

Allergies in Dogs

What is allergic skin disease?

It is important to remember that allergic skin disease tends to be a lifelong problem and invariably the aim is to **control not cure**. As clinical signs of these conditions can often be similar it is usual that a stepwise process is followed to narrow down the exact cause. Also, it is possible that there may be a combination of causes.

The mainstays of managing allergic skin disease are:

- Avoiding potential triggers
- Reducing itchiness
- Treating secondary infections
- Improving and maintaining barrier function

Allergic skin disease is often complicated by secondary problems and it is vital that these conditions are treated along with the underlying problem. It is worth noting that all of the potential causes of allergy listed in this handout are **cumulative**. For example, whilst one or two fleas may not be enough to be a problem for some dogs, if your pet has “atopy” then the extra irritation caused by fleas (or contact irritants etc) may exacerbate the reaction. For this reason, regardless of the major underlying cause of your pet's allergy, we will endeavour to address all of the above aspects, and it is important that you continue this broad based treatment approach at home.

Allergy causes

1. Sarcoptic mange (scabies)
2. Bacterial or yeast infection
3. Flea allergy dermatitis
4. Food allergy dermatitis
5. Atopic dermatitis
6. Contact dermatitis

1. Sarcoptic mange (scabies mite)

This is more common in dogs who live or have access to a rural environment, or are in contact with an infected dog. It commonly presents as an acute onset of a very itchy dog with hair loss especially over their ears, elbows, hocks, and tummy. The owner may also be itchy. It can be identified with superficial skin scrapings of the affected areas and can be treated easily with an effective anti-mite treatment such as Nexgard, Nexgard Spectra, Revolution, Advocate, Bravecto, or Simparica.

2. Bacterial or yeast infection

Bacterial and yeast infections often occur secondarily to another underlying allergy due to the allergy causing a microenvironmental change where the increased temperature and moisture of the skin favours bacterial or yeast growth. This infection can be diagnosed through cytology (looking at samples from the infected area under the microscope). Infections can be treated with appropriate anti-microbial medication. Further investigation of an underlying allergy that caused the infection may be required.

3. Flea allergy dermatitis

This is the most common cause of itching and allergic skin disease in dogs. Itching is caused by an allergic response to the flea saliva when the flea bites the dog. This allergy usually presents with the dog being particularly itchy on their lower back. Even a very low number of fleas in sensitive dogs may be sufficient to cause itching, and the only evidence of the presence of fleas is often “flea dirt”. This can be readily differentiated from regular dirt by putting the black specks on moistened white paper or tissue and smearing it. Flea dirt will show as a red/brown smear, which is the remains of the blood meal the flea had enjoyed from your pet! We must rule out a flea allergy when investigating allergic skin disease via a **strict fast-acting flea control** such as a trial with Comfortis every 14 days, or Capstar every day for a month (if the case is severe).

4. Food allergy dermatitis

This is when a dog has a reaction to a particular food substance. Usually, this reaction is to a protein or carbohydrate in a food that the dog has been eating for a prolonged period of time (not a new food), such as; beef, wheat, chicken, dairy products, soy, corn, or egg. The dog can also develop an allergy to proteins or carbohydrates used in the elimination diet after prolonged exposure. 50% of affected dogs will present when they are less than one year of age, however there is a wide age range of dogs developing this allergy. The most common sign is itchiness, however some animals may suffer from vomiting, diarrhoea or flatulence. Food allergies don't have a seasonal recurrence, they tend to be year-round. Commonly the skin becomes red and

itchy around the face, ears, feet, groin, armpits, and anus. This allergy is diagnosed by a **very strict 8-week elimination trial** followed by rechallenging with existing food. If itchiness flares (usually within 24-72 hours), this confirms an allergy. Sequential challenges may be required to isolate the individual ingredient causing the allergy. Foods for a diet trial; Prime 100 single protein diets, Royal Canin hypoallergenic or anallergenic, Hills Z/D. During the trial, the patient must not eat anything other than the prescribed food. This means no additional treats or even flavoured medications.

5. Atopic dermatitis

Atopy is caused by an allergic reaction to inhaled allergens from the environment. Allergies can be to many different things (our dermatologists test for over 50 allergens) including grasses, trees, pollens, and house dust mites. This condition may initially be seasonal but can progress to a year-round problem with time. Unless a change of environment occurs, it is unusual for this condition to develop after the age of 5 years old. Dogs commonly initially present within 12-18 months of age, where 95% of dogs will show clinical signs at less than 5 years of age. Dogs are commonly itchy on their face, ears, feet, armpits, groin, and anus (like food allergies). A dermatologist can perform intradermal allergy testing or serologic testing to find the specific allergen of your dog. Clinically relevant reactions may be treated with allergen-specific immunotherapy.

6. Contact dermatitis

Contact dermatitis is a condition that normally affects sparsely haired skin (the areas that contact the offending allergen, such as the groin, feet, anus or genital area). The contact irritant may include grasses (especially buffalo and kikuyu species), plants (ie tradescantia spp, or commelinaceae succulents), topical antibiotics, shampoos, flea products, carpet deodorisers, metals, or bleach / floor detergent etc. Diagnosis can be made via confinement / protective clothing, followed by a re-challenge to confirm the allergen. Or scratch/patch testing by a dermatologist.

Treating the itch

Avoidance of the offending allergens is the perfect treatment but is rarely achievable. Other treatment options include:

i. **Hyposensitisation** (gold-standard)

This is a course of injections in increasing doses of what the dog is allergic to, with the aim of desensitising them to this allergen/s. This has good results in ~70% of cases and when successful is a safe, predominantly side-effect free method of treatment.

ii. **Cytopoint** (Lokivetmab) (monthly injection)

This medication targets the inflammatory mediator involved in causing itchiness (IL31). It is considered a very safe and focused canine-specific drug.

iii. **Apoquel** (Oclacitinib) (oral medication)

This targets the "itch/scratch" cycle, stops the dog feeling itchy so they stop scratching, and therefore the inflammation settles down. This is not approved to be used in dogs less than 12 months of age.

iv. **Corticosteroids** (Prednisolone) (oral medication)

Steroids come with a number of potential unpleasant side-effects (i.e. food-seeking, weight-gain, panting, increased drinking and urinating). While they are a cheaper solution and extremely effective, they should be used with care and in a responsible way. They are usually implemented as a short-term treatment.

v. **Atopica** (Cyclosporin) (oral medication)

This is a drug that modulates the immune response to reduce itchiness and scratching. Although one of the more expensive anti-itching medications, it is a great choice for long-term control. Significant improvement is usually seen within 10-14 days, and complete remission in 4-6 weeks.

There are other useful adjunctive treatments such as antihistamines, fish oils containing essential fatty acids, and shampoos that may aid in controlling the problem also.

