Signs and symptoms of snake bite.

This is a formal medical document I found a couple of years ago – I have added footnotes to explain the technical medical terms – June 2012.

The bite site is usually painless. It may have classical paired fang marks, but this is not the most common picture. Often there are just a few lacerations or scratches, and sometimes these may be painless or go unnoticed. Bruising, bleeding, and local swelling may be present, but significant local tissue destruction is uncommon in Australia.

Regional lymphadenopathy[1] may be marked, even with non-venomous snake bites, and is not by itself an indication for the administration of antivenom. It may contribute to abdominal pain in children.

The usual sequence of systemic symptom development goes something like this:
(<1hr) Headache (an important symptom), irritability, photophobia, nausea, vomiting, diarrhoea, confusion; coagulation abnormalities; occasionally sudden hypotension[2] with loss of consciousness.

(1-3 hrs) Cranial nerve paralysis (ptosis[3], diplopia[4], dysphagia[5] etc), abdominal pain, haemoglobinuria[6], hypertension[7], tachycardia[8], haemmorrhage.

(>3hrs) Limb and respiratory muscle paralysis leading to respiratory failure, peripheral circulatory failure with pallor and cyanosis[9], myoglobinuria[10], eventually death.

This sequence of events is highly variable. Brown snake bites, even apparently trivial ones, have been associated with acute deterioration over a five minute period leading to death. This may occur as soon as 30 minutes to an hour after the original bite. Acute, severe cardiac depression may be the mechanism for sudden death.

Paralysis, when it occurs, usually commences with cranial nerves, then skeletal muscle, then the muscles of respiration. In small children or with highly venomous snake bites it may happen much more quickly.

Major bleeding disturbances are, as mentioned before, rare with Australian snakes, although the development of coagulopathies[11] and a DIC-like[11] picture are relatively common. Thromboctopaenia[11] and haemolysis[11] may occur. Watch for haematuria[12], haemoptysis[13], haematemesis, low bowel haemmorrhage, menorrhagia[14] or haemoglobinuria[11], and remember that about 20% of patients who die after snake bite have cerebral haemmorrhages.

Muscle destruction from myolytic toxins is not uncommon and may not be associated with muscle tenderness; it may lead to renal failure and should be specifically looked for, because early treatment with antivenom will reduce its severity.
Snake bite should always be considered in any case of unexpected confusion or loss of consciousness following outdoor activities in snake country. In Australia, snake venoms alone cause coagulopathy[15], so if present you can rule out other forms of envenomation.

Prognosis depends on the type of snake and the quantity of venom injected. An angry snake and multiple bites is associated with greater venom volumes.

First Aid for Snake Bites:

Do NOT wash the area of the bite!

It is extremely important to retain traces of venom for use with venom identification kits!

Stop lymphatic spread - bandage firmly, splint and immobilise!

The "pressure-immobilisation" technique is currently recommended by the Australian Resuscitation Council, the Royal Australasian College of Surgeons and the Australian and New Zealand College of Anaesthetists.

The lymphatic system is responsible for systemic spread of most venoms. This can be reduced by the application of a firm bandage (as firm as you would put on a sprained ankle) over a folded pad placed over the bitten area. While firm, it should not be so tight that it stops blood flow to the limb or to congests the veins. Start bandaging directly over the bitten area, ensuing that the pressure over the bite is firm and even. If you have enough bandage you can extend towards more central parts of the body, to delay spread of any venom that has already started to move centrally. A pressure dressing should be applied even if the bite is on the victims trunk or torso. Immobility is best attained by application of a splint or sling, using a bandage or whatever to hand to absolutely minimise all limb movement, reassurance and immobilisation (eg, putting the patient on a stretcher). Where possible, bring transportation to the patient (rather then vice versa). Don't allow the victim to walk or move a limb. Walking should be prevented.

The pressure-immobilisation approach is simple, safe and will not cause iatrogenic tissue damage (ie, from incision, injection, freezing or arterial torniquets - all of which are ineffective).

Bites to the head, neck, and back are a special problem - firm pressure should be applied locally if possible.

Removal of the bandage will be associated with rapid systemic spread. Hence ALWAYS wait until the patient is in a fully-equipped medical treatment area before bandage removal.

Do NOT cut or excise the area or apply an arterial torniquet! Both these measures are ineffective and may make the situation worse.

My footnotes:
1 - Swelling of the lymph nodes
2 – Very low blood pressure
3 – Drooping eylid
4 – Double vision
5 - Difficulty in swallowing
6 - Presence of haemoglobin in the urine (no way to tell in the bush)
7 – High blood pressure
8 - Irregular heart rate
9 – The appearance of a blue or purple coloration of the skin
10 - The presence of myoglobin in the urine (no way to tell in the bush)
11 – Really bad but can’t tell in the bush
12 – The presence of red blood cells in the urine
13 - Coughing up of blood
14 – Vaginal bleeding
15 - Any defect in the body's mechanism for coagulation

The lymphatic system is a series of vessels throughout the body that drain fluid from tissues. Bacteria and other microbes are picked up in the lymphatic fluid and trapped inside lymph nodes, where they can be attacked and destroyed by white blood cells.

Good luck, and by the way, at this point there’s no reason not to take up smoking ☺