Suspected Venomous Snakebites

Venomous snakebites, although uncommon in the United States, should be treated as a true emergency. In the United States, all venomous snakes are in the same family (*Crotalid*) and therefore all have the same venom. For this reason, in the US, it is **NOT Necessary to Identify the snake**.

The crotalid family includes *rattlesnakes*, *copperheads* and *water-moccasins* (commonly called the *cottonmouth*). ***Rattlesnakes*** cause most snakebites and related fatalities. The venom of these snakes can be classified as being *hemotoxic* (attacking tissue and blood) and *neurotoxic* (damaging or destroying nerve tissue). Although more than 50% of all venomous snakebites are considered "dry bites", where the snake only bites but does not release any venom, it is important to recognize the signs of a venomous snakebite.

Signs of a Venomous Snakebite

- *Fang marks*
- *Within 30 minutes:*
  - *Bite area turns black & blue*
  - *Redness & swelling*
  - *Swelling migrating towards the heart*
- *Severe pain*
- *Changes in Level of Responsiveness*
- *Cool, clammy, pale skin*
- *Nausea or vomiting*
- *Shortness of breath*

Signs & symptoms range from mild local reactions to life-threatening systemic reactions, depending on the species and size of the snake involved; the location of the bite(s); the volume of venom injected; and the age, size, and health of the victim. Most pit viper bites are painful within five minutes and soon display local swelling.

Children under age 12 are more likely to suffer significantly because they receive a larger envenomation relative to body size.

FIRST AID

Do **NOT** cut, suck, use a tourniquet, apply ice, or elevate the bite, as this is ineffective and may be harmful.

- Keep patient **calm**, travel slowly and rest frequently
- **Irrigate** the wound *without additives* (NO iodine)
- **Immobilize** limb ***below the heart*** & apply a **WIDE** pressure dressing (*Australian Wrap**)
- **Call 9-1-1** or evacuate the patient to the nearest hospital

*AUSTRALIAN WRAP: As soon as possible, apply a broad pressure bandage from below the bite site, upward on the affected limb (starting at the fingers or toes, bandaging upward as far as possible). Leave the tips of the fingers or toes un-bandaged to allow the victim's circulation to be checked. Do not remove pants or trousers, simply bandage over the top of the clothing.

Bandage firmly as for a sprained ankle, but not so tight that circulation is prevented. Continue to bandage upward from the lower portion of the bitten limb. Apply the bandage as far up the limb as possible to compress the lymphatic vessels. It is vital to now apply a splint. Bind a stick or suitable rigid item over the initial bandage to splint the limb. Secure the splint to the bandaged limb by using another bandage, (if another bandage is not available, use clothing strips or similar to bind). It is very important to keep the bitten limb still.

REFERENCES: Australian Venom Research Unit, www.avru.org/taxonomy/term/99
Wilderness Medical Society's *Practice Guidelines for Wilderness Emergency Care*, Guilford, Conn., Falcon Guide, 2006