

SNAKE BITE TREATMENT

3000 bites are reported annually. 300-500 hospitalisations. 2-3 deaths annually.

Average time to death is 12 hours. The urban myth that if you're bitten in the yard, you'll die before you can walk from your chook pen back to the house, is a load of rubbish!

Basic overview

There are five genus of snakes that will harm us (seriously) - Browns, Blacks, Adders, Tigers and Taipans.

All snake venom is made up of huge proteins (like egg white). When bitten, a snake injects some venom into the meat of your limb (NOT into your blood).

This venom cannot be absorbed into the bloodstream from the bite site.

It travels in a fluid transport system in your body called the lymphatic system (not the bloodstream).

Now this fluid (lymph) is moved differently to blood.

Your heart pumps blood around, so even when you are lying dead still, your blood still circulates around the body. Lymph fluid is different. It moves around with physical muscle movement, like bending your arm, bending knees, wriggling fingers and toes, walking/exercise etc.

Now here's the thing... Lymph fluid becomes blood after these lymph vessels converge to form one of two large vessels (lymphatic trunks) which are connected to veins at the base of the neck.

Back to the snake bite site...

When bitten, the venom has been injected into this lymph fluid (which makes up the bulk of the water in your tissues).

The only way that the venom can get into your bloodstream, is to be moved from the bite site in the lymphatic vessels. The only way to do this is to physically move the limbs that were bitten.

Stay still!!! Venom can't move if the victim doesn't move. **Stay still!!!**

Remember, people are not bitten into their bloodstream.

In the 1980's a technique called "Pressure immobilisation bandaging" was developed to further retard venom movement. It completely stops venom/lymph transport toward the bloodstream.

A firm roll bandage is applied directly over the bite site. Don't wash the area, or remove clothes from the bite site.

TECHNIQUE

Three steps: KEEP THEM STILL!

Step 1

Apply a bandage over the bite site, to an area about 10cm above and below the bite.

Step 2

Then using another elastic roller bandage, apply a firm wrap from fingers/toes all the way to the armpit/groin.

The bandage needs to be firm, but not so tight that it causes fingers or toes to turn purple or white. About the tension of a sprain bandage.

If you have a texta, mark the site of the bite on the bandage (or if not, dab a small smear of dirt/dust there).

Step 3

Splint the limb so the patient can't walk or bend the limb.

DO NOT...

- Cut, incise or suck the venom.
- EVER use a tourniquet
- Remove the shirt or pants - just bandage over the top of clothing.
(Remember movement, like wriggling out of a shirt or pants, causes venom movement).

DO NOT try to catch, kill or identify the snake!!! This is important.

In hospital we no longer need to know the type of snake; it doesn't change the treatment.

5 years ago we would do a test on the bite, blood or urine to identify the snake, so the correct antivenom can be used. BUT NOW... we don't do this. Our new antivenom neutralises the venoms of all the 5 listed snake genus, so it doesn't matter what snake bit the patient.

Read that again - **one injection for all snakes!**

Polyvalent is our one shot wonder, stocked in all hospitals, so most hospitals no longer stock specific antivenoms.

Australian snakes tend to have 3 main effects in differing degrees:

- Bleeding - internally and bruising.
- Muscles paralysed causing difficulty talking, moving & breathing.
- Pain (with some snakes, severe muscle pain in the limb, and days later the bite site can break down, forming a nasty wound).

Allergy to snakes is rarer than winning Lotto twice.

Final tips: Not all bitten people are envenomated (injected with venom) and only those starting to show symptoms above are given antivenom.

Did I mention to stay still..?

~Rob Timmings (Amos)

Rob runs a medical/nursing education business, teaching nurses, doctors and paramedics.

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