

Poisoning in humans from administering medicines to horses



BACKGROUND

France has more than a million horses, and like all pets, they are increasingly being treated with medicines, sometimes over the long term. As a result, the risk of owners and professionals being exposed to medicinal products intended for this species should not be overlooked. While this risk is well managed by professionals (veterinarians and veterinary assistants), horse owners are less aware of it, even though they are often responsible for continuing treatments dispensed initially during the veterinary consultation. However, any therapeutic procedure exposes the owner and other people nearby to products about which they do not always have prior knowledge, and which may have health consequences in the event of accidental exposure.

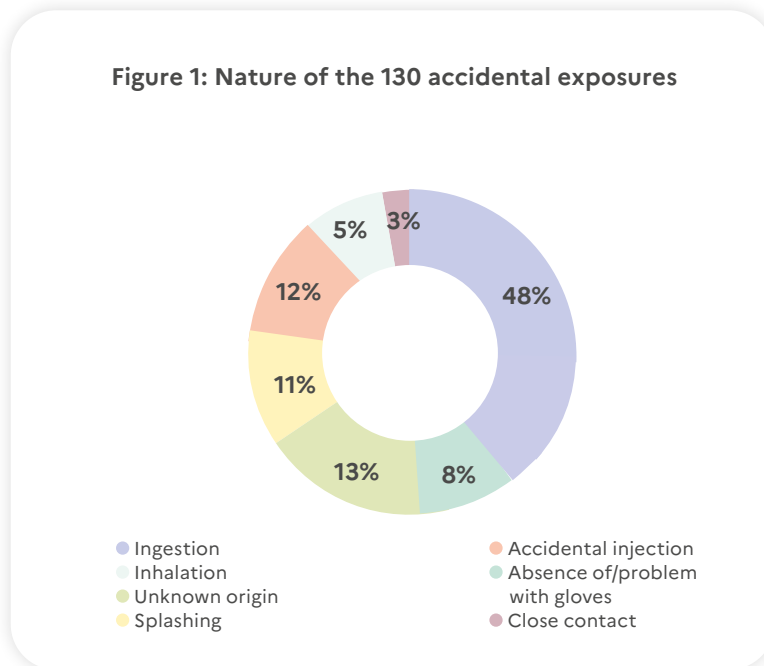
As part of its veterinary pharmacovigilance scheme, the French Agency for Veterinary Medicinal Products (ANMV), which is part of ANSES, records all human adverse effects reported spontaneously by field workers (veterinarians, owners, breeders, etc.) following exposure to a veterinary medicine. A retrospective study of the reports recorded in the national pharmacovigilance database from 2008 to June 2024 identified the main exposure circumstances for users, whether professionals or owners, during the treatment of horses. The term «horse» in the study includes both horses and ponies. Of the 3000 symptomatic human cases recorded over this period, only those involving a veterinary medicinal product authorised exclusively for horses or explicitly indicated as having been administered to this species were selected. A total of 130 cases were selected and their exposure circumstances analysed.

When a horse is treated with a veterinary medicinal product, humans can also be exposed. The most common scenario is accidental ingestion, accounting for more than half of all reported cases, followed by accidental injections and splashes onto the face or unprotected skin.

Two very different circumstances are behind these accidents:

confusion between a veterinary medicine and one intended for humans, or difficult administration due to an inability to control an agitated horse. Horse owners therefore need to be properly informed about the risks involved and the ways of preventing such accidents.

Figure 1: Nature of the 130 accidental exposures



THE DIFFERENT ACCIDENTAL EXPOSURES (FIGURE 1)

• Accidental ingestion

Ingestion accounted for the majority of accidental exposures to veterinary medicines in the equine sector: 63 cases out of 130 exposures reported. Confusion between equine and human medicines was common, especially if the product was in tablet form. The main medicines concerned by this exposure circumstance were Prascend® and its generics (pergolide), intended for the treatment of Cushing’s disease in horses. This is due to the fact that since horses are often kept a long way from their owners, the tablets may be kept at the owner’s home and then mistaken for the owner’s own tablets. Moreover, the treatment is sometimes prepared in advance, and if the tablet (or part of it) is hidden in fruit or bread, or dissolved in a liquid, and then put aside without being clearly identified, it could be inadvertently ingested by a third party.

Other reported confusions concerned solutions of external antiparasitic products (e.g. Butox® 50 % or Sébacyl® 50%) which, once diluted, were stored in bottles with unclear or no labelling. There were also reports of accidental ingestion of deworming pastes after owners used their mouth to remove the cap.

• Splashes on the face or any other exposed part of the body

The administration of liquid preparations carries a higher risk of splashing. A sudden movement of the animal or pressing too quickly on the syringe plunger were the main causes of accidents with this type of medicine, especially since users rarely wear gloves or protective clothing. Splashes from dewormers, injection products and external medicines such as antiparasitic ointments or solutions were regularly the subject of reports.

• Skin contact due to not wearing gloves

Only certain medicines known to pose a risk to humans, such as those containing altrenogest (Regumate Equine®), have a leaflet that explicitly mentions the need to wear gloves when using them. However, it should be borne in mind that any active substance, regardless of its dosage form (ointment, tablet or solution), can pass through the skin barrier to varying degrees and cause a potentially severe localised reaction. Gloves are not normally used when handling horses, and even when they are worn, they are sometimes removed without taking care (touched with the other hand, torn during removal), which can also lead to accidental exposure.

• Inhalation

Most treatments are administered outdoors, making the risk of accidental inhalation of a medicament higher in windy conditions. Inhalation of oral powders, but also

of medicines in liquid form, was reported in 5% of the cases analysed.

• Accidental injections

The presence of two operators during an injection is specific to horses. The risk of accidental injection therefore concerns both the person injecting the medicine and the one holding the horse. A sudden movement of the animal is often the cause of accidental needlesticks, mainly to the fingers and hands.

Accidental injections of equine medicines into humans have also been reported, in particular equine vaccines kept in the refrigerator next to an injection product intended for humans.

• Close contact with the animal

Although less commonly reported than with pets, there have also been a few reports of adverse effects occurring after close contact with an animal that was just treated.

NOT FORGETTING THE RISK TO CHILDREN

Although children are more likely to be exposed to medicines intended for pets, the study identified 18 cases of exposure involving children aged between 2 and 13 years (average 4.4 years) over the period examined. As in the general population, accidental ingestions were mainly due to a tablet or oral syringe being left within the child's reach, or to confusion between a medicine intended for humans and one for horses, the latter being inadvertently administered to the child. A child's close contact with their treated pony can also be a source of adverse effects.

PREVENTIVE MEASURES TO BE ADOPTED

Preventive measures should address both the risk of inadvertent ingestion and the risk of accidents, whether caused by confusion with other medicines or handling of the animal.

With regard to the risk of ingestion or confusion, the precautions to be taken are those that apply to all medicines:

- medicines for horses must be stored in their original packaging and grouped together in the same place;
- they must be stored separately from human medicines,

particularly those that need to be kept in the refrigerator (in a separate, reserved part of the refrigerator), and properly identified.

This is particularly true of equine vaccines kept in a refrigerator that also contains an injection product intended for humans.

- they must be stored out of the reach of children and in locked cupboards, particularly in riding schools;

- if the product is prepared in advance because this cannot be done in situ, it must be clearly identified and prepared in only limited quantities;

- liquids to be diluted must be stored in a labelled non-food container to avoid confusion; avoid decanting into plastic bottles.

Furthermore, horses are animals that can react quickly and sometimes violently. Although they are used to regular handling, some still remain fearful of medical procedures. In addition, the close contact with the animal during treatment increases the risk of bodily injury if the horse should bite, push, kick, etc. To limit the risk of accidents, veterinarians should be told about any difficulties encountered with a horse during handling, in order for them to prescribe the most appropriate medication for the situation – oral rather than injection, for example.

Administering medication to a horse requires a good knowledge of the animal's behaviour and, above all, experience. Veterinarians are increasingly providing training directly in stables, in order to teach users about prevention and getting horses used to veterinary care and procedures. Online resources are also available, such as the series of short videos by the British Equine Veterinary Association («Don't break your vet») on YouTube.

Lastly, personal protective equipment such as gloves, protective clothing and goggles should be worn to limit exposure of the eyes or skin. Users should always remember to remove gloves carefully and wash their hands after a procedure, even when gloves have been worn.

CONCLUSION

The risks of exposure associated with administering medicines to horses are often underestimated, particularly by their owners. Appropriate prevention depends above all on a good understanding of these risks. Horse owners should be informed and aware of all the risks that can arise when treating their horse.

It is also important to remember that while accidental exposure concerns humans, it can also affect an animal

¹ [Don't Break Your Vet! - YouTube](#)

other than the one being treated (horse or other species). Hygiene measures – such as one bucket per horse, isolation of the horse at the time of administration and hand washing after each treatment – remain essential to limit this risk.

To report an adverse effect in a human following the use of a veterinary medicinal product:

<https://signalement.social-sante.gouv.fr/>



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FIND OUT MORE

[1] Vigil'Anses no. 9 • The ANSES bulletin of vigilance

• **November 2019:** Altrenogest: veterinary medicinal products to be used with caution

https://vigilanses.anses.fr/sites/default/files/VigilAnsesN9_Novembre2019_Pharmacoveterinaire_Altrenogest.pdf

[2] Vigil'Anses no. 15 • The ANSES bulletin of vigilance

• **November 2021 :** PRASCEND® tablets for horses: be aware of the risk of accidental ingestion and the steps to take in the event of an accident

https://vigilanses.anses.fr/sites/default/files/VigilAnsesN15_Novembre2021_Prascend.pdf

[3] News update on veterinary medicinal products •

28 July 2022: Good practices in the use of veterinary medicines for pets

<https://www.anses.fr/fr/content/m%C3%A9dicaments-pour-animaux-de-compagnie-quelles-bonnes-pratiques>