

# Disease Information Sheets

## Snake bites



### Introduction

There are many species of venomous and non-venomous snakes found worldwide. The vast majority of snake species represent no threat to humans, however the consequences of an inoculative bite by a venomous species vary from local swelling and pain (Two-striped night adder) to respiratory failure and death within 5 hours (African banded cobra).

### How common is it?

An estimated 5 million people are bitten each year, with at least 100,000 deaths and around three times as many amputations and other permanent disabilities each year. Victims are mainly women, children and farmers living in poor rural communities where health systems are not well equipped and medical resources are sparse.

### Are travellers and/or expat workers at risk?

**Yes.** Not every snake is poisonous, nor do poisonous snakes eject venom every time they bite. Effects of bites vary depending on the age, health and fitness of the patient and also the characteristics of the individual snake.

### What is the illness?

Signs and symptoms associated with the injection of venom may include swelling, bruising and blistering around the bite site; tissue death and/or gangrene around the bite site; dizziness, confusion or loss of consciousness; bleeding; breathing difficulties and paralysis. Timings are very variable, but generally symptoms manifest between 5 minutes and 10 hours post-bite, and death may occur between 5 and 15-hours post-bite without medical intervention. Rarely respiratory failure may occur after just 30 minutes following cobra and mamba bites; death from viper bites is usually more delayed - up to 48 hours after the envenomation.

### How is it prevented?

- Education
  - ▶ Know the local species, where they live and rest, times (daily and seasonal) of particular risk and association with climatic extremes (e.g. after floods)
  - ▶ Ensure avoidance of traditional, ineffective or harmful first aid treatments
- Equipment
  - ▶ Wear protective clothing, especially on the feet and legs - stout boots, trousers, gaiters
  - ▶ Carry a torch at night
  - ▶ Do not sleep in open or poorly sealed accommodation
  - ▶ If sleeping on the ground is unavoidable, a well tucked-in mosquito net or, in a tent, a sealed ground sheet should be used – a hammock or camp bed is preferable
- Behaviour
  - ▶ Avoid areas where snakes are likely to rest or hunt - particularly in vegetation, under logs, rocks, tyre piles etc.
  - ▶ Look before you step or reach; stamp your feet as you walk; never corner a snake
  - ▶ Do not handle dead snakes and avoid snake charmers' performances
  - ▶ Impeccable camp hygiene to avoid rodent infestation attracting snakes
  - ▶ If you surprise a snake, stay calm, move slowly, back away

### How should it be treated in the field?

The most important factor in the management of snakebite is to deliver the patient to a medical facility as rapidly and as safely possible. First aid measures aim to delay the development of life-threatening respiratory paralysis and shock, but should only be taken if they do not delay the transportation of the patient to medical care. Unless the bite was *definitely not* by a neurotoxic cobra or mamba, pressure immobilisation of the entire limb should be used. The patient should not be allowed to walk unless this would severely delay the evacuation.

### Should I carry antivenom?

**Probably not.** Severe allergic reactions are common with antivenom therapy. Its use in the field should only be contemplated where a qualified, equipped and experienced physician is on scene, prepared to manage an anaphylactic reaction (i.e. able to perform advanced resuscitation techniques including intubation and drug therapy). The focus of your safety in the field should be on rapid evacuation - knowing where to go, how, and being able to communicate - as well as preventing being bitten in the first place.

#### NEED MEDICAL ADVICE FOR YOUR WORK OR TRAVEL IN REMOTE AREAS?

Sentinel Consulting provides support services for people travelling and working in remote or resource-poor locations. Services include:

- Pre-travel medical screening and advice
- Risk management including risk assessment, emergency response planning and medical facility inspections
- 24-hour medical support from wilderness specialist doctors
- Operational support including call-ins, incident support and liaison
- Medical bags (prescription and non-prescription drugs) and first aid kits

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