

APPENDIX: U

TITLE: DUODOTE™ PROCEDURES

REVISED: OCTOBER 1, 2010

I. BACKGROUND:

Nerve Agent Antidote Kit (DUODOTE™): A **DUODOTE™** kit is an alternative way to administer atropine and 2-PAM Chloride in response to symptomatic nerve agent (or similar toxin) exposure. It replaces the **MARK I** kit in all situations. Unlike the **MARK I** kit, the **DUODOTE™** is a *single auto injector*. The **DUODOTE™** contains:

- 2.1 mg of Atropine Sulfate
- 600 mg of 2-PAM Chloride (Pralidoxime)

Like the older **MARK I** kit, the **DUODOTE™** kit is specifically designed for use on the battlefield by both medical and non-medical personnel. As a result of its durability, simplicity, and similarity to other civilian medical auto-injectors (I.E. The EPI-PEN) the **DUODOTE™** kits are being deployed into civilian medical arenas as well. The **DUODOTE™** kits are particularly useful during “dirty” or “hot zone” medical care because no IV is needed.

The **DUODOTE™**, as well as other similar kits, may be available to ACEMSS Personnel and other responders through ACEMSS, civil defense authorities, FEMA sponsored groups, the military, or other agencies in a time of crisis or in response to increased terrorism threat assessments.

II. INDICATIONS

DUODOTE™: Any patient who is symptomatic from suspected exposure to a nerve agent, organophosphate poisoning, or similar toxin.

The Use of the **DUODOTE™** Kit is especially desirable in hazardous environments, as they can be given through clothes and NBC Suits.

Dose

Adults: **DUODOTE™:** Administer up to three **DUODOTE™** IM as needed.
CANA: Administer a single CANA kit IM as needed.

Children: **DUODOTE™:** A single **DUODOTE™** injector can be given IM to children over 50 pounds.

Infants: The adult-size **DUODOTE™** injector should not be given to infants.

NOTE WELL: The above limitations are due to the 2-PAM Chloride component of the **DUODOTE™** KIT. FURTHER (APPROPRIATE) DOSES OF ATROPINE ARE PERMITTED WITHIN THE BOUNDS OF THE ACEMSS STANDING WRITTEN ORDERS OR MEDICAL DIRECTION.

III. CONTRAINDICATIONS:

None in the Nerve Agent / Organophosphate casualty except as noted above.

IV. PROCEDURE:

Who May Use the DUODOTE™ Kit?

ACEMSS personnel may self-administer ("Self Aid") the **DUODOTE™** kit if exposure to a nerve agent, organophosphate, or similar toxin is suspected. A responder's **DUODOTE™** kit may be administered by another responder if the first responder is unable to do so himself ("Buddy Aid"). Regardless, a responder should never use his/her own **DUODOTE™** kit on a patient.

DUODOTE™ Kit should only be administered to non-responders (patients) by a Paramedic or other appropriately trained responder.

Administration of auto-injectors:

DUODOTE™: The **DUODOTE™** is a single injector; the procedure is essentially the same as for an individual MARK I Injector, ATROPEN, EPIPEN, or similar auto-injectors.

To use the auto-injector:

1. Remove **DUODOTE™** kit from protective pouch. Hold unit in dominant/strong hand by its "body".
2. Keep GREEN tip pointed down. This is the "needle" end of the auto-injector.
3. **REMOVE THE GRAY "SAFETY" CAP.** If the gray safety cap is in place, the auto injector will not fire.
4. Choose the location to inject. It should be a large muscle mass, the outer thigh is the most common site. Remove any wallets, pocket guides, or other potential obstructions. The **DUODOTE™** should be able to deploy through a couple layers of clothes.
5. Grasp the unit and position the green tip of the injector on victim's outer thigh at an approximately 90 degree angle.
6. Push firmly until auto-injector fires.
7. Hold in place for 10 seconds to ensure Atropine has been properly delivered
8. Remove the **DUODOTE™** auto injector and inspect for the (now visible) needle from the green tip. If the needle is not visible, the auto injector has not fired. Make sure the gray safety cap is removed and repeat the process.
9. Once fired, bend the needle back onto the auto-injector, place in pouch, and keep with patient so other medical personnel know it has been administered.
10. Complete evacuation and decontamination procedures. Re-evaluate for need of further intervention.

V. NEEDLE DISPOSAL

Be careful handling used auto-injector units because communicable diseases such as hepatitis and HIV can be spread through accidental needle sticks. The usual procedure to reduce the chance of accidental needle sticks is to bend the needle back against a hard surface at a 180-degree angle and replace into the packaging

Note: Generally, medical protocols recommend that all sharps (needles) be placed in a sharps container for proper disposal to protect workers from exposures to blood borne illnesses. Because needle stick injuries are a major cause of these exposures, it is important to recognize that there are work practices and engineering controls that help prevent needle sticks in environments outside of a hospital, clinical laboratory, or research laboratory. According to CFR 1910.1030 (d)(2)(vii) through 1910.1030 (d)(2)(vii)(B), contaminated sharps can be bent if the employer can demonstrate that no alternative is feasible or that such action is required by a specific medical or dental procedure. The **DUODOTE™** kit will be used primarily in areas outside of hospitals, clinical or research laboratories. It is prudent and a required procedure (i.e., using a one-handed technique) to bend the needle from the **DUODOTE™** kit to permanently blunt the exposed sharp until they can be disposed of properly.

VI. OTHER CONCERNS:

The **DUODOTE™** Kit should be protected from temperatures below 32 degrees F. It may be necessary to carry next to body to keep warm.

Providers may hold **DUODOTE™** kit administration if Atropine and/or 2-Pam Chloride being administered by other routes, methods, or preparations.

Use of the DUODOTE™ Kit is not a substitute for decontamination and use of proper protective gear. Individuals should not rely solely upon agents such as atropine and 2-Pam Chloride to provide complete protection from chemical nerve agents and insecticide poisoning. Primary protection against exposure to chemical nerve agents and insecticide poisoning is the wearing of protective garments, including masks designed specifically for this use.

The DuoDote™ Auto-Injector is intended as an initial treatment of the symptoms of organophosphorus insecticide or nerve agent poisonings; definitive medical care should be sought immediately.

Evacuation and decontamination procedures should be undertaken as soon as possible. Medical Personnel assisting evacuated victims of nerve agent poisoning should avoid contaminating themselves by exposure to the victim's clothing.

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DUODOTE™ AUTO-INJECTOR KIT

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