
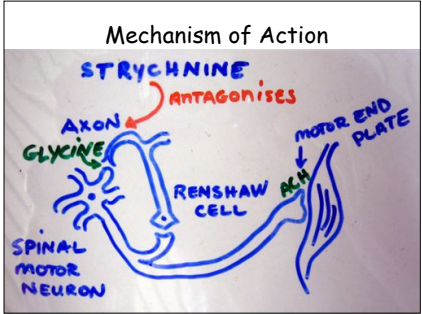


CNS Excitation Toxicities

STRYCHNINE (aka nux vomica)

Infrequent poisonings (in NZ) as no longer sold here as a rodenticide, still available overseas
 Nux vomica is used as a stimulant in Ketovet®
 Dog - LD₅₀ 0.5 mg/kg

- Muscle rigidity
- Sawhorse stance
- Opisthotonos
- Violent seizures (stimulated)

CNS Excitation Toxicities


STRYCHNINE TREATMENT

Would you, should you, give an emetic? Why or Why not?

- Anticonvulsants
- Symptomatic and supportive care
- Dark, quiet environment
- Acidify the urine EXCEPT if acidotic

CNS Excitation Toxicities

CHOCOLATE



- methylxanthine
- theobromine, caffeine
- chronotropic and inotropic cardiac effects
- causes diuresis (like coffee)
- dark chocolate more toxic than milk chocolate

COMPOUND	COMMON METHXYLXANTHINES	AMOUNT CHOCOLATE TO HARM
White chocolate	0.04 mg/gm	14.5g 20g (1oz)
Milk chocolate	2.28 mg/gm	250gm 1kg
Dark sweet choc	0.8 mg/gm	100gm 400gm
Dark baking choc	15.52 mg/gm	26gm 144gm
Cocoa beans	21.18 mg/gm	26gm 199gm
Cocoa powder	28.21 mg/gm - 2.52 mg/gcup	

chocolate calculator

CNS Excitation Toxicities

CHOCOLATE

- Hyperactive, restless, vomiting
- Hyperthermia
- Urinary incontinence
- Hyperreflexive
- Cardiac arrhythmias (tachycardia)
- Ataxia, seizures and coma



CNS Excitation Toxicities

CHOCOLATE TREATMENT

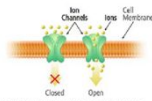
- Decontaminate - Repeat Activated Charcoal
- Anticonvulsants
- Symptomatic and supportive care
- Premature Ventricular Contractions - lignocaine
- Tachycardia - beta blockers if persist

CNS Excitation Toxicities

RYEGRASS STAGGERS

SOURCE

- Mycotoxin - Lolitrem B (Neotyphodium lolii)
- Ryegrass pastures (Lolium perenne)



How water and ions move through pores in the cell membrane. The diagram shows the ion channels in a closed state (marked with a red X) and an open state (marked with a red arrow). The myosin motor is shown in a closed state (marked with a red X) and an open state (marked with a red arrow).

CNS Excitation Toxicities

RYEGRASS STAGGERS

Clinical Signs

- Trembling, twitching of muscles
- Head nodding, jerky movements
- Incoordination, ataxia
- Severe - opisthotonus

CNS Excitation Toxicities

RYEGRASS STAGGERS

Treatment

- Symptomatic
- Provide feed, water and shelter if severe
- Most deaths are from misadventure so avoid "traps" in paddocks, e.g. dams

Is it poisoned?

- History: It is spring time. A Linton Camp dog owner is away. Neighbor looking after dog discovers it is missing. A search of the neighborhood finds the dog in a distressed state. Rogan is a 5 yo male, mixed breed dog, weighing 33kg.
- On physical examination the dog is alert, salivating, and has a TPR of 39.7, 160 bpm, 60 bpm. He is incoordinated and has whole body muscular tremors.
- Neighbor has no idea what the dog has been doing for the past several hours.
- Is it poisoned?
- What are you going to do?

Is it poisoned?

- Rogan 5 yo male mixed breed dog, 33kg.
- dog is alert, salivating, TPR of 39.7, 160 bpm, 60 bpm, incoordinated, whole body muscular tremors.
- While you begin treatment the dog starts convulsing.
- What are you going to do now?
- What would be highest on your list of differentials?
