

Your Pet

ALLERGIC SKIN DISEASE (ASD)



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further evidence to support the theory that the tendency to develop atopy can be inherited. Therefore, affected animals should not be used for breeding. The breeders of affected animals should be informed if a particular sire and dam produced affected offspring and this should influence decisions regarding future breeding.

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The Animal *Health* Trust is an internationally recognised centre of excellence in the field of veterinary medicine.

It has pioneered many breakthroughs in relation to improving the prevention, diagnosis and treatment of animal disease and injury and is entirely dedicated to improving the health and welfare of cats, dogs and horses.

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the science behind animal welfare



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How common is ASD?

At the Animal Health Trust, about two thirds of dogs referred to the Dermatology Clinic are found to be suffering from allergic skin disease.

What causes ASD?

The immune system (IS) is essential to keep us all healthy, by protecting us from bacteria, viruses, parasites and other infections and infestations. To do this the IS recognises 'foreign' substances and then responds to these by mobilising an army of immune cells, many of which produce proteins (including antibodies) as part of the process. These highly orchestrated mechanisms enable the body to fight off infections, but are very complex and sometimes over-react to commonly encountered foreign substances resulting in skin and other disease.

What triggers an allergic reactions?

Parasites such as fleas, ear mites (*Otodectes cyanotis*) and sarcoptic mange mites (*Sarcoptes scabiei*) can all induce allergic reactions, but commonly the reactions are to substances and organisms that appear to do no harm. These substances (allergens) include proteins found in foods (food intolerance) as well as particles in the air and on the ground (atopic dermatitis). In the UK, it is the house dust mite (*Dermatophagoides* spp.) that is most commonly implicated, but tree, grass and weed

pollens as well as mould spores are also involved.

How is ASD diagnosed?

The clinical signs can sometimes indicate which particular allergic disease is affecting a dog.

- Crusted red spots affecting the ear flaps, outer aspect of elbows and hindlimbs associated with intense itchiness is typical of sarcoptic mange. In this disease the family members are often also bitten by the mites resulting in small red spots.
- Itching with hair loss, crusting and scaling affecting the lower part of the back and tail base, often with sudden spinning round to nibble, is indicative of flea allergy dermatitis. However although fleas can bite people, this is relatively rare and in many cases fleas are not seen by the owners.
- Foot licking, recurrent ear inflammation, face rubbing, itching of the armpits and groin in a young animal is very suggestive of atopic dermatitis.

Despite these clues the diagnosis of allergy is a complicated task and the investigation of a suspect allergic dog should include: rigorous treatment for external parasites and secondary bacterial yeast infections which often complicate and contribute to the itch; an elimination diet to rule out food intolerance (which must be followed by a dietary challenge to confirm the diagnosis) and if parasites, food intolerance and infections are ruled out an

intradermal allergy test to identify allergic antibodies to environmental allergens is used to support the diagnosis of atopic dermatitis.

A diagnosis of flea allergy is made in 10–20% of itchy dogs and 60% of itchy cats in referral clinics. Treatment relies on treating all of the animals in the affected animals environment and can require considerable dedication to ensure that fleas are truly eradicated.

A diagnosis of food intolerance is made in 2–10% of itchy dogs using elimination diets. When the allergenic food is identified it can be

controlled without using drugs. Elimination diets are time consuming and require considerable commitment as it can be up to 2 months before the dog stops scratching.

When a diagnosis of atopic dermatitis is made treatment is often life-long as dogs and cats rarely grow out of their allergy. Various treatments are available and your veterinary surgeon will recommend the best regime. Unfortunately, many animals with atopic dermatitis are prone to recurrent secondary bacterial and yeast infections which will require intermittent or ongoing therapy as well as treatment to control the underlying allergic disease. An atopic dog can be difficult and expensive.

What about breeding?

Veterinary dermatologists recognise that certain breeds are predisposed to develop allergic skin disease. Furthermore, studies at the Animal Health Trust (Shaw *et al.* 2004) have provided

