Snakebite Treatment

Self-Care at Home

Common sense will guide your efforts if you are bitten by a snake or are witness to someone else being bitten. Even a bite from a nonvenomous snake requires excellent wound care. The victim needs a tetanus booster if he or she has not had one within 5 years. Wash the wound with large amounts of soap and water. Inspect the wound for broken teeth or dirt.

Take the following measures:

- Prevent a second bite or a second victim. Snakes can continue to bite and inject venom with successive bites until they run out of venom.
- Identify or be able to describe the snake, but only if it can be done without significant risk for a second bite or a second victim.
- Safely and rapidly transport the victim to an emergency medical facility unless the snake has positively been identified as harmless (nonvenomous). Remember, misidentification could be fatal. A bite without initial symptoms can still be dangerous or even fatal.
- Provide emergency medical care within the limits of your training.
  - Remove constricting items on the victim, such as rings or other jewelry, which could cut off blood flow if the bite area swells.
  - If you are in a remote area in which transport to an emergency medical facility will be prolonged, you should apply a splint to the affected limb. If you do apply a splint, remember to make sure the wound does not swell enough to make your splint a tourniquet, cutting off the blood flow. Check to make sure toes and fingers are still pink and warm, that the limb is not going numb, and that pain is not getting worse.
  - If you have been bitten by a dangerous elapid and have no major local wound effects, you may apply a pressure immobilizer. This technique is mainly used for Australian elapids or sea snakes. Wrap a bandage at the bite site and...
up the extremity with a pressure at which you would wrap a sprained ankle. Then immobilize the extremity with a splint, with the same precautions concerning limiting blood flow. This technique may help prevent life-threatening systemic effects of venom, but may also worsen local damage at the wound site if significant symptoms are present there.

- While applying mechanical suction (such as with a Sawyer Extractor) has been recommended by many authorities in the past, it is highly unlikely that it will remove any significant amount of venom, and it is possible that suction could actually increase local tissue damage.

- The two guiding principles for care often conflict during evacuation from remote areas.

  - First, the victim should get to an emergency care facility as quickly as possible because antivenom (medicine to counteract the poisonous effects of the snake's venom) could be life-saving.
  - Second, the affected limb should be used as little as possible to delay absorption of the venom.

- A number of old first aid techniques have fallen out of favor. Medical research supports the following warnings:

  - Do NOT cut and suck. Cutting into the bite site can damage underlying organs, increase the risk of infection, and does not result in venom removal.
  - Do NOT use ice. Ice does not deactivate the venom and can cause frostbite.
  - Do NOT use electric shocks. The shocks are not effective and could cause burns or electrical problems to the heart.
  - Do NOT use alcohol. Alcohol may deaden the pain, but it also makes the local blood vessels bigger, which can increase venom absorption.
  - Do NOT use tourniquets or constriction bands. These have not been proven effective, may cause increased tissue damage, and could cost the victim a limb.

**Medical Treatment**

The doctor treats life-threatening conditions first. A victim with difficulty breathing may need a tube placed in his or her throat and a ventilator machine used to help with breathing. People who are in shock require intravenous fluids and possibly other medicines to maintain blood flow to vital organs.
• The doctor gives antivenom to victims with significant symptoms. This therapy can be life saving or limb saving. Antivenom can occasionally also cause allergic reactions, however, or even anaphylactic shock, a life-threatening type of shock requiring immediate medical treatment with epinephrine and other medications.
• Antivenom can also cause serum sickness within 5-10 days of therapy. Serum sickness causes fevers, joint aches, itching, swollen lymph nodes, and fatigue, but it is not life threatening.
• Even victims without significant symptoms need to be monitored for several hours, and some people need to be admitted to the hospital for overnight observation.
• The doctor cleans the wound and looks for broken fangs or dirt. A tetanus shot is required if the victim has not had one within 5 years. Some wounds may require antibiotics to prevent infection.
• Rarely, the doctor may need to consult a surgeon if there is evidence of compartment syndrome. If treatment with limb elevation and medicines fails, the surgeon may need to cut through the skin into the affected compartment, a procedure called a fasciotomy. This procedure can relieve the increased limb swelling and pressure, potentially saving the arm or leg.


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