



State of Maryland

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To: EMS Clinicians  
Jurisdictional Advisory Committee  
Medical Directors

From: Timothy Chizmar, MD, FACEP  
State EMS Medical Director

Date: July 19, 2019

Re: CHEMPACK Updates

The CHEMPACK Program is a federal project that places nerve agent antidotes where they can be quickly accessed for use in EMS and hospital settings. In Maryland, the CHEMPACK is managed jointly by MIEMSS and the Maryland Department of Health (MDH) in partnership with the US Department of Health and Human Services (HHS).

**With recent changes in the formulary, we have updated and streamlined our CHEMPACK guidance (please see attached).** The updated algorithms incorporate the addition of midazolam for treatment of severe nerve agent exposure and seizures.

As a reminder, the CHEMPACK is a resource available for use by all EMS jurisdictions and hospitals in Maryland. A request should be considered by an EMS incident commander or hospital clinician whenever an incident presents with the possibility that available on-scene or hospitals' chemical nerve agent antidotes will not be sufficient.

All requests for the CHEMPACK are made to SYSCOM/EMRC by radio or phone 800-648-3001. The requested nerve agent antidotes will be delivered to the scene or hospital by aviation or ground transportation.

Attachment:

CHEMPACK Nerve Agent Exposure Treatment Guidance, Rev. 7/2019



# CHEMPACK

## Pediatric Nerve Agent Exposure Treatment

### Mild Exposure

Patients who can walk and talk who may present with miosis, rhinorrhea, increased salivation, and nausea

Weight (Kg)	Atropine Dose (IM)
Less than 10 kg	<b>0.5mg</b>
10 kg – 25 kg	<b>1 mg</b>
26 - 50 kg	<b>2 mg</b>
Over 50 kg	<b>2 mg</b>

**May repeat 3-5 minutes until symptoms resolve**

### Moderate Exposure

Patients with mild dyspnea, ataxia, miosis, or muscle cramping

Weight (Kg)	Dose (IM)
Less than 10 kg	Atropine <b>1mg</b> + Pralidoxime <b>600mg</b>
10 kg – 25 kg	Atropine <b>2mg</b> + Pralidoxime <b>600mg</b>
26 kg - 50 kg	Atropine <b>2mg</b> + Pralidoxime <b>1200mg</b>
Above 50kg	Atropine <b>2mg</b> + Pralidoxime <b>1200mg</b>

**May repeat 3-5 minutes until symptoms resolve**

### Severe Exposure

Patients who may have severe respiratory distress, seizures, extreme SLUDGEM (See below)

Weight (Kg)	Dose (IM)
Up to 25kg	Atropine <b>2mg</b> + Pralidoxime <b>600mg</b> + [Diazepam <b>2.5mg</b> ] <b>OR</b> [Midazolam <b>2.5mg</b> ]
26 kg - 50kg	Atropine <b>4mg</b> + Pralidoxime <b>1200mg</b> + [Diazepam <b>5mg</b> ] <b>OR</b> [Midazolam <b>5mg</b> ]
Above 50kg	Atropine <b>6mg</b> + Pralidoxime <b>1800mg</b> + [Diazepam <b>10mg</b> ] <b>OR</b> [Midazolam <b>10mg</b> ]

**May repeat 3-5 minutes until symptoms resolve**

Atropine/ Pralidoxime may come packaged as either DuoDotes, Mark I Kits, ATNAA kits, individual Atropen + Pralidoxime autoinjectors, or in individual medication vials.

Treatment via Atropine & Pralidoxime Autoinjectors is preferred

CANA autoinjectors are not indicated for pediatric patients less than 50kg

### Color Coding and unit amount for Atropens

	0.5 mg auto-injector (blue)
	1 mg auto-injector (red)
	2 mg auto-injector (green) (May not be available in all CHEMPACK caches)

### Pediatric Vial Medication Instructions:

**Atropine** (0.4mg/mL, 20mL): Draw-up medication in 3mL, 5mL, or 10mL syringe as indicated

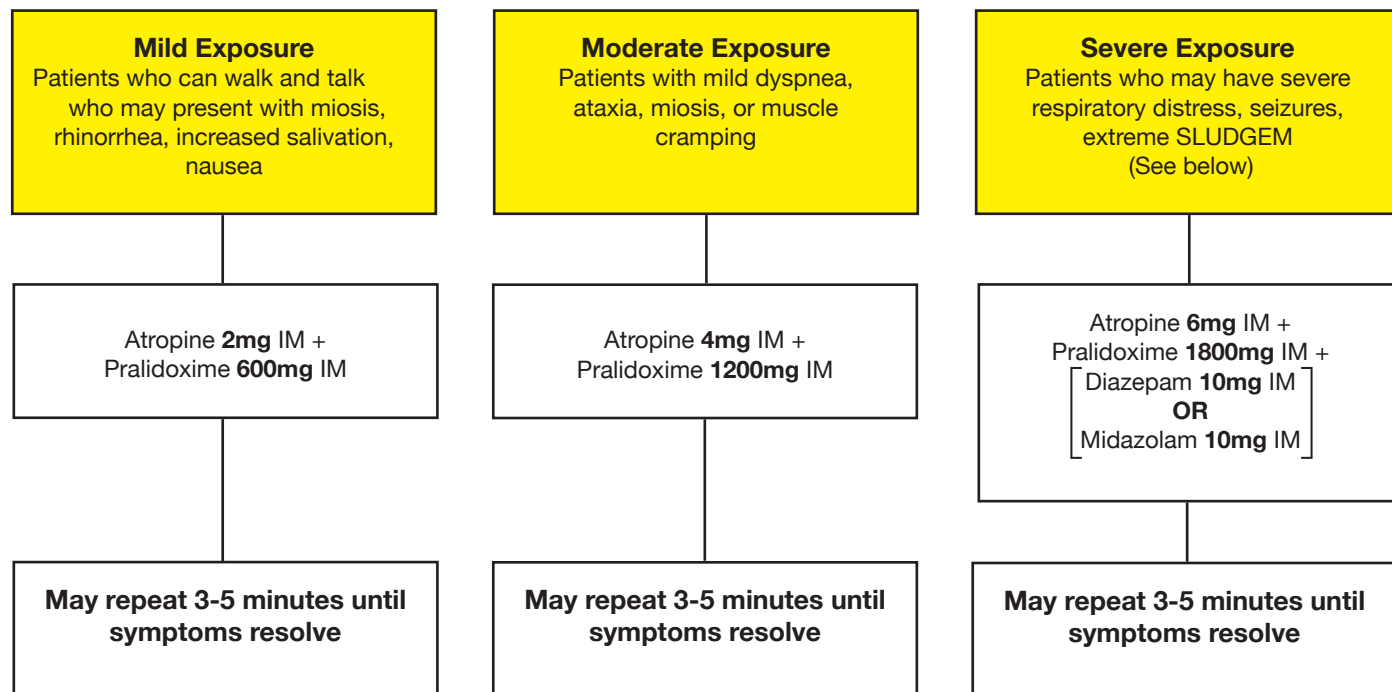
**Pralidoxime** (300mg/ mL) Add 3.3mL of sterile water into a single 1 gram vial, which results in a 300mg/mL concentration. Do not exceed 2mL per IM injection

**Diazepam & Midazolam** (5mg/mL, 10mL) Draw 0.2mg/kg IM to a maximum 10mg

S- Salivation  
L- Lacrimation (tear production)  
U- Urination  
D- Defecation  
G- Gastrointestinal distress  
E- Emesis  
M- Muscle Twitching & Miosis (constricted pupils)

# CHEMPACK

## Adult Nerve Agent Exposure Treatment



**\*\*\*AUTO-INJECTORS SHOULD BE USED FOR ALL ADULT EMS PATIENTS\*\*\***

Medications may come packaged as either DuoDotes, Mark I Kits, ATNAA kits, individual Atropen + 600mg Pralidoxime Autoinjectors, or in individual medication vials

2mg Atropens are not available in all CHEMPACK caches

### Adult Vial Medication Directions:

**Atropine** (0.4mg/ml in 20mL): Draw up medication in 5mL syringe (5mL)

**Pralidoxime** (300mg/mL): For Intramuscular (IM) injection: Add 3.3mL of sterile water into a single 1-gram vial, which results in a 300mg/mL concentration. Do not exceed 2mL per IM injection

**Diazepam & Midazolam** (5mg/mL in 10mL): draw up 2mL in 3mL syringe for IM administration for initial dose of 10mg IM

S- Salivation  
L- Lacrimation (tear production)  
U- Urination  
D- Defecation  
G- Gastrointestinal distress  
E- Emesis  
M- Muscle Twitching & Miosis (constricted pupils)