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Beware of the risks to children from liquid detergent pods for dishwashers



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The dishwasher detergent market has seen the arrival of a new format in recent years, alongside tablets and gels: «all-in-one» capsules, modelled on liquid laundry detergent pods. These brightly coloured single-dose pods contain only liquid or have several solid (powder) and liquid compartments. French poison control centres and ANSES analysed the cases of exposure to these products reported between 1 January 2018 and 30 June 2023

Like the liquid detergent pods used in washing machines, these dishwasher capsules are promoted for their ease of use. The contents are packaged in a single-use dose surrounded by a water-soluble film that seals the pod completely. A single pod is recommended for each wash; it is simply placed directly in the dishwasher. The water-soluble film dissolves spontaneously on contact with water in the machine, avoiding direct contact with the contents during handling.

NO SPECIFIC REGULATIONS

Since 2015, liquid laundry detergent pods have been subject to a specific European regulation¹, because their ingredients are more toxic than those in conventional detergents and following several alerts about accidents involving young children [1]. This regulation requires the product to be packaged in a fully opaque outer box, the lid closure to be reinforced with a safety flap, a «Keep out of reach of children» precautionary statement to be visibly displayed, a non-toxic aversive agent to be added to the water-soluble film, and greater resistance to pressure in the event of handling.

On the other hand, dishwasher pods are not subject to similar regulations.

The European Commission therefore asked Member States to send the CARACAL2 group (Competent Authorities for REACH³ and CLP⁴) any data they had on cases of poisoning by dishwasher pods, in order to assess whether it was necessary to amend the CLP Regulation specifically for this use.

To respond to this request, ANSES therefore analysed cases of exposure to dishwasher pods recorded by French poison control centres over the period from 1 January 2018 to 30 June 2023.

¹ <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014R1297&from=EN>

² Group of experts advising the European Commission and ECHA on implementation of the REACH and CLP regulations.

³ Regulation (EC) No 1907/2006 (known as REACH, for Registration, Evaluation, Authorisation and Restriction of Chemicals) is a European regulation that came into force in 2007 to improve safety in the manufacture and use of chemicals in European industry.

⁴ Regulation (EC) No 1272/2008 (known as CLP, for Classification, Labelling and Packaging of Substances and Mixtures) aims to communicate at European level on the dangers of all hazardous chemicals and mixtures, via labelling and safety data sheets, in order to inform consumers and workers and protect human health and the environment.

EXPOSURE ON THE RISE, PARTICULARLY AMONG CHILDREN

The analysis included cases of exposure to a liquid dishwasher detergent in a water-soluble dose or a multi-compartment powder/liquid dose contained in a water-soluble film, whether or not the person presented symptoms and regardless of the route of exposure, the circumstances and the severity of the poisoning.

In order to be able to attribute the symptoms to exposure to the liquid contained in the pod, or rule this out, the analysis excluded exposure to multiple products

(multiple agents) – except for those involving several liquid pods, exposure only to the «powder» compartment of multi-compartment pods, cases where a link between exposure to the product and clinical signs had been ruled out (where causality was zero), as well as cases not dealt with by the emergency telephone hotline⁵.

In total, the poison control centres provided advice and guidance on medical treatment for 787 cases of exposure between 1 January 2018 and 30 June 2023.

There has been an increase in cases since 2018. Children under the age of six accounted for 79.6% of cases (n=627).

Figure 1 – Temporal distribution of exposure cases to dishwasher pods reported to poison control centres

(Source SICAP: January 2018 to June 2023)

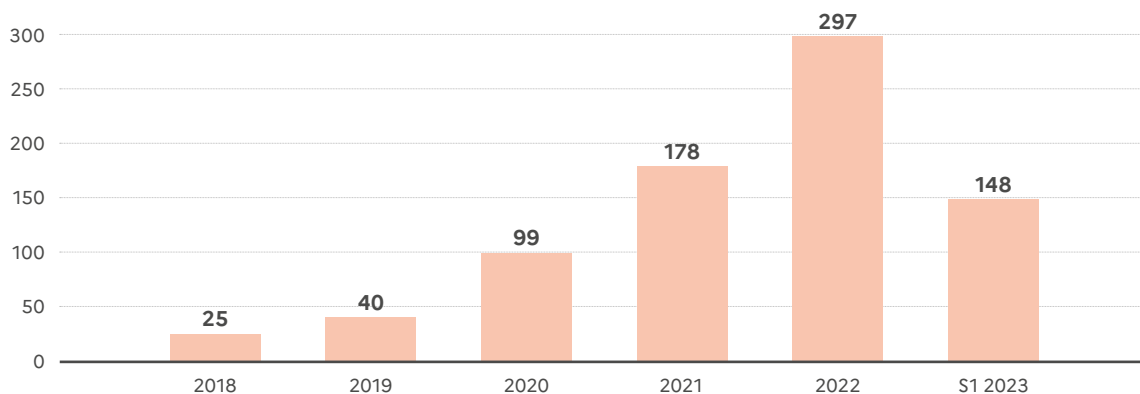


Table 2 – Breakdown by age group of cases of exposure to dishwasher pods reported to poison control centres

(Source SICAP: 2018-2023)

AGE GROUP	NUMBER OF CASES (N)	PERCENTAGE (%)
1 month – 3 months	1	0.1
3 months – 1 year	68	8.6
1 year – 3 years	497	63.2
3 years – 6 years	61	7.8
6 years – 10 years	7	0.9
10 years – 15 years	14	1.8
15 years – 18 years	5	0.6
18 years – 25 years	11	1.4
25 years – 65 years	90	11.4
65 years – 75 years	10	1.3
> 75 years	14	1.8
Unknown (age)	9	1.1
TOTAL	787	100

⁵ A case not dealt with by the emergency telephone hotline is an exposure case for which the PCC received notification of an exposure dossier or specifically searched for exposure dossiers as part of a study, but was not spontaneously called to give medical advice or toxicological expertise.

Individuals were exposed mainly by the oral route alone or in combination with another route of exposure (74.7%, n=588), but also by the mouth (i.e. without ingestion) alone or in combination (15.4%, n=121), or by the ocular route alone or in combination (12.7%, n=100).

SERIOUS CASES ASSOCIATED WITH EYE SPLASHES

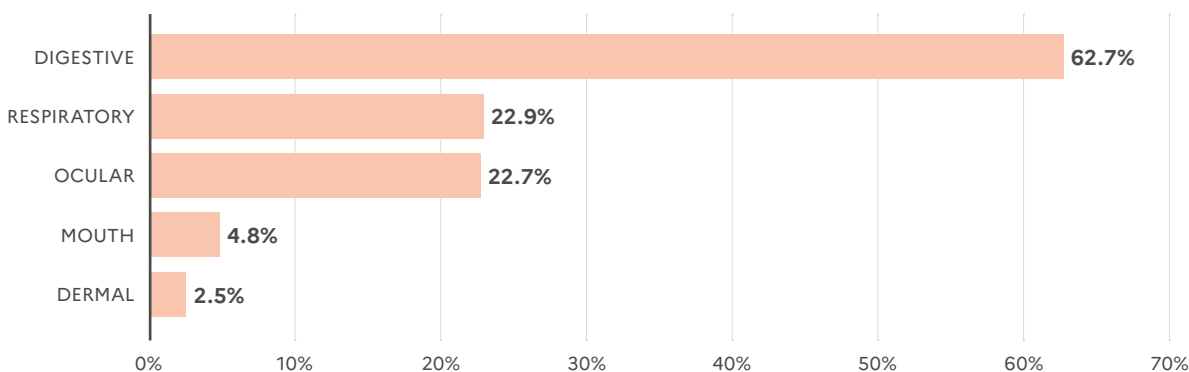
Of the 787 people exposed between 1 January 2018 and 30 June 2023, half of them (n=397) suffered from at least one symptom: poisoning was severe in three patients, moderate in 15 and mild for the vast majority of symp-

tomatic patients (95.4%, n=379).

The symptoms most commonly reported with low-severity poisonings (95.4%, n=379) were digestive: 62.7% of patients poisoned by dishwasher pods (n=249) had at least one digestive sign, such as vomiting (48.6%, n=194) or hypersalivation (4.3%, n=17), 22.9% (n=90) had respiratory symptoms such as coughing (20.4%, n=81), and 22.7% (n=90) had ocular symptoms such as eye pain (12.8%, n=51), eye redness (6.3%, n=25) and/or blurred vision (5.8%, n=23). Among the moderate-severity cases, there were nine ingestions and six eye splashes. The ingestions involved eight children aged between 8 months and 2.5 years, and a 77-year-old woman. (6,3 %, n=25) et/ou une vision trouble (5,8 %, n=23).

Figure 2 – Description of the classes of symptoms reported in low-severity poisonings by dishwasher pods

(Source SICAP: 2018-2023)



Among the moderate-severity cases, there were nine ingestions and six eye splashes. The ingestions involved eight children aged between 8 months and 2.5 years, and a 77-year-old woman. Symptoms associated with these ingestions were prolonged coughing, dyspnoea, hypersalivation associated with dysphagia and lip oedema or persistent vomiting. Eight of these cases were treated in a hospital emergency department. An *upper gastrointestinal fibroscopy* was carried out on the 77-year-old woman, which found no lesions. The six people who splashed the product in their eyes all suffered from keratitis⁶, which was treated in a hospital emergency department. All recovered without any sequelae.

Regarding the most serious poisonings, two cases of eye splashes resulted respectively in chronic blepharitis⁷ (still present six months after the accident) in a 44-year-old patient, and blepharitis and extensive corneal ulceration (which eventually resolved) in another patient

aged 86. There was also one case of ingestion resulting in respiratory distress in an 8-month-old infant.

EUROPEAN DATA IN LINE WITH FRENCH DATA

Several European Member States provided data from their poison control centres, which also showed exposure predominantly among young children. In light of these data, the European Commission will decide whether it is necessary to amend the regulations on these products, which have become widespread in kitchens and pose a risk of ingestion by young children.

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⁶ Ulcération de la surface de la cornée.
⁷ Inflammation chronique du bord des paupières.

Tobacco products, related products and cigarette flavourings: minors increasingly exposed to the risk of poisoning



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TOBACCO PRODUCTS, RELATED PRODUCTS AND FLAVOURINGS: A MARKET THAT IS CONSTANTLY EXPANDING, SOMETIMES ON THE FRINGES OF CURRENT REGULATIONS

The range of tobacco products and related products (i.e. products that do not contain tobacco but may contain nicotine) is constantly expanding. These products are marketed as less harmful alternatives to cigarettes. As a reminder: it is illegal to sell tobacco products to minors in France.

Heated tobacco was launched on the French market in 2017. It comes in the form of tobacco sticks that are inserted into a heating device to produce an inhalable aerosol (Photo 1). Heated tobacco is one of the novel tobacco products covered by Directive 2014/40/EU on the manufacture, presentation and sale of tobacco and related products. Due to a sharp increase in the volume of sales since it was launched on the market, its regulation has been tightened by European Directive (EU) 2022/2100, transposed into French law by the Act of 9 March 2023.

The market for tobacco products, related products (that contain nicotine rather than tobacco) and accessories for flavouring them is constantly expanding. An analysis of the calls about these products to poison control centres showed that some were responsible for poisoning cases in young children, through accidental ingestion of heated tobacco, chewing tobacco or flavour beads, as well as in adolescents who consumed «snus» or nicotine pouches. They suffered symptoms of nicotine poisoning of varying degrees of severity. These products must never be left within the reach of children and in some cases a clear regulatory framework is needed.

Photo 1 – Heated tobacco

(Source FDA)



Some tobacco products are older, such as chewing tobacco, which is regulated by Directive 2014/40/EU as a smokeless tobacco product (Photo 2).

Photo 2 – Chewing tobacco

(Source Uffe Johansson)



Recently, some new related products have appeared on the market and are particularly promoted on social media: tobacco-free nicotine pouches for oral use, also known as nicopods (Photo 3). These permeable fabric pouches contain no tobacco; instead, they have polymer fibres impregnated with flavoured or unflavoured nicotine. They are intended to be placed between the lip and gum, where they deliver the substance through the oral mucosa. These products are not governed by any regulations in France, and there is no harmonised framework in Europe.

Photo 3 – Tobacco-free nicotine pouches for oral use

(Source Alexclere)



Snus, which is tobacco for oral use also presented in the form of a tobacco pouch to be placed between the lip and gum, is banned throughout the European Union under Directive 2014/40/EU, except in Sweden where it has been marketed for over 40 years (Photo 4).

Photo 4 – Snus or oral tobacco

(Source Lisa Risager)



Furthermore, cigarettes and roll-your-own tobacco containing clearly perceptible flavours other than tobacco, also known as «characterising flavours», have been prohibited from sale since 2016 under Directive 2014/40/EU. This ban, which was extended to menthol flavouring in May 2020, has been circumvented by using devices and accessories used to flavour cigarettes or tobacco but sold separately from them. They include small flavour beads that can be inserted into the filter to modify the flavour of the cigarette smoke (Photo 5).

Photo 5 – Flavour beads for cigarettes

(Source Anses)



Following their arrival on the market, these five types of product (heated tobacco, chewing tobacco, snus, nicotine pouches and flavour beads) led to calls being made to French poison control centres (PCCs), which then alerted ANSES to their increase or persistence, particularly the calls concerning snus and nicotine pouches, products that are attracting more and more adolescents. This prompted a review of these poisoning cases and their characteristics [1].

AN INCREASE IN CALLS TO PCCS ABOUT POUCHES AND FLAVOUR BEADS

This study analysed calls for medical advice following exposure to these five types of product, received by the PCCs between 1 January 2017 and 31 December 2022, whether or not the patient was symptomatic. This analysis excluded cases where it was possible to rule out a link between the symptoms and the assumed product. All records of symptomatic patients were examined by toxicology experts.

In some cases, it was not possible to determine precisely whether the product consumed was snus or nicotine pouches, due to their similar mode of use and the absence of more precise information on the product.

Au Over the six-year study period, 295 calls concerned intentional or accidental consumption of the products of interest, broken down as follows:

- heated tobacco: 12 calls;
- chewing tobacco: 98 calls;
- snus or unspecified pouches: 31 calls;
- nicotine pouches: 16 calls;
- flavour beads: 138 calls.

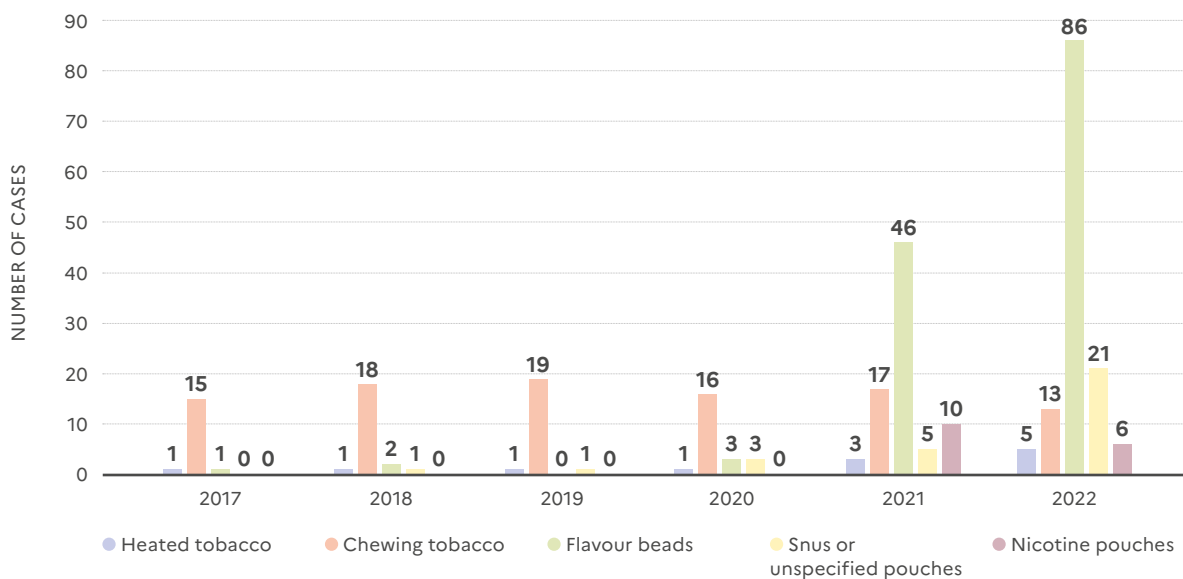
Since 2017, there has been little change in the number of cases of exposure associated with the use of heated tobacco or chewing tobacco: for heated tobacco, numbers increased from one case in 2017 to five cases in 2022; for chewing tobacco, from 15 cases in 2017 to 13 cases in 2022, with a maximum of 19 cases reported in 2019 (see Figure 1).

In contrast, the number of calls concerning exposure to flavour beads rose considerably, from three in 2020 to 86 in 2022 (there had been none before 2020).

For snus and nicotine pouches, the number of calls between 2017 and 2020 was low. From 2021 onwards, this number increased and the data available in the medical records made it possible to define with greater certainty whether nicotine pouches or snus were involved.

Figure 1 – Annual breakdown of the number of calls following exposure to tobacco products, related products and flavourings of interest, reported to PCCs between 01/01/2017 and 31/12/2022

(Source SICAP)



POTENTIALLY SERIOUS NICOTINE POISONING, ESPECIALLY AMONG MINORS

Of the 295 people included in this study, with the exception of four patients whose age was not provided, 83.8% (244 out of 291) of those exposed were minors, all types of products combined. Adults accounted for 16.2% of the exposed patients. Of these 295 cases, 54.6% reported symptoms (Table 1).

For heated tobacco, all the patients were infants aged between 9 and 20 months (median age 12 months). Accidental ingestions accounted for 41.7% of symptomatic cases.

For chewing tobacco, the majority of patients were children from infancy to seven years of age (median age one year). Only three adults were involved. In the cases involving children, exposure concerned exclusively accidental ingestions. For this type of product, 75.5% of cases were symptomatic.

Of the 110 calls concerning heated tobacco and chewing tobacco, 72% of cases were symptomatic (n=79). Most of these symptomatic cases were mild (63 cases, 79.7%), with clinical signs of nicotine syndrome, characterised by at least one of the following symptoms: tachycardia, palpitations, discomfort, nausea, vomiting, pallor, dizziness, tremors. The 16 other symptomatic cases (20.3%) corresponded to poisonings of moderate severity, with a more severe nicotine syndrome, requiring hospital treatment due to prolonged vomiting with a risk of dehydration, hypotension requiring intravenous fluid therapy, convulsions, consciousness disorders or hypotonia. The poisonings involved children aged between six

months and seven years who had accidentally ingested heated tobacco or chewing tobacco left within their reach. These accidents had all taken place in the child’s home or in a home they regularly visited.

Regarding exposure to snus or nicotine pouches (47 calls), most people exposed were aged between 12 and 17 (median age 14 years), with only six adult patients and five young children. Apart from the latter, consumption of the snus or nicotine pouches was intentional. The young children (the youngest being eight months old) had accidentally put these products in their mouths.

The proportion of symptomatic cases was 83.9% when the product could not be identified (snus or unspecified pouches), and 100% for nicotine pouches identified with certainty.

Thirty-one patients had a mild nicotine syndrome. Eleven had severe nicotine syndrome, including ten adolescents aged between 12 and 17, and one 19-year-old. For eight of them, consumption had taken place at a middle or high school.

In the case of flavour beads (138 calls), three-quarters of those exposed were children, most of them between one and three years of age. Just over a quarter of the exposed individuals were over 18 (from 18 to 54 years of age). In each case, the product was accidentally ingested, including with the adults – for example, confusion with sweets or inhalation of an incorrectly inserted bead from the filter into the mouth. Less than one third of exposure cases were symptomatic (29.0%, n=40) with 82.5% (n=33) of these exposed orally and 37.5% (n=15) by the ocular route.

Table 1 – Number and proportion of symptomatic cases by type of product of interest, reported to poison control centres between 1 January 2017 and 31 December 2022

(Source SICAP)

	TOTAL	NUMBER (%) OF SYMPTOMATIC CASES
Heated tobacco	12	5 (41.7%)
Chewing tobacco	98	74 (75.5%)
Snus or unspecified pouches	31	26 (83.9%)
Nicotine pouches	16	16 (100%)
Flavour beads	138	40 (29.0%)
TOTAL	295	161 (54.6%)

Clinical signs were mild (e.g. abdominal or gastric pain, nausea) except for a three-year-old child who accidentally ingested flavour beads and suffered repeated and persistent vomiting for several hours, with a risk of dehydration. The eye symptoms reported in 15 people were due to splashes from a burst bead.

HEATED TOBACCO, CHEWING TOBACCO AND FLAVOUR BEADS: DO NOT LEAVE WITHIN REACH OF CHILDREN!

The figures presented here may seem low in relation to the period and the general population, but it should be remembered that generally speaking, not all poisoning cases result in a call to the poison control centres for medical advice. Their numbers are therefore always underestimated.

In this study by ANSES and the poison control centres, the clinical outcome of the poisoning – when known – was always favourable.

The accidents reported to poison control centres involving heated tobacco and chewing tobacco indicated that these products had been left unattended within the reach of young children. They caused nicotine poisoning that was sometimes severe and required hospital treatment, because of vomiting potentially leading to dehydration, loss of consciousness and even convulsions.

Flavour beads are a new source of accidents in the home, affecting young children as well as adults. As they are sold by circumventing a regulation banning the direct addition of characterising flavours to certain tobacco products, their presentation needs to be regulated to reduce their appeal to children: some packaging contains brightly coloured drawings of fruit, and the beads can be mistaken for sweets.

In order to prevent accidents, and because the packaging for these products does not currently have a safety seal, these products must never be left within the reach of children.

NICOTINE POUCHES: NOVEL PRODUCTS EXPOSING ADOLESCENTS TO POISONING

Particular attention should be paid to nicotine pouches. The study found cases of acute nicotine syndrome in adolescents who had used these products, sometimes in a school setting. Moreover, regular consumption of the nicotine they contain can lead to addiction in the medium and long term. These products are heavily advertised on social media, targeting young consumers.

The Finnish poison control centre has reported growing use of these products among young people. The number of calls about nicotine poisoning related to these pouches rose from 11 in 2017 to 51 in 2022, of which 27% in 2017 and 49% in 2022 respectively involved minors [2]. A 2020 study in the Czech Republic showed that among nicotine pouch users, the largest age group was 15- to 24-year-olds (6.6%), of whom 2% used them daily. This study concluded that, contrary to the arguments put forward by the manufacturers and distributors of these products, it is impossible to state that nicotine pouches are used only by smokers or ex-smokers [3].

In Europe, nicotine pouches are not covered by Directive 2014/40/EU and are therefore not subject to the provisions relating to tobacco products¹. They could, however, be covered by Regulation (EC) 1272/2008 on classification, labelling and packaging of chemical substances and mixtures (the CLP Regulation), as a hazardous mixture containing nicotine, because this substance has been classified as lethal if swallowed, in contact with the skin or inhaled (Acute toxicity Category 2).

Pending a harmonised European position, several European countries began proposing ad hoc national regulations as early as 2020. These imposed, for example, the introduction of the status of medication for cessation of tobacco use, the application of the CLP Regulation involving regulatory labelling with hazard symbols and warning labels on packaging, making such packaging more secure, a limit on nicotine concentrations per pouch, and a ban on sales to minors. In June 2023, a French bill was tabled to prohibit tobacco-free nicotine products for oral use, including nicotine pouches.

The rapid emergence on the market of nicotine pouches, their appeal to young consumers, their non-harmonised regulatory status, the absence of any control over nicotine concentrations and the lack of data on their toxicity call for the introduction of a European legal framework for these products.

¹ https://health.ec.europa.eu/tobacco/product-regulation_fr

It is now necessary to raise awareness among school supervisory and medical staff, general practitioners, paediatricians and emergency doctors about the nature of these products, the differences between snus and nicotine pouches, and the risks of nicotine poisoning.

Children, adolescents and their parents also need to be made aware of these risks, through information in schools and appropriate communication campaigns, particularly on social media. Indeed, the toxicity and addictive nature of the nicotine contained in these pouches have been widely documented, and this study showed that exposure and, above all, poisoning mainly affect children and adolescents.



Weniko Caré and Jérôme Langrand (Paris poison control centre), Cécilia Solal (ANSES)

REFERENCES

[1] ANSES. 2023. Produits du tabac, produits connexes et arômes. Bilan des cas rapportés aux Centres antipoison du 1^{er} janvier 2017 au 31 décembre 2022 [Tobacco products, related products and flavourings. Review of cases reported to poison control centres from 1 January 2017 to 31 December 2022]

Internal request 2023-AUTO-0121.

<https://www.anses.fr/fr/system/files/Toxicovigilance2023AUTO0121Ra.pdf>

[2] Finnish Safety and Chemicals Agency (Tukes). 2023. *New restrictions on the strengths of nicotine pouches – nicotine pouches containing 20 mg or more to be removed from the market.*

<https://tukes.fi/-/nikotiinipussien-vahvuuksille-uusia-rajoituksia-20-mg-tai-enemman-nikotiinia-sisaltavat-pussit-poistettava-markkinoilta>

[3] Draft Act amending Act No. 65/2017 on the protection of health against the harmful effects of addictive substances, as amended. 2022. Notification number: 2022/0840/CZ (Czechia). Impact assessment. Explanatory statement.

<https://technical-regulation-information-system.ec.europa.eu/fr/notification/23526>

Don't use banned products to eradicate cockroaches, bed bugs and other pests!



© BNPC

A PRODUCT BANNED SINCE 2013...

SNIPER 1000 EC DDVP® contains dichlorvos, an active substance belonging to the organophosphate class. It is classified as toxic by inhalation, toxic in contact with skin and if swallowed, a skin sensitizer and very toxic to aquatic life.

Its use as a plant protection product¹ was prohibited in France in 2007. Its presence in biocidal² insecticides for household use has been banned since 2013. However, dichlorvos can still be purchased through illegal channels, particularly under the name SNIPER 1000 EC DDVP®, to combat pests such as bed bugs and cockroaches.

...BUT POISONING CASES ON THE RISE

Over the period from 1 January 2018 to 30 June 2023, poison control centres recorded 170 events³ related to SNIPER 1000 EC DDVP®, involving 206 people. In 154 of these events, just one person was affected. In the other 16, between two and eight people were exposed at the same time, i.e. a total of 52 people.

Despite its 2013 ban in France as an insecticide for household use, there has been an increase in the number of calls to poison control centres since 2018. This increase should be seen in light of the upsurge in bed-bug infestations in the last few years. ANSES has estimated that 11% of French households were infested by bed bugs between 2017 and 2022 [1].

In May 2023, ANSES received a report of a serious case of poisoning involving an infant who had ingested a third of a bottle of SNIPER 1000 EC DDVP®, an insecticide that is banned in France. The family had purchased the product at a market north of Paris.

Several minor cases of poisoning by this same insecticide had already been reported to ANSES in 2019. ANSES and the French poison control centres analysed the cases occurring since 2018, focusing particularly on the places where this insecticide was purchased, in order to alert the competent authorities to the circulation of a dangerous banned product in France and guide them on the management measures to be taken where applicable.

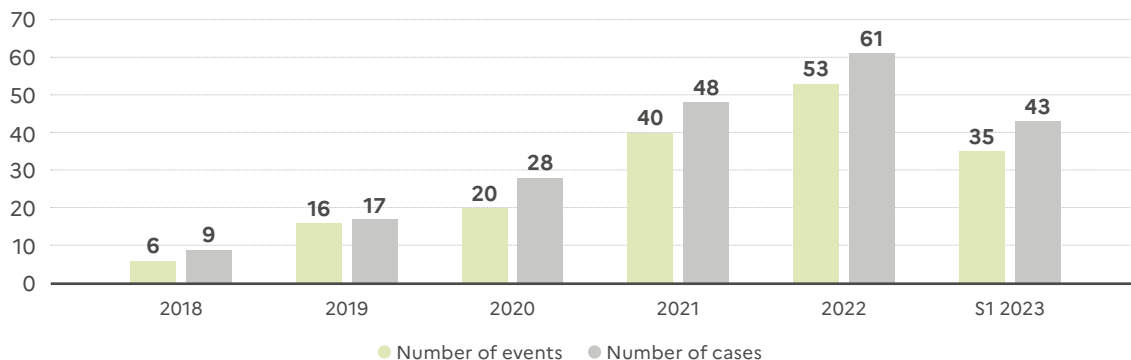
¹ Plant protection products, commonly known as pesticides, are preparations intended to protect plants and crop products from organisms such as insect pests, pathogens and weeds.

² Biocidal products are used with the intention of «destroying, deterring [or] rendering harmless ... any harmful organism». This group encompasses numerous products with a wide variety of uses. Biocides are used in industry and the workplace, but also as everyday products.

³ Situation in which one or more people have been exposed to the same agent, at the same time and in the same place. When several people have been exposed during the same event, certain information (such as their age or sex, for example) may not be specified for all of them.

Figure 1 – Annual breakdown of the numbers of events and exposed people involving the product SNIPER 1000 EC DDVP®, recorded by poison control centres

(Source SICAP : 2018-2023)



PRODUCTS MAINLY PURCHASED IN ÎLE-DE-FRANCE, IN MARKETS OR SHOPS...

The Île-de-France region was the most affected by this problem: almost 75% of events (n=127) took place in this region alone, and more specifically in the Seine-Saint-Denis *département* (35%, 45 events).

Where information was available (41% of events, n=70), people said they had bought the product in markets (37.1% of events, n=26) or shops/bazaars (20% of events, n=14), particularly in the northern *arrondissements* of Paris and in Seine-Saint-Denis. To a lesser extent, these products may also have been brought back from abroad (outside the European Union, mainly Africa) or given by a third party.

Table 1 – Number of events and people exposed in connection with the use of SNIPER 1000 EC DDVP®

(Source SICAP)

ÎLE-DE-FRANCE DÉPARTEMENTS	NUMBER OF EVENTS	NUMBER OF CASES	OTHER REGIONS	NUMBER OF EVENTS	NUMBER OF CASES
Île-de-France	127	160	Provence-Alpes-Côte d'Azur	16	17
Seine-Saint Denis	45	53	Grand-Est	6	8
Paris	25	28	Auvergne-Rhône-Alpes	6	6
Essonne	18	26	Pays-de-la-Loire	4	4
Val-de-Marne	12	23	Centre-Val-de-Loire	3	3
Hauts-de-Seine	10	12	Bretagne	3	3
Seine-et-Marne	6	7	Nouvelle-Aquitaine	2	2
Val d'Oise	8	8	Normandie	1	1
Yvelines	3	3	Hauts-de-France	1	1
			International	1	1
			TOTAL	170	206

Table 2 – How SNIPER 1000 EC DDVP® was obtained

(Source SICAP)

PLACE OBTAINED	EVENTS		CASES	
	N	%	N	%
Markets	26	37.1	29	32.2
Shops/Bazaars	14	20.0	28	31.1
Given by a third party	12	17.1	13	14.4
Purchased abroad (outside the EU)	10	14.3	12	13.3
Purchased online	8	11.4	8	8.9
TOTAL	70	100.0	90	100.0

...TO CONTROL COCKROACHES AND BED BUGS

Three profiles of exposed people emerged from this study:

- adults between 20 and 60 years of age, exposed when using the products directly in their homes or when re-entering treated premises. This profile accounted for almost 75% of the 170 events (n=127). In the events for which information was available, the individuals reported that they had used the product to control cockroaches (n= 30), bed bugs (n=24) or lice (n=1);

- young children, i.e. «classic» cases of paediatric poisoning due to a lack of risk perception, accounting for 14% of events (n=25). Typically, the child was able to access the product, which had been left within reach, and had ingested it or put it on him or herself without being aware of the risk. Each event involved a single child;
- suicide attempts, which accounted for less than 10% of events.

Table 3 – Circumstances of exposure to SNIPER 1000 EC DDVP® reported to poison control centres

(Source SICAP)

	EVENTS	CASES
Used in the home to control pests	127	163
- unspecified	72	87
- cockroaches	30	44
- bed bugs	24	30
- lice	1	2
Product left within reach of a child	25	25
Suicide attempt	15	15
Ingestion of unpackaged product	2	2
Ingestion of food on which the product was present	1	1
TOTAL	170	206

While most poisoning cases were mild, 8.6% (n=14) were of moderate severity and 5.5% (n=9) were very serious, including three deaths.

Seven of the nine very serious poisonings (including the three deaths) were due to ingestion with suicidal intent. The other two involved respectively an infant who had ingested the product (the case that prompted the alert and this study) and a man who developed respiratory symptoms after using the product.

AN ISSUE THAT ALSO CONCERNS OTHER PRODUCTS

Given the rise in infestations and the difficulty in eradicating cockroaches and bed bugs, people are turning to banned products, whose use has become a public health problem. These pesticides are considered to be more effective and can be easily found on the internet or in shops, or even purchased abroad (outside the European Union).

However, this phenomenon is not limited to the SNIPER 1000 EC DDVP® product. Other cases of exposure to banned products containing dichlorvos were identified in the poison control centres' database, but not included in this study, which focused on SNIPER 1000 EC DDVP®.

Products banned in France are also used to combat pests other than bed bugs and cockroaches. In 2021, two children died due to a rat poison banned in France [2] [3]. It is doubtful that the people who buy these products, in shops or on the internet, are aware that they have been banned because of their toxicity.

In view of the growing number of poisoning cases, it seems necessary to:

- identify the supply channels for these products and seize imported products as they enter the country;
- step up checks in markets and shops selling this type of product;
- inform the professionals selling these products about their toxicity and illegality;
- inform the general public about products that are banned in the European Union and the risks involved in using them.

In its opinion published in 2023 [1], ANSES made recommendations for effectively controlling bed bugs and called for non-chemical control methods to be prioritised.

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REFERENCES

[1] **Anses. (2023).** Avis relatif aux punaises de lit : impacts, prévention et lutte. [Opinion on bed bugs: impact, prevention and control] (Request No 2021-SA-0147). Maisons-Alfort: ANSES, 26 p. This opinion is accompanied by a collective expert appraisal report.

[2] **Anses. (2022).** Intoxications par les produits utilisés dans le cadre de la lutte contre les punaises de lit. Analyse des cas enregistrés par les Centres antipoison et de toxicovigilance français du 1^{er} janvier 1999 au 31 décembre 2021. [Poisonings caused by bed-bug control products. Analysis of cases recorded by poison control centres from 1 January 1999 to 31 December 2021.] Request No 2021-SA-0147

[3] **LABADIE, M., LANGRAND, J., PAGES, R. 2021.** «Banned rat poison causing death and serious poisoning in children in France.» Vigil'Anses 15: 8–10

FIND OUT MORE



Vaccines for horses: very rare and mostly mild adverse effects



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A four-year retrospective study (2019-2022) of adverse effects reported in horses after vaccination was carried out by the French Agency for Veterinary Medicinal Products within ANSES, based on the national veterinary pharmacovigilance database.

Most of the reported effects were mild and mainly concerned local reactions at the injection site. General symptoms were also described, as well as musculoskeletal symptoms, episodes of abdominal pain, hypersensitivity reactions and even neurological symptoms.

On the other hand, very few reports mentioned a lack of vaccine efficacy.

Veterinary vaccines are the main cause of adverse effects in animals receiving veterinary treatment [1]; those intended for horses are no exception to the rule.

Today, there are seven valences¹ available, either alone or in combination: equine influenza, tetanus, equine rhinopneumonitis, rabies, West Nile fever, strangles and equine viral arteritis.

An earlier study of post-vaccination adverse effects in horses, carried out over the period 2016-2018, had shown that vaccination was well tolerated in these animals, with any reactions mostly being mild and mainly limited to the injection site.

As part of its ongoing monitoring of the benefit-risk balance for medicines, ANSES's French Agency for Veterinary Medicinal Products (ANMV) repeated this study over the next four years (2019-2022), to see whether this tolerability was confirmed.

VERY RARE AND MOSTLY MILD ADVERSE EFFECTS

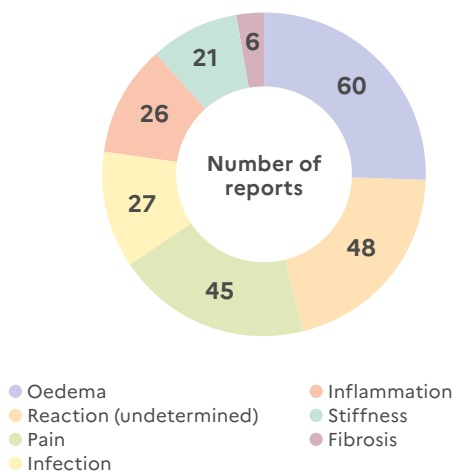
Avec une déclaration enregistrée pour plus de dix mille chevaux vaccinés, l'incidence des effets indésirables post-vaccinaux est qualifiée de très rare.

With one report recorded for more than every ten thousand horses vaccinated, the incidence of post-vaccination adverse effects is considered to be very rare.

Moreover, of the 152 adverse effects reported over the four years of the study, 70% were considered to be non-serious. The majority of reactions (85 cases) were limited to the injection site and included oedema, pain, inflammation and abscess. These local reactions sometimes gave rise to other symptoms, such as neck or gait stiffness. Other effects considered non-serious included allergic reactions such as facial oedema or urticaria, fever, loss of appetite and transient discomfort.

¹ The vaccine valence is the part of a vaccine that provides protection against a single germ. There are monovalent vaccines (against equine influenza, for example) or multivalent vaccines. The latter protect against several germs all causing the same disease (e.g. the vaccine against equine herpes viruses) or against different diseases (e.g. the influenza-tetanus vaccine).

Figure 1: Local reactions



However, it is important to be aware of the risk of serious reactions and to monitor the vaccinated animal closely for 48 hours after vaccination.

In the 45 cases considered serious, anaphylactic-type reactions, as well as neurological symptoms (ataxia, falls, convulsions) and digestive symptoms (abdominal pain), were most commonly observed. Twenty-one deaths were recorded.

The adverse effects of vaccines are all the more serious because they appear rapidly after vaccination. Of the 21 deaths recorded, 15 occurred within 24 hours of vaccination. These figures correlate with the fact that ataxia and falls generally have more harmful consequences for large animals than for species such as cats or dogs, potentially leading to the animals being euthanised. Furthermore, the frequency with which abdominal pains occur, for which the prognosis is often unfavourable, is specific to the equine species.

REPORTS OF LACK OF EFFICACY IN HORSES, A NEGLECTED SPECIES IN PHARMACOVIGILANCE

According to the SIMV2 vaccination observatory, in 2022, around 71% of the one million horses in France had been vaccinated against influenza, 65% against tetanus and 27% against rhinopneumonitis.

² French Union for the Veterinary Medicinal Product and Reagent Industry
³ Epidemiological surveillance network for equine diseases: <https://respe.net/>

In France, equine diseases are monitored by RESPE3 through a network of sentinel veterinary practitioners in the field. They are tasked with reporting any suspected cases of disease they encounter, by sending RESPE information about the case (including the animal's vaccination status) and samples that can be used to confirm the disease.

Despite the regular resurgence of outbreaks in France confirmed by RESPE, particularly equine influenza (2018, 2023) or equine rhinopneumonitis each spring, the ANMV only very rarely receives reports concerning a lack of efficacy of vaccines, which nevertheless also concerns veterinary pharmacovigilance. This is despite the fact that these diseases may have appeared in vaccinated animals, as shown by the information sent to RESPE.

In the absence of official reporting, it remains difficult to quantify the ineffectiveness of vaccination and take the appropriate regulatory measures with regard to the vaccines in question.

AN ADVERSE EFFECTS PROFILE THAT CHANGES LITTLE OVER TIME

The nature and incidence of post-vaccination reactions were similar between the periods covered by the two studies (2016-2018 and 2019-2022), confirming that equine vaccines are well tolerated. However, veterinary practitioners need to understand all the potential risks, both serious and non-serious, in order to make horse owners adequately aware of the possibility of post-vaccination effects and the appropriate monitoring needed, and ensure that the necessary measures are taken beforehand in horses at risk, i.e. those that have already suffered a reaction following injection of a vaccine.


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REFERENCES

[1] SPost-MA surveillance of veterinary medicinal products. 2021 Annual Report. <https://www.anses.fr/en/system/files/ANMV-Ra-Pharmacovigilance2021EN.pdf>

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ANSES is in charge of several health vigilance systems: pharmacovigilance for veterinary medicinal products, nutriviigilance, phytopharmacovigilance, toxicovigilance and vigilance for occupational diseases. Our vigilance activities make little noise and are therefore poorly known to public health actors, health professionals, marketers and users in general. And so, in order to make our work more visible we have decided to create a dedicated newsletter entitled : Vigil'Anses.

As news on each of our vigilance topics crops up, this quarterly newsletter presents the main results of the work carried out by ANSES within the framework of its vigilance missions, in conjunction with its partners, professional networks and expert groups, as well as the actions we have undertaken. The articles are deliberately short, and are intended for all those involved in the occupational and environmental health and safety field: public authorities, health agencies, institutes and expert bodies that are partners of ANSES, prevention policy managers, the scientific community, professionals, associations and users. Vigil'Anses also invites the interested reader to delve deeper and discover publications, opinions and reports available online that will further their knowledge.



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