

uncomplicated atopy will respond to steroids, we must consider a food allergy in a dog that does not respond.

- **There are no reliable blood tests for food allergies.** Serologic tests looking for IgE against food allergens are inaccurate and even misleading.

- A properly performed home cooked elimination diet trial is the only 100% accurate “test”. These are designed once we know the current or previously eaten ingredients. Food allergics should improve within 4 weeks of removing the inciting ingredient. However, it may take 12 weeks to see maximal benefit since the allergic immune system takes time to normalize.

- Commercially available “novel protein” or “hydrolyzed” (chemically chopped up into smaller pieces) diets have a 10-15% failure rate. This is true even if the bagged diet is chosen based on current/previous ingredients. Ingredients get pretty similar as you look down the list (fish oil, pork fat, etc...).

- Watch out for terms like “animal digest” or “meat-by-product” or “fish-meal.”

- Thankfully, dogs and cats very rarely develop allergies against an effective novel protein diet.

- Shampoos: Appropriate high quality shampoos increase the hydration of the stratum corneum (outer skin layer) and improve the skin barrier. Shampoos are a very effective vehicle for antimicrobial agents. Shampoos can contain anti-pruritic agents (colloidal oatmeal, hydrocortisone, pramoxine, etc...). Shampoos also help remove topical allergens through a simple cleaning action. Shampoos are obviously not a great option for cats.

- Antihistamines (and other nonsteroidal agents): Antihistamines can reduce the action of histamine on a receptor level (H1) and reduce the release the histamine. They are better at preventing pruritus and are not good at removing pruritus. As such, we commonly use steroids to “put out the fire” and then we can see if the antihistamine can keep the animal comfortable. If they help, then they are given routinely at the appropriate dosage interval. Antihistamines can have a steroid sparing effect and they are often used together. Nonsedating antihistamines (Claritin, Seldane, etc...) are not as effective as the sedating types (deiphenhydramine, chlorpheniramine, hydroxyzine, clemastine). Amitriptylline (a Tri-Cyclic Antidepressant) has potent antihistaminic properties, is cheap, administered twice daily, and may help dogs with anxiety. Pentoxifyline (a methylxanthine derivative) works in a different manner but helps up to 30% of atopics. Antihistamines can be very effective in cats.

- Omega Fatty Acids: Certain omega fatty acids can lead to anti-inflammatory prostaglandins and leukotrienes. To achieve this result, the ratio of Omega 6’s (e.g. certain vegetable oils) to Omega 3’s (e.g. fish oils) is very important and should be between 10:1 or 5:1. Supplements (DermCaps®, etc...) can help to achieve this goal, but it is easier/cheaper to have a diet with the ideal types/quantity/ratio of omega FA’s. Eukanuba® dog foods have been studied repeatedly and have consistent and high quality omega FA’s.

- Steroids: We use short acting steroids (pred family) when necessary to control itching. Prednisolone is ideal for cats and we often use this over plain prednisone in dogs too. We do not want to use more than 0.5 mg/kg prednisolone every other day long term as it has many side effects (Cushings, elevated liver enzymes, immunosuppression, polyuria/polydipsia). Methylprednisolone is 20% more potent than prednisolone, but has minimal mineralocorticoid properties and is well tolerated by older patients. DepoMedrol (methylprednisolone acetate) is a reasonable option for cats that are difficult to pill. The shots can last over 2 months, but should

not be used as a sole treatment for atopy if more than 2-3 shots are needed annually.

- Cyclosporine (Atopica®): A very expensive option when needed every day (about \$8-9 for the average Labrador!). Perhaps 70% of animals improve when dosed daily. This 70% is not completely “cured” and may only have less erythema or partial improvement in pruritus. If daily therapy works, then we try to go to every other or even every third day. With each drop in frequency, you can expect to lose control in ½ the animals that improved. It is a good option for cats (due to efficacy and cost reasons), BUT... they must be *Toxoplasma gondii* titer negative or they may develop fulminant toxoplasmosis and die.

- What about allergy shots?... □□□□□□□□

- Allergy testing is available as serologic and intradermal skin test (IDST) options. Both have pro’s and con’s. (No steroids allowed for either testing scheme. Sedation only needed with IDST. Antihistamines and omega fatty acids ok for serology).

- Serologic allergy testing (VARL, HESKA, Greer) looks at species specific IgE’s against environmental allergens. False positives or negatives are possible as blood antibodies may not correlate with the antibodies in the skin. Allergy shots based on serology can work in 2/3 of dogs, and this is about the same success rate as allergy shots based on skin testing.

- IDST should not have false positive results, but can have false negative results. Only well trained/experienced clinicians should perform/interpret IDST.

- Either serology or IDST alone can explain the itching pattern in 75% of cases. We often need to use both tests to best explain an animal’s seasonality or lack thereof. ASIT based on both tests combined may have the best results.

- ASIT is giving purified, sterile (but fairly crude) allergen extracts subcutaneously. We are giving way more of an allergen than they would normally encounter, but it is via a different route (SQ). Theoretically, this exposure should drive the Th2 response (hypersensitivity) toward a Th1 response (tolerance).

- Initially, a dilute and small quantity is given, and then shot gradually build up to more concentrated and more volume of shot.

- The most common side effect is increased itching, and this usually indicates that we are giving too much allergen (at least once at a maintenance dosage).

- A common scenario is that the shots provide a palliative effect, but this wears off before the next shot is due. This indicates that the interval may need to be shorter.

- Shots make 1/3 dogs great on shots alone, 1/3 dogs better (still need medicines, but generally need less steroids), and just do not work in 1/3 of dogs.

- It takes a full year to see maximal benefit from the shots.

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1-3。 6。 1-8。

1mg/kg。

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2. Food allergies? What's the deal? ? ? ?

The signs of food allergies or atopy can be very similar. Also, both conditions can be present in probably 10-20% of allergic pets. As such, if an animal has signs of an allergy that is at least partially present at all times of the year, then a food allergy should be ruled out. Food allergies must be considered in an animal that is itchy very young in life (< 4-6 months). This makes sense since the immune system of an atopic takes some time before it can develop an allergy to the environment—at least 6 months, but usually 1-2 years. Young animals often have internal parasites or viral GI diseases that promote a “leaky” gut mucosal barrier.

10-20%。 <4-6。 6。

1-2。 “”。

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... "atopy" ...

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... / ...

... IgE ...

... 100% ...
12 ...

... 10-15% ...
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... "atopy" ...

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3. Atopy Treatment Options: ...

Treating atopic animals often requires a multi-faceted approach. The goal of all therapies is to achieve a level of "tolerable" itch and/or reduce the secondary infections.

0.5mg/kg
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20%
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DepoMedrol
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2-3
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Atopica® \$8-9. 70%. 70%
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1/2
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4. Allergy testing and allergen specific immunotherapy (ASIT or “allergy shots”): ASIT “”
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IDST. IDST.
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VARL, HESKA, Greer IgE. 2/3.

IDST. IDST.

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