

Descriptions of Local Anesthetic Amides

Name	MRD	Onset	Pulpal (P) and Soft Tissue (ST) Duration	Metabolism /Excretion	Conc.	Forms	Brands
Lidocaine	7 mg/kg	3 – 5 min	For both conc's: P: 1 hr ST: 3-5 hrs	Liver/ kidneys	2%	1:50,000 epi used to decrease bleeding 1:100,000: epi prolongs anaes, reduces bleeding	Available in both conc: Alphacaine HCL, Octocaine HCL, Lidocaine HCL, Lignospan, HCL Xylocaine, HCL
Articaine	7 mg/kg	Ultracaine DS: 1-2 mins (1:200,000) Ultracaine DS: Forte 1-2 1/2 mins (1:100,000)	1:100,000: P: 60-75 min ST: 3-5 hrs 1:200,000: P: 45-60 min ST: 3-4 hrs	Liver and Plasma /kidneys	4%	1:100,000 epi 1:200:000 epi	Available in both conc: Septanest SP, Astracaine, Ultracaine.
Mepivacaine	6.6 mg/kg	3-5 mins	w/o epi: P: 5-10 min ST: 1.5-2 hrs w epi: P: 1 hr ST: 3-5 hrs	Liver/ kidneys	2% 3%	1:20,000 levenordefrin Plain	Carbocaine, Isocaine Mepivacaine HCL Arestocaine Polocaine Scandonest
Prilocaine	8.0 mg/kg	Slower than lidocaine (3-5 mins)	w/o epi: P: 15-60 min ST: 1-4 hrs w epi: P: 1-1.5 hrs ST: 3-8 hrs	Liver, lungs /kidneys	4%	Plain 1:200,000 epi Most rapidly metabolized and therefore safest anaesthetic.	Citanest Plain Citanest Forte
Bupivacaine	2.0 mg/kg	6 – 10 min	P: >90 min ST: 4-12 hrs	Liver/ kidneys	0.5%	1:200,00 epi	Marcaine HCL

MAXIMUM RECOMMENDED DOSE

PRODUCT	%	MRD	EXAMPLE FOR 60KG/120 LB HEALTHY CLIENT	
Lidocaine	2 % 1:50,000 epi	7 mg/kg for both	420 mg or 6 cartridges	
	2 % 1:100,000 epi		420 mg or 11 cart's	
Articaine	4 % 1:100,000 epi	7 mg/kg for both	420 mg or 6 cart's	
	4 % 1:200,000 epi		420 mg or 6 cart's	
Mepivacaine	3 % Plain	6.6 mg/kg for both	396 mg or 7 cart's	
	2 % 1:20,000 levenordefrin		396 mg or 11 cart's	
Prilocaine	4 % Plain	8.00 mg/kg for both	480 mg or 6.5 cart's	
	4% 1:200,000		480 mg or 6.5 cart's	
Bupivacaine	.5 % 1:200,000 epi	2.0 mg/kg	90 mg is ABSOLUTE MAXIMUM DOSE	

LA CALCULATION:

1.8 ml/cart X # cartridges X Concentration of Solution = mg admin

(Example: 2 cartridges 2% lidocaine: $1.8 \times 2 \times 20 = 72$ mg)

Concentrations:

- 1% = 10 mg/ml
- 2% = 20 mg/ml
- 3% = 30 mg/ml
- 4 % = 40 mg/ml

(Diane Girardin September 2020)

