

**PRESCRIPTION ANIMAL REMEDY
KEEP OUT OF REACH OF CHILDREN
FOR ANIMAL TREATMENT ONLY**

**NORTHERN SERUMS
Canine Paralysis Tick Antiserum**

Contains >500 ANTITOXIN UNITS/ML
AND 0.0017mL/mL MIXED ISOMERS OF CRESOL AS A PRESERVATIVE

**FOR THE USE IN TREATMENT OF SYMPTOMS FROM IXODES
HOLOCYCLUS ENVENOMATION**

PRODUCT DESCRIPTION

The antiserum is produced from the blood of dogs that have been hyperimmunised to the dog paralysis tick, *Ixodes Holocyclus*. The serum is processed to concentrate the globulins and to remove some of the unwanted canine blood products without effecting the stability of the antiserum. A harmless cloudiness may appear in the antiserum with time due to the presence of omega fatty acids. Each batch of serum has a titre test of >500 antitoxin units/mL and is clinically tested on animals effected by ixodes toxin prior to release.

SYMPTOMS

Ixodes Holocyclus toxin is multifaceted producing a variety of symptoms. In the dog especially an ascending musculo skeletal paralysis and cardio pulmonary effects can be seen separately or together in varying degrees. These effects should be described separately as follows:

GAIT

1. Normal
2. Ataxic but walking
3. Stands occasionally
4. Can't stand
5. Can't lift head

RESPIRATION

- A. Apparently normal
- B. Respiratory rate increase
- C. Dyspnoea and/or cough
- D. Dyspnoea and/or retching
- E. Cyanosis and/or expiratory grunt

Respiratory symptoms are more life threatening than gait effects so treatment and prognosis should be determined by this.

DIRECTIONS FOR USE

PRECAUTIONS

Reactions to antiserum can occur in all species usually in the first few minutes of an I.V. injection. The majority of these are related to the Bezold-Jarisch reflex and present as apnoea, bradycardia, pale mucous membranes and weakness/depression. To a lesser extent anaphylaxis is seen as tachycardia, injected mucous membranes, anxiety, restlessness, cutaneous swellings and gastrointestinal disturbances. Bezold-Jarisch reflex reactions can be greatly reduced by premedication with 0.1mg/kg I.V. of atropine. Anaphylaxis can be treated with 1:1000 I.V. or I.M. adrenaline 0.01ml/kg. NORTHERN SERUMS paralysis tick antiserum is very effective at reversing the symptoms of paralysis produced by *Ixodes Holocyclus* toxin. Cardiopulmonary effects are reversible but often need supportive therapies. Animals with advanced pulmonary oedema or necrosis are very likely to die whatever the treatment.

ANTISERUM DOSE AND ADMINISTRATION

The preferred route of administration of antiserum is intravenous with caution used when treating breeds and species of animals more likely to react to canine serum. As a general rule antiserum is warmed, may be diluted with normal saline and given SLOWLY I.V. Premedication with cortisone and antihistamines is recommended. Clinical experience suggests the following guide:

Dogs: 15cc I.V. standard dose; 10cc for very small breeds. Dose should be increased to 20 or 25cc in cases where dogs have not been previously exposed to ticks, have multiple ticks, are severely affected or in very hot weather.

Cats: 10cc I.V. or 5cc I.V. and 5cc subcutaneous or 10cc intraperitoneal.

Calves: 10cc intramuscular (2cc in 5 different places). Move to the closest shade and leave in the paddock with the mother. Long acting antibiotics and tick wash. Recoveries are reduced when transported long distances.

Adult Cattle: 15-20cc intramuscular. Response is not as good as in calves. Symptoms of tick paralysis are often gone in 2-3 days but adult cattle often develop a "downer cow" type syndrome which can take weeks of careful nursing to reverse.

Horses and Foals: 30-40cc I.V. Large doses are traditionally given to horses due to the higher value of these animals and the need to get equines to their feet as rapidly as possible to reduce the risk of secondary pneumonias.

Other Species: Antiserum has been successfully used on a variety of species using the above dose rates and routes of administration as a guide.

NURSING AND SUPPORTIVE THERAPY

STRESS AND ANXIETY must be avoided or eliminated. Kennel in a cool, dark, quiet area or return animal to home environment if practical. Sedation with acepromazine 0.1 mg/kg (with caution) or light anaesthesia with pentobarbitone are commonly used.

TEMPERATURE Reduce body temperature if above normal and keep patient in a cool environment.

ANTIBIOTICS Broad spectrum antibiotics should be used in all animals suffering with tick paralysis for the prevention of pneumonia.

FOOD AND WATER Nil by mouth due to possible laryngeal paralysis, megaoesophagus and vomiting. Antiemetics can be used to stop vomiting. I.V. fluids only for severe dehydration and at low doses.

Diuretics can be considered in the treatment of pulmonary oedema but not in a dehydrated animal. Bowel stasis and urinary retention are often seen and bladders may have to be regularly expressed. Animals can manage pulmonary dysfunction better if kept in sternal recumbancy.

A response to therapy is expected within 24 hours and even severe cases are looking better in 48 hours. If the patient responds briefly and then further declines, look for more ticks. Acaracidal washes and/or clipping may be needed.

If no response to initial treatment is noticed, more serum may be given but the original diagnosis and the possibility of concurrent diseases should be considered.

Avoid strenuous exercise and reinfestation with ticks for four weeks after treatment.

Withholding period: Nil

STORAGE

Store between 2°C and 8°C. REFRIGERATE. DO NOT FREEZE.

DISPOSAL

To dispose of the empty container, wrap in paper and place in the garbage.

PRESENTATION

NORTHERN SERUMS Canine Paralysis Tick Antiserum is supplied to the Veterinary profession only. The product is available in 20 mL and 50 mL bottles.

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