





Bites and Envenomation – Land

Injury

CRITERIA

Known or suspected bites/stings by venomous or non-venomous animal, insect, or snake based on physical findings. All bite/sting patients should be transported to the hospital.

PROTOCOL

EMR	Follow <i>General – Universal Patient Care/Initial Patient Contact protocol</i> .	EMR
EMR	Remove all rings, bracelets, or constricting items on the injured extremity. Mark inflammation boundaries and time, if known.	EMR
	If allergic reaction with urticaria, itching, stomach cramps, or anaphylaxis with respiratory distress or hypotension, go to <i>Medical – Allergic Reaction/Anaphylaxis protocol</i> .	
<u>Insect Stings/Ticks/Spider Bites</u>		
EMT	Remove stinger if present. Do not squeeze stinger. Scrape it away with the edge of a flat surface (e.g., a credit card). Apply ice packs, elevate above heart if possible.	EMT
EMT	Remove a tick by grasping the body with a tweezers behind the head with a steady but not forceful upward pull until the tick is released from the skin. Retain the tick for identification in a small container.	EMT
I	For black widow bites with severe signs and symptoms (seizures or muscle spasms), administer <i>Lorazepam (Ativan) 0.5 mg up to maximum of 2 mg IV/IM/IO</i> and repeat dose in five minutes if seizure activity continues up to a <i>maximum total dose of 4 mg</i> . or <i>Midazolam (Versed) 1.0 mg IV/IM/IO</i> followed by <i>1 mg every 2 minutes</i> until seizure activity stops up to a <i>maximum total dose of 5 mg</i> . or <i>Midazolam (Versed) 2 mg IN</i> repeated as necessary up to a <i>maximum total dose of 4 mg IN</i> .	I
I	Consider <i>General - Pain Control protocol</i> .	I



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<u>Snake Bites</u>		
EMT	Clean the wound with soap and water or antiseptic. DO NOT apply ice, tourniquet, suction, or lance the wound. Immobilize or splint the wound and keep it lower than the heart if possible. Monitor closely for hypotension. Take photo of the reptile if possible. Do not bring reptile to the ED.	EMT
A	If hypotensive, administer up to 0.9% Normal Saline IV/IO 20 ml/kg fluid bolus and reassess.	A
I	If nausea/vomiting, administer Ondansetron (Zofran) 4mg IV/IM	I
MC	For non-native reptiles or serious envenomation the patient may need to be transported to a hospital where the appropriate anti-venom is available.	MC
I	Consider <i>General – Pain Control Protocol</i> .	I
<u>Human/Animal/Rodent Bites</u>		
EMR	Anyone bitten by a raccoon, skunk, fox, coyote, bat or other mammal, whose rabies immunization cannot be determined and which cannot be quarantined, needs immediate medical attention. Animal Control should be contacted for wild animal or significant pet bites. Anyone bitten by a human/animal/rodent should have an up to date tetanus immunization.	EMR
EMT	Control minor bleeding and clean the wound with soap and water or antiseptic. Dress with dry sterile dressing. If wounding is severe, consider <i>General - Trauma protocol</i> . Anyone with greater than superficial wounds to the face, hands or other small appendages, those who might be immuno-compromised or whose wounds would appear to require stitches, should be seen by a physician.	EMT

PEARLS

- 🚨 Human bites have higher infection rates than animal bites due to normal mouth bacteria.
- 🚨 Cat bites may progress to infection rapidly due to specific bacteria in their mouths. Consider risk of rabies.
- 🚨 Carnivore bites (such as dogs) have potential for progression to infection and risk of Rabies exposure.
- Venomous snakes in this area are generally of the pit viper family: rattlesnake, copperhead, cottonmouth water moccasin. Coral snake bites are rare. The amount of envenomation is variable.
- Life-threatening snake bites are unusual, if not rare. Only if the patient shows clear signs of envenomation in the field (fang marks, pain/edema beyond bite site, weakness, diaphoresis, nausea/vomiting, paresthesia, shock) are there serious risks to life or limb. The prehospital goal is to transport the patient promptly and calmly to the nearest appropriate medical facility and obtain a history including type of snake, if possible.



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- Black widow spider bites tend to be minimally painful at first, but over a few hours patients develop severe muscular pain and abdominal rigidity.
- Brown recluse spider bites are minimally painful, but progress to tissue necrosis over the course of a few days.