

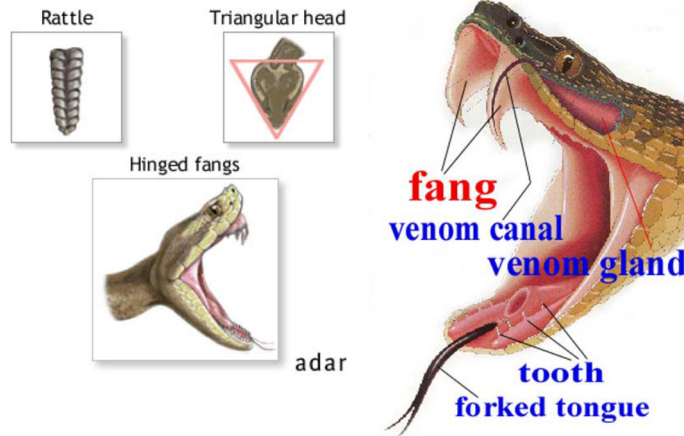
Bites & Stings - Dr. Hiwa

Nonpoisonous snake

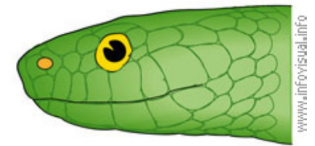
- Round head
- Round eyes
- No fangs

Poisonous snake

- Triangular head
- Elliptical eyes
- Has fangs
- Double tail rattle



HEAD OF A SNAKE



LATERAL VIEW



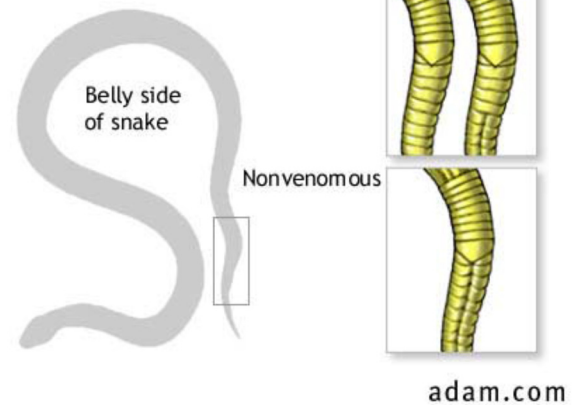
UPPER VIEW



LOWER VIEW

Venoms

- The venoms of poisonous snakes consist of enzymatic complex
- Neurotoxic, hemorrhagic, thrombogenic, hemolytic, cytotoxic, antifibrinolytic, and anticoagulant effects.
- Most venoms contain hyaluronidase, which enhances the rapid spread of venom by way of the superficial lymphatic.
- There may be considerable variation in the venom effect.
- Neurotoxic features such as muscle cramping, fasciculation, weakness, and respiratory paralysis
- Or hemolytic characteristics may predominate, depending on the snake.



Envenomation

- The snake injects venom into the subcutaneous tissue, which is absorbed by capillaries and lymphatics

FIRST AIDS

Tourniquet

- Application of a tourniquet
- The tourniquet should be applied loosely to obstruct only venous and lymphatic flow.
- The tourniquet is not released once applied and may be left in place during the 30 min
- The tourniquet may be removed
 1. After definitive treatment has been instituted
 2. The patient is not in shock
 3. IVF started

Incision

- Incision and suction for 30 min may be beneficial if accomplished within 30 minutes after snakebite.
- When two fang marks are seen, the depth of the venom injection is generally considered to be one-third of the distance between the fang marks.
- Incisions made proximal to the bite are contraindicated.
- The incision should be longitudinal and not cruciate.

Suction

- Suction is appropriate if done within 1 h of the time of the bite.
- Incision and suction for 30 min may be beneficial if accomplished within 30 minutes after snakebite.

Surgical excision

- The average snakebite does not require surgical excision.
- This procedure is reserved for the most severe envenomations.
- It has been shown that wide excision of the entire area around the snakebite within 1 h of the time of injection can remove most of the venom.
- Excision of the fang marks including skin and subcutaneous tissue should be considered in
 - severe bites
 - in patients known to be allergic to horse serum
 - who are seen within 1 h of the bite

STAGES

Grading Envenomation (*Most bites will have reached a final staging within 12 h*)

0—No envenomation

- One or more fang marks; minimal pain; less than 1 inch of surrounding edema and erythema at 12 hours; no systemic involvement.

I—Minimal envenomation

- Fang marks; moderate to severe pain; 1 to 5 inches of surrounding edema and erythema in the first 12 hours after bite; systemic involvement usually not present

II—Moderate envenomation

- Fang marks; severe pain; 6 to 12 inches of surrounding edema and erythema in first 12 hours after bite; possible systemic involvement including nausea, vomiting, giddiness, shock, or neurotoxic symptoms.

III—Severe envenomation

- Fang marks; severe pain; more than 12 inches of surrounding edema and erythema usually present and may include generalized petechiae and ecchymosis.

IV—Very severe envenomation

- Systemic involvement is always present, and symptoms may include renal failure, blood-tinged secretions, coma, and death; local edema may ext

Snake Bite Do's

- Remove yourself or victim from risk of a second bite.
- Use the Sawyer Extractor Pump immediately. You can leave the pump on for up to four hours. The first few minutes are the most important for venom removal.
- Calm the patient. Virtually all snakebites are successfully treated in the US.
- Keep the extremity at heart level or lower. In most cases severe complications DO NOT occur until several hours post-bite. If the victim must be transported or walked out, make wise use of 1st few hrs.
- Limit liquid intake because the body pumps fluids to the bite site, increasing painful swelling. Avoid alcohol, which increases metabolism and impairs judgment.
- Remember that most bites, even from poisonous snakes, are not fatal. Panic can increase the danger to the victim by inducing rapid heartbeat.

Snake Bite Don'ts

- Don't excite the victim or even allow the victim to walk if it can be avoided. Doing so will increase blood circulation, speeding the spread of the venom beyond the area of the bite.
- Don't use the small rubber suction cups found in some first aid kits because they are too weak to remove any significant amount of venom.
- Don't cut an "X" or suck out venom with the mouth. This is ineffective and increases trauma in the area of the wound.
- Don't apply a tourniquet, constricting band, or "Australian Wrap," unless you are well-trained in its use.
- Don't risk a second bite by chasing or trying to capture the snake. The antivenin for pit viper bites is the same for all species so identification is rarely necessary. Emergency room personnel will know from the type of bite (punctured versus chewed tissue) whether the attacker was a pit viper or coral snake.
- We do not recommend the use of cold compresses.

Rx

- Supportive
- Soul Rx ANTIVENUM

Antivenin

- Smaller larger dose
- The injection of antivenin locally around the bite is not advised
- given by intravenous drip in 500 mL normal saline solution or 5% glucose solution
- Grade 0 or I envenomation; no antivenin
- Grade II may require 3 or 4 ampules
- Grade III usually requires 5 to 15 ampules.
- Grade IV If symptoms increase, several ampules may be required during the first 2 h. Proper dosage can be estimated by observing the clinical signs and symptoms. If systemic manifestations are severe, antivenin should be given rapidly, by intravenous drip, in large doses.

Animal Bites

- Bites are a particular type of puncture wound,
- Associated with high incidence of infection, from mouth organisms
- From carnivores; as dogs; small sharp incised wounds
- From Herbivores; horses; severe tissue crushing
- Dog bites; tissue avulsion ,punctured wounds from U& L teeth,+contusion of tissues
- In Rt antirabies indicated

Human bites

- Avulsion of pieces of nose or ear
- Knuckles bite <
fist >> Radiology
MPJ > explored,trimm
Ing & antibiotics
- More dangerous
 - Motivation
 - Bacteria in mouth fusiform, anaerobic types

Scorpion Sting

Features

- The sting causes intense pain with few other local symptoms.
- Hyperesthesia persists at the site so that a light tap will reproduce the intense pain.
- Other symptoms reflect the neurotoxic nature of the venom, including anxiety, blurred vision, temporary blindness, wandering eye movements, dyspnea, wheezing, dysphagia, involuntary urination and defecation, opisthotonos, somatic muscular contractions, resembling seizures, hypertension, supraventricular tachyarrhythmias, fever also are seen.

Rx

- These stings have been of little significance in adults and are satisfactorily treated with cold compresses
- Narcotics should not be used because they aggravate the neurotoxic effects of the venom
- If there is severe pain, analgesia & local xylocain infiltration

Important: In any age features of hypocalcemia is an indication for Rx

- Small children with signs of envenomation should be admitted to the hospital and monitored.
- No special diagnostic tests are indicated.
- Treatment consists of airway management for excessive secretions, sedation, and treatment of arrhythmias and hypertension if indicated.
- Calcium gluconate has been used to treat muscle spasms

Spider Sting

Venom features

- Venom is primarily neurotoxic in action and centers on the spinal cord.
- After a bite by the black widow spider, the majority of patients experience
 - pain within 30 min
 - small wheal with an area of erythema appears.
 - nausea and vomiting occur in approximately one-third of patients
 - dyspnea may develop

Features

- The time of onset of symptoms after the bite is 30 min to 6 h.
- The severe symptoms last from 24 to 48 h.
- Generalized muscle spasm is the most prominent physical finding.
- Cramping muscle spasms occur in the thighs, lumbar region, abdomen, or thorax.
- Priapism and ejaculation have been reported.
- Most patients recover within 24 h

Treatment consists of

- Narcotics for the relief of pain and a muscle relaxant for relief of spasm.
- Antivenin is available, it is rarely required.
- The antivenin is prepared from horse serum and is administered intramuscularly after appropriate skin tests.

Hospitalization

- Hospitalization may be required for
 - the young
 - the elderly
 - patients with significant chronic diseases
 - those with severe signs and symptoms of envenomation

Bee Sting

- Venom sac remained in the body of victim
- Causes pain, itching, anaphylaxis in previously stung person
- B > B
- Analgesia
- Antihistamine, corticosteroid

Wasp Sting

- Cause pain, itching, local edema, reaction, anaphylaxis in previously stung person
- Rx
 - Analgesia, local pad
 - V > W
 - Rx of anaphylaxis if any