



ANTIVENOM REACTIONS ALGORITHM

Treatment Algorithm - Antivenom Reactions



DO NOT DELAY EPINEPHRINE IF ANAPHYLAXIS SUSPECTED!

Early signs of anaphylaxis after AV:

- Sudden spike in HR and/or drop in BP
- Pale, cool, diaphoretic skin
- Altered mental status or syncope
- Wheezing, angioedema, dyspnea, hypoxia
- Severe or persistent vomiting/diarrhea

Epinephrine FIRST, Epinephrine FAST:

- 1:1000 Epi - IM (lateral thigh) q5 min + IV fluids
- IM Dose: Adult: 0.5 mg; Pediatric: 0.01 mg/kg.
- 1:10,000 Epi by IV/IO per protocols (if needed)
- Once stable, H1/H2 antihistamines + steroids

COMMUNICATION PLAN:

Call DOD ADVISOR (+1-833-238-7756) ASAP.
Request toxicology consult for suspected EARs.
DO NOT DELAY ANTIVENOM. MEDEVAC ≥ ROLE 2.



UNSTABLE SNAKEBITES:

If a snakebite patient is unstable, antivenom administration is the priority even if anaphylaxis occurs. Epinephrine is the pretreatment to prevent EARs, and once given should reduce the risk of additional EARs substantially for up to 48 hours. Resume AV when stabilized.

Early Adverse Reaction (EAR) to antivenom suspected during or after administration

Dry Cough (Observe)

NOTE - Dry cough is often the first sign of a reaction, but treatment NOT needed unless it progresses.

No treatment needed for dry cough alone, assess for Respiratory signs, GI signs, and Skin/Mucosal signs --> treat them if found.

- Rule out respiratory signs: No new onset wheezing, dyspnea, hypoxia, etc
- Check for GI & Skin/Mucosal signs: Treat if present (see Mild Early Reactions below)

Airway / breathing issues found on exam?

GI or Skin/Mucosal Signs?

Mild Early Reactions

CONSIDER SLOWER INFUSION / GREATER DILUTION

↑ DILUTION OF ANTIVENOM or ↓ RATE OF INFUSION
Diluting AV in larger volume fluid and slowing rate of infusion can reduce EARs. Double volume or halve the rate; continue infusion.

Skin / Mucosal Only

Itching; hives/rash; flushing; sweating

- **Tx H1 Antihistamines:** Diphenhydramine
• 25 mg - 50 mg IVP (single dose adult)
- **Tx H2 Antihistamines:** Famotidine (Pepcid)
• 20 mg - 40 mg IVP (single dose adult)

Gastrointestinal Only

Nausea +/- vomiting, diarrhea.

- **Tx Antiemetics:** Ondansetron 4 - 8 mg IV or PO (Oral Disintegrating Tablets). Repeat as needed as per protocols.
- Typically responds to antiemetics, if severe/intractable rule out anaphylaxis.

No improvement, but NO anaphylaxis and ABCs still stable?

Skin / Mucosal Only

- **Tx** If no improvement or significant worsening but no signs of anaphylaxis:
• **Corticosteroids:** Methylprednisolone 125 mg IVP (single dose)

Gastrointestinal Only

- **Tx H1 Antihistamines:** Diphenhydramine 25 - 50 mg IV. Wait ~30 min for effect. Repeat as needed as per protocols, consider IV antihistamine if no effect.
- **Tx H2 Antihistamines:** Famotidine (Pepcid) • 20 mg - 40 mg IVP (single dose adult)

If symptoms continue or worsen, consider IM 1:1000 epinephrine

- **Tx Give 1:1000 epinephrine via IM inj (lateral thigh)**
- IM dose: Adult: 0.5 mg; Pediatric: 0.01 mg/kg.

Switch to anaphylaxis pathway & contact DoD ADVISOR if no improvement.

Severe Early Reactions Anaphylaxis

PAUSE ANTIVENOM INFUSION, TREAT REACTION

Pause AV until reaction treated: Pause antivenom, treat anaphylaxis. Once stabilized, double the fluid volume AND halve the rate of administration to resume antivenom.

ANAPHYLAXIS TREATMENT: FIRST 3 MINUTES

- **Tx Give 1:1000 epinephrine via IM inj (lateral thigh)**
- IM dose: Adult: 0.5 mg; Pediatric: 0.01 mg/kg.
- **Tx After 1st dose IM epi onboard, give IV fluid bolus**
- Initial fluid bolus 10 - 20 cc/kg (1 - 2 liters up front).
- Dual large bore IV lines ideal, place 2nd line if needed.

Recheck vitals 3 min after epi, if no improvement:

- **Tx Repeat IM epinephrine (1:1000 epi in lateral thigh)**
- Repeat q3 - 5 mins until improvement noted

If no improvement OR unstable patient with urgent need for additional antivenom, consider IV epinephrine (drip / push):

- If trained provider, clinical need, & protocols allow:
• **Tx Consider IV epinephrine (1:10,000 epi IV infusion, 1:100,000 IV push dose, "dirty epi drip" etc...)**

Repeat epinephrine, fluids, and support ABCs until improvement

Once patient stabilized, consider adjunct treatments!

- **Tx Corticosteroids:** Methylprednisolone (Solu-Medrol)
• 125 mg IVP (single dose adult)
- **Tx H1 Antihistamines:** Diphenhydramine (Benadryl)
• 25 mg - 50 mg IVP (single dose adult)
- **Tx H2 Antihistamines:** Famotidine (Pepcid)
• 20 mg - 40 mg IVP (single dose adult)

Call DOD ADVISOR (+1-833-238-7756) ASAP. Request toxicology consult for advice regarding management of early adverse reactions to antivenom.