

CYCLOSPORINE THERAPY II: TIPS, TRICKS, AND TRIBULATIONS  
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Author's Suggested Protocol:

Eliminate fleas, scabies, pyoderma, yeast dermatitis, otitis.

*Cyclosporine is miraculous but it doesn't kill fleas or bacteria...*

In young dogs, try a food trial and consider Allergy testing.

*Would you rather avoid what you were allergic too OR have to take cyclosporine forever?*

Screen for tumors and check viral status in cats.

*Above all else Do No Harm...*

Bath every 3-7 days.

*It helps remove allergens and organisms plus clean pets are more pleasant :)*

Begin prednisone for 1-3 weeks.

*This may help hit the immune reset button providing better response.*

Begin cyclosporine after a meal for 14 days then discontinue the food before treatment to maximize absorption.

*If GI symptoms develop, divide dose into bid and give after a full meal.*

Administer cyclosporine daily for 6-8 weeks to determine efficacy; then attempt to taper the dose to everyother day.

*Some dogs will require daily therapy but most can be tapered.*

Response Rates:

Cyclosporine therapy works better than antihistamines, topical antipruritics, and works as well as steroids and immunotherapy (allergy vaccines).

If the patient is responding by the 4 week point they will likely do well and have a 75% chance of being tapered to an alternative day dose.

Improving Efficacy:

Eliminate all secondary infections (pyoderma, yeast dermatitis, otitis) before beginning cyclosporine therapy.

Not all cyclosporine is the same. Use Atopica<sup>R</sup> first to verify its efficacy; only then consider generics.

Ideally give Atopica<sup>R</sup> 1 hour before or after a meal to maximize absorption (this may increase GI symptoms).

For severely pruritic dogs, consider administering antiinflammatory doses of prednisone with cyclosporine for the first 1-3 weeks.

The target dose is usually 5 mg per kilogram per day; however, the addition of drugs that compete with the cytochrome P-450 enzyme system in the liver can increase cyclosporine blood levels by approximately two times (double). This will allow the daily dose to be tapered to every-other-day or the 5 mg per kilogram dosed be lowered.

Ketoconazole (5 to 10 mg per kilogram per day) can be administered concurrently to increase cyclosporine blood levels. In these patients, the dose of cyclosporine can be reduced (approximately half) or possibly tapered sooner than in patients not receiving the combination protocol. The addition of ketoconazole is especially useful in allergic patients with concurrent Malassezia dermatitis or otitis.

Recheck the patient only after 4-6 weeks since rechecking earlier may not identify improvement and produce more owner frustration.

Some patients do better with BID or daily dosing rather than being tapered to everyother day administration.

Make sure the owner has a back-up supply to prevent treatment gaps.

Practical Tips:

For bid dosing, the capsules can be ruptured and half of the content expressed into the food or a treat. (It may help to let the capsule set outside of its foil wrapper for several minutes to let it soften.)

Educate the owner about the long-term prognosis and need for continual treatment.

Only treat animals that have failed more conservative therapies; antihistamines, topical antipruritics, food trials, allergen avoidance; these are less expensive and less medically invasive.

Use poly-modal therapy protocols; concurrent antihistamines, topical antipruritics, EFAs.

The cost for the 10mg is the same for the 25mg so consider dividing the 25mg capsule.

Don't forget to monitor the patient for pyoderma, yeast dermatitis, demodex, otitis, and UTIs.

If the patient is flea allergic, make sure the owner keeps current with control measures.

In cats difficult to pill, consider using the injectable cyclosporine every 2-3 days.

Managing Adverse Effects:

25% of patients will develop GI side effects but less than 5% will be serious enough to require the cyclosporine to be stopped.

If the patient demonstrated GI symptoms, give after food or divide the does into 12 hour increments.

The Bloom Protocol to avoid GI symptoms: For the first 7 days, the cyclosporine is gradually increased so that the maintenance dose is achieved on day 7. During this induction phase cyclosporine is administered with metoclopramide and food. On day 10 the metoclopramide is discontinued and the cyclosporine is administered with food until day 14 at which time the cyclosporine is administered on an empty stomach to maximize absorption.

Pretreatment survey blood work (CBC, serum chemistries, and urinalysis) is usually performed to identify patients with concurrent renal or liver disease. Generally after the first four to six weeks of cyclosporine therapy, survey blood work and urinalysis is reevaluated to identify any developing problems.

Do not treat dogs with neoplasia and monitor dogs for tumor development; especially lymphocytic neoplasias.

Watch for warts.

Although hypertension is rare, consider performing prescreening and periodic monitoring.

*References available upon request.*