



Treatment Protocol 9202

Nerve Agent

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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. The patient should be removed from the environment.
1. **Never attempt rescue unless training and properly equipped.**
 2. **Never place yourself for your crew in danger.**
- B. Mild to moderate signs and symptoms (including dyspnea and nausea/vomiting):
1. Administer **one (1) MARK I kit** IM (or atropine 2 mg (Peds 0.02 mg/kg) IM or IV (Adult: 2 mg / PEDS: 0.02mg/kg) and pralidoxime 600 mg (Peds 25-50 mg/kg) IM or IV)). Atropine should be repeated every 5 minutes until improvement is noted.
 2. Oxygen should be administered at 15 LPM via non-rebreather.
- Do not treat for isolated miosis (unless eye pain is severe) or rhinorrhea (unless severe).
- C. 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 1800 mg IM or 2 grams slow IV drip - over 20 minutes.) Repeat atropine 2 mg IM or IV every 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. Administer diazepam 10 mg IV or IM if the patient is convulsing.
- D. Monitor patient via pulse oximeter and cardiac monitor.
- E. 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 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.