



Bites/Envenomations

Approval: Troy M. Falck, MD – Medical Director

Effective: 06/01/2024

Approval: John Poland – Executive Director

Next Review: 01/2027

Important Caveats

General

- Ensure the scene is safe. Attempt to identify what type of animal/reptile/insect the bite or sting is from (transport with the pt is not recommended). If safe to do so, a digital photograph is preferred for identification purposes (include the head, tail & any distinctive markings). Avoid the head & fangs of pit vipers as they are capable of envenomation even when dead.
- Venomous & mammal bites to the face, tongue, mouth & neck or direct stings to the tongue & mouth are imminent airway emergencies & will need to be addressed early.

Spider/Centipede Bites or Bee/Wasp/Scorpion/Ant Stings

- Bites from brown recluse, hobo & other spiders in the sicariidae family may cause a painless bite with tissue necrosis & clotting disorders developing over several days with little to no immediate symptoms. Brown recluse spiders are not native to California & are very rare. There is no current antivenom for this class of spider.
- Black widow spider bites cause diaphoresis, severe cramping & pain in the abdomen, groin, back & legs.
- Scorpion stings may cause pain & red welt at the sting site as well as uncontrolled muscle jerking, pain, eye twitching, hypotension & increased salivation.
- While very rare, severe reactions to black widow spider bites & some scorpion stings may require antivenom.
- Centipede bites may cause pain, minor bleeding & red welt at the sting site. First aid treatment is usually sufficient.
- Bee, wasp & ant stings may cause pain, minor bleeding & red welt at the sting site. First aid treatment is usually sufficient. Pts with history of reaction or who have multiple stings are at higher risk for anaphylaxis.

Snakebite - Venomous

- Bites from pit vipers & others in the crotalinae family are hemotoxic & cytotoxic & may cause pain, localized tissue destruction & edema. Oral paresthesia or metallic taste in the mouth may represent systemic toxicity. Hypotension may be due to fluid loss as a result of edema & usually resolves with antivenom. However, it may be due to the venom itself if no significant edema is noted.
- Bites from coral snakes & others in the elapid family, are neurotoxic & lack the impressive signs of envenomation of pit vipers, but may cause neuromuscular weakness & rapid respiratory depression/failure.
- If a snake bite was from an exotic pet or zoo animal (e.g. coral, cobra, krait, mojave), neurologic &/or respiratory depression may precede local reaction, observe closely for mental status change, respiratory depression, convulsions or paralysis.
- If bite/envenomation is from an exotic species, contact base/modified base hospital early as they may need to consult with poison control for specific antivenom.
- Pre-alert receiving hospital of probable need for antivenom if moderate to severe venomous snake bite is noted.

Dog/Cat/Other Mammals/Human Bites

- Human bites have higher infection rates than animal bites due to normal mouth bacteria.
- Consider risk for rabies, tetanus & other infections, especially in cat & other carnivore bites.
- Concern must be given for bleeding, infection & wound healing complications in patients with significant health history &/or extremes of age.

See page 2 for treatment of bites/envenomations



Bites/Envenomations

BLS

- Assess ABC's, manage airway & assist ventilations as necessary
- Assess V/S including SpO₂ (**DO NOT** apply BP cuff to snakebite extremity)
- O₂ at appropriate rate if hypoxemic (SpO₂ <94%)
- If bite/sting is in an extremity, consider **LOOSELY** immobilizing/splinting injury in a position of comfort at or slightly above heart level for pain control purposes
- Remove constrictive clothing/jewelry/bands
- Clean wound site & control bleeding
- Monitor for anaphylaxis - refer to Allergic Reaction/Anaphylaxis protocol (M-1 or M-1P) if necessary
- Immediate rapid transport should occur for venomous snake bites &/or anaphylaxis related to bites/stings

Spider/Centipede Bites or Bee/Wasp/Scorpion/Ant Stings

- If necessary, remove stinger by scraping with a straight edge (like edge of a tongue blade) - do not squeeze or attempt to pick stinger from skin as this may express more venom from the venom sack
- Apply ice for pain if needed

Snakebite - Venomous

- **DO NOT** cut or slice wound or use suction on wound to remove venom
- **DO NOT** apply ice
- **DO NOT** apply tourniquets or lymphatic constriction wraps/banding
- Document time of bite
- Mark margin of swelling/redness, including time

Dog/Cat/Other Mammals/ Human Bites

- Apply ice for pain if needed
- If uncontrolled hemorrhage, refer to Hemorrhage protocol (T-8)

ALS

- Cardiac monitor
- Advanced airway if necessary
- Consider IV/IO NS TKO (**DO NOT** establish IV/IO in snakebite extremity)
 - Adult: may bolus up to 1000 mL
 - Pediatric: may bolus 20 mL/kg

Pain management necessary?

Go to Pain Management Protocol (M-8 or M-8P)

Monitor & reassess