

**Field Administration of Radiation Exposure Antidotes: Pediatric Dosing Guidelines<sup>1,2,3</sup>**

Antidote Target	Product	Age (or Weight)	Dose
Americium, Curium, or Plutonium Antidotes (chelating agent)	Pentetate Calcium Trisodium: 200 mg/mL injection solution (Ca-DTPA) <sup>a</sup>	> 12 years	1 g IV STAT
		< 12 years	14 mg/kg (not to exceed 1 g) IV STAT
Americium, Curium, or Plutonium Antidotes (chelating agent)	Pentetate Zinc Trisodium: 200 mg/mL injection solution (Zn-DTPA) <sup>a</sup>	> 12 years	1 g (25 mL) IV QD
		< 12 years	14 mg/kg (not to exceed 1 g) IV QD
Cesium or Thallium Antidote (ion exchange resin)	Ferric Hexacyanoferrate: 0.5 g capsules (Prussian Blue)	> 12 yrs	3 g PO TID (followed by 1-2 g PO TID)
		2 - 12 yrs	1 g PO TID <sup>b</sup>
Radioactive Iodine Antidote (antithyroid agent) for $\geq 5$ Gy Predicted Thyroid Dose <sup>4</sup>	Commercial formulations: Potassium Iodide <sup>4</sup> : 65 or 130 mg tablets or 65 mg/mL solution (KI)	> 150 lbs	130 mg PO QD for 7-10 days
		3 to 18 yrs (<150 lbs)	65 mg PO QD for 7-10 days
		1 month to 3 years	32.5 mg PO QD for 7-10 days
		Birth < 1 month	16.25 mg PO QD for 7-10 days

**GUIDELINES FOR HOME PREPARATION OF POTASSIUM IODIDE (KI) SOLUTION (if commercial preparation not available)<sup>4</sup>**

- Place one 130mg tablet (or two 65mg tablets) into a bowl and grind into a fine powder.
- Add 20ml of water to bowl and dissolve the KI powder.
- Add 20ml of milk, juice, soda or syrup to flavor the KI/water mixture
- Resulting solution has a concentration of 16.26mg/5ml
- Unused iodine mixture may be stored in the refrigerator for up to 7 days.

<sup>a</sup> Ca-DTPA is preferred initial agent followed by sequential administration of Zn-DTPA. Ca-DTPA should only be used for maintenance therapy when Zn-DTPA is not available. Dilute Ca-DTPA or Zn-DTPA into 100-250 mL D5W, NS or LR; infuse over 30 minutes. Length of therapy depends upon patient response and degree of contamination.

<sup>b</sup> Capsules may be opened and mixed with bland food or liquid. Administer with food to stimulate excretion of cesium or thallium.

<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)).

<sup>3</sup>All doses are one time unless repeat dosing is recommended by public health authorities. <sup>4</sup>Contraindicated in patients with known allergies to iodine

References: [www.bt.cdc.gov](http://www.bt.cdc.gov); [www.fda.gov/cder/drug](http://www.fda.gov/cder/drug); Ann Intern Med. 2004 Jun 15; 140(12):1037-51.; Med Mgmt of Radiological Casualties. Armed Forces Radiobiol Res Inst. Dec 1999; Drug Information Handbook. Lexicomp. 2005.

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**Field Administration of Acute Radiation Syndrome Treatments: Pediatric Dosing Guidelines<sup>1</sup>**

Product	Age or Weight	Dose
<b>Anti-infectives for Radiation Dose Range of 2-10 Gy</b>		
Fluoroquinolone (ciprofloxacin tablet, injection solution, or oral suspension)	1 to 17 years	10-15 mg/kg (up to 500 mg) PO BID
		6-10 mg/kg (up to 400 mg) IV Q8
Antiviral <sup>a</sup> (acyclovir capsule, tablet, injection solution, or oral suspension)	> 2 years	20 mg/kg PO QID
	> 2 years	250 mg/m <sup>2</sup> IV Q8
	< 1 year	10 mg/kg IV Q8
Antifungal <sup>b</sup> (fluconazole tablets, injection solution, or oral suspension)	All ages	6-12 mg/kg PO or IV QD
<b>Antiemetics</b>		
granisetron tablets, injection solution, or oral solution	> 2 years	2 mg PO QD
		10 mcg/kg IVPB (over 5 minutes) QD
ondansetron tablets, injection solution, or oral solution	> 12 years	8 mg PO Q12
	4 to 11 years	4 mg PO Q4
	0.5 to 18 years	0.15 mg/kg IV (over 30 minutes) Q4
<b>Colony Stimulating Factor (CSF) for Radiation Dose Range of 3-10 Gy</b>		
granulocyte CSF (filgrastim) injection solution	All ages	5 mcg/kg SQ QD
		until ANC >1.0 X 10 <sup>9</sup> cells/L
pegylated granulocyte CSF (pegfilgrastim) injection solution	> 45 kg	6 mg SQ STAT
granulocyte-macrophage CSF (sargramostim) injection solution or powder for reconstitution	All ages	250 mcg/m <sup>2</sup> SQ QD
		until ANC >1.0 X 10 <sup>9</sup> cells/L

<sup>a</sup> Acyclovir is recommended if patient is seropositive for herpes simplex virus or has a medical history of the virus.

<sup>b</sup> Fluconazole is recommended if patient's absolute neutrophil count (ANC) is < 0.500 x 10<sup>9</sup> cells/L.

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

References: Ann Intern Med. 2004 Jun 15; 140(12):1037-51; Drug Information Handbook. Lexicomp. 2005.

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