

## Beware of the risks of poisoning when self-medicating your pet

Administering medicines to a pet without consulting a veterinarian can lead to serious poisoning. Adverse effects due to the misuse of veterinary medicines, or animals being given medicines originally intended for their owners, are regularly reported. To minimise this risk, a veterinary medicinal product should only be administered after the owner has read the package insert or prescription. Furthermore, medicines intended for humans should only be administered to animals if they have been prescribed by a veterinarian.

### Self-medicating your pet is tempting...

It may seem like a good idea to treat your pet without consulting a veterinarian, but only the administration of non-prescription medicines such as certain antiparasitics, or drugs to relieve minor illnesses (e.g. digestive powders for occasional vomiting without any other symptoms), should be considered without systematic medical advice.

Pet owners can buy veterinary medicines from:

- pharmacists, who can sell all types of veterinary medicines, although prescription medicines require a veterinary prescription
- veterinarians, who can sell all types of veterinary medicines for animals they treat or whose supervision and care they are regularly entrusted with
- supermarkets, pet shops and garden centres, which can sell antiparasitics for external treatment, provided that they are not on prescription

However, if they are misused, medicines can be dangerous and poison the treated animal. An analysis of animal poisoning cases reported in the literature [1] or in the veterinary pharmacovigilance database of the French Agency for Veterinary Medicinal Products (ANMV) showed that they often result from improper administration of veterinary medicines, but are also sometimes due to pets being given human medicines initially intended for their owners.



### Poisoning by administration of a medicinal product intended for another animal species

Numerous cases of poisoning due to errors in the administration of veterinary medicines are recorded in the ANMV database. ANSES has already warned about the most common poisonings, in particular, giving cats antiparasitic products containing permethrin, as this species is unable to eliminate this compound from its body. These products are reserved for dogs and just a few drops applied to a cat's skin can be enough to induce serious effects or even death in the most sensitive animals [2,3]. Similarly, antiparasitics containing fipronil intended for dogs and cats should not be given to rabbits, which are highly sensitive to them [4, 5].

As marketing authorisations for veterinary medicinal products are issued for one or more specific animal species, it is important to comply with the instructions regarding the target species. Moreover, genetic mutations within the same animal species mean that some breeds may have a particular sensitivity to certain medicinal products. For example, some collies and related breeds (Shelties, Australian shepherds, Border collies) may be poisoned by the administration of substances belonging to, among others, certain classes of antiparasitics, antidiarrhoeals, antiemetics and tranquillisers, even those intended for dogs. A veterinarian's advice is therefore essential.

### Administration of medicinal products intended for humans: the classic case of paracetamol

The human formulations available in pharmacies are generally unsuitable for treating animals, whose weight is often far less than that of a human being. This can lead to administration of a dose that is toxic or even fatal for the animal. Poisoning is therefore often due to overdose.

In addition, the recommended human dose per kilogram of body weight cannot always be directly transposed to animals, as they may absorb the medicine in a different way. Poisoning is also sometimes due to a lack of awareness of the side effects of certain substances, which can vary depending on the species treated, but also on the breed, age, or any illnesses the animals may be suffering from.

As in humans, analgesics, and in particular paracetamol (the most widely sold active ingredient in French pharmacies), are the products most often used by owners for self-medicating their pets, especially since some commercial paracetamol products for humans are sold without a prescription. However, owners are often unaware of their adverse effects in animals.

Giving paracetamol to a dog or cat can lead to serious poisoning or even death. Paracetamol's toxicity is linked to the inability of these animals to eliminate the compound, because they do not have (cats) or have very few of (dogs and exotic pets such as dwarf rabbits, ferrets or pet birds) the enzymes needed to break it down.

The active ingredient then accumulates in the blood, leading to the onset of adverse effects, mainly anaemia in cats and liver disorders in dogs. In cats, even a very small dose can be fatal.

Other poisonings are linked to an overdose of anti-inflammatory drugs (ibuprofen, ketoprofen, aspirin, diclofenac), which cause digestive, renal and neurological disorders that can lead to coma and death of the animal.

In addition, there have been a few cases of poisoning following the administration of benzodiazepine anxiolytics and tricyclic antidepressants intended for humans, by owners wishing to reduce their pets' anxiety.

Furthermore, some people are tempted to give their pets medicines containing loperamide intended for humans, as this compound is sometimes prescribed for the treatment of diarrhoea in dogs. Nevertheless, great care should be taken when administering loperamide, particularly to collies and related breeds, some of whom carry a genetic mutation that makes them unable to metabolise this substance.

Lastly, the administration of drugs containing vitamin D – which pets rarely need – has also led to cases of poisoning. This administration should be avoided without a veterinary prescription, as an overdose can have dramatic consequences for the animal.

### Precautions to be taken before administering medicinal products to animals

In order to avoid any risk of poisoning, ANSES reiterates that:

- a veterinary medicine should only be given to an animal after the owner has read the package leaflet or prescription, when the medicine has been prescribed by a veterinarian, and this information should be strictly followed, in particular the administration conditions such as the dose, when and how often it should be taken, the route of administration, as well as any contraindications and precautions for use,
- a medicinal product intended for humans may only be given to an animal if prescribed by a veterinarian, in compliance with the details of this prescription, in particular the adjustment of the dosage.

In the event of a suspected error in administering a veterinary or human medicine to an animal, contact a veterinarian or veterinary poison control centre<sup>1</sup> as soon as possible, to enable the risk to the animal to be assessed and determine the action to be taken.

In addition, if an adverse effect is observed following the administration of a veterinary or human medicinal product, it must be reported to the ANMV or the Lyon Pharmacovigilance Centre (<https://pharmacovigilance-anmv.anses.fr>). This will help improve knowledge of veterinary pharmacovigilance and if necessary will enable preventive measures to be taken to avoid further accidents.

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1. National Information Centre for Veterinary Toxicology (CNITV): +33 (0)4 78 87 10 40  
Western France Animal Poison Control Centre (CAPAE OUEST): +33 (0)2 40 68 77 39

## References

- [1]. DHAUSSY C., "Les principaux toxiques pour les animaux de compagnie : enquête auprès de clients du CHUVA et élaboration d'un recueil informatif" [The main toxins for pets: survey of CHUVA clients and compilation of information]. Doctoral thesis in veterinary medicine. 2018.
- [2]. ANSES (2021): Do not treat your cat with antiparasitics for dogs.
- [3]. Vigil'Anses 8 (2019): Antiparasitic products for dogs containing permethrin must not be used for cats.
- [4]. ANSES (2021): Antiparasitics containing fipronil are toxic to rabbits.
- [5]. VIGIL'ANSES 14 (2021) Antiparasitics containing fipronil intended for dogs and cats must not be used on rabbits.
- [6]. ANSES (2022): Médicaments pour animaux de compagnie : tous nos conseils pour éviter les accidents [Pet medication: all our advice on how to avoid accidents].