

Polyvalent Snake Antivenom

PRODUCT INFORMATION

APPROVED NAME

Polyvalent Snake Antivenom (Australia - Papua New Guinea)

AUST R 31849

DESCRIPTION

Polyvalent Snake Antivenom contains antibodies to the venom of the following snakes:

King brown snake	(<i>Pseudechis australis</i>)
Tiger snake	(<i>Notechis scutatus</i>)
Brown snake	(<i>Pseudonaja textilis</i>)
Death adder	(<i>Acanthophis antarcticus</i>)
Taipan	(<i>Oxyuranus scutellatus</i>).

The antivenom is prepared from the plasma of horses immunised with the venom of the snakes. The amount of antivenom has been standardised to neutralise *in vitro* the average yield of venom from each snake. The minimum amount of each antivenom is as follows:

King brown snake antivenom	18,000 units
Taipan antivenom	12,000 units
Death adder antivenom	6,000 units
Tiger snake antivenom	3,000 units
Brown snake antivenom	1,000 units
Total	40,000 units

The product also contains phenol as a preservative, sodium chloride and other equine plasma proteins in an aqueous solution.

PHARMACOLOGY

The venoms of some snakes from Australia and Papua New Guinea contain neurotoxins which can cause respiratory paralysis, and coagulants (except in the death adder) which convert prothrombin to thrombin, which in turn produces a secondary aflorinogenaemia with resultant haemorrhage. The venoms of some snakes also contain a myolytic toxin which can cause renal failure.

Although the amount of antivenom in each dose of Polyvalent Snake Antivenom will neutralise the average yield of venom from each snake *in vitro*, the actual amount needed in clinical practice may be considerably more, particularly if treatment is delayed and the effects of the venom are already evident.

INDICATIONS

For the treatment of patients in Papua New Guinea and in all Australian states except Victoria and Tasmania who exhibit manifestations of systemic snake envenoming and the snake has not been definitely identified. In Tasmania, Tiger Snake Antivenom should be used rather than polyvalent antivenom whilst in Victoria a combination of Tiger Snake Antivenom and Brown Snake Antivenom is the preferred treatment.

Polyvalent Snake Antivenom should not be used when the snake has been identified, as appropriate monovalent antivenom provides similar neutralisation of the venom without introducing the larger amounts of equine protein present in the polyvalent product.

CONTRAINDICATIONS

There are no absolute contraindications, but the product should not be used unless there is clear evidence of systemic envenoming with the potential for serious toxic effects.

PRECAUTIONS

When medicinal products prepared from animal plasma are administered, infectious diseases due to the transmission of infective agents cannot be totally excluded. This applies to pathogens of hitherto unknown origin. This possibility must always be considered and should be conveyed, whenever possible, to patients who may receive the product. Historically there have been no known recorded cases of transmission of viruses by this product.

In many cases of snake bite, little venom is injected and significant systemic envenoming does not occur. If a significant amount of venom has been introduced, clinical or laboratory evidence of poisoning is usually present within 2 hours but can be delayed, particularly if efficient first aid has been instituted with immobilisation and a firm crepe bandage.

Removal of the bandage and splint will often precipitate the systemic effects of the poison in patients who have been bitten.

Suspected cases of snake bite should be observed for at least 6 hours after being bitten or after removal of the bandage and definite cases for at least 12 hours, preferably in an intensive care setting. Such patients must be regularly monitored for signs of neuromuscular impairment, coagulopathy, myolysis and other abnormalities.

A diagnosis of systemic envenoming should be based on clinical and, where possible, laboratory evidence.

The venom detection kits can be helpful in detecting and identifying specific venom at the bite site or in urine and can enable the selection of the appropriate monovalent antivenom. Tests of blood are less reliable.

As this product is prepared from animal serum, severe allergic reactions may follow, including anaphylactic shock. A syringe already loaded with 1:1,000 adrenaline must be available during antivenom therapy. Anaphylactoid reactions may be more likely to occur in those who are atopic or who have previously received equine serum. This would include patients who have previously received equine Tetanus Antitoxin (prior to 1974 in Australia). Some authorities have advocated premedication with subcutaneous adrenaline and intravenous antihistamine, particularly in those patients who are known to be at risk, but such use is controversial.

The results of skin testing to determine patients who may have an allergic reaction are not satisfactory and should not be undertaken. **Antivenoms may bind complement and produce an anaphylactoid reaction in patients who have had no previous contact with equine protein. The risk of such a reaction can be reduced by adequate dilution of antivenom (1:10 in adults and 1:5 in small children) prior to infusion (also see DOSAGE AND ADMINISTRATION).**

Symptoms and signs of anaphylaxis include pallor, tachycardia, urticaria, angioedema, cough and dyspnoea due to laryngeal oedema or bronchospasm. Nausea, vomiting and abdominal pain are less common. Typical signs of shock may develop in 1 to 2 minutes and the patient may convulse, become unresponsive and die.

Should anaphylaxis occur, cease administration of antivenom, administer oxygen and inject adrenaline 1:1,000 intramuscularly at the following dose rates: small adults (<50 kg) 0.25 mL, average adults (50 - 100 kg) 0.5 mL, large adults (>100 kg) 0.75 mL. For children (to age 12) use 1:10,000 and inject 0.25 mL per year of age. If there is little or no response to the initial intramuscular dose

CONSUMER MEDICINE INFORMATION

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WHAT IS IN THIS LEAFLET?

This leaflet contains information about Polyvalent Snake Antivenom. Please read it carefully and keep it for future reference. The information in this leaflet is only a summary and is not intended to replace advice from your doctor.

Please consult your doctor or pharmacist if you have any comments or questions.

WHAT IS POLYVALENT SNAKE ANTIVENOM?

Polyvalent Snake Antivenom (Australia - Papua New Guinea) is an injection designed to help neutralise the effect of the poison (venom) of most snakes that are encountered in Australia and in Papua New Guinea. The antivenom is produced by immunising horses against the venoms of the king brown snake, taipan, death adder, tiger snake and brown snake and then collecting that part of the horse's blood which neutralises the poisons of these snakes. The antivenom for all these snakes is purified and made into an injection for people who may need it after being bitten by a poisonous snake. The polyvalent antivenom is also effective if you are bitten by other snakes such as the copperhead or black snake.

WHEN IS POLYVALENT SNAKE ANTIVENOM USED?

Polyvalent Snake Antivenom is given to those people who become ill after being bitten by an unidentified snake, except in Victoria and Tasmania. If the type of snake is known, it is much better to use the appropriate antivenom for that snake; the size of the injection will be smaller and less likely to cause side effects. Polyvalent Snake Antivenom may also be used when the appropriate antivenom for the identified snake is unavailable.

Not every one who is bitten needs to have the antivenom as some people have only very mild effects from the bite or none at all. However, some people can become extremely ill after being bitten and in these people it is essential to use an appropriate amount of antivenom to counteract the effects of the poison. Several people die in Australia each year from inadequately treated snake bite.

WHO SHOULD NOT HAVE THE ANTIVENOM?

As Polyvalent Snake Antivenom consists of antivenom to all the local snakes it is a very large injection. It should not be used if the type of snake which caused the bite is known, as the specific antivenom for that snake will be just as effective, and less likely to cause side effects than the large volume Polyvalent Snake Antivenom injection.

As there are sometimes unpleasant and dangerous reactions to the antivenom (see **SIDE EFFECTS OF POLYVALENT SNAKE ANTIVENOM**), it should not be given to people who have no effects from the bite. However as Polyvalent Snake Antivenom can be an emergency life-saving product, it should not be withheld from anyone who needs it.

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