# Nassau Regional EMS Council

Basic Life Support
Protocols and
Supplements to State BLS Protocol Manual

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** = Revised*
*c = Corrected 8/1/2011*

# BLS – Adult Nerve Agent/Organophosphate Poisoning Antidote Protocol

This protocol applies to all appropriately trained ALS & BLS providers.

**CAUTION IS TO BE EXERCISED AT ALL TIMES. ALARM INFORMATION INCLUDING LOCATION, NUMBER OF PATIENTS, AND COMPLAINTS SHOULD BE INCLUDED IN THE SCENE SIZE -UP *PRIOR* TO ARRIVAL. DECONTAMINATION TO PREVENT OFF GASSING MUST BE PERFORMED *PRIOR* TO EMS ASSESSMENT AND TREATMENT. TREATMENT BY EMS IS TO BE PERFORMED IN THE COLD ZONE ONLY *UNLESS APPROPRIATELY TRAINED AND EQUIPPED.***

1. **Atropine/2-Pam combination antidote injector kits are to be used only**:

   A. when specific signs and symptoms of exposure are present

   **AND**

   B. the scene has been declared the site of a nerve agent release by a local competent authority

   **AND**

   C. Following orders from Medical Control

      a) The Atropine/2-Pam combination antidote injectors are not to be used as a prophylaxis for personal protection.
      b) There is to be no self-administration of antidote.

2. In the event EMS personnel become exposed to a Nerve Agent and they meet the above criteria, the Atropine/2-Pam combination antidote injectors may be administered via ***BUDDY -ADMINISTRATION*** only.

3. If **severe** signs and symptoms are present, three (3) Atropine/2-Pam combination antidote injectors should be administered in rapid succession.

4. If the patient exhibits **SLUDGEM** but no central nervous system (CNS) findings are present, then one (1) Atropine injector and one (1) Atropine/2-Pam combination antidote injector should be given.

5. In either case, remove secretions, maintain patient's airway and, if necessary and the resources permit use artificial ventilation.

6. If symptoms resolve, then only monitoring is necessary.

7. Pralidoxime (2-PAM CL) is most effective if administered immediately after poisoning and following but **not** before Atropine, especially for severe exposures.

8. If dermal exposure has occurred, decontamination is critical and should be done with standard decontamination procedures. Patient monitoring should be directed to the same signs and symptoms as with all nerve agent exposures.

9. Diazepam (Valium) may be given *by ALS* personnel cautiously if convulsions are not controlled.

10. Documentation shall be done on triage tags. Each dose of Atropine should be recorded with an "A", each dose of Pralidoxime Chloride with a "P" (if an Atropine/2-Pam antidote injector is used then annotate with "A/P"), and each dose of Diazepam with a "D".

11. If patients continue to exhibit signs and symptoms of Nerve Agent intoxication they may continue to receive Atropine/2-Pam antidote injector until symptoms cease or 3 combination injectors have been administered.

    **NOTE: THE MAXIMUM DOSE OF PRALIDOXIME IS 1.8 GRAMS, ONCE THE MAXIMUM DOSE OF 2-PAM IS REACHED THE ATROPINE/2-PAM ANTIDOTE INJECTORS MUST NOT BE USED. THERE IS NO MAXIMUM DOSE OF ATROPINE INJECTORS**

***In the initial phase, triage will be initiated in the Hot Zone, continued in the warm zone, and performed only by trained personnel who are wearing appropriate Personal Protective Equipment (as determined by the Incident Commander). Patient decontamination will be simultaneous with and/or prior to treatment. Children should be decontaminated and have expedited transport off scene especially if they are demonstrating any signs and symptoms of exposure.***

**SLUDGEM + RESPIRATION and AGITATION**

**S –** salivation (excessive drooling)
**L –** lacrimation (tearing)
**U –** urination
**D –** defecation / diarrhea
**G –** GI upset ( cramps )
**E –** emesis ( vomiting )
**M –** muscle ( twitching, spasm, "bag of worms" )

**RESPIRATION –** difficulty breathing / distress ( sob, wheezing )

**AGITATION + CNS SIGNS –** confusion, agitation, seizures, coma.

**Antidote Dosing Schedules:**

## BLS – Adult Nerve Agent/Organophosphate Poisoning Antidote Protocol

### *Initial Adult Treatment*

| Signs & Symptoms | Atropine Dose Monitor Interval | Atropine/2-Pam Injector Dose | Monitor |
|---|---|---|---|
| Severe Respiratory Distress, Agitation **SLUDGEM** | | 3 Auto-injectors | Every 5 minutes |
| Respiratory Distress, **SLUDGEM** | 1 Auto-injector | 1 Auto-injector | Every 10 minutes |
| Asymptomatic NONE | None | None | Every 15 minutes |

## BLS – Pediatric Nerve Agent/Organophosphate Poisoning Antidote Protocol

This protocol applies to all appropriately trained ALS & BLS providers

**CAUTION IS TO BE EXERCISED AT ALL TIMES. ALARM INFORMATION INCLUDING LOCATIONS, NUMBER OF PATIENTS, AND COMPLAINTS SHOULD BE INCLUDED IN THE SCENE SIZE-UP *PRIOR* TO ARRIVAL. DECONTAMINATION TO PREVENT OFF GASSING MUST BE PERFORMED *PRIOR* TO EMS ASSESSMENT AND TREATMENT. TREATMENT BY EMS IS TO BE PERFORMED IN THE COLD ZONE *ONLY UNLESS APPROPRIATELY TRAINED AND EQUIPPED.***

1. **Atropen 0.5mg and 2mg auto-injectors are to be used only.**

   A. When specific signs and symptoms are present

      **AND**

   B. The scene has been described as the scene of a nerve agent release by local competent authority.

      **AND**

   C. Following orders from Medical Control

**IMPORTANT NOTE:**

CHILDREN MAY NOT PRESENT WITH THE TYPICAL ADULT SIGNS AND SYMPTOMS OF NERVE AGENT EXPOSURE.

SPECIFICALLY, INCREASED SECRETIONS AND MIOSIS ARE USUALLY ABSENT.

70-100% OF CHILDREN WILL PRESENT WITH SEVERE WEAKNESS AND HYPOTONIA.

CHILDREN ARE ALSO MORE LIKELY TO HAVE EARLIER AND MORE PROFOUND CNS SIGNS AND SYMPTOMS.

RESPIRATORY DEPRESSION AND SEIZURES ARE THE MOST COMMON CAUSES OF MORTALITY.

## BLS – Pediatric Nerve Agent/Organophosphate Poisoning Antidote Protocol

1. If **severe** signs and symptoms are present in the child (3) three Atropen autoinjectors should be administered in rapid succession to achieve atropinization.

2. If mild signs and symptoms are present one to two units can be administered.

3. In all cases, remove secretions, maintain patient's airway, and if necessary and resources permit use artificial respirations.

4. If symptoms resolve, then only close monitoring is necessary.

5. If dermal exposure has occurred, decontamination is critical and should be done with standard decontamination procedures. Patient monitoring should be directed to the same signs and symptoms as with all nerve agents.

6. Diazepam (Valium) may be given *by ALS personnel* cautiously if convulsions are not controlled.

7. Documentation shall be done on triage tags. Each dose of Atropine should be recorded with an "A", and each dose of Diazepam with a "D".

8. If patients continue to exhibit signs and symptoms of nerve agent intoxication, they may continue to receive Atropine auto injector until symptoms cease.

***In children, improvement in respiration either spontaneous or noted while artificial respiration is being given is evidence of adequate dosing of atropine.***

In the initial phase, triage will be initiated in the Hot Zone, continued in the warm zone, and performed only by trained personnel who are wearing appropriate Personal Protective Equipment (as determined by the Incident Commander). Patient decontamination will be simultaneous with and/or prior to treatment. Children should be decontaminated and have expedited transport off scene especially if they are demonstrating any signs or symptoms of exposure.

**The Atropen auto injector can be used in children 6 months to 9 years of age.**

**SLUDGEM + RESPIRATION AND CNS SIGNS AND SYMPTOMS**

**S**: salivation (excessive drooling)
**L**: lacrimation (tearing)
**U**: urination
**D:** defecation
**G**: GI upset
**E:** emesis
**M**: muscle (cramps spasm fasciculation)

RESPIRATION: difficulty breathing/ distress (SOB/ wheezing)

CNS AND AGGITATION: confusion, agitation, seizures, coma

## ANTIDOTE DOSING SCHEDULE

***INITIAL PEDIATRIC TREATMENT***

**EXPOSURE AND SIGNS AND SYMPTOMS = YES**

**TREATMENT GUIDELINE** = Weight 0-40 LBS

**INITIAL ATROPINE DOSE:**

Atropen 0.5mg auto injector (**blue**) repeat every three (3) minutes as needed

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**EXPOSURE AND SIGNS AND SYMPTOMS = YES**

**TREATMENT GUIDELINE** = Weight 40-90 LBS

**INITIAL ATROPINE DOSE:**

Atropen 2.0mg auto injector (**green**) repeat every three (3) minutes as needed

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**EXPOSURE AND SIGNS AND SYMPTOMS = NO**

**TREATMENT GUIDELINE** = NONE

**INITIAL ATROPINE DOSE:** = Monitor Every Ten (10) Minutes

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**NOTE: IN SEVERE CASES OF NERVE AGENT INTOXICATION GIVE (3) DOSES IN RAPID SUCCESSION.**

Nassau REMAC Supplemented

# Altered Mental Status

**(NON-TRAUMATIC AND WITHOUT RESPIRATORY OR CARDIOVASCULAR COMPLICATIONS)**

**Note:**
**Request Advanced Life Support if available.**
**Do Not delay transport to the appropriate hospital.**

**Note:**
**This protocol is for patients who are not alert (A), but who are responsive to verbal stimuli (V), responding to painful stimuli (P), or unresponsive (U).**

I. Assess the situation for potential or actual danger. If the scene/situation is not safe, retreat to a safe location, create a safe zone and obtain additional assistance from a police agency.

**Note:**
**Emotionally disturbed patients must be presumed to have an underlying medical or traumatic condition causing the altered mental status.**

**Note:**
**All suicidal or violent threats or gestures must be taken seriously. These patients should be in police custody if they pose a danger to themselves or others. If the patient poses a danger to themselves and/or others, summon police for assistance.**

II. Perform initial assessment. Assure that the patient's airway is open and that breathing and circulation are adequate. Suction as necessary.

III. Administer high concentration oxygen. In children, humidified oxygen is preferred.

IV. Obtain and record patient's vital signs, including determining the patient's level of consciousness. Assess and monitor the Glasgow Coma Scale.

A. **If the patient is unresponsive (U) or responds only to painful stimuli (P), transport immediately,** keeping the patient warm.

B. **If the patient has a known history of diabetes controlled by medication, *perform a Glucometer test for blood sugar level, if it is less than 60* and the patient is conscious and is able drink without assistance,** provide an oral glucose solution, fruit juice or non-diet soda by mouth, then transport, keeping the patient warm.

**Note:**
**Do not give solutions by mouth to patients who are unconscious or to patients with head injuries.**

V. If underlying medical or traumatic condition causing an altered mental status is not apparent; the patient is fully conscious, alert (A) and able to communicate; and an emotional disturbance is suspected, proceed to the Behavioral Emergencies protocol.

VI. Transport immediately, keeping the patient warm.

VII. Ongoing assessment. Repeat and record the patient's vital signs, including the level of consciousness and Glasgow Coma Scale enroute as often as the situation indicates.

VIII. Record all patient care information, including the patient's medical history, *Glucometer reading*, and all treatment provided, on a Prehospital Care Report (PCR).

***NOTE:*** ***Agencies must be authorized by the Nassau REMAC, in accordance with NYS DOH BEMS Policy 09-13, in order to use BLS Glucometry.***

* - New material is underlined and italicized.

Nassau REMAC Supplemented

# Amputation

I. Perform initial assessment.

II. Assure that the patient's airway is open and that breathing and circulation are adequate.

**Caution:**
**Manually stabilize the head and cervical spine if trauma of the head and/or neck is suspected!**

III. Place the patient in a position of comfort **only if doing so does not compromise stabilization of the head and cervical spine!**

IV. Control the bleeding by applying direct pressure.

V. Elevate the stump above the level of the patient's heart.

VI. **If severe bleeding persists,** apply a tourniquet just proximal to the bleeding site. If severe bleeding still persists, a second tourniquet may be applied proximal to the first tourniquet. Record time tourniquet was secured and document near the tourniquet site.

VII. Assess for hypoperfusion. **If hypoperfusion is present, refer immediately to the hypoperfusion protocol!**

VIII. Wrap the stump with moist sterile dressings.

XII. Cover the dressed stump with a dry bandage.

XII. Preserve the amputated part as follows:

A. Moisten an appropriately sized sterile dressing with sterile saline solution.

B. Wrap the severed part in the moistened sterile dressing, preserving all amputated material.

C. Place the severed part in a water-tight container (i.e. sealed plastic bag).

D. Place the container on ice or cold packs (if available). **Do not freeze or use dry ice! Do not immerse the amputated part directly in water! Do not allow the amputated part to come in direct contact with ice!**

XI. Immobilize the limb to prevent further injury.

XII. Transport the amputated part with the patient, as able, to the closest appropriate Trauma Center. If the patient's condition is stable enough to tolerate transport to a Replant Center contact Medical Control and request them to notify the Replant Center of your impending arrival.

XIII. Current Nassau Replant Center (24/7 operation): Winthrop University Hospital