

List of emergency drugs and their actions

S. No.	Name of drugs	Uses	Dosage	Action
1.	Adrenaline injection	Drug of choice in cardiac arrest	1 mg I.V. route with a dilution of 1:10,000 (or 0.1 mg/ml)	Strongly binds with the beta-1 receptor
		Drug of choice in anaphylactic condition	0.3-0.5 mg I.M. route with a dilution of 1:1000	Increases blood pressure by the influence of alpha-1 receptor and improves breathing problems by the influence of beta-2 receptor
2.	Noradrenaline injection	Drug of choice in cardiogenic shock	Continuous I.V. infusion in the range of 0.025 to 0.4 mcg/kg/min	Provide powerful vasoconstrictor effect via binding on alpha-1 receptor
3.	Dopamine injection	Cardiac arrest	5-10 mcg/kg/min IV	Works on alpha-1 and beta-1 receptors
		Vasoconstriction effect (Increase blood pressure)	10 – 20 mcg/kg/min IV	
4.	Dobutamine injection	Acute (sudden) congestive heart failure	2-20 mcg/kg/min IV	Only works on the beta-1 receptor
5.	Calcium gluconate injection	Cardiac arrest and cardiotoxicity (if occur due to hyperkalemia and hypermagnesemia)	10% solution, 15 to 30 ml IV over 2 to 5 mins	Increase the level of calcium in the blood
		Severe symptomatic hypo-calcemic conditions	1-2 gm for 10 mins.	
6.	Atropine injection	Severe bradycardia	0.5 to 1.0 mg every 3-5 minutes by rapid IV push.	Decrease parasympathetic influences on heart via blocking M2 receptor
		Mushroom poisoning	1-2 mg rapid IV push and then as per need	Atropine is a non-selective muscarinic receptor blocker. It decreases the acetylcholine rush of your body via blocking M1, M2 and M3 receptors.
		Organophosphorus compound toxicity	1-6 mg rapid IV push every 3-5 minutes	

7.	Amiodarone injection	Drug of choice in pulseless ventricular tachycardia (V.T.) and ventricular fibrillation (V.F.)	300 mg IV rapid push followed by 150 mg IV rapid push	It is a potassium channel blocker that helps to prolongation of the repolarization (phase-3)
8.	Lidocaine injection	Drug of choice in acute myocardial infarction, ventricular tachycardia and heart surgery	1.0 to 1.5 mg/kg slow IV push	Lidocaine provides antiarrhythmic effect by blocking the sodium channel.
9.	Adenosine injection	Drug of choice in Paroxysmal supraventricular tachycardia (PSVT)	6 mg rapid IV push	It slows the conduction of the heart by blocking the A.V. (atrioventricular) node.
10.	Esmolol injection	Atrial flutter, atrial fibrillation, and PSVT	500 mcg/kg loading dose IV bolus, then continuous infusion of 50-300 mcg/kg/min	Decreases the heart rate and contraction of the heart by blocking the beta-1 receptor.
11.	Magnesium sulfate injection	Drug of choice in torsade de points.	2 gm slow IV push	Increase magnesium and potassium levels by blocking the calcium channel
		Eclampsia conditions (hypertension + proteinuria + seizure during pregnancy)	2-4 gm IV over 5 mins	
		Severe acute (or sudden) asthma attacks.	2 gm over 15 mins	
12.	Mannitol injection	Acute congestive glaucoma, shock, head injury, cerebral edema, acute kidney failure, stroke, reduce intraocular pressure and intra-cranial pressure	1.5 to 2g/kg infused over 30 to 60 min	It is highly effective osmotic diuretic. It powerfully increases the urine output and excretes almost all the electrolytes like sodium, potassium, calcium, magnesium, chloride, bicarbonate, and phosphate ions.
13.	Furosemide injection	Edema due to lung disease, liver disease, cardiac disease, and kidney disease	20- 40 mg IV administration	Powerful loop diuretic agent. It inhibits the reabsorption of the following electrolytes – sodium, potassium, and chloride ions
14.	Sodium bicarbonate injection	Drug of choice in metabolic acidosis conditions.	5% sodium bicarbonate in 300	Sodium bicarbonate is an alkalizing agent. This drug increase serum

		It is also used in hyperkalemia, TCA (tricyclic antidepressant agents) toxicity, and aspirin poisoning.	to 500 mL fluid rapid IV push	bicarbonate level in the body.
15.	Fosphenytoin injection	Status epilepticus	15-20 mg/kg slow IV push followed by continuous infusion 150 mg/min	It controls the seizure by blocking sodium channel.
16.	Nitroglycerin injection	Used to treat high blood pressure during surgery	0.5 to 2.0 mg/min	It reduces cardiac preload and afterload via relaxing vascular smooth muscles
17.	25% or 50% dextrose infusion	Hypovolemia and hypoglycaemia conditions	-	Provide fluids and carbohydrates to the body
18.	Snake antivenom	snakebite	-	Act as an effective antidote in the treatment of snake bite
19.	Naloxone	Opioids poisoning (like morphine, heroin, etc.)	-	It binds on opioid receptors and reverse the effect of opioids.
20.	Flumazenil	Overdose of benzodiazepines (like diazepam, alprazolam, clonazepam, clobazam, etc.)	-	Benzodiazepine antagonist