

# Management of Poisoning And Medication Dose (Antidote)

Drug / Antidote	Used for Poisoning / Overdoses	Dose		Comments
		Adult	Pediatric	
Acetylcystein Injection 9200 mg/10 mL	Acetaminophen (Paracetamol)	IV: 150 mg/kg over 1 hour then, 50 mg/kg over 4 hours then, 100 mg/kg over 16 hours.	IV dosing same as for adults, except when using the IV protocol in children weighing < 40 kg; mg/kg dosing same as for adults, with dilution to concentration of 40 mg per mL of N-acetylcysteine using dextrose 5% in water.	
Atropine Sulphate Injection (500 micrograms/mL)	Organophosphates	IV: 1 to 3 mg over three to five minutes PRN.	LD: 0.02 mg/kg MD: 10% to 20% of the LD every hour	See guidelines for organophosphates poisoning management.
	Clonidine	IV: 0.5 to 1 mg PRN.	0.02 mg/kg (Maximum dose of 0.16 mg)	Can be used for bradycardia from any drug overdose.
Calcium Chloride 10%	Beta-Blockers CCBs	IV: 20 mg/kg over 5-10 minutes; 20 mg/kg/hour infusion PRN.	N/A	Preferred over calcium gluconate because it provides more calcium/gram.
Desferrioxamine Injection (500 mg/vial)	Iron	IV (acute iron intoxication): 1000 mg at a max rate of 10 mg/kg/h, then 500 mg over 4 hours x 2 doses if needed. Subsequent doses may be required, to a max of 6 g in 24 hours.	Children > 3 years: IM: 90 mg/kg/dose every 8 hours (Maximum: 6000 mg/24 hours). IV: 15 mg/kg/hour (Maximum: 6000 mg/24 hours).	Can be given IM, but IV is preferred because of more reliable absorption.
Dextrose - minijet 50% 50 mL	Insulin and oral hypoglycaemic	IV: 1-2 mL/kg of 50% solution PRN	One month to two years: dextrose 25% solution bolus of 2 to 4 mL/kg. Older than two years: dextrose 50% solution bolus of 1 to 2 mL/kg.	Glucagon
Dicobalt Edetate Injection 1.5% (15 mg/mL) 20 mL	Cyanide poisoning	Fast IV: 2 ampoules, followed immediately by 50 mL IV hypertonic glucose solution.		
Dogoxin antidote Digibind®	Digoxin	Known amount: Dose varied by amount ingested. See product information for details. Unknown amount: 20 vials is adequate to treat most life-threatening ingestion. May give as a single dose or give 10 vials, observe the response, and give a second dose of 10 vials indicated.	Known amount: Dose varied by amount ingested. See product information for details. Unknown amount: 20 vials is adequate to treat most life-threatening ingestion. May give as a single dose or give 10 vials, observe the response, and give a second dose of 10 vials indicated.	
Dimercaprol	Arsenic / Gold / Lead / Mercury	Dose differs by heavy metal and severity of poisoning. See product for details.	Dose differs by heavy metal and severity of poisoning. See product for details.	
Dopamine 40 mg/mL 5 mL	Clonidine Tricyclic Antidepressants (TCA)	IV: 5 to 20 micrograms/kg/minute and titrate to blood pressure.	IV: 1 to 20 micrograms/kg/minute, maximum: 50 micrograms/kg/minute continuous infusion, titrate to desired response.	Vasopressors such as epinephrine and norepinephrine are often preferred over dopamine.
Epinephrine	Beta-Blockers CCBs	IV: Start at 1 microgram/kg/minute and titrate to blood pressure.	10 to 30 micrograms/minute (may need high doses).	Can be used for most overdoses with hypotension.
Edetate Calcium Disodium	Lead	Dose differs according to BSA, SCr, and blood level of lead. See product information for specific doses.	Dose differs according to BSA, SCr, and blood level of lead. See product information for specific doses.	Also called EDTA
Ethanol	Ethanol Glycol Methanol	IV: 5% or 10% infusion mixed in D5W. Dose must be titrated to blood levels of ethanol.		
Flumazenil	Benzodiazepines	IV: 0.5 to 5 mg over three to five minutes. Titrate to effect.	Initial infusion of 0.005 to 0.2 mg over three to five minutes. Titrate to effect.	Best for acute over sedation. Multiple contraindications, including history of seizures.
Glucagon	Beta-Blockers CCBs	IV: 50 to 150 micrograms/kg/dose x 1 dose. May repeat in 3 to 5 minutes. Start infusion at effective dose/hour. Titrate to blood pressure.	Initial bolus of 50 to 150 micrograms/kg; may repeat in three to five minutes, then start infusion at 0.1 mg/kg/h	
Hydroxocobalamin 100 micrograms/mL	Cyanide Smoke Inhalation	IV: 5 g in NS over 15 minutes x 1 dose. Repeat the 5 g dose if necessary, infusing it over 15 to 120 minutes.	Children (unlabeled use): Initial: 70 mg/kg (maximum: 5 g) as a single infusion, may repeat a second dose of 35 mg/kg depending on the severity of poisoning and clinical response.	
Insulin (regular)	Beta-Blockers CCBs	IV: 1 unit/kg/dose x 1 dose with dextrose 25 g, then IV: 0.5 units/kg/h with dextrose 0.5 g/kg/h. Adjust to serum glucose of 100 to 250 mg/mL.	Children: 1 unit/kg IV bolus dose; then begin IV infusion at 0.5-1 units/kg/hour, titrated to clinical response.	Used as an adjunct to other medications for hypotension.
Lorazepam	TCAs	IM/IV: 2 to 4 mg/dose for seizures PRN.	0.05 to 0.1 mg/kg.	Can be used for seizures due to any overdose.
Methylene blue	Drug-induced methemoglobinemia	IV: 1 to 2 mg/kg/dose over several minutes. Repeat in 1 hour if necessary.	IV: Neonate: 0.3-1 mg/kg 1 to 2 mg/kg/dose over several minutes. Repeat in 1 hour if necessary.	
Naloxone	Opioids Clonidine	IM/IV/intranasal No respiratory depression: 0.1 to 0.4 mg bolus. Respiratory depression: 1 to 2 mg bolus. If no or partial response, give 2 mg every 3 to 5 minutes to a total of 10 to 20 mg.	No respiratory depression: Initial IV dose of 0.1 mg/kg (in children < 5 years or < 20 kg). Respiratory depression: Initial IV dose of 2 mg. If no or partial response, then IV dose of 2 mg every 3 to 5 minutes for a total of 10 to 20 mg. Can also be given IM.	
Norepinephrine 1 mg/mL 4 mL	Clonidine TCAs	IV LD: 8 to 12 micrograms/minute. MD: 2 to 4 micrograms/minute. Titrate to blood pressure. Administration in dextrose 5% solution is recommended.	IV LD: 0.05 to 0.1 micrograms/kg/minute; titrate to desired effect. Maximum dose: 2 micrograms/kg/minute.	Can be used for most overdoses with hypotension.
Physostigmine Salicylate	Anticholinergics	IM/IV: 1 to 2 mg over 5 minutes. Repeat if necessary.	Reserve for life-threatening situations only. IV: 0.01-0.03 mg/kg/dose; may repeat after 5-10 minutes to a maximum total dose of 2 mg.	Multiple contraindications, including ingestion of TCAs.
Pralidoxime chloride 1 / 20 ml	Organophosphate	IV LD: 30 mg/kg over 20 minutes MD: 8 mg/kg/h	IV LD: 30 mg/kg over 20 minutes MD: 8 mg/kg/h	See PSMC guidelines for organophosphate poisoning management.
Protamine Sulphate	Heparin (UFH and LMWH)	1 mg of protamine (neutralizes 100 units of heparin. Protamine dose in mg = (units of heparin received in the last hour + 50% units received in the previous hour + 25% units received 2 hours ago). Enoxaparin: 1 mg protamine for each mg of enoxaparin. If PTT prolonged 2 to 4 hours after first dose (or if bleeding continues), consider additional dose of 0.5 mg for each of enoxaparin Dalteparin or tinzaparin: 1 mg protamine for each 100 anti-Xa units of dalteparin or tinzaparin; if PTT prolonged 2 to 4 hours after first dose (or if bleeding continues), consider additional dose of 0.5 mg for each 100 anti-Xa units of dalteparin or tinzaparin.	1 mg of protamine (neutralizes 100 units of heparin. Protamine dose in mg = (units of heparin received in the last hour + 50% units received in the previous hour + 25% units received 2 hours ago). Enoxaparin: 1 mg protamine for each mg of enoxaparin. If PTT prolonged 2 to 4 hours after first dose (or if bleeding continues), consider additional dose of 0.5 mg for each of enoxaparin Dalteparin or tinzaparin: 1 mg protamine for each 100 anti-Xa units of dalteparin or tinzaparin; if PTT prolonged 2 to 4 hours after first dose (or if bleeding continues), consider additional dose of 0.5 mg for each 100 anti-Xa units of dalteparin or tinzaparin.	Maximum dose: 50 mg
Pyridoxine hydrochloride injection 50 mg/2 mL	Isoniazid	IV: administer on a per g basis with Isoniazid dose taken. If Isoniazid dose is unknown, give 5 g of pyridoxine over 30 to 60 minutes. Repeat dose if necessary.	IV: administer on a per g basis with Isoniazid dose taken. If Isoniazid dose is unknown, give 60 mg/kg (maximum dose: 5 g) at a rate of 0.5-1 g/minute. Repeat dose if necessary.	
Rabies vaccine Verorab® IM	Prevention of Rabies, before and after exposure	Post-exposure vaccination fully immunized subjects: vaccination < 5 years 2 doses D0 and D3 Vaccination > 5 years 5 doses D0, D3, D7, D14, and D8 Non-immunized subjects: 5 doses on D0, D3, D7, D14, and D8.	Post-exposure vaccination fully immunized subjects: vaccination < 5 years 2 doses D0 and D3 Vaccination > 5 years 5 doses D0, D3, D7, D14, and D8 Non-immunized subjects: 5 doses on D0, D3, D7, D14, and D8.	Non-immunized subjects: rabies immunoglobulin RIGs should be administered at the same time as the first injection in case of severe injury.
Sodium Bicarbonate	Beta-Blockers CCBs TCAs	IV: 50 mEq (50 mmol) bolus of a 1 mEq/mL solution PRN.	IV: bolus of 1 to 2 mEq/kg if QRS interval greater than 120 milliseconds.	Titrate to blood pH 7.45 to 7.55.
	Salicylates	IV: 150 mEq (150 mmol) in 850 mL D5W with 40 mEq (40 mmol) KCl, at 2 to 3 mL/kg/h.	Solution same as for adults, then infuse at 1.5 to 2 times the calculated maintenance rate.	
Scorpion Anti-venom	Scorpion sting	Five 1 mL ampoules are to be diluted in 20-50 mL half NS, infused slowly over 30 minutes. Repeat the dose if necessary up to 20x1mL ampoules.	Five 1 mL ampoules are to be diluted in 20-50 mL half NS, infused slowly over 30 minutes. Repeat the dose if necessary up to 20x1mL ampoules.	BESREDKA test should be carried out before administering the anti-venom.
Snake Anti-venom	Saudi snake bite	40 mL diluted in 5 mL NS per kg body weight, infused slowly over 30 to 60 minutes.	40 mL diluted in 5 mL NS per kg body weight, infused slowly over 30 to 60 minutes.	Risk of early and late allergic reactions.
Vitamin K1 Phytomenadione	Warfarin	No significant bleeding: INR>10:hold warfarin and give vitamin K 2.5 to 5 mg PO If urgent surgery needed and INR 4.5 to 10 < 5 mg (addition of 1 to 2 mg in 24 h if needed). Major bleeding: PCC over FFP, plus vitamin K 5 to 10 mg slow IV infusion.		