



Marieke A. Dijkman, Anne A Kan, Irma de Vries  
PhD

Dutch Poisons Information Center, University Medical Center Utrecht  
The Netherlands

m.dijkman-2@umcutrecht.nl

## VETERINARY CONSULTATIONS AT THE DUTCH POISONS INFORMATION CENTER

### Introduction

The Dutch Poisons Information Center (DPIC) can be contacted 24/7 for queries about acute intoxications. Although the center is originally directed toward human toxicology, veterinarians confronted with a (suspected) intoxicated animal also regularly consult the DPIC for information about toxicity and treatment. In 2015, the DPIC received almost 44.000 enquiries about human and veterinarian cases. Every year, the number of calls from veterinarians increases. The percentage of information requests by veterinarians has risen from 9% in 2009, to 13% in 2015. In this lecture an overview is given of the most frequently encountered toxic agents in animals in 2015 <sup>(1)</sup> as well as a veterinary decontamination guideline <sup>(2)</sup>.

### Methods

All information requests made to the DPIC are registered in a database. This database was analysed retrospectively concerning information requests made by veterinarians in 2015. Data on patient species, type of exposure and product categories were analysed.

### Results

In 2015, the DPIC received 5.418 information requests concerning 5.429 animals exposed to one of more potentially toxic substances. The majority of species concerned were dogs (68%) and cats (24%). Dogs (n=3.938) were commonly exposed to 1) human medication followed by 2) plants, fungi and other (venomous) animals, and 3) food, beverages, and drugs of abuse. Cats (N=1.377) on the other hand, were most commonly exposed to 1) plants, fungi and animals, followed by 2) pesticides and disinfectants, and 3) human medication. The most frequently ingested human medications by dogs and cats were ibuprofen, paracetamol (acetaminophen), contraceptives, and methylphenidate. Plants that were most commonly associated with toxic ingestions were *Vitis vinifera* (the grape) in dogs and *Lilium* species (lily) in cats. The highest scoring pesticides were the insecticides and rodenticides. In the substance category food, beverages, and drugs of abuse more than 50% of all information requests were related to dogs eating chocolate, typically with peak moments in the year around Easter and December.

### Conclusion

Animals can intentionally or un-intentionally be exposed to toxic substances. Management of a (suspected) intoxicated animal always starts with a risk assessment, with the main question whether the animal is exposed to an actual toxic dose. Information regarding the body-weight and the precise name of the potential toxic substance are vital components of a successful information exchange with the DPIC. In case a toxic dose is ingested decontamination measures can be considered. The efficacy of these procedures depends largely on the time passed since ingestion and toxin characteristics. Emesis (table 1) and activated charcoal (table 2) are still the most important decontamination techniques <sup>(1)</sup>. The DPIC developed a decontamination flowchart to assist the veterinarian in deciding which procedure might be of benefit in relation to the type of toxin ingested and the elapsed time after ingestion (fig. 1).

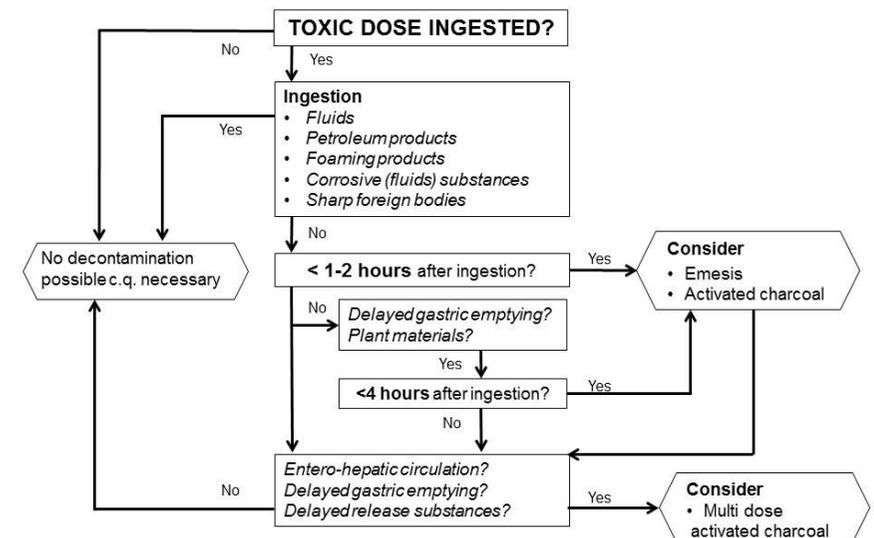


Figure 1: Veterinary decontamination flowchart <sup>(1)</sup>. See also [www.vergiftigingen.info/protocollen](http://www.vergiftigingen.info/protocollen) for the DPIC decontamination protocol.

# COMPANION ANIMAL

## TOXICOLOGY & EMERGENCY TREATMENT

Table 1: Dosing protocol emetics <sup>(1)</sup>.

Species	Emetic	Dose
Dog	apomorphine	0.04-0.08 mg/kg (SC, IM) 0.03-0.04 mg/kg (IV)
Cat	xylazine dexmedetomidine medetomidine	0.66 mg/kg (IM) 0.01-0.02 mg/kg (IM) 0.02-0.04 mg/kg (IM)
Emetic	Antagonize with	
apomorphine	sedation: naloxone vomiting: metoclopramide bradycardia: atropine	0.01-0.04 mg/kg (IV) 0.125-0.25 mg/kg (IM, IV) 0.005-0.05 mg/kg (IV)
xylazine (dex)medetomidine	atipamezole	0.05-0.15 mg/kg (IM or slow IV)

Table 2: Dosing protocol activated charcoal <sup>(1)</sup>.

	Product (form)	Dose
Single dose activated charcoal		
Dog & Cat	Activated charcoal granules (NB: not tablets/capsules)	1-2 g/kg (max 50 gram) once
Multi dose activated charcoal*		
Dog & Cat	Activated charcoal granules (NB: not tablets/capsules)	1-2 g/kg (max 50 gram) once, followed by 0.5 g/kg every 2-6 hours

\* duration and frequency of the therapy is determined by the kinetics of the toxin and the clinical state of the patient

## References

1. Mulder-Spijkerboer HN, Kan AA, Van Velzen AG, Van Riel AJHP, De Vries I. Acute intoxications in humans and animals. Annual report 2015, Dutch Poisons Information Center. [https://www.umcutrecht.nl/Subsites/Nationaal-Vergiftigingen-Informatie-Centrum-\(NVIC\)/Nationaal-Vergiftigingen-Informatie-Centrum-\(NVIC\)](https://www.umcutrecht.nl/Subsites/Nationaal-Vergiftigingen-Informatie-Centrum-(NVIC)/Nationaal-Vergiftigingen-Informatie-Centrum-(NVIC)) (accessed feb, 14, 2016).
2. Kan AA, Dijkman MA, De Vries I, Robben JH. Orale vergiftigingen bij hond en kat. Tijdschr Diergeneeskd. 2016;5,30-5