

CANINE ALLERGIC SKIN DISEASE (ATOPIC DERMATITIS)

ATOPY

- Animals with atopy are allergic to substances in the environment that may be inhaled, absorbed through the skin or ingested.
- The main allergens involved are pollens (grasses, weeds, trees), moulds, house-dust mites, storage mites, flea saliva, food (proteins/carbohydrates that are being ingested).
- Atopy can occur in any breed (including crossbreeds) but West Highland White Terriers, Labradors and Golden Retrievers are particularly susceptible.
- There is a genetic (inherited) component to this condition.

Clinical signs

- Signs often develop between 6 months and 3 years old (but can occur as late as 7 years old).
- They may be seasonal initially but can progress to a year-round problem.
- Intense itchiness occurs:
 - Especially around the face, paws, groin and ears.
 - Some dogs have signs at one site only but others are affected all over.
 - Your dog may scratch, chew, excessively lick or rub themselves.
 - Head shaking may occur.
- Initially the skin will appear red but over time additional lesions occur due to scratching:
 - Hair loss.
 - Secondary bacterial skin infection causing a red pustular rash.
 - Secondary yeast infection causing an unpleasant smell.
 - Thickened leathery feeling skin.
 - Darkening of the skin (hyperpigmentation).
 - Ear infections,
 - Itchy, sore feet with interdigital cysts.

Diagnosis

- Diagnosing atopic dermatitis usually involves excluding other diseases.
- Your vet will consider the age and breed of the dog, pattern of the skin lesions and your description of their development when trying to reach a diagnosis.
- Tests that may be performed include:
 - Skin scrapes and/or blood tests to check for parasites including fleas, mites and lice.
 - Hair plucks to check for mites, fungal infections and hair disorders.
 - Skin swabs to check for bacterial or yeast infection.
 - Skin biopsies taken under deep sedation or general anaesthetic to rule out more unusual causes of skin disease.
 - Diet trials to identify food allergens.
 - Blood tests or skin pricks to identify environmental allergens.
 - These may identify multiple different allergens that your dog is mildly reactive to a couple of allergens your dog is strongly reactive to.
 - This is useful for allergen avoidance and guides immunotherapy.

Management

- Atopy and allergic skin disease require lifelong management.
 - We are aiming to control the signs and minimise flare-ups as atopy can rarely be cured.
 - It can take time to find a good protocol that keeps your dog comfortable and we may need to try multiple different things to find an effective solution.
 - Flare-ups can occur and more intense management will be required to control these episodes, these may be triggered by secondary skin infections, parasite infestation, changes in the environment or new foods.
1. Clear any secondary infections including infections of the skin, ears or eyes:
 - a. Many atopic animals will suffer with secondary skin infections that make their itchiness even more intense. They occur because of the trauma to the skin caused by scratching or a poor skin barrier.
 - b. Skin swabs can identify the type of infection present which guides treatment.
 - c. Treatment generally involves topical antiseptics (shampoos, mousses, wipes and sprays) but sometimes oral antibiotics or oral anti-fungals may be required.
 2. Stringent use of parasite prevention:
 - a. Many atopic animals are allergic to flea saliva and mites so regular use of a prescription parasite product is essential.
 - b. All animals in the household need to be treated.
 3. Perform a diet trial to identify and avoid any food allergens:
 - a. Approximately 15% of dogs with atopy are allergic to something they are eating.
 - b. An exclusion diet needs to be fed to test for food allergens.
 - c. We usually recommend a hydrolysed diet, which has been heat-treated so the proteins are broken down into such small pieces the immune system cannot recognise them.
 - d. This diet should be fed as a sole food (no other food or treats) for at least 8 weeks with just water to drink.
 - e. An anti-itch medication is often used for the first few weeks of the diet trial to ensure your dog remains comfortable. It is then stopped to assess whether the diet works.
 - f. If your dog is not itchy at the end of the diet trial, then they may have a food allergy. The diet can be continued for life, or you can challenge your dog with single ingredients added to their diet one at a time every few weeks, if the itchiness recurs you know your dog is allergic to that ingredient.
 - g. If your dog has improved but there is still some itchiness present your dog may have multiple allergies, including a food allergy. Continuing the special diet is likely to reduce the need for anti-itch medications and other interventions.
 - h. If there has been no improvement and your dog is still itchy at the end of the diet trial, then your dog is less likely to have a food allergy. However, we may need to try multiple diets before we can rule out the involvement of a food allergen.
 - i. One of the following diets should be chosen:
 - i. Purina ProPlan HA (dry or wet)
 - ii. Hills z/d (dry or wet)
 - iii. Royal Canin Anallergenic (dry) or Royal Canin Hypoallergenic (dry or wet)
 - iv. Dechra Specific Food Allergen Management (dry or wet)

4. Anti-itch medications – these are often required long-term as the itch will recur when the medication is stopped:
 - a. JAK inhibitors (Numelvi, Apoquel/Skylocalm, Zenrelia)
 - i. The itch and inflammation in the skin seen with atopy and allergic skin disease is driven by small molecules called cytokines that bind receptors called JAKs. There are many different JAKs and these determine the specific response to cytokine binding.
 - ii. JAK inhibitors are drugs that prevent the response to cytokine binding.
 - iii. These medications all come in tablet form and need to be given daily.
 - iv. They start working within hours, but the full benefit may not be seen for weeks to months.
 - v. There are several different JAK inhibitors available now:
 1. Numelvi is the most selective and therefore has fewest side effects. If you read the datasheet, you will see routine monitoring for side effects with blood tests is not recommended. It is licensed in dogs from 6 months old.
 2. Apoquel or Skylocalm was the first licensed JAK inhibitor. In rare cases it can affect red blood cell and white blood cell production so monitoring with a blood test every 6-12 months is recommended. It is licensed in dogs from 12 months old.
 3. Zenrelia is the least selective so it can be more effective and may be considered in severe cases or those that fail to respond to other anti-itch medications. In rare cases it can affect red blood cell and white blood cell production so monitoring with a blood test every 6-12 months is recommended. It is licensed in dogs from 12 months old.
 - b. Cytopoint
 - i. This is a monoclonal antibody, a biological therapy rather than a chemical drug, that clings to a specific cytokine (IL-31) to prevent it binding to the JAK receptors and triggering itch and inflammation.
 - ii. It is a monthly injection administered under the skin
 - iii. Cytopoint begins to work within 7 days of the first dose and at least 2 doses should be trialled before deciding if this medication has worked.
 - iv. Side effects are rare and blood tests for monitoring are not recommended.
 - v. It can be used at any age but cannot be used in dogs weighing less than 3kg.
 - c. Atopica
 - i. This is an immunosuppressive drug.
 - ii. It comes as a syrup or soft capsules that are given daily for at least 8 weeks until the itch is well controlled. The dose can then be gradually reduced to find the lowest dose that effectively controls the itchiness.
 - iii. This medication is not as specific in its action as the JAK inhibitors or Cytopoint so it will affect other areas of the body and can cause side effects such as reduced appetite, vomiting and diarrhoea.
 - iv. We often need to check your pet does not have any underlying diseases that may prevent the use of Atopica by performing a blood test before starting this drug. Bloods tests are used to monitor for side effects during treatment.
 - v. Atopica needs to be temporarily discontinued for your dog to be vaccinated.

- d. Corticosteroids
 - i. These are immunosuppressive drugs.
 - ii. They come as tablets or a syrup that are given daily until the itch is well controlled then the dose is gradually reduced to the lowest effective dose.
 - iii. Corticosteroids also have more widespread effects than JAK inhibitors and Cytopoint - side effects include increased appetite, increased thirst, increased urination, behaviour changes, skin thinning, and risk of infections, diabetes, liver disease or Cushings syndrome.
 - iv. There are several medications that cannot be given with corticosteroids including anti-inflammatory pain-relief due to the risk of stomach ulcers.
 - v. Your pet should be examined regularly and have blood tests periodically to monitor for side effects.
 - vi. Corticosteroids may need to be temporarily stopped for your dog to be vaccinated.

- 5. Topical products to soothe the skin:
 - a. These include shampoos, mousses, wipes and sprays.
 - b. They can be really helpful to reduce the need for medications.
 - c. In some cases, once the initial symptoms are under control, a dog with mild atopy can be maintained on parasite treatment, special diets and weekly shampooing only.
 - d. There are many different products available with different aims.
 - i. Antiseptic products treat secondary skin infections and reduce the level of bacteria and yeast on the skin.
 - 1. Douxo pyo range (shampoo, mousse, wipes)
 - 2. Coatex medicated shampoo
 - 3. Malaseb shampoo
 - 4. Contego spray
 - ii. Calming products reduce itchiness and improve the skin barrier.
 - 1. Douxo calm range (shampoo, mousse)
 - 2. Coatex oatmeal and aloe vera shampoo
 - iii. Moisturising products to reduce dryness and scaling.
 - 1. Ermidra (shampoo, mousse, spray)

- 6. Essential fatty acids (skin supplements):
 - a. These improve the quality of the skin and the skin's ability to act as a barrier.
 - b. They are rarely potent enough to control the signs if used alone but may help to reduce the frequency of flare-ups of itchiness.
 - c. Skin supplements can be given by mouth or in food (e.g. CoatexEFA, Gomega, Redonyl Ultra, Yumove itchy skin) or as a topical spot-on (e.g. Virbac Allerderm, Dermascent PYOspot).

7. Immunotherapy:

- a. If your dog has an allergy blood test or skin pricks performed, we may be able to identify which allergens your pet is reacting.
- b. We may be able to avoid exposure to these allergens.
 - i. Regular cleaning of carpeted areas or removal of carpets for house dust mites.
 - ii. Use of an air filter for dust.
 - iii. Rinsing your dog off after a walk for pollens.
- c. Most allergens however are difficult to avoid; in this case an anti-allergy vaccine can be custom made to desensitise your dog. The aim is to prevent the reaction to these allergens, which can be curative.
- d. About 1 in 3 dogs will have a complete response and will no longer be itchy, 1 in 3 dogs will have a partial response and will be less itchy, and 1 in 3 dogs will not respond
- e. The full effect of the anti-allergy vaccines will not be seen for 9-12 months and they need to be continued for life to maintain the benefit.
- f. It may be necessary to use an anti-itch medication like JAK inhibitors or Cytopoint to keep your pet comfortable initially.

Last updated April 2026