

Lidocaine

Indications: V-Fib or Pulseless V-Tach(pVT) Cardiac Arrest, Post Resuscitation Care, Wide Complex Tachycardia with a Pulse, Pain Management for IO Flush, Eye Injury, Pain Management for Kidney Stone

Contraindications: Second and third degree heart blocks, CHF

Concentration: 20 mg/mL

ADULT DOSING

Indication	Dose	Rate & Route	Note
V-fib or pVT Cardiac Arrest	100 mg 5 mL	IV/IO Push	q 4 minutes to max total patient dose of 3 mg/kg
V-fib or pVT Post Resuscitation Care			
Wide Complex Tachycardia with a Pulse			
Eye Injury	100 mg	Eye/Topical	Mix 100mg (5.0 mL) into 1 L LR for continuous eye irrigation
IO Flush	40 mg 2 mL	Slow IO Push	Non-cardiac arrest patients Dilute with isotonic solution to 10 ml
Kidney Stones	100 mg	IV infusion over 10 minutes	OLMC Required

ADULT DOSING

PEDIATRIC DOSING

Indication	Dose	Rate & Route	Note
V-fib or pVT Cardiac Arrest	1 mg/kg Max dose: 100 mg	IV/IO Push	q 4 minutes to max total patient dose of 3 mg/kg
V-fib or pVT Post Resuscitation Care			
Wide Complex Tachycardia with a Pulse			
Eye Injury	100 mg	Eye/Topical	Mix into 1 L LR for continuous eye irrigation
IO Flush	0.5 mg/kg Max dose: 40 mg	Slow IO Push	Non-cardiac arrest patients Dilute with isotonic solution to 10 ml

PEDIATRIC DOSING

Pediatric Dosing Lidocaine										
3 kgs	4kgs	5 kgs	6-7 kgs	8-9 kgs	10-11 kgs	12-14 kgs	15-18 kgs	19-23 kgs	24-29 kgs	30-36 kgs
6.6 lbs	8.8 lbs	11 lbs	13-15 lbs	17-20 lbs	22-24 lbs	26-30 lbs	33-40 lbs	42-50 lbs	53-64 lbs	66-80 lbs
in18.25-20.25	in20.25-21.5	in21.5-23.25	in23.25-26.25	in26.25-29.25	in29.25-33	in33-37.5	in37.5-42.5	in42.5-47.75	in47.75-51.25	in51.25-56.25
Lidocaine for Cardiac Care 1 mg/kg ≤ 100 mg Concentration 20 mg/ml										
0.1 ml	0.2 ml	0.2 ml	0.3 ml	0.4 ml	0.5 ml	0.6 ml	0.8 ml	1.1 ml	1.4 ml	1.7 ml
Lidocaine for IO Flush 0.5 mg ≤ 40 mg Concentration 20 mg/ml then dilute with NS to 10 ml										
0.1 mL	0.1 mL	0.1 mL	0.2 mL	0.2 mL	0.3 mL	0.3 mL	0.4 mL	0.8 mL	1.0 mL	1.2 mL

Precautions

CNS depression may occur when the drug exceeds 300mg/hr. Lidocaine should be used with caution when administered concomitantly with Procainamide and beta-blockers as drug toxicity may result.

Adverse/Side Effects

Drowsiness, seizures, confusion, hypotension, bradycardia, heart blocks, nausea, vomiting, and respiratory and cardiac arrest

Class

Antiarrhythmic (Class 1b), Sodium channel blocker

Mechanism of Action

Lidocaine depresses depolarization and automaticity in the ventricles, and increases the ventricular fibrillation threshold by increasing phase IV repolarization.

Onset of Action

45 – 60 seconds

Peak Effect

Fast

Duration of Action

10 – 20 minutes