







GlobalRPh ACLS Pocket Guide

Stroke Assessment

The Cincinnati Prehospital Stroke Scale

Facial Droop (have patient show teeth or smile):

- Normal—both sides of face move equally
- Abnormal—one side of face does not move as well as the other side



Left: Normal. Right: Stroke patient with facial droop (right side of face).

Arm Drift (patient closes eyes and extends both arms straight out, with palms up, for 10 seconds):

- Normal—both arms move the same or both arms do not move at all (other findings, such as pronator drift, may be helpful)
- Abnormal—one arm does not move or one arm drifts down compared with the other



Left: Normal. Right: One-sided motor weakness (right arm).

Abnormal Speech (have the patient say "you can't teach an old dog new tricks"):

- Normal—patient uses correct words with no slurring
- Abnormal—patient slurs words, uses the wrong words, or is unable to speak

Interpretation: If any 1 of these 3 signs is abnormal, the probability of a stroke is 72%.

Modified from Kothan RU, Pancioli A, Lis T, Brett T, Brodenck J, Cincinnati Prehospital Stroke Scale: reproducibility and validity. Ann Emerg Med. 1999;33:373-378. With permission from Elsevier.

Drug Dosing:

Amiodarone: I.V. DOSE RECOMMENDATIONS -- FIRST 24 HOURS --Loading infusions. The recommended starting dose of Cordarone I.V. is about 1000 mg over the first 24 hours of therapy, delivered by the following infusion regimen. First Rapid: 150 mg over the FIRST - 10 minutes (15 mg/min). Add 3 mL of Cordarone I.V. (150 mg) to 100 mL D5W. Infuse 100 mL over 10 minutes. Followed by Slow: 360 mg over the NEXT 6 hours (1 mg/min). Add 18 mL of Cordarone I.V. (900 mg) to 500 mL D5W (conc = 1.8 mg/mL). Maint infusion: 540 mg over the REMAINING 18 hours (0.5 mg/min).

Cisatracium: Intermittent IV dosing: initial dose 0.15 - 0.2 mg/kg IV bolus, followed by 0.03 mg/kg IV q40-60 minutes. Continuous infusion: 0.15-0.2 mg/kg bolus, followed by 1 to 3 mcg/kg/min. (range: 0.5 to 10 mcg/kg/min). Based on a standard dilution of 1 mg/ml (eg 100mg/100ml or 200mg/200ml) and a weight of 70kg: 1 mcg/kg/min =4.2 ml/hr. 3 mcg/kg/min =12.6 ml/hr. 0.15 mg/kg =10.5 mg. 0.2 mg/kg=14 mg

Digoxin: Loading dose: **CHF**: 8-12 mcg/kg in divided doses (q4-8h) over 12 to 24 hours. [Normally, give 50% of the total digitalizing dose in the initial dose, then give 25% of the total dose in each of the two subsequent doses at 8 to 12 hr intervals-Obtain EKG 6 hours after each dose to assess potential toxicity (AV block, sinus bradycardia, atrial or nodal ectopic beats, ventricular arrhythmias); Other: vision changes, confusion.] If pt has <u>renal insufficiency</u> give 6 to 10 mcg/kg IBW. <u>A-fib:</u> 10 to 15 mcg/kg IBW given as above. (If given IVPush-admin over at least 5 min)

Diltiazem_ 0.25 mg/kg over 2min. If no response c/in 15min, give 2nd bolus of 0.35 mg/kg over 2min. Subsequent doses should be individualized. If effective start continuous infusion: 5-15 mg/hr.

Dopamine: Calculation of drip rate (ml/hr) 400mg/250 ml: wt(kg) x mcg/min x 0.0375. Refractory CHF: ini 0.5 to 2 mcg/kg/min Renal: 1 to 5 mcg/kg/min. Severely ill pt: ini 5 mcg/kg/min, inc by 5 to 10 mcg/kg/min (q10 to 30 min) up to max of 50 mcg/kg/min. [0.5 to 2 mcg/kg/min-dopa; 2-10-dopa/beta; >10-primarily alpha. Used to support BP, CO and renal perfusion in shock.

Esmolol: Dosing: PSVT: 500 mcg/kg over 1 min, then 50 mcg/kg/min x 4 to 5min. If heart rate not controlled, rpt load of 500 mcg/kg and increase inf to 100 mcg/kg/min. Rpt load and increase infusion q5 to 10min as needed to max of 200 (up to 300?) mcg/kg/min. Watch BP. Calculation of drip rate (ml/hr): 2.5 grams/250 ml: wt (kg) x mcg/min x 0.006

Fenoldopam (Corlopam): severe HTN: <u>Dosing:</u> Usu initial rate: 0.1 mcg/kg/min, increased by increments of 0.05 to 0.1 mcg/kg/min at 15-20min intervals until target BP reached. Usual effective doses: 0.1 to 1.6 mcg/kg/min. Generally, lower initial doses (0.03 to 0.1 mcg/kg/min) titrated slowly, have been assoc c less reflex tachycardia. <u>Never given by IV bolus.</u> 10mg/250 ml NS/D5W

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 Hydralazine: Parenteral (IV/IM) (Inject over 1 minute) Hypertension: Initial: 10-20 mg/dose every 4-6h prn, may increase to 40 mg/dose; change to oral therapy as soon as possible. Route is indicated only when oral therapy is not feasible. HTN emergency: 10 to 40 milligrams, repeated prn (q20-60 minutes), with frequent blood pressure monitoring. Ibutalide: 1 mg over 10 min. May rpt x 1 after 10 min. Class III agent—prolongs action potential (inc atrial and ventricular refractoriness.). 	Alteplase - Acute Ischemic Stroke: (Activase®): within 3 hours of symptom onset (or within 3 – 4.5 hrs – see ACLS criteria): Recommended total dose = 0.9 mg/kg (MAXIMUM total dose 90mg). Patients <100 kg:	
 Labetalol: Dosing: ini 20 mg IVP over 2 min. May rpt 20 to 80 mg q10min (up to 300 mg total dose) until desired BP is reached or start continuous infusion: 2 mg/min (range: 1 to 3 mg/min)-titrate to BP. Natrecor: IV bolus of 2 mcg/kg (over 1 minute) followed by a continuous infusion of 0.01 mcg/kg/min. Withdraw bolus dose from the infusion bag. Higher initial dosages are not recommended. At intervals of 3 hours, the dosage may be increased by 0.005 mcg/kg/minute. Patients experiencing hypotension during the infusion: Hold infusion. May attempt to restart at a lower dose (reduce initial infusion dose by 30% and omit bolus). No adjustment required in renal failure. Nitroglycerin: (HTN/ CHF/ angina): ini inf rate 5 mcg/min. May inc by 5 mcg/min q3 to 5 min until response. If 20 mcg/kg is inadequate, inc by 10 to 20 mcg/kmin-q to 5 smin. Calculation of drip rate (50 mg/250 ml) ml/hr = mcg/min x 0.3 (eg 5 mcg/min=@ 2ml/hr ; 20mcg/min = 6 ml/hr etc.) Nitroprusside: Onset: immediate Duration: 1 to 10min. Tx htn emer. IV infusion rate: 0.5 to 10 mcg/ kg/ min-titrate to BP. Dosing: Initial: 0.3 to 0.5 mcg/kg/min-increase by 0.5 mcg/kg/min increments. (usual dose: 3 mcg/kg/min-rarely need > 4 mcg/kg/min). Note: when > 500 mcg/kg is admin by continuous infusion at > 2 mcg/kg/min-cyanide is produced faster than can be handled by endogenous mechanisms. Maximum infusion rate: 10 mcg/kg/min. Calculation of drip rate 50 mg/250 ml (ml/hr) = wt (kg) x mcg/min x 0.3 Norepinephrine: Used to maintain BP in hypotensive states. Most potent vasconstrictor (Norepi >>> penylephrine). Dosage: ini 8 to 12 mcg/min –titrate to BP(Usual target: SB:80-100 or MAP=80). Usual maint: 2 to 4 mcg/min mirtate to BP(Usual target: SB:80-100 or MAP=80). Usual maint: 2 to 4 mcg/min for 10 n 18 mg/min (titrate). Maximum rate: 10-15 mcg/kg/min? PSVT: 0.5 mg rapid Ivpush, subsequent doses may be inc in increments of 0.1 to 0.2mg. Calculation of drip rate 4 mg/ 250 ml (ml/hr) = mcg/min x 1.875	<text><complex-block></complex-block></text>	

Drug	Standard dose	ROSC / Comments	D. McAuley 2014
	Cardiac arrest -	VF - Pulseless VT	
Epinephrine	1 mg q3-5 min. Drip: 0.1- 0.5 mcg/kg/min	Drip: 1mg/250ml> (ml/hr) = wtx mcg/kgx 15. 1mg/100ml wt x mcg/kgx 6. Endotracheal: 2-2.5 mg diluted with 10ml NS	
Vasopressin	40 units IV x 1	0.01 - 0.03 units/min. Drip : 40 units/100ml NS 0.01 units/min=1.5 ml/hr; 0.03 units/min=4.5 ml/hr.	
Amiodarone	300mg IV over 1-2 seconds May repeat 150 mg IV x 1.	Drip: 1 mg/min x 6 hrs, then 0.5 mg/min x 18 hrs.	
Lidocaine	1 - 1.5 mg/kg over 2-3 min, then may repeat 0.5-0.75 mg/kg in 5-10 min. Max: 3 mg/kg.	Drip: 1 - 4 mg/min. 1 gram/250ml (ml/hr) = mg/min x 15	
Calcium Chloride	5-10 ml (0.5-1 gm) over 2-5min	Calc gluc: 15-30 ml over 2 to 5 minutes.	
Dopamine	5 - 10 mcg/kg/min.	Drip: 400mg/250ml (ml/hr)= (wt) x (mcg/min) x 0.0375	
Norepinephrine	0.1 - 0.5 mcg/kg/min	Drip: 4 mg/250ml (ml/hr) = (wt) x (mcg/min) x 3.75	
Magnesium	VF/pulseless VT: 1-2 grams/ 10)ml D5W over 2-5 minutes.	
	Ventricular tag	chycardia (VT)	
Procainamide	25-50 mg/min until arrhy suppressed or hypoten or QRS prolonged by 50% Max cumulative dose: 17 mg/kg, Alt: 100mg q5min until arrhythmia is controlled or side effects listed. Hemodynamically stable monomorphic VT		
Amiodarone	150mg/100 ml D5W IV over 10 min. Repeat if necessary.	F/b 1 mg/min IV x 6hrs, then 0.5 mg/min IV x 18hr. (900mg/500 ml D5W).	
Lidocaine	See above.		
Magnesium	Polymorphic VT: 1-2 grams/50-100ml D5W over 15 min.		
0	Supraventricular tachycardia	narrow complex tachycardias	
Adenosine	6mg rapidiv, may repeat after 1-2 min 12mg rapid IV	2nd 12mg dose may be given if ne cumulative dose: 30 mg.	eded in 1-2 minutes. Max
Diltiazem	15 to 20 mg (0.25 mg/kg) IV ov if needed; 5 to 15 mg/hour IV m control)	er 2 minutes; additional 20 to 25 mg aintenance infusion(titrated to AF h	(0.35 mg/kg) IV in 15 minutes eart rate if given for rate
Verapamil	2.5 to 5 mg IV over 2 minutes; may repeat 5 to 10 mg q15-30 min to total dose of 20-30 mg		
Esmolol	500 mcg/kg (0.5 mg/kg) IV over f/b 100 mcg/kg/min. Max rate of	1 min, f/b 50 mcg/kg/min; if respons 7300 mcg/kg/min.	se is inadequate, repeat load,
Metoprolol	5 mg over 1 to 2 min repeat as r	needed q5min to max dose of 15 mg	1
Amiodarone	See under VT		
Digoxin	8 to 12 mcg/kg total loading dos	se, give 50% IV over 5 min, then 259	6 of dose x 2 at 4-8hr intervals

	Bradycardia	
Atropine	0.5 mg rapid IV. May repeat q3-5min as needed up to max cumulative dose of 3 mg.	
Dopamine	Refractory hypotension: IV infusion: 2-10 mcg/kg/minute- titrate dosage to desired effect.	
Epinephrine	Continuous IV infusion: 2-10 mcg/min - titrate dosage to desired effect.	
	Other Meds	
Cisatracurium (Nimbex)	100 mg/250 mL D5W or NS. Loading dose: 0.1 to 0.2 mg/kg IV f/b infusion at 1-3 mcg/kg/min (0.06-0.18 mg/kg/hour) and adjust rate accordingly	
Etomidate	Peak effect: 1 min. Duration: 3-5 min. <u>Procedural sedation</u> (unlabeled use): I.V.; Initial: 0.1-0.2 mg/kg, followed by 0.05 mg/kg q3-5 min pm. Other: 0.2-0.6 mg/kg IV over 30-60 sec for induction	
Phenylephrine	Shock/hypotension: I.V. bolus: 100-500 mcg/dose q10-15min prn as needed I <u>.V. infusion</u> : Ini dose: 100-180 mcg/min, or alt 0.5 mcg/kg/min; titrate. Dosing ranges between 0.4-9.1 mcgkg/min.	
Propofol	Induction: Healthy adults <55 yrs: 1.V.: 2-2.5 mg/kg (~40 mg q10 sec). [Elderly, debilitated: 1-1. mg/kg (~20 mg q10 sec). ICU sedation : 5 mcg/kg/min (0.3 mg/kg/hour); incby 5-10 mcg/kg/m (or 0.3-0.6 mg/kg/hour) q5-10 min desired sedaton. <u>usu maint</u> 5-50 mcg/kg/min (or 0.3-3 mg/kg/br)	
Fentanyl	Pain management: Adults: Bolus at start of infusion: 1-2 mcg/kg or 25-100 mcg/dose; continuous infusion rate: 1-2 mcg/kg/hour or 25-200 mcg/hour. <u>Severe</u> : I.M. I.V.: 50-100 mcg/dose every 1-2 hours as needed; patients with prior opioid exposure may tole at higher initial doses	
Succinylcholine	Duration: I.V.: 4-6 minutes. I.V.: Intubation: 0.6 mg/kg (range: 0.3-1.1 mg/kg).	
Vecuronium(Norcuron®)	Ini bolus dose:0.08-0.1 mg/kg, f/b cont IV infusion 0.8-1.7 mcg/kg/min (0.048-0.102 mg/kg/br)	
	MI / Stroke	
Alteplase Any quantity of drug not to be administered to the patient must be removed from vial(s) prior to admin of remaining doce	ST-elevation MI (STEMI): I.V. Accelerated regimen: Maximum total dose: 100 mg. Patients >67 kg: Total dose: 100 mg over 1.5 hours>[15 mg I.V. bolus over 1-2 minutes]then [50 mg over 30 min], then [35 mg over 1 hour]. Patients intervention 1.5 hours>[15 mg I.V. bolus over 1-2 minutes]then [50 mg over 30 min], then [35 mg over 1 hour]. Patients then [0.75 mg/kg (not to exceed 50 mg) over 30 minutes] then [0.5 mg/kg (not to exceed 35 mg) over 1 hour]. Note: Thrombolytic should be administered within 30 minutes of hospital arrival. Administer concurrent as pirin, clopidogrel, and anticoagulant therapy (ie, unfractionated heparin, enoxaparin, orfondaparinux) with alteplase. Acute ischemic stroke: Alteplase within 3-4.5 hrs of sx onset. Note: Perform noncontrast-enhanced CT or MRI prior to admin. Record total dose: 0.9 mg/kg (max total dose 90 mg)	
remaining dose.	Patients <100 kg: Load with 0.09 mg/kg (10% of 0.9 mg/kg dose) as an I.V. bolusover 1 minute f/b 0.81 mg/kg (90% of 0.9 mg/kg dose) as a cort infusion over 60 min. Patients >100 kg: Load with 9 mg (10% of 90 mg) as an I.V. bolus over 1 min, f/b 81 mg (90% of 90 mg) as a continuous infusion over 60 min.	