

Rattlesnakes strike again in San Diego, bites more toxic

June 5 2012, By Michelle Brubaker

(Phys.org) -- Each year, approximately 8,000 Americans are bitten by venomous snakes. On average, 800 or so bites occur annually in California, home to an abundance of snake species, but only one family is native and venomous: rattlesnakes.

“This is the time of year when we see a rise in snake bites,” said Richard Clark, MD, director of the Division of Medical Toxicology at UC San Diego Health System.

Toxin levels in rattler venom vary from year to year and season to season, but typically venom is weaker in winter and stronger in summer because snakes are more active, fighting for food and territory.

“We really don’t know why the venom is becoming increasingly potent. Some speculate that with the modern world encroaching on nature it could be survival of the fittest. Perhaps only the strongest, most venomous snakes survive,” said Clark. “The anti-venom is costly at around \$2,500 a vial. Patients may need a series of anti-venom shots and insurance does not always cover the treatment.”

The majority of the injuries are on hands, fingers and feet, and the most typical result is swelling and tissue damage that looks like blisters or frost bite.

Symptoms of severe bites can include: extreme pain at the location of the bite, nausea and sometimes diarrhea, followed by swelling in the

mouth and throat, making it difficult to breathe. Within minutes, victims can get lightheaded, collapse and go into shock.

“Many of our snake bite victims show symptoms of severe weakness, trouble breathing and low blood pressure,” said Clark who is also medical director for the California Poison Control System (CPCS), San Diego Division. “For anyone who suspects a bite, their next move should be to a hospital emergency department.”

With some rattlesnake bites, no venom is injected into the wound, but because it is impossible to know if venom has or has not been injected, getting medical treatment quickly is important.

What to Do?

- If bitten by a snake, go to the emergency department or a nearby health care facility immediately.
- There are potential risks to applying ice, using a tourniquet or suctioning the wound. For the direct application of ice, the main concern is the risk of a frostbite-like injury. If tourniquets are applied too tightly, they will decrease blood flow to the affected area and might also concentrate the venom, increasing local tissue damage. Suctioning the wound is ineffective in removing venom because the venom is usually injected too deeply into tissue. When people use their mouths to suck the bite site, they can actually make things worse by introducing harmful bacteria.
- If in a remote area when bitten by a rattler, first immobilize the wounded area, especially for a hand or arm bite, then proceed slowly to a vehicle. Moving slowly will keep the heart rate low and help prevent the venom from spreading.
- If bitten on the leg or foot, it might be necessary to use that limb to get to the vehicle, unless someone can carry the victim. If walking is necessary, it is very important to move slowly. Drive to the nearest

phone, call 911 and wait for assistance. If there is no phone nearby, proceed to the nearest hospital.

The California Poison Control System (CPCS) is available at 800-222-1222, 24 hours a day, seven days a week for immediate expert help and information in case of poison exposure, including snake bites.

Provided by University of California - San Diego

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