



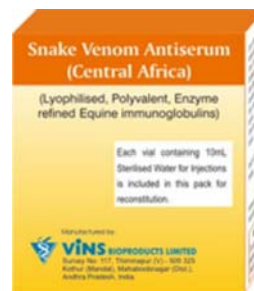
## VINS - Snake Venom Antiserum (Central Africa)

(Lyophilised/Liquid)

### Description

Polyvalent Snake Venom Antiserum (Central Africa) is prepared from hyperimmunised equines against the venoms of the corresponding venomous snakes, namely:

Black Mamba ( <i>Dendroaspis polylepis</i> ) :	0.45 mg
Gaboon Viper ( <i>Bitisgabonica rhinoceros</i> ) :	0.60 mg
Russell's Viper ( <i>Vipera russelli</i> ) :	0.60 mg
Saw-scaled Viper ( <i>Echis carinatus</i> ) :	0.45 mg



Plasma obtained from the hyperimmunised equines is enzyme refined, purified and concentrated. Each mL of the Snake Venom Antiserum (after reconstitution to 10 mL for lyophilised form) neutralises not less than the following quantities of venoms when tested in mice:

Black Mamba 0.45 mg  
 Gaboon Viper 0.60 mg  
 Russell's Viper 0.60 mg  
 Saw scaled Viper 0.45 mg

Snake envenomation is serious and could be life threatening.

The effects produced by the action of snake venoms vary considerably according to the group to which the particular venom belongs. This in turn depends upon the composition of the venom. In principle, the effects produced fall into 2 categories.

1. One causing damage to the nervous system (Neurotoxic), predominating mainly in the elapids, e.g. Black Mamba.
2. One breaking down tissues and destroying the red blood cells (Cytotoxic) induced mainly by the venom of viperid and crotalid snakes. e.g. Gaboon viper, Russell's viper and Saw scaled viper.

However, this must not be taken as an inflexible rule. In case of Black Mamba envenomation, the venom being a protein of low molecular weight, is able to spread extraordinarily rapidly within the bitten tissue. The constitutional symptoms are more prominent than local pain and swelling. General intoxication is soon followed by a sense of creeping paralysis beginning in the legs and ascending to the head by way of trunk. Paralysis of the muscles of the eyelids, staggering gait, in coordination of speech, paralysis of the limbs, drooping of the head and complete paralysis of all the voluntary muscles develop. Nausea and vomiting frequently occur. Breathing gets more and more difficult and finally stops. The death of a victim is usually brought about as a result of respiratory failure or the suspension of cardiac activity.

In cases of viper envenomation (Gaboon viper, Russell's viper and Saw scaled viper) the venom is characterised by a low content of neurotoxins, but large quantities of cytotoxins and these being proteins of high molecular weight, diffuse slowly within the tissues and so they produce at first, severe symptoms of poisoning in the region of the bite. Therefore, local symptoms are prominent and severe. There is great and persistent pain and intensive swelling at the site of bite. The venom of the viper contains several enzymes which may possibly act synergistically to produce shock, spontaneous haemorrhages in the organs and tissues, acute necrosis and death. There is constant and incessant oozing of blood from the site of bite. Sloughing occurs permitting other infections.

## VINS Other Products

[Snake venom antiserum I.P.](#)

[Snake venom antiserum \(African\)](#)

[Snake venom antiserum \(C.Africa\)](#)

[ASVS Echis Ocellatus \(Monovalent\)](#)

[ASVS Naja Kouthia \(Monovalent\)](#)

[ASVS Daboia Russelii \(Monovalent\)](#)

[VINRAB 1000 IU \(Rabies Antiserum\)](#)

[VINRIG 1500 IU \(Rabies Antiserum\)](#)

[Scorpion Venom Antiserum](#)

[Tetanus Antitoxin](#)

[Diphtheria Antitoxin 10000 IU](#)

The venom has a toxic effect on many different types of cells causing destruction of cell membranes. The constitutional symptoms are therefore characterised by haemorrhages both external and internal. Haemorrhages in the abdomen are responsible for pain, tenderness and vomiting. Death is due to heart failure, there is no paralysis.

#### TREATMENT OF SNAKE BITE

##### FIRST AID

1. Keep the patient calm let the patient lie down to ensure that the bitten part is at rest with minimal activity in a well ventilated quiet place.
2. Clean the bitten part by washing with sufficient water with care without disfiguring or defacing bite mark. Apply a broad and firm antiseptic dressing/bandage.
3. Assure the victim and do not let him panic. Getting panic may enhance the circulation of venom in the body.

##### SPECIFIC SERUM TREATMENT

1. Immediate neutralisation of the circulating venom is of utmost importance.
2. For immediate effect, the Snake Venom Antiserum should be injected intravenously as soon as possible after the bite. As a first dose, at least 20 mL of the reconstituted serum should be injected intravenously slowly (1 mL per min.).
3. The second dose should be repeated two hours after the first dose or even earlier, if the symptoms persist. If the symptoms, which vary with different snake venoms, indicate persistence of venom action, further doses should be repeated after every six hours until the symptoms disappear completely.
4. At present, there is no simple method to measure the amount of circulating venom in the body, therefore the antivenin dose cannot be accurately recommended. It has been found that the clotting time returns to normal about two hours after the neutralisation of venom, therefore repeated testing of clotting time after the antivenom therapy is necessary. Close monitoring of the patient's condition with urine output, blood pressure, pulse, respiration and urea and electrolyte estimations must be done. Local pain and necrosis at the site of bite may need attention, but is usually not very serious except in special circumstances such as a bite on the digit which can become gangrenous.
5. First Aid treatment should never be relaxed even when the serum is administered. Intravenous injection of Snake Venom Antiserum in equine serum sensitive subjects can produce very severe serum reactions and even acute anaphylaxis. Further care should be taken to prevent these reactions.

##### ASSOCIATED TREATMENTS

1. In case of Gaboon, Russell's and Saw-scaled viper envenomation, sedatives such as small doses of barbiturate and/or analgesics (e.g. aspirin) may be given to relieve nervousness and pain.
2. In case of syncope / shock, strychnine, pituitrin or other general stimulants like coramine may be used. The use of corticosteroids would help minimise serum reaction and other minor allergic reactions.
3. Treatment with antibiotics may also be given to combat local sepsis. In severely envenomated cases, infusion of a large amount of physiological saline or transfusion of blood or plasma may not only bring substantial relief but may be life saving in borderline cases.
4. Cases of respiratory paralysis should be treated by tracheostomy and artificial respiration.

##### DIRECTIONS FOR USE RECONSTITUTION OF LYOPHILISED ANTIVENOM

1. Draw 10 mL of Sterilised Water for Injections in a sterile syringe.
2. Transfer the sterile water from the syringe to the vial and shake well till the contents dissolve.
3. Let the vial stand for one minute for the serum to clear. The reconstituted serum will become crystal- clear and ready for injection. Froth if any, should be left in the vial.
4. For the second and subsequent injections, you will have more time to dissolve the lyophilised serum. For these add 10 mL Sterilised Water for Injections to the serum vial and rotate it between the palms of your hands until the serum is fully dissolved and let the vial stand for serum to clear.

##### STORAGE

Store the freeze dried vial in a cool, dark place, protected from light and avoid exposure to excessive heat. reconstituted liquid should neither be stored for long nor be allowed to freeze.

10 mL liquid vials should be stored between 2°C & 8°C.

DO NOT FREEZE.

##### PREVENTION OF SERUM REACTION

Before injection of Snake Venom Antiserum it is necessary to enquire from the patient:

1. Whether he has received any other antisera injection (eg. tetanus antitoxin or diphtheria antitoxin) before.
  2. Whether there is personal or familial history of allergy, i.e. asthma, eczema or drug allergy.
- The sensitivity of the patient to Snake Venom Antiserum is tested by injecting subcutaneously 0.1 mL of this 1:10 diluted serum. The patient should be observed for 30 minutes for local and general reactions. If the test dose shows either local reaction such as flare or general anaphylactic reaction such as pallor, sweating, nausea, vomiting, urticaria, and fall of blood pressure, these should be countered immediately by intramuscular injection of 1 mL of 1:1000 adrenaline and with

corticosteroids which should be always kept handy. A negative test is not an absolute guarantee for the absence of immediate allergic type reaction.

In allergic or sensitive patients, it is better to inject the Snake Venom Anti serum under cover of antihistamine such as antistaine (100 mg.) and hydrocortisone (100 mg.) intramuscularly 15 to 30 minutes before the administration of Snake Venom Antiserum.

The administration of adrenaline and hydrocortisone may be repeated if necessary.

When symptoms of snakebite are severe it may not be advisable to wait for 30 minutes to observe reactions to test-dose of serum. In such cases it may be better to inject 1 mL of 1:1000 adrenaline intramuscularly at the same time as the serum in order to lessen the risk of anaphylaxis. Half the dose of adrenaline may be repeated 15 minutes later if necessary.

#### **Presentation**

Snake Venom Antiserum (Central Africa) is supplied as freeze dried powder in glass vials along with 10mL Sterilised Water for injections. The Snake Venom Antiserum is also supplied as 10 mL liquid in glass vials.

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