

## EMS Immediate Response to NBC

Poison Center – 1-800-222-1222

NBC= Nuclear, Biological, Chemical

### **Nuclear** → **DECON with Water First!**

	Symptoms	Exposure	First Response
Nuclear Radiation	Nausea, vomiting, severe burns, fatigue	Amount of time exposed, internal vs. external exposure, and distance from the radiation is important	Protect Caregivers Remove clothing  External decon using water

### **Biological** → **Don Mask and Gloves at a Minimum**

Agents	Symptoms	Exposure	First Response
Smallpox	Hard pox lesions, body aches, malaise, vomiting, and headaches <b>HIGHLY INFECTIOUS!</b>	Inhalation contact	<b>Protect caregivers</b> Use impermeable surgical gown/gloves
Botulism	Weakness, dizziness, dry mouth, blurred vision, progressive weakness, of muscle leading to paralysis and abrupt respiratory failure	Ingestion Inhalation Open wounds	Use oral/nasal masks ( <i>Preferable to use HEPA-filter masks, especially for plague, smallpox, and VHF</i> )
Tularemia	<b>No person-to-person transmission</b> General discomfort, irritating cough, weight loss		If necessary, use face shields or goggles.
Anthrax	<b>No person-to-person transmission</b> <b>Contact with spores may cause illness</b>  Fatigue, then abrupt onset of severe respiratory problems (cough, dyspnea). Toxic shock and death within 2-3 days	Ingestion Inhalation Open wounds	Remove clean people from contaminated people as soon as appropriately possible  <b>If dermal exposure</b> Clothing should be removed by protected personnel
Plague	Tender lymph nodes, skin lesions, chills, possible hemorrhages leading to pneumonia, circulatory failure and death  <b>HIGHLY INFECTIOUS!</b>	Inhalation	Wash skin with lots of soap and water  Give supportive care  <b>ALL Agents</b> Refer to NBC Card from OMMRS for Treatment Recommendations

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### **Chemical** → **Symptoms are often immediate** **Protect SELF First with PPE!**

Agents	Symptoms	Exposure	First Response
<b>Irritant Gases</b> Phosgene  Ammonia  Chlorine	<b>Immediate</b> Irritation of eyes, skin, respiratory tract  <b>Delayed</b> Pulmonary edema	Skin Contact  Eyes  Inhalation	<b>ALL Agents Listed</b> <b>Protect Caregivers</b>  Use Level B personal protection equipment  Use positive air pressure respirators  Remove clean people from contaminated people as soon as possible  <b>If dermal exposure is suspected:</b> Contaminated clothing should be removed by protected personnel  Wash skin thoroughly with soap and water to deactivate contaminant  <b>Irritant Gases &amp; Cyanide</b> Maintain airway and administer Oxygen immediately, in addition to above recommendations
<b>Cyanide</b>	<b>Flushing,</b> headache, altered mental status tachycardia, <b>respiratory depression,</b> lethargy, coma	<b>Cyanokit® (Hydroxocobalamin)</b> <b>Adult</b> 5 grams IV; 15 min. Repeat 5 grams if no improvement <b>Child</b> 70 mg/kg IV; 15 min (dosing not FDA approved) Recon vial with 200 ml NS. Administer in separate IV <b>Causes red skin and urine.</b>	
<b>Blister Agents</b>  Lewisite  Nitrogen  Sulfur Mustard	<b>Eye-pain, gritty eyes,</b> reddened skin, large fluid-filled blisters, respiratory damage	Skin Contact  Eyes  Inhalation  Ingestion	
<b>Nerve Agents</b>  Tabun  Soman  Sarin  Organo-phosphates  Carbamates  VX	Symptom onset may be delayed up to 18 hours after dermal exposure  <b>Mild</b> Constricted pupils, runny nose/nasal secretions, shortness of breath, chest tightness, sweating & fasciculations at site of liquid contact  <b>Moderate</b> Wheezing, profuse airway secretions, respiratory distress, muscle weakness, vomiting, diarrhea  <b>Severe</b> Unconsciousness, seizures, flaccid paralysis, cyanosis, apnea	<b>Mark I Kit / DuoDote</b> Mark I Kit consists of 2 IM auto-injectors; DuoDote is a single IM auto-injector <b>Both Contain:</b> atropine 2 mg + pralidoxime 600 mg  <b>Symptoms = Adult Dose</b> Mild: 1 Kit or DuoDote Moderate: 2 Kits or DuoDotes Severe: 3 Kits or DuoDotes  <b>AtroPEN (atropine)</b> 0.5 mg autoinjector for IM -1 Pen (0.5 mg) 5-18 kg (13-40 lbs) -2 Pens (1 mg) 19-28 kg (41-62 lbs) -3 Pens (1.5 mg) 29-39 kg (63-84 lbs) -4 Pens (2 mg) >38 kg (>84 lbs)  <b>For Seizures</b> <b>Diazepam (Valium)</b> Adults 5 to 10 mg IV/IM Child 0.2 to 0.5 mg/kg IV/IM May repeat q 5-10 min  <b>Lorazepam (Ativan)</b> <b>Alternative to Diazepam</b> Adult 2 to 4 mg IV/IM Child 0.05-0.1 mg/kg IV/IM May repeat q 5-10 min	<b>Nerve Agents</b>  Exposure by any route use treatment for symptoms listed under Mark I Kit/DuoDote
			Check with <a href="http://www.NebraskaPoison.com">www.NebraskaPoison.com</a> for the most recent version or call Nebraska Regional Poison Center at 402-955-5555  <b>DO NOT REVISE</b> Copyrighted  Jacobitz/Massoomi/Candy December 2016 Version 5