical therapy). Research shows that, because allergens are absorbed through the skin, frequent bathing may help reduce the number of allergens that a dog absorbs. Some of the topical therapies incorporate omega fatty acids and ceramides, which may be absorbed into the skin, strengthening the skin barrier to help reduce the itching. Others will reduce the secondary overgrowth of yeast or bacteria on the skin that makes your dog itchier.

There may also be environmental measures you can take to decrease your dog's exposure. For example, **washing your pet's bedding frequently and vacuuming often** can decrease allergens.

If your dog has a secondary skin or ear infection caused by allergies, this infection will also require treatment. Skin infections are often treated with oral or injectable antibiotics. Ear infections are usually treated with drops applied to the ears.

When my dog's allergies flare up, she seems to have a terrible smell. What causes this?

When allergies occur, the skin produces more sebum, which is an oily material that causes a musty odor. Once the itching and scratching are controlled, the odor and seborrhea should clear up. A skin or ear infection may also cause skin odor. Bacteria, and yeast are opportunists that can cause a secondary infection in dogs with underlying atopic dermatitis. The secondary infection may require specific antimicrobial treatment in addition to the allergy treatment.

What is the prognosis for atopy?

Unfortunately, the signs of atopy tend to worsen with age. Your dog will likely require lifelong treatment to manage atopy and the resulting secondary infections. Fortunately, there are a variety of medical treatments available for atopy, with new drugs constantly being developed. Therefore, it is typically possible for atopic dogs to have a good quality of life with ongoing care.

Spring- (March-May) Tree Pollens

Summer (May – August) Grass Pollens

Fall/Autumn (September- December) Pollens from weeds. Also, peak Flea Season

Year round indoor allergens include ; dust mites, mold, mildew, cigarette smoke, wool fabrics

Benadryl dose: 1 mg per pound of dog's weight, given 2 to 3 times daily.
For example, a 25 lb dog would receive 25 mg, 2 or 3 times a day.)

Zyrtec dose: 0.5mg per lb -once per day wt_____x 0.5=_____mg