



BELGIAN POISON CENTRE, BRUSSELS, BELGIUM

# ACCIDENTAL POISONING IN DOGS FROM INTRA-RUMINAL MONENSIN DEVICES EXPELLED BY COWS

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## OBJECTIVE

Monensin is an antibiotic produced by *Streptomyces cinnamomensis*. It is used in lactating dairy cattle for control of ketosis as an intraruminal capsule releasing 32.4 g monensin. We report 5 serious cases of accidental poisoning in dogs from expelled capsules.



## CASE REPORT

**CASE 1:** A 32 kg dog ingested 1/10th of the content of a regurgitated Kexxtone® capsule corresponding to 3 grams of monensin. The veterinarian was consulted one week after ingestion. Examination revealed a very ill, tachypnoeic dog with signs of major rhabdomyolysis: CPK 318.305 IU/L, myoglobinuria. The dog was euthanised.

**CASE 2:** While playing with a regurgitated Kexxtone® capsule, a 20 kg dog ingested some content. After 45 minutes, the dog seemed sleepy and the hindquarters were stiffened. The veterinarian failed to provoke vomiting, administered activated charcoal and installed forced diuresis. The dog was discharged the day later. According to the owner he deteriorated after 5 days and died 3 days later in respiratory distress.

**CASE 3:** A 35 kg dog played with a retched Kexxtone® capsule. A day later the dog was severely ill. The veterinarian noticed symptoms of somnolence, hypersalivation, diarrhoea, tachycardia and paresis. The dog was euthanised.

**CASE 4:** A dog ingested an unknown quantity from a Kexxtone® device. A few hours later, the dog vomited and presented hindquarter paresis. He recovered after symptomatic treatment.

**CASE 5:** A 11 kg Border Collie swallowed a small part of the content of a Kexxtone® capsule. Three days later, the dog was presented to the veterinarian with tachycardia, marked dyspnoea, hyperthermia (39.5°C) and myoglobinuria. Despite forced diuresis, he deteriorated and died a few hours later.

## CONCLUSION

Toxic myopathy has been reported in dogs after monensin exposure [1][2]. Kexxtone® capsules retched by treated cows put dogs at risk for severe monensin poisoning. Ingestion of a small amount can lead to rhabdomyolysis and myoglobinuria. Dogs should be kept away from treated animals. At the request of the Belgian Poison Centre, a warning was issued by the competent authorities [3].

## REFERENCES

[1] Condon FP, McKenzie RA. Fatal monensin toxicity in a dog after chewing a bovine intra-ruminal slow-release device. *Australian Veterinary Practitioner* 2002; 32(4):179-80.

[2] Wilson JS. Toxic myopathy in a dog associated with the presence of monensin in dry food. *Can Vet J* 1980; 21(1):30-1.

[3] Intoxicatiegevaar na accidentele opname van Kexxtone® bolus bij honden (december 2015). <http://www.cbip-vet.be/nlgow.php>



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