



INFORMATION-AT-A-GLANCE CONSIDERING DRUGS FOR TRANSDERMAL THERAPY QUICK REFERENCE CHART FOR CATS

Drug	Oral Dose (cats)	Injectable Dose (cats)	Evidence-based Transdermal Dosing	Target for Efficacy	Monitoring for Toxicity	Recommendation
Amitriptyline	2.5 – 12.5 mg/cat SID	N/A	Single dose of 5mg has poor absorption compared to oral ¹	Cessation of undesirable behavior	Dry mouth, gastric distress, constipation, ataxia, tachycardia, weakness, sedation, urinary retention	Insufficient data
Amlodipine	0.625 – 2.5 mg/cat SID	N/A	0.28 mg/kg SID x 7 days immediately following 7 days of oral resulted in BP reduction, but not to the extent of the oral ²	Reduction in blood pressure	Hypotension	May be an acceptable option
Atenolol	6.25 – 25 mg/cat BID	N/A	6.25 mg BID x 7 days resulted in inconsistent absorption and plasma levels ³	Reduction in pulse	Hypotension, bradycardia, bronchospasm, cardiac failure, hypoglycemia	Not recommended
Buspirone	2.5 – 7.5 mg/cat BID - TID	N/A	- 2.5 mg/kg single dose produced undetectable levels ¹ - 4 mg/kg SID x 5 weeks was clinically effective in one study ⁴	Cessation of undesirable behavior	Sedation, nausea, anorexia, tachycardia	May be an acceptable option
Cyclosporine	7 mg/kg/day	N/A	25 mg SID x 21 days resulted in detectable levels but most cats didn't get within 25% of oral levels ⁵	Resolution of dermatitis	GI distress, lethargy, behavior changes, gingival hyperplasia, flares of latent viral infections	Insufficient data
Dexamethasone	10-20% of the prednisolone dose	0.125-0.5 mg IV or IM every 3-5 days	0.05 mg/kg x 1 dose did not result in concentrations equal to oral ⁶	Cessation of inflammatory signs	Epidermal or cartilage atrophy, signs of hyperadrenocorticism, signs of diabetes mellitus	Not recommended
Fluoxetine	0.5-1 mg/kg/day	N/A	5mg/kg and 10 mg/kg x 1 dose showed bioavailability 10% or oral ⁷	Cessation of undesirable behavior	- Anxiety, irritability, anorexia, hepatotoxicity - Some patients have experienced severe burns on the ear after administration, requiring drug discontinuation	Insufficient data
Morphine	N/A	0.05-0.4 mg/kg IM, SC every 3-6 hours prn	1mg/kg x 1 dose was not quantifiable ⁸	Cessation of pain	Respiratory depression, GI distress, behavior changes	Not recommended

Drug	Oral Dose (cats)	Injectable Dose (cats)	Evidence-based Transdermal Dosing	Target for Efficacy	Monitoring for Toxicity	Recommendation
Glipizide	2.5 mg/cat BID with food	N/A	5mg x 1 dose showed bioavailability 20% of oral; highly variable absorption ⁹	Reduction in blood glucose	GI distress, hypoglycemia, increased ALT	Not recommended
Methimazole	2.5 mg/cat BID	N/A	- 2.5mg/cat BID and 5mg/cat SID had most euthyroid in 1 week ¹⁰ - 5mg/cat BID x 28 days was effective ¹¹ - 5mg/cat and 10 mg/cat SID x 7 days was effective but took longer to reach effective levels compared to oral ¹² - 2.5-5mg/cat SID-BID was effective ¹³	Reduction in serum T4 levels; clinical symptom improvement	Worsening of vomiting, dermal excoriations, leukopenias, hepatopathies, thrombocytopenia	Recommended
Phenobarbital	1 – 3 mg/kg BID	3 mg/kg IV as part of a combination for SE	3mg/kg BID x 14 days did not result in therapeutic levels; 9mg/kg BID x 14 days resulted in therapeutic concentration ¹⁴	Seizure free; serum plasma concentrations of 10-30 mcg/mL	Ataxia, sedation, bone marrow suppression, immune mediated reactions	May be an acceptable option

Medications that should NEVER be compounded as transdermals:¹⁴ <ul style="list-style-type: none"> • Antibiotics • Cytotoxic medications • Diagnostic agents • Medications exerting their effect in the GI tract 	Medications that should be used cautiously as transdermals:¹⁴ <ul style="list-style-type: none"> • Corticosteroids • Irritating medications • Narrow therapeutic index 	Monitoring and counseling for all transdermals:¹⁴ <ul style="list-style-type: none"> • Monitor for irritation at the application site • Wear gloves when applying the medication • Wipe away any excess medication that is present before applying the next dose • Rub the medication into the ear
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References:

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