

Pharmacology / Plasma Kinetics

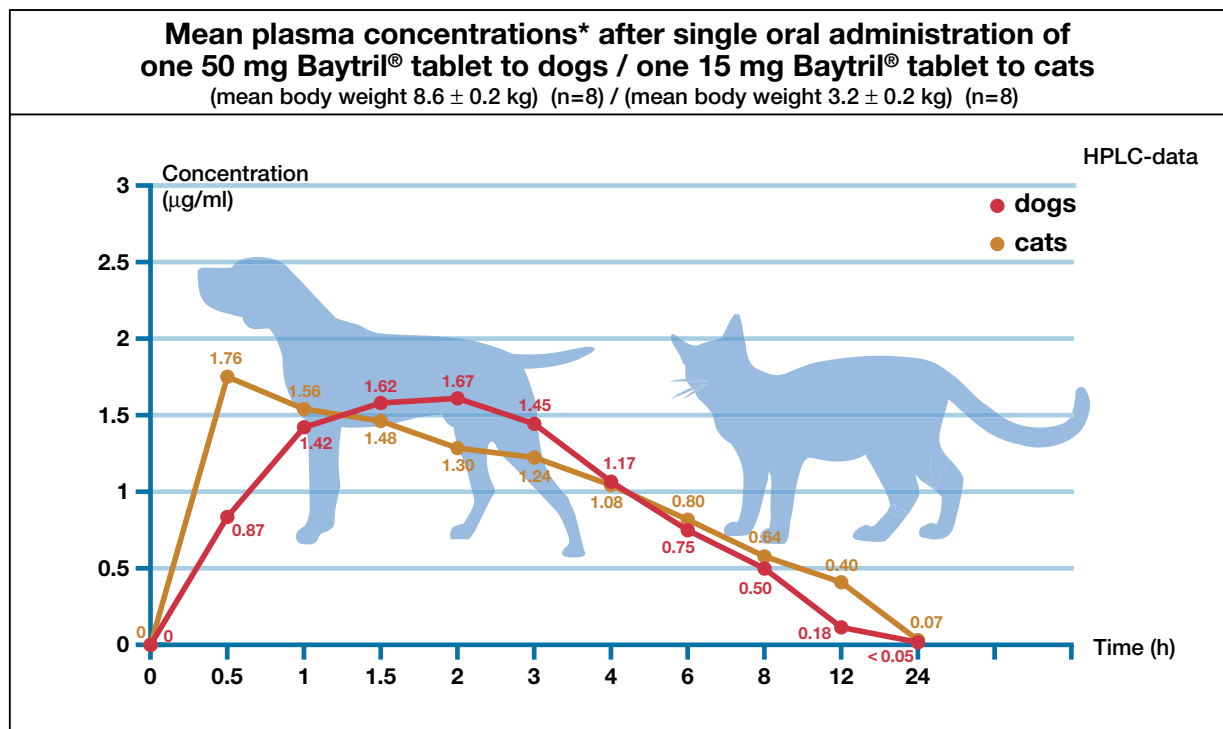
Baytril quickly reaches high bactericidal concentrations of active unbound drug in the circulation.

Whether administered orally or by injection, it reaches maximum plasma concentrations within around 2 hours in cats and dogs.

Plasma protein binding is low, maintaining a high level of unbound active drug in the circulation (3).

Baytril exhibits concentration-dependent killing activity against relevant Gram-negative as well as Gram-positive bacteria. This means that peak plasma concentration (C_{max}) as well as the area under the time-concentration curve (AUC), but not the time the drug concentration remains above the MIC of the pathogen, correlates best with the efficacy of Baytril treatment (4), (5).

Once daily application of the total dose therefore has therapeutic advantages over splitting the dose into two portions. Single administration also increases convenience for the animal owner.



* Expressed as sum of enrofloxacin and ciprofloxacin concentration.
Dog: MONLOUIS et al. 1997. (13), Cat: Richez et al. 1997. (14)

Pharmacokinetic data of Baytril in dogs and cats at recommended doses (5 mg/kg b.w. SID)			
Parameter	Dog	Cat	Source
Bioavailability F (%)	95	100	(13), (14)
Plasmaprotein Binding (%)	27 ± 3	-	(3)
C _{max} (µg/ml) oral*	1.67	1.76	(13), (14)
T _{max} (h) oral	2	0.5 - 2.0	(13), (14), (16)
AUC (µg · h/ml)	10.4	10.4	(13), (14)
Vd _{ss} (l/kg)	3.7 ± 0.6	4.0 ± 0.3	(13), (14)
t ¹ / ₂ elim. (h)	3.8 ± 0.4	6.2 ± 0.5	(17), (14)

* Expressed as sum of enrofloxacin and ciprofloxacin concentration.

References:

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