

NERVE AGENT - **OPTIONAL**

Nerve agents are very toxic organophosphorus compounds that have biological activity similar to that of many insecticides. They cause biological effects by inhibiting acetylcholinesterase and, thereby, allowing acetylcholine to accumulate. Initial effects from small amounts of a nerve agent differ, depending on the route of exposure. There is usually an asymptomatic interval of minutes after liquid exposure before these occur. Effects from vapor occur almost immediately.

- A. Perform **Initial Treatment / Universal Patient Care Protocol** and follow the proper protocols for medical management based on clinical presentation.
- B. The patient should be removed from the environment.
 - 1. Never attempt rescue unless trained, certified, and properly equipped.
 - 2. Never place yourself or your crew in danger.
- C. Mild to moderate signs and symptoms (including dyspnea and nausea/vomiting):
 - 1. Administer one (1) MARK I Kit IM or **Atropine** 2 mg IM or IV (Adult: 2 mg / Peds: 0.02mg/kg) and **Pralidoxime** 600 mg IM or IV (Peds 25 - 50 mg/kg). **Atropine** should be repeated every five (5) minutes until improvement is noted.
 - 2. Oxygen should be administered at 15 LPM via non-rebreather.
 - 3. Do not treat for isolated miosis (unless eye pain is severe) or rhinorrhea (unless severe).
- D. Severe signs and symptoms (including loss of consciousness, seizures, or apnea):
 - 1. Administer three (3) MARK I Kits IM or **Atropine** 6 mg IM or IV and **Pralidoxime** (if available) 1800 mg IM or 2 grams slow IV drip over 20 minutes. Repeat **Atropine** 2 mg IM or IV every five (5) minutes until:
 - a. secretions diminish; **or**
 - b. airway resistance is less or is normal.
 - 2. Secure airway. Refer to **Airway Management Protocol 4901**.
 - 3. In patients with seizure activity administer **Midazolam** 2 mg IV/IO/IM or 5 mg (IN) via atomizer.

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- E. Monitor patient via pulse oximeter and cardiac monitor.
- F. Decisions regarding the transportation of patients should be made in consultation with **Medical Command** and the on-scene incident management system.

Note: EMT-Bs may administer MARK I Kits [up to total of three (3) kits] to symptomatic public safety personnel or when directed to do so by an ALS provider based on signs and symptoms in a mass casualty incident (MCI) or on-site chemical testing, confirming nerve or organophosphate agent presence in a mass casualty incident. **Medical Command** consultation is not required in these situations.