

California Poison Control System

10-14-2014

ANTIDOTE CHART

(Suggested Stocking Level is based on dose to treat a single 100 kg patient for 8 hours and for 24 hours.* Large medical centers who may receive large numbers of patients in a single incident must stock larger amounts of antidotes or have an effective and efficient drug sharing/transfer procedure in place to rapidly obtain additional antidotal supplies.)

Generic/ Name Brand	Indications	Notes	Suggested Stocking Level	Access Priority
Atropine	Organophosphate/ carbamate insecticide poisoning and other cholinesterase inhibitors (eg, warfare agents); bradycardia induced by a variety of toxins	May require large amounts in severe cholinesterase inhibitor poisoning. Also stocked in the Strategic National Stockpile but will need supplies for first 48 hours. For mass casualties, local cache may provide supplies for first 48 hours coordinated by state department of health and emergency response system.	8 Hours: 100 mg <u>or</u> 13 vials (0.4 mg/mL, 20 mL each) 24 hours: 200 mg <u>or</u> 26 vials (0.4 mg/mL, 20 mL each) <i>Use preservative free product</i>	Immediate emergency department
Antivenom, Crotalidae Polyvalent Immune-FAB(ovine)/ Cro-Fab®	Rattlesnake envenomation		8 hours: 18 vials 24 hours: 36 vials	Within 1 hour
Antivenom, Black Widow Spider/ Antivenom (Latrodectus Mactans)®	Black Widow Spider envenomation	Equine base risk of allergic hypersensitivity.	8 hours: 1 vial 24 hours: 1 vial	Special Access-contact manufacturer-Merck (800)-672-6372
BAL(Dimercaprol)/ BAL in oil 10%®	Heavy metal poisoning	IM administration only.	8 hours: 600 mg <u>or</u> 2 amps (100 mg/mL, 3 mL each) 24 hours: 1800 mg <u>or</u> 6 amps (100 mg/mL, 3 mL)	Within 1 hour
Bicarbonate , Sodium	Sodium channel blocker ("membrane stabilizer") toxicity & urinary alkalinization	IV bolus dosing for reversal of sodium channel blocker toxicity; monitor alkalemia.	8 hours: 63 g (750 mEq) <u>or</u> 750 mL of 8.4% solution 24 hours: 84 g (1000 mEq) <u>or</u> 1 L of 8.4% solution	Immediate emergency department
Botulinum antitoxin/H-BAT-heptavalent	Botulism	Only available through the CDC or state government.		Special Access; CDC -1-770-488-7100; California call: 1-800-971-9631
Calcium Chloride injection	Calcium channel blocker poisoning; hypocalcemia induced by various agents	Can cause tissue necrosis if extravasation occurs – use large vein for infusion <u>OR</u> use calcium gluconate (see below).	8 hours: 10 gms <u>or</u> 10 vials (10%, 10 mL) 24 hours: 10gms <u>or</u> 10 vials (10%, 10 mL)	Immediate emergency department
Calcium Gluconate Powder	Hydrofluoric acid	For manufacture of topical gel.	8 hours: 1 x 100 g powder bottle 24 hours: 1 x 100 g powder bottle	Within 1 hour
Calcium Gluconate injection	Hydrofluoric acid skin exposure or poisoning; hypocalcemia induced by various agents		8 hours: 30 g <u>or</u> 30 vials (10%, 10 mL) 24 hours: 30 g <u>or</u> 30 vials (10%, 10 mL)	Immediate emergency department
Calcium Gluconate gel/Calgonate 2.5% gel®	Hydrofluoric acid dermal burns	For topical burns.	8 hours: 6 x 25 gm tubes 24 hours: 10 x 25 gm tubes	Within 1 hour

Carnitine (L-Carnitine)/ Carnitor®	Hyperammonemia from valproic acid toxicity		8 hours: 10g or 10 x 1 g vials 24 hours: 20 g or 20 x 1 g vials	Within 1 hour
Cyanide Antidote Kit (Nithiodote by Hope Pharmaceuticals)	Cyanide; Sodium nitroprusside toxicity	Conventional cyanide antidote: contains 1-10mL (300mg) vial of sodium nitrite, 1-50 mL (12.5G) vial of sodium thiosulfate (amyl nitrite inhalant ampules not included).	2 kits for small hospitals, 6 kits for major medical centers or stock separate supplies of sodium thiosulfate and sodium nitrite vials OR stock the <i>Cyanokit® (hydroxocobalamin) antidote kit (see below)</i>	Immediate emergency department
• Sodium Nitrite	Cyanide	Risk of methemoglobinemia with use.	2 x 10 mL (3%) vials; 6 vials for major medical centers (<i>Less expensive: Stock instead of the Cyanide antidote kit</i>)	Immediate emergency department
• Sodium Thiosulfate	Cyanide; Sodium nitroprusside toxicity	If used alone for cyanide toxicity, may have a slow onset of action. Thiosulfate is synergistic with sodium nitrite, and the two drugs should be used together to treat cyanide poisoning whenever possible.	2 x 50 mL (25%) vials; 6 vials for major medical centers (<i>Less expensive: Stock instead of the Cyanide antidote kit</i>)	Immediate emergency department
Cyanokit®/ Hydroxocobalamin	Cyanide poisoning	Newer, safer and easier to use than the conventional cyanide antidote kit.	8 hours: 10 g or 2 kits 24 hours: 10 g or 2 kits (OR stock the cyanide antidote kit or the individual kit components)	Immediate emergency department
Cyproheptadine/ Periactin®, others	Mild to moderate serotonin syndrome	Anticholinergic side effects and only PO administration.	8-24 hours: 32 mg or 8 tablets (4 mg each)	Within 1 hour
Dantrolene	Malignant hyperthermia		8 hours: 1000 mgs or 50 x 20 mg vials 24 hours: 1300 mgs or 56 vials	Immediate emergency department
Deferiprone/ Ferriprox®	Iron overload	PO Chelator.	8 hours: 3.3 g or 7 x 500 mg tablets 24 hours: 9.9 g or 20 x 500 mg tablets	Specialty/optional
Deferoxamine/ Desferal®	Iron poisoning	IV use only.	8 hours: 12 g or 6 x 2 g vials 24 hours: 36 g or 18 x 2 g vials	Within 1 hour
Digoxin Immune FAB (ovine)/ DigiFab®	Digoxin poisoning; other cardiac glycosides (eg, oleander, foxglove)	Consult with poison center regarding dosing, especially for cardiac glycosides than digoxin.	8 hours: 15 vials of either product 24 hours: 20 vials of either product	Immediate emergency department
DMSA (Succimer)/ Chemet®	Heavy metal poisoning		8 hours: 1 g or 10 x 100 mg capsules 24 hours: 3 g or 30 x 100 mg capsules	Within 1 hour

DTPA-Calcium (Diethylenetriamine pentaacetate)/ Pentetate Calcium Trisodium injection)	Dirty bomb agents: radioactive plutonium, americium and curium	Only available through government sources. Stocked in the Strategic National Stockpile. Local cache will provide supplies for first 48 hours coordinated by state department of health and emergency response system.	8 hours: 1 x 1 g amp 24 hours: 1 x 1 g amp	Special access-Strategic National Stockpile. The Radiation Emergency Assistance Center/Training Site (REAC/TS) can be contacted for information on use of antidote. business hours: 1-865-576-3131; afterhours: 1-865-576-1005.
DTPA-Zinc (Diethylenetriamine pentaacetate)/ Pentetate Zinc Trisodium injection)	Dirty bomb agents: radioactive plutonium, americium and curium	Only available through government sources. Stocked in the Strategic National Stockpile. Local cache will provide supplies for first 48 hours coordinated by state department of health and emergency response system.	8 hours: 1 x 1 g amp 24 hours: 1 x 1 g amp	Special access-Strategic National Stockpile. The Radiation Emergency Assistance Center/Training Site (REAC/TS) can be contacted for information on use of antidote. business hours: 1-865-576-3131; afterhours: 1-865-576-1005.
EDTA-Calcium/ Versenate®	Heavy metal poisoning	Note: Do not confuse with "Sodium" EDTA.	8 hours: 1 g <u>or</u> 1 1000 mg/5mL amp 24 hours: 3 g <u>or</u> 3 1000 mg/5mL amps	Within 1 hour
Ethanol IV 10% with 5% Dextrose	Ethylene glycol or methanol poisoning	Note: IV 10% ethanol product no longer manufactured. Fomepizole easier to dose and monitor than ethanol.	8 hours: 2 x 1 liter 24 hours: 4 x 1 liter <i>(Can be prepared using 95% ethanol product)</i>	Within 1 hour
Ethanol (oral) / Vodka	Ethylene glycol or methanol poisoning	Fomepizole easier to dose and monitor than ethanol. Oral ethanol can be used in an emergency situation.	8 hours: one pint 24 hours: 750mL	Within 1 hour
Flumazenil/ Romazicon®	Benzodiazepine poisoning	Use small initial dose to avoid abrupt awakening/ delirium. Do not use in patients on chronic benzodiazepine therapy as withdrawal seizures may occur. Also use with caution in mixed drug overdoses.	8 hours: 6 mg <u>or</u> 6 x 1mg/10 mL vials 24 hours: 12 mg <u>or</u> 12 x 1 mg/10 mL vials	Immediate emergency department
Fomepizole (4-MP)/ Antizol® /generics/X-Gen Pharmaceuticals	Preferred antidote for ethylene glycol or methanol poisoning	Manufacturer will replace expired stocks.	8 hours: 1.5 g <u>or</u> 1 x 1.5mL (1g/mL) vials 24 hours: 6.0 g <u>or</u> 4 x 1.5 mL (1g/mL) vials	Immediate emergency department
Glucagon	Beta blocker/calcium channel blocker poisoning	Anticipate nausea and vomiting.	8 hours: 90 mg <u>or</u> 90 x 1 mg kits 24 hours: 250 mg <u>or</u> 250 x 1 mg kits	Immediate emergency department
Glucarpidase/ Voraxaze®	Methotrexate toxic levels	Use in patient with toxic levels and impaired renal function. May also metabolize leucovorin so stagger doses at least 2 hours.	5 vials(1000U/vial)	Specialty/optional
Insulin	Hyperinsulinemia - euglycemia (HIE) therapy for calcium antagonist and beta-blocker poisoning	Accompany with dextrose if blood glucose < 200 mg/dL.	8 hours: 1000 U <u>or</u> one vial (100 U/mL, 10mL each) 24 hours: 3000 U <u>or</u> three vials (100 U/mL, 10mL each)	Immediate emergency department

Intravenous Fat Emulsion/ Intralipid®	Lipophilic cardiotoxic drugs	Immediately after administration several laboratory tests of patient serum/blood may be uninterpretable.	8-24 hours: 3300 mL of 20% <u>or</u> 3 bags(100mL each) plus 6 bags (500 mL each)	Immediate emergency department
Leucovorin calcium	Folic acid antagonists/methanol		8-24 hours: 300 mg <u>or</u> 3 (100 mg) vials	Within 1 hour
Methylene Blue	Methemoglobinemia		8 hours: 400 mg <u>or</u> 4 x 10 mL (10 mg/mL) amps 24 hours: 600 mg <u>or</u> 6 x 10 mL (10 mg/mL) amps	Immediate emergency department
N-Acetylcysteine (NAC) Mucomyst® or generic	Acetaminophen poisoning (oral preparation)	Use orally. Dilute at least by a 3:1 ratio.	8 hours: 28 g <u>or</u> 5 x 30mL (20%) vials 24 hours: 56 g <u>or</u> 10 x 30 mL (20%) vials	Immediate emergency department
N-Acetylcysteine (NAC) Acetadote®	Acetaminophen poisoning (IV preparation)	Note: 3 different dilutions are used for 1, 4 and 16 hour infusions. Loading dose should be infused slowly over 45-60 minutes. Generic N-acetylcysteine can be used if Acetadote® is not available (consult with poison center and administer via a micropore filter).	8 hours: 24 g <u>or</u> 4 x 30 mL (20%) vials 24 hours: 30 g <u>or</u> 5 x 30 mL (20%) vials	Immediate emergency department
Naloxone/ Narcan®	Opioid overdose	Use small initial dose to avoid abrupt awakening/withdrawal.	8 hours: 20 mg <u>or</u> 50 x 0.4 mg/2mL amps <u>or</u> 2 x 10 mg/10mL vials 24 hours: 40 mg <u>or</u> 4 x 10 mg/mL vials	Immediate emergency department
Octreotide acetate/ Sandostatin®	Oral sulfonylurea poisoning and meglitinide poisoning	Avoid long-acting depot products.	8 hours: 200 mcg <u>or</u> 2 x 1mL (0.1mg/mL) amps 24 hours: 1000 mcg <u>or</u> 1 x 5mL (0.2mg/mL) Multidose Vial	Within 1 hour
Physostigmine/ Antilirium®	Anticholinergic poisoning, especially antimuscarinic delirium.	Administer at low dose (0.5 mg) and slowly, over 2-5 minutes to avoid severe adverse reactions including bradycardia, asystole and seizures. (Contraindicated in TCA or similar poisoning with widened QRS intervals.)	8 hours: 4 mg <u>or</u> 2 x 2mL (1mg/mL) amps 24 hours: 20 mg <u>or</u> 10 x 2 mL (1 mg/mL) amps	Immediate emergency department
Pralidoxime(2-PAM)/ Protopam®	Cholinesterase Inhibitor poisoning (organophosphate or "nerve gas")	Also stocked in the Strategic National Stockpile but will need supplies for first 48 hours. For mass casualties, local cache may provide supplies for first 48 hours coordinated by state department of health and emergency response system.	8 hours: 7 g <u>or</u> 7 x 1 gm (20 mL) vials 24 hours: 18 g <u>or</u> 18 x 1 gm (20 mL) vials	Within 1 hour
Protamine	Heparin reversal	May also partially neutralize low-molecular weight heparins.	8-24 hours: 500 mg or 2 vials (10mg/mL, 25 mL each)	Within 1 hour

Prussian Blue/ Radiogardase®	Dirty bomb agents: radioactive cesium and thallium and non-radioactive thallium	Only available through government sources. Stocked in the Strategic National Stockpile. Local cache will provide supplies for first 48 hours coordinated by state department of health and emergency response system.	Minimum order is 25 bottles (30 capsules each)	Special access- Strategic National Stockpile. The Radiation Emergency Assistance Center/Training Site (REAC/TS) can be contacted for information on use of antidote. business hours: 1-865-576-3131; afterhours: 1-865- 576-1005.
Pyridoxine (Vitamin B ₆)	Isoniazid (INH) poisoning	Large amounts needed for poisoning: 5 grams is the minimum antidotal dose used in an ingestion of an unknown amount. Note: the 30 mL vials may only be available from compounding pharmacies. The 100 mg in 1 mL vials may contain the preservative chlorobutanol. A 5 gram dose requires 50 of these vials and may deliver a toxic dose of the preservative.	8 hours: 9 g <u>or</u> 3 vials (100 mg/mL, 30 mL each) <u>or</u> the equivalent (<i>Use preservative free product.</i>) 24 hours: 24 g <u>or</u> 8 vials (100 mg/mL, 30 mL each) or the equivalent	Immediate emergency department
Vitamin K ₁ (Phytonadione)/ Mephyton® or AquaMephyton®	Warfarin, warfarin-based anticoagulants and super- warfarin based rodenticide poisoning	If patient is actively bleeding use fresh frozen plasma or Factor VII concentrate.	8 hours: 50 mg <u>or</u> 10 x 5 mg tabs <u>or</u> 5 x 10 mg/mL amps 24 hours: 200 mg <u>or</u> 40 x 5 mg tabs <u>or</u> 20 x 10 mg/mL amps	Within 1 hour

Expert advice regarding use of antidotes and treatment of poisoning and overdose is available 24 hours a day, 7 days a week from the California Poison Control System.

Health Professionals, call 1-800-411-8080

Members of the public, call 1-800-222-1222

*Adapted from Dart RC et al. Annals of Emergency Medicine. 2009; 54(3):386-394.

Note: List is not all-inclusive but reflects agents used more exclusively as antidotes or antidotal agents used infrequently.

Updated: 10-14-2014