

**Field Administration of Nerve Agent (Cyanide\*) Antidotes: Pediatric Dosing Procedures<sup>1,2</sup>**  
**\*Calcium Cyanide, Hydrogen Cyanide, Cyanogen Chloride, Potassium Cyanide, Sodium Cyanide**

- Ventilate using bag-valve-mask with one ampoule of amyl nitrite (crushed) in bag; after several minutes, add another (crushed) ampoule; keep adding an ampoule every **3** minutes. This is a temporary measure until IV drugs can be given.
- Administer 300 mg (10 ml) of **sodium nitrite IV** over at least 5 minutes. Flush line. [**Children's dose: 6-9 mg/kg.** No separate recommendation for infants.] For elderly, use adult dose unless they are small and frail. Be aware: **Nitrites produce orthostatic hypotension, but a patient who can stand does not need them.** If hypotension occurs, slow the rate of infusion.
- Follow with 12.5 grams (50 ml) of **sodium thiosulfate IV** over 10 to 20 minutes. [**Children's dose: 400 mg/kg.** No separate recommendation for infants.] Adult dose should be used for elderly unless they are small and frail. (Amyl nitrite, sodium nitrite, and sodium thiosulfate are in the Pasadena (formerly Lilly) Cyanide Antidote Kit, the latter two in ampules of 300 mg/10 ml and 12.5 grams/50 ml). Use one-half dose in 30 minutes if no improvement. See instructions on top of Antidote Kit box.
- If patient continues to remain apneic, intubate and continue oxygen through tube with assisted ventilation. Transfer apneic or unconscious patients to medical facility. Patients often recover rapidly unless CNS hypoxia has occurred.

<sup>1</sup>NOTE: Local protocols may supercede the recommended guidelines.

<sup>2</sup>NOTE: Dosing may also be adjusted based on Hg assessment. If rapid Hg assessment is not available, assume Hg concentration of 12 g/dL (Goldfrank's Toxicologic Emergencies, 7<sup>th</sup> ed.)

**References:** Agency for Toxic Substance and Disease Registry Website, Antidotes and Other Treatments: [www.atsdr.cdc.gov/HEC/natorg/pehsubrochure.pdf](http://www.atsdr.cdc.gov/HEC/natorg/pehsubrochure.pdf), [www.atsdr.cdc.gov/HEC/natorg/pehsu.html](http://www.atsdr.cdc.gov/HEC/natorg/pehsu.html), CDC: [www.bt.cdc.gov/children/pdf/working/execsumm03.pdf](http://www.bt.cdc.gov/children/pdf/working/execsumm03.pdf)

November 1, 2005

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<b>Sodium Nitrite 3% Solution (30 mg/mL)</b>			
<b>Weight</b>		<b>Dose (6-9 mg/kg)</b>	<b>Administer (IV)</b>
<b>Pounds (lbs)</b>	<b>Kilograms (kg)</b>		
11	5	30-45 mg	1-1.5 mL
22	10	60-90 mg	2-3 mL
44	20	120-180 mg	4-6 mL
66	30	180-270 mg	6-9 mL
=88	=40	Adult Dose (300 mg)	10 mL

  

<b>Sodium Thiosulfate 25% Solution (250 mg/mL)</b>			
<b>Weight</b>		<b>Dose (400 mg/kg)</b>	<b>Administer (IV)</b>
<b>Pounds (lbs)</b>	<b>Kilograms (kg)</b>		
11	5	2000 mg (2 gm)	8 mL
22	10	4000 mg (4 gm)	16 mL
44	20	8000 mg (8 gm)	32 mL
=66	=30	Adult Dose (12.5 gm)	50 mL

<sup>1</sup>NOTE: Local protocols may supercede the recommended guidelines. <sup>2</sup>This card may be used as a cross-reference to calculate pediatric doses. All pediatric doses should be individualized based on a child's actual weight. Refer to CDC guidelines for complete prescribing information ([www.bt.cdc.gov](http://www.bt.cdc.gov)).

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