These Guidelines Expire May 27th, 2022

North Carolina Poison Control (NCPC) 1-800-222-1222 Guidelines for Treatment of Snake Bites

A. Initial Treatment

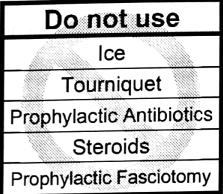
- 1) Local wound care and tetanus immunization if indicated.
- 2) Wound measurement: see Page 2 for further details.
- 3) Elevate and extend arm or leg. Remove jewelry.
- 4) Do not apply tourniquet, constrictive clothing or wrap.
- 5) Consider 20cc/kg LR bolus with possible maintenance infusion.
- 6) Observe at least 6 hrs for upper, 8 hrs for lower extremity bites.

B. Laboratories

- 1) Copperhead bites with only mild swelling and no clinical evidence of coagulopathy (no bleeding/excessive bruising): no routine labs
- 2) For all other including unknown pit viper bites in NC: PT/INR, fibrinogen (if it is not a send out) and CBC at least 6 hrs after bite (unless critically ill)
- 3) Some patients require recheck of PT, fibrinogen and platelets 72 hours after last antivenom dose.

C. Antivenom (Caution: Potential for Allergic Reaction)

- 1) Used in patients with moderate or worse swelling, pain and/or significant systemic symptoms.
- 2) CroFab®
 - a) Use cautiously in patients who have previously received sheep serum products; are hypersensitive to pineapples, papayas, papain, or latex; have asthma, or are on β-blockers.
 - b) Dissolve 4 vials (18ml NS each) of CroFab® in 250cc NS; use 125cc NS for pts wt <15kg.
- 3) Anavip®
 - a) Caution in pts who have previously received horse serum products; have asthma or are on β-blockers.
 b) Dissolve 10 vials (10ml NS each) of Anavip[®] in 250 cc NS; use 125cc NS for pts wt <15kg.
- 4) Start infusion at 10 cc/hr, tripling the rate every 3 minutes if patient tolerating infusion; goal is to give entire dose over 1 hour if patient tolerates infusion.
- 5) Halt infusion for hypotension, bronchospasm, or rash. Stabilize and then call NCPC. Most CroFab® patients (90+%) can tolerate antivenom at a lower infusion rate after steroids & antihistamines.
- 6) Progressive swelling usually requires treatment with more antivenom; abnormal labs may require tx.
- 7) Strongly recommend observing at least 4 hours after antivenom finishes; longer (6+ hours) for
- rattlesnake bites and any patients with laboratory abnormalities
- D. Examine for possible compartment syndrome (rarely develops); if capillary refill normal, distal sensation good and pain proportional to physical findings then compartment syndrome not likely.
 - 1) If compartment syndrome not present, elevate extremity above heart:
 - a) Arm elevator using posterior mold splint elevated using very loose stockinette from IV pole
 - b) Leg elevator using posterior mold splint elevated with orthopedic elevator.
 - Keep extremity above heart in <u>relative extension</u> (minimal flexion; <45°).
 - Avoid anything constricting around the extremity.
 - 4) If compartment syndrome (very rare) is a possibility:
 - a) We recommend immediately discussing with a NCPC toxicologist.
 - b) Patient will need antivenom administration emergently.
 - c) Compartment pressures should be measured emergently.
- E. Inpatient Treatment and Follow up information
 - Record how far swelling has progressed and circumferential measurements hourly for the first 3 hours and thereafter every 2-4 hours at these sites (see illustrations).
 - 2) Additional doses of antivenom may be required based on swelling/clinical findings.
 - 3) Scheduled maintenance antivenom vials not usually necessary; PRN dosing preferred.
 - 4) Rare patients treated with antivenom require PT/INR, fibrinogen and platelets 72 hrs after treatment.
 - 5) Patient home phone number is required for home follow up by NCPC.
 - 6) A discharge instructional sheet (English and Spanish) is available for your use upon request.
- F. Prior to discharge, review amount of swelling. Consider calling NCPC to discuss esp. if whole hand or foot.



Fax Sheets

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treating physician depending on the patient's individual needs.

This Guideline is a suggested guideline

These Guidelines Expire May 27th, 2022 North Carolina Poison Control 1-800-222-1222 Guideline for Monitoring of Snake Bites-Foot/Leg

G. Wound Measurement

- 1) Mark edema edge to monitor for progression
- 2) Assess ability to move toes/ankle
- 3) Groin tenderness should be noted.
- 4) The lower extremity should also be marked with ink as indicated in the diagram below
- 5) The tape measure should be wrapped loosely around the marked site to measure.
- 6) Circumferential measurements in centimeters (cm) should be recorded (see example right).

Area	Time			
	Arrival	:	:	:
Foot				
Ankle				
Calf				
Thigh				
Groin				
tenderness? Yes/No				

H. Frequency of Measurement

- 1) Mark any erythema or edema edge to monitor progression; monitor swelling tightness.
- 2) Circumferential measurements and assessment of edema amount/progression should be made:
 - a) Upon presentation and hourly for the first 3 hours.
 - b) If antivenom administered, one hour after administration and then every 2 to 3 hours.
 - c) After swelling appears to stop, measure every 3 to 4 hours.
- Circumferential measurements are a guide to determining progression; no metric is 100% accurate.

I. Expected course of swelling following envenomation

- For a Foot bite, the patient might have an increase in swelling of thigh but should have a decrease in the swelling of foot and ankle if properly elevated above the heart in relative extension (<45 degrees flexion).
- 2) If swelling continues to increase in the extremity, contact North Carolina Poison Control.
 - a) Treatment with more antivenom may be required.
 - b) The extremity may need additional elevation or re-positioning.
- 3) Erythema, bruising and mild skin discoloration near the bite is occasionally seen.
- Although rare, compartment syndrome does occur -- symptoms include:
 - a) Severe pain not well controlled by medication.
 - b) Poor capillary refill of envenomed extremity.
 - c) Severe ecchymosis/cyanosis of envenomed extremity.
 - d) Loss of peripheral sensation of envenomed extremity.
 - e) Call NCPC immediately to discuss with a Toxicologist if this is suspected.
- Lower extremity envenomations may benefit from additional observation time and pediatric lower extremity envenomations should be considered for overnight observation.

