



Advanced Practice Paramedic

Medication Index

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Medication	Adult Dosage	Pediatric Dosage
<p><u>Amiodarone</u> Advanced Paramedic</p> <p>* Acts directly on the myocardium to delay repolarization and increase the duration of the action potential.</p> <p>Indication: Cardiac Arrest- Ventricular Fibrillation/Pulseless V-Tach</p> <p>Contraindication: Hypersensitivity, cardiogenic shock, severe bradycardias, sinus node dysfunction, heart blocks.</p> <p>Side Effects: Bradycardia, hypotension, congestive heart failure, nausea, and vomiting.</p> <p>Dosage: 300mg IV/IO bolus. Repeat dose at 150mg IV/IO bolus.</p> <p>Supply: 50mg/ml; 3ml (3 vials)</p>	<ul style="list-style-type: none"> • Replace administration of Lidocaine during Cardiac Arrest- Ventricular Fibrillation/Pulseless V-Tach. <ul style="list-style-type: none"> ➤ 300 mg IV/IO bolus for ventricular fibrillation/pulseless V-tach. ➤ May repeat 150 mg IV/IO bolus. 	
<p><u>Diltiazem (Cardizem)</u> Advanced Paramedic</p> <p>* Diltiazem is a potent vasodilator, increasing blood flow and variably decreasing the heart rate via strong depression of AV node conduction.</p> <p>Indication: Reentrant supraventricular tachydysrhythmias, atrial fibrillation of atrial flutter with a rapid ventricular response.</p> <p>Contraindication: In patients with sick sinus syndrome or AV heart block in the absence of a functioning artificial pacemaker. In any wide QRS tachycardia resulting from a poisoning or drug overdose, Wolf Parkinson White (WPW) syndrome associated with either atrial flutter or atrial fibrillation, or ventricular tachycardia.</p> <p>Side Effects: Tachycardia, hypertension, arrhythmias, chest pain, nausea, vomiting.</p> <p>Dosage: if patient is > 70 kg, administer 20 mg. If < than 70 kg, administer 10 mg. (Max dose is 20 mg).</p> <p>Supply: 5mg/ml (10 ml vial)</p>	<ul style="list-style-type: none"> • If patient is > 70 kg, administer 20 mg. • If < than 70 kg, administer 10 mg. (Max dose is 20 mg). 	

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<p><u>Epinephrine</u> Advanced Paramedic</p> <p>Has alpha and beta 1 & 2 effects.</p> <p>Indications:</p> <ul style="list-style-type: none"> • Bradycardia with symptomatic hypotension • Suspected Septic Shock unresponsive to fluid resuscitation • Distributive shock (spinal and anaphylactic) shock unresponsive to fluids • Cardiogenic shock and ROSC with hypotension refractory to fluids or if pulmonary edema develops <p>Contraindications: Do not give cardiac arrest doses to a patient with a pulse</p> <p>Supply: 1 mg/10ml</p>	<p>**See AP-13 for mixing instructions**</p> <p>Administer 0.5 ml (5 mcg) IV/IO every 1-3 min</p> <p>Titrate to:</p> <ul style="list-style-type: none"> • A systolic blood pressure > 90 mmHg • A mean arterial pressure (MAP) > 65 mmHg • A modified shock index (MSI) < 1.3 	<p style="text-align: center;"></p>
<p><u>Etomidate</u> Advanced Paramedic</p> <p>* Suppresses corticosteroid synthesis in the adrenal cortex by reversibly inhibiting 11-beta-hydroxylase, an enzyme important in adrenal steroid production; it leads to primary adrenal suppression.</p> <p>Indications: Use of sedation in Drug Assisted Intubation.</p> <p>Contraindications: Sepsis, hypertension, hypovolemia, esophageal varices, renal impairment</p> <p>Side Effects: Tachycardia, hypertension, arrhythmias, chest pain, nausea, vomiting.</p> <p>Supply: 2 mg/ml;20ml (1 Vial)</p>	<ul style="list-style-type: none"> • 0.3 mg/kg IV/IO. 	<p style="text-align: center;"></p>

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<p><u>Fentanyl, (Sublimaze)</u> Advanced Paramedic * Acts on the opiate receptors in the brain to block the sensation of pain.</p> <p>Indications: Medication following intubation.</p> <p>Contraindications: Head trauma, multiple trauma, decreased LOC, systolic BP < 110 (children: systolic BP < 80) , hypersensitivity</p> <p>Side Effects: Respiratory depression, sedation, vomiting, bradycardia, decreased LOC, rigid chest syndrome with rapid push.</p> <p>Supply: 50 mcg/ml; 5ml (4 vials in the DAI bags – 200 mcg total).</p>	<p>Fentanyl 1 mcg/kg IV / IO / IM (over 2-3 mins) or IN Max initial dose 50 mcg After 10 minutes, may repeat 25 mcg every 5 minutes as needed until improvement.</p>	<p>Fentanyl 1 mcg/kg IV / IO / IM (over 2-3 mins) or IN Max initial dose 50 mcg After 10 minutes, may repeat 25 mcg every 5 minutes as needed until improvement.</p>
<p><u>Haloperidol (Haldol)</u> Advanced Paramedic * Inhibits central nervous system (CNS) catecholamine receptors. Acts on CNS to depress subcortical areas, mid-brain and ascending reticular activating system in the brain.</p> <p>Indications: Adult behavioral emergencies, agitated and aggressive patients who present a danger to themselves or to others who cannot be safely managed otherwise.</p> <p>Contraindications: Hypersensitivity, pediatrics, Parkinson's disease, CNS depression, and suspected heart injury.</p> <p>Side Effects: extrapyramidal symptoms (dystonic reaction), restlessness, spasms, Parkinson-like symptoms, drooling, hypotension, orthostatic hypotension, nausea, vomiting, blurred vision</p> <p>Supply: 5 mg/ml; 1ml (2 Vials)</p>	<ul style="list-style-type: none"> • 5 mg IM for psychotic and hear injured patients (behavioral patients). • Do not administer to patients with history of seizures or prolonged QT intervals. 	<p style="text-align: center;"></p>

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<p><u>Ketamine</u> Advanced Paramedic *Hypnotic (sleep producing), analgesic (pain relieving) and amnesic (short term memory loss) effects.</p> <p>Indications: Adjunct to Fentanyl in patients with severe traumatic pain associated with fracture reduction and splinting, and multiple or significant fractures in patients requiring facilitated extrication due to entrapment.</p> <p>Contraindications: Age < 1 year, known hydrocephalus or raised intraocular pressure, hypertension, pregnant patients.</p> <p>Side Effects: Blurred vision, confusion, drowsiness, increased/decreased blood pressure/heart rate, mental or mood changes, nausea or vomiting, nightmares.</p> <p>Supply: 50 mg/ml; 10 ml (2 vials)</p>	<ul style="list-style-type: none"> • 2mg/kg IV/IO for induction. • 0.5-2 mg/kg IV/IO or 4 mg/kg IM (max 400mg) for Agitated Chaotic Event. • 0.5-2 mg/kg IV/IO for reduction/realignment of fractures/dislocations. • 10mg added with analgesic (Fentanyl) 	
<p><u>Labetalol</u> Advanced Paramedic</p> <p>*Competitive alpha 1 receptor blocker & nonselective beta receptor blocker. Causes peripheral vasodilation and decreases cardiac output.</p> <p>Indications: Hypertensive crisis (systolic > 200; diastolic > 120) with symptoms of headache, chest pain, altered mental status. Hypertensive related to Stroke (systolic > 185; diastolic > 110). Tachydysrhythmias.</p> <p>Contraindications: Hypersensitivity, CHF, cardiogenic shock, bradycardia, children</p> <p>Side Effects: Headache, dizziness, ventricular dysrhythmias, postural hypotension, dyspnea</p> <p>Supply: 5 mg/ml; 4ml (1 vial)</p>	<ul style="list-style-type: none"> • 10 mg IV/IO over 1-2 minutes. 	

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<p><u>Levophed,</u> <u>(Norepinephrine)</u> Advanced Paramedic</p> <p>*Functions as a potent peripheral vasoconstrictor and as an inotropic stimulator of the heart and dilator of coronary arteries by stimulating the alpha and beta-1 receptors.</p> <p>Indication: Post cardiac arrest, cardiogenic shock, fever (septic shock), dialysis-related issues, hypotension due to cardiogenic shock, septic, or neurogenic shock unresponsive to fluid challenge.</p> <p>Contraindication: Hypertension</p> <p>Side Effects: Few, though at higher doses, symptoms may include headache, palpitations, tachycardia, chest pain, and eventual hypertension. Bradycardia can result reflexively from an increase in blood pressure.</p> <p>Supply: 1mg/ml; 4ml (4 vials)</p>	<ul style="list-style-type: none"> Administer LEVOPHED IV/IO infusion 5 mcg/min. Titrate to a systolic BP > 90mmHg. Maximum infusion rate is 12 mcg/min. Administration: Mix 16 mg (4 vials, 4 mg each) in 250ml of D5W. This concentration give 1 mcg/min. = 1 ml/hr. in the starting doses. Note this will alter slightly as the titration increases. 	
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<p><u>Midazolam HCL, (Versed)</u> Advanced Paramedic</p> <p>*Sedation by direct action on CNS.</p> <p>Indication: Seizures, sedation for cardioversion, sedation after intubation, severe agitation, tachycardia, or hallucinations caused by alcohol intoxication/withdraw, altered vital signs from cocaine or methamphetamine overdose.</p> <p>Contraindication: Hypersensitivity, hypotension</p> <p>Side Effects: Respiratory depression, hypotension, amnesia, apnea.</p> <p>Supply: 1 mg/ml.; 5ml (2 vials)</p> <p>Comments: Advanced airway management equipment must be readily available. Be prepared for respiratory depression.</p>	<ul style="list-style-type: none"> • DAI: 2 mg • Agitated Chaotic Event: 5 mg via mucosal atomizing device). • <p>Advanced airway management equipment must be readily available. Be prepared for respiratory depression.</p>	<ul style="list-style-type: none"> • 0.15 mg/kg IV up to maximum of 5 mg. • May administer same dose using nasal adaptor. • May administer same dose IM if unable to readily establish IV/IO. • <p>Advanced airway management equipment must be readily available. Be prepared for respiratory depression.</p>
<p><u>Morphine Sulfate</u> Advanced Paramedic</p> <p>*Sedation by direct action on CNS.</p> <p>Indication: Acute Pain.</p> <p>Contraindication: Hypersensitivity, hypotension. Adult SBP <110mmHg and Pediatric SBP <80mmHg</p> <p>Side Effects: Respiratory depression, hypotension, vomiting, decreased LOC and histamine release</p> <p>Supply: (1) Vial contains 10mg (1ml)</p> <p>Comments: Halt the IVP if pain is relieved, stop IVP if SBP above are met or if respiratory depression occurs</p>	<ul style="list-style-type: none"> • 4mg slow IVP up to 10mg PRN • Max Dose is 10mg • Administer zofran 4mg IV/IM with morphine sulfate administration • Administer Diphenhydramine 12.5mg IV if allergic reaction occurs 	<ul style="list-style-type: none"> • 0.1mg/kg slow IVP • Max Dose is 10mg • Administer zofran 0/1mg/kg via IV/IM. Max Dose is 4mg <p>Advanced airway management equipment must be readily available. Be prepared for respiratory depression.</p>

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<p><u>Nitroglycerin, (Nitrostat)</u> Advanced Paramedic</p> <p>Indication: Chest discomfort (cardiac causes suspected), pulmonary edema, CHF</p> <p>Contraindication: Systolic BP < 100, acute stroke, nitro intolerance, Use of sexual enhancement drugs within 24 hrs.</p> <p>Side Effects: Hypotension, tachycardia, syncope, headache, flushing, bradycardia may occur in AMI.</p> <p>Supply: Nitroglycerin / D5W 100 mcg/ml Inj. ; 252 ml</p>	<p>Infusion: If B/P is greater than 160 systolic. Administer loading dose of 400 mcg/min for 2 minutes. Then decrease dose to 50 mcg/min. Titrate dosage up or down 10 mcg/kg until target BP (140/90) is achieved. Perform BP reading every 2 minutes. When systolic B/P drops by <u>10 mmHg</u>, begin to titrate Nitroglycerin down. If B/P drops below 140/90, TURN OFF NITROGLYCERIN.</p>	
<p><u>Rocuronium</u> Advanced Paramedic</p> <p>*Rocuronium is a nondepolarizing neuromuscular blocking agent with a rapid to intermediate onset of action. Rocuronium produced neuromuscular blockade by competing with acetylcholine for cholinergic receptors at the motor end plate.</p> <p>Indication: As an adjunct to general anesthesia for inpatients and outpatients to facilitate both rapid sequence and routine tracheal intubation and to provide skeletal muscle relaxation during surgery or mechanical ventilation.</p> <p>Contraindication: Hypersensitivity, seizures, status epilepticus.</p> <p>Side Effects: Anaphylaxis, residual paralysis, myopathy, increased pulmonary vascular resistance.</p> <p>Supply: 10mg/ml; 10ml (2)</p>	<ul style="list-style-type: none"> • 1 mg/kg IV/IO. 	

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<p><u>Succinylcholine</u> Advanced Paramedic</p> <p>* A “persistent” depolarizaion of the neuromuscular junction. This depolarization is caused by Succinylcholine mimicking the effect of acetylcholine but without being rapidly hydrolyzed by acetylcholinesterase. This depolarization leads to desensitization.</p> <p>Indication: Used in surgical procedures where a rapid onset and brief duration of muscle relaxation is needed (includes intubation, endoscopies, and ECT).</p> <p>Contraindication: Hypersensitivity; recently had a severe burn and nerve damage. If patient has a personal or family history of muscle disease or malignant hyperthermia</p> <p>Side Effects: Increased saliva, muscle pain following surgery, muscle twitching.</p> <p>Supply: 20 mg/ml; 5ml (4 syringes)</p>	<ul style="list-style-type: none"> • If rocuronium is contraindicated • 1.5 mg/kg IV/IO. If paralysis is inadequate. May be repeated-succinylcholine at ½ original dose. 	
<p><u>Tranexamic Acid, (TXA)</u> Advanced Paramedic</p> <p>*Promotes clot formation in the setting of massive hemorrhage.</p> <p>Indication: Hemostatic Agents. Adults in hemorrhagic shock with suspected need for massive blood transfusion.</p> <p>Contraindication: Non-hemorrhagic shock, non-traumatic hemorrhagic shock,</p> <p>Pharmacokinetics: Onset of action within 4 hours after IV administration.</p> <p>Side Effects: TXA has not been shown to cause significant increase in deep venous thrombosis, pulmonary embolism, myocardial infarction, or stroke in published trials to date.</p> <p>Supply: 100mg/ml; 10ml (1 vial)</p>	<ul style="list-style-type: none"> • 1 gram mixed in 100 ml NS infused over 10 minutes. 	

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Medication	Adult Dosage	Pediatric Dosage
<p><u>Vasopressin (Pitressin)</u> Advanced Paramedic</p> <p>* Potent alpha agonist in cardiac arrest, causes vasoconstriction. Vasopressin does not have the negative, adverse effects of Epinephrine on the heart, such as increased ischemia and irritability and, paradoxically, the propensity for VF.</p> <p>Indication: Cardiac arrest to replace first or second dose of Epinephrine.</p> <p>Contraindications: Hypersensitivity</p> <p>Side Effects: None when administered for indications.</p> <p>Supply: 20u/ml;1ml (2 vials)</p>	<ul style="list-style-type: none"> 40 units IV/IO push, single dose prior to administration of Epinephrine during cardiac arrest. 	
<p><u>Zofran (Ondansetron)</u> Advanced Paramedic</p> <p>* Binds to 5-HT3 receptors in the periphery and CNS with primary effects in the GI tract.</p> <p>Indication: Nausea/vomiting from any cause</p> <p>Contraindications: Hypersensitivity, age less than 1 year, weight under 15kg and pheyketonurics.</p> <p>Side Effects: Headache, dizziness, prolongation of PR/WRS/OT intervals and arrhythmias</p> <p>Supply: 2mg/ml; 2ml (2 vials)</p>	<ul style="list-style-type: none"> 4mg IV/IM May repeat x1 in 5 minutes for continued nausea/vomiting 	<ul style="list-style-type: none"> 0.1mg/kg IV/IM Max dose is 4mg May repeat x1 in 5 minutes for continued nausea/vomiting