



Immunotherapy 101: Suggestions for veterinarians prescribing RESPIT™ for atopic dermatitis

1. Set realistic expectations for the pet owner

- Present immunotherapy as a long-term strategy to manage atopic dermatitis, not a quick fix. Many pets respond in 3 to 4 months, but some may not respond for 6 months or more. Depending upon the seasonality of the disease and the time of year when RESPIT is begun, it may take 10-12 months to fully assess the response.
- Immunotherapy may be required for life, but some pets can discontinue treatment after 3-4 years without relapsing.
- Immunotherapy should be considered for cases in which you have made a diagnosis of atopic dermatitis, when the owner is not planning an imminent move to another part of the country, and you judge that they have a good chance of following your recommendations.
- Approximately 75% of dogs respond to RESPIT, similar to the accepted success rate of immunotherapy based on allergy testing.
- While pet owners would like their pets to itch no more than a normal dog, the more realistic expectation is that they will experience improvement to the point that their itching severity is mild and occurs less frequently.
- Ask the owner to grade the pruritus severity (0-10) on each visit. A validated pruritus severity scale is available at www.vetrespit.com.

2. Control the pruritus

Many patients will need short-term relief as they begin immunotherapy. If the pet is moderately to severely pruritic, do not rely on RESPIT alone to control pruritus for the first month or two. Aside from your normal concerns in prescribing glucocorticoid or cyclosporin, giving one of these at anti-inflammatory doses along with RESPIT does not appear to negate the overall, long-term improvement. Prednisone doses up to 1 mg/kg every 48 hours and cyclosporin at up to 5 mg/kg/day are often used in conjunction with immunotherapy. Antihistamines, when effective, can be given with RESPIT.

3. Treat secondary infections

Assess the possibilities of *Malassezia* dermatitis and staphylococcal pyoderma with cytology. Take samples with a direct impression smear from moist or greasy areas, and cellophane tape from dry or scaly lesions. If you find more than 2 or 3 yeast per oil immersion field from a skin lesion, treatment for *Malassezia* is warranted. Topical treatment with antifungal shampoos and wipes is most effective in conjunction with a 20-30 day course of ketoconazole or fluconazole at 5 mg/kg/day. If pyoderma is recognized clinically or confirmed with cytology, treat with a cephalosporin (cephalexin, cefpodoxime, or cefovecin) for a minimum of three weeks and two weeks after clinical resolution.

4. Begin RESPIT Injectable or Oromucosal Spray

RESPIT Injectable is given subcutaneously. It is up to you to decide whether to give injections in your hospital or to teach the owner to give them at home. The RESPIT client brochure includes a sample induction schedule, beginning with 0.1 ml, increasing by 0.1 ml weekly until a **weekly** maintenance dose is achieved. The recommended weekly maintenance dose is 1.0 ml for pets greater than 10 kg, and 0.5 ml for those less than 10 kg.

RESPIT Oromucosal Spray does not require an up-dosing induction schedule and is started at the **daily** maintenance dose (2 squirts/day for pets < 10 kg; 3 squirts/day for pets > 10 kg). It is very safe, but it may be prudent to administer the first dose at the hospital so that the pet can be observed for 15-30 minutes.

5. Maintenance therapy with RESPIT Injectable

RESPIT Injectable is supplied at a concentration of 10,000 PNU/ml. If you follow the induction schedule outlined above, you will be using this vial for both induction and maintenance. For most pets, weekly maintenance dosing is recommended. After six to 12 months, pets that have responded well and have stabilized with minimal pruritus may require less frequent dosing. In that case, you may try decreasing the frequency to every 2 weeks. If the pruritus increases, resume weekly dosing. By carefully monitoring a pet's pruritus, the owner may provide you with valuable insight on the dosing frequency required to keep the pruritus under control.

Remind the owner to re-order RESPIT with you when their supply runs low, or set up a custom reminder in your software system.

6. Managing adverse reactions

As with traditional immunotherapy, RESPIT has the potential to induce hypersensitivity reactions, including hives, swelling at the injection side, an increase in pruritus, and systemic reactions. These reactions are uncommon and occur no more often with RESPIT than with traditional immunotherapy which often includes allergens selected on the basis of false-positive test reactions. Experimentally, normal dogs have undergone immunotherapy with irrelevant allergens without inducing clinical signs of hypersensitivity.

Should one of your patients experience an allergic reaction to RESPIT, manage the episode as you would a bee sting: antihistamines and glucocorticoids. When a mild reaction occurs, consider reducing the dose by 50%, pre-medicating with an antihistamine, and observing the pet for 30-60 minutes after the next injection. In the unlikely event of a severe reaction, follow your standard protocol for anaphylaxis and consider the benefit-risk ratio of continuing immunotherapy. In human medicine, the rate of fatal anaphylaxis from immunotherapy is 1 in 2.5 million injections; however the rate in veterinary medicine is unknown.

7. Treating allergy "flare-ups"

There are many triggers that can cause a temporary increase in pruritus, even in the well-controlled patient. Your attentiveness to recognizing and managing these triggers will have a significant impact on the overall improvement of your patient on RESPIT (or any chronic allergy treatment). When examining an atopic pet for a flare-up, remember these things:

- Break the itch-scratch cycle. If needed, glucocorticoid therapy can be given.
- Fleas. Has the owner been following your flea control recommendations?
- *Malassezia* dermatitis. Repeat cytology, especially between the digits
- Pyoderma. Consider prescribing an antibacterial shampoo to help prevent recurrences.
- Food allergy. If you have diagnosed a concurrent food allergy, has the diet been followed?