

Table 2: Characteristics of specific ACE-Inhibitors.

ACE-Inhibitor Species	Pro-drug	Hypothesized Tissue-ACE Affinity	Excretory route (Human Data)	Pharmacokinetics: Dog Note: ET _{1/2} is for active drug See table 3 for ET _{1/2} of benazeprilat, enalaprilat, imidiprilat, and ramiprilat	Dosage & Doses/Day All dosages are oral Note: unless indicated, dosage adjustment is recommended in CKD (Human Data)
Quinapril ¹ H	Yes	Highest 1	(U=61%; F=37%)	----	(10-20 mg/day)
Benazepril ²⁻⁴ V	Yes	Highest 1	U=45%; F=55%	Rapid absorption & conversion to active drug with peak concentration at 2h	D & C: 0.25-0.5 mg/kg q24 to 12h; No (or less) dosage adjustment in stable CKD
Ramipril ^{2,5} V	Yes	High 3	U~15%	Rapid absorption & conversion to active drug; renal impairment did not change pharmacokinetic parameters	D & C: 0.125-0.25 mg/kg q24h No (or less) dosage adjustment in stable CKD
Perindopril ⁶ H	Yes	High 4	(U=70%)	----	(2-4 mg/day; No dosage adjustment in stable CKD)
Lisinopril ² VR	No	High 5	U~100%	Bioavailability of 25-50% Peak concentration at 4h May have long duration of action	D: 0.5mg/kg q24 to 12h C: 0.25-0.5mg/kg q24h
Enalapril ² V	Yes	High 6	U=95%	Onset of action 4-6h Duration of action 12-14h	D: 0.5 mg/kg q24 to 12h C: 0.25-0.5 mg/kg q24h
Fosinopril ^{7,8} H	Yes	High 7	(U = F)	----	(10-20 mg/day; No dosage adjustment in stable CKD)
Captopril ² VR	No	Lowest 8	U=95%	Bioavailability reduced by food ET _{1/2} = 2.8h; duration 3-4h	D: 0.5-2mg/kg q8h C: 3.125-6.25mg q12 to 8h
Alacepril ⁹ VR	Yes	Unknown	(U=60%)	----	D: 0.5mg/kg BID
Imidapril ² V	Yes	Unknown	U=40% F=60%	Bioavailability reduced by food Peak concentration of active drug at 5h	D: 0.25-0.5mg/kg q24h; No (or less) dosage adjustment in stable CKD
Moexipril ⁷	Yes	Unknown	(F>U)	----	(7.5mg/day)
Trandopril ⁷	Yes	Unknown >> Enalapril	(U = 33%) F=67%)	----	(2mg/day)

C, cat; CKD, chronic kidney disease; D, dog; $ET_{1/2}$, elimination half-life; F, fecal excretion; H, human marketed only; h, hour; V, veterinary and human marketed; Pr, protein; VR, veterinary research/clinical use – not marketed; U, urinary excretion; (*i*) – italicized in parentheses, human data; >>, much greater than

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