

**NATIONAL INSTITUTE OF TOXICOLOGY  
AND FORENSIC SCIENCES**



**TOXICOLOGY  
INFORMATION  
SERVICE**



**2021 Report**

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# **National Institute of Toxicology and Forensic Sciences.**

## **Toxicology Information Service**

### **2021 Report**



Madrid, 2022

Report presented by Antonio Alonso Alonso  
Director of the National Institute of Toxicology and Forensic Sciences

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## 1. INTRODUCTORY NOTE AND ACKNOWLEDGEMENTS

In this annual report, the Toxicology Information Service (SIT) at the National Institute of Toxicology and Forensic Sciences (INTCF) includes, as in previous years, the statistical data of the different consultations received throughout 2021 on intoxications or exposure to toxic substances, which are attended to by a team of twenty doctors as part of a 24-hour a day telephone service, which operates uninterruptedly 365 days a year.

For a more detailed understanding of the structure, organisation, staffing and functions of the SIT and its Documentation Section, which is responsible for the development, management and updating of the various chemical databases used by the team of medical experts in the counselling of intoxicated persons, consult to chapter 9 of the *National Institute of Toxicology and Forensic Sciences. 2021 Report*.

The data presented correspond to a total of 75,677 telephone enquiries, the majority of which (58,443) are related to intoxications in humans, followed by informative enquiries not associated with any intoxications (9,600), as well as enquiries related to intoxications in animals (2,081).

Toxicological records of consultations (aetiology, type of substance or product, route of entry, estimated severity of intoxication, etc.) are related to various epidemiological variables (age, sex, geographical distribution, monthly and hourly distribution, etc.). This statistical analysis, like those presented in previous reports, provides very relevant information for those working on the prevention of accidental and voluntary intoxications in the general population.

In this year's edition, the data has been processed for statistical purposes using the Click Sense advanced analytics tool, which has made this data available to the different Administrations and the general public in a dynamic way through an [online portal open to the public](#), developed by the Directorate General for Digital Transformation (DGTD) at the Ministry of Justice. Thus, the different autonomous communities can easily explore the toxicological data recorded by the SIT for their corresponding region.

Another new feature of this edition is the presentation of a more detailed study of consultations generated by voluntary self-inflicted intoxication, which in 2021 accounted for a total of 5,411 consultations, a very significant increase compared to the cases recorded in previous years. The data suggests that suicide attempts occur at a very young age (more than 20% occurred in the 11-15 age group and mostly in females), with drugs being the predominant substances in this type of voluntary intoxication (86.9%), with a very significant prevalence of drugs affecting the central nervous system (83.10%), and, amongst these, the use of anxiolytics (34.8%) and antidepressants (32.5%), either alone or in combination, is worth particular mention. Undoubtedly, this data is highly relevant when it comes to developing suicide prevention policies in Spain and coincides with the findings

of other suicide prevention projects, such as those of the Survive project (<https://plataformanacionalsuicidio.es>).

As director of the INTCF, I would like to thank the medical staff of the SIT for their selfless dedication and commitment to providing ongoing toxicological advice, both to the general public and to health professionals, as well as the work of the SIT Documentation Section in developing, maintaining and updating the databases on chemical substances and mixtures that make it possible to provide appropriate and rigorous medical advice in the intoxication consultations received by the SIT.

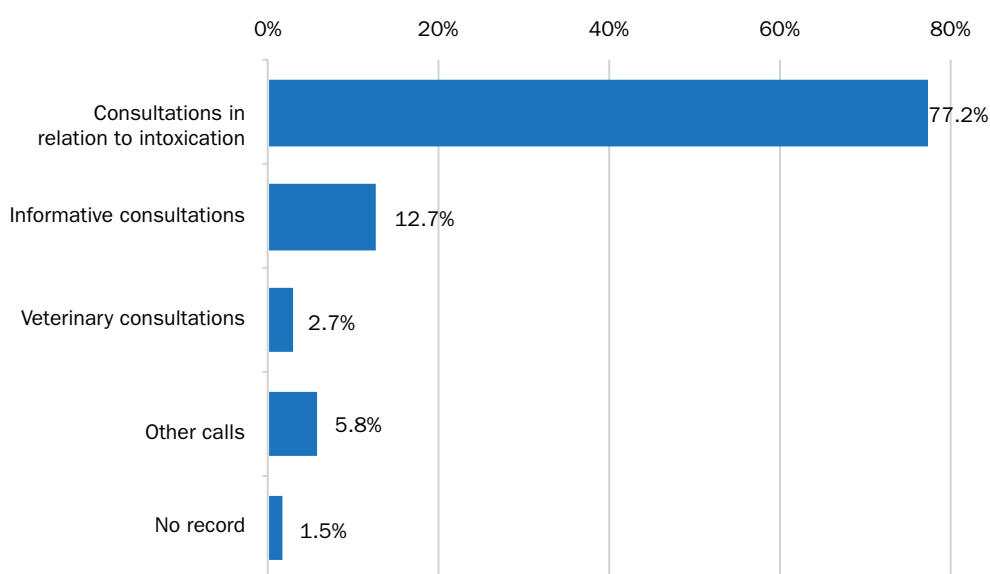
In particular, I would like to acknowledge the essential data coordination and compilation and processing work performed by José Luis Conejo Menor, head of the SIT, and Rosa Martínez Arrieta, head of the Documentation Section, as well as Beatriz Ibor Alonso for editing the text and figures in this report. Finally, our thanks go to the team of people responsible for data processing at the DGTD at the Ministry of Justice. Without their efforts, this report would not have been possible.

Antonio Alonso Alonso  
Director of the INTCF

## 2. GENERAL STATISTICAL DATA ON CONSULTATIONS

This section provides the general data on telephone consultations received by the SIT during 2021, classed by type of consultation, type of requester and geographical distribution of the persons making the consultation, the monthly distribution of the consultations and a general classification of the type of product or chemical substance involved in the consultation.

**Figure 2.1. Distribution by type of consultation**

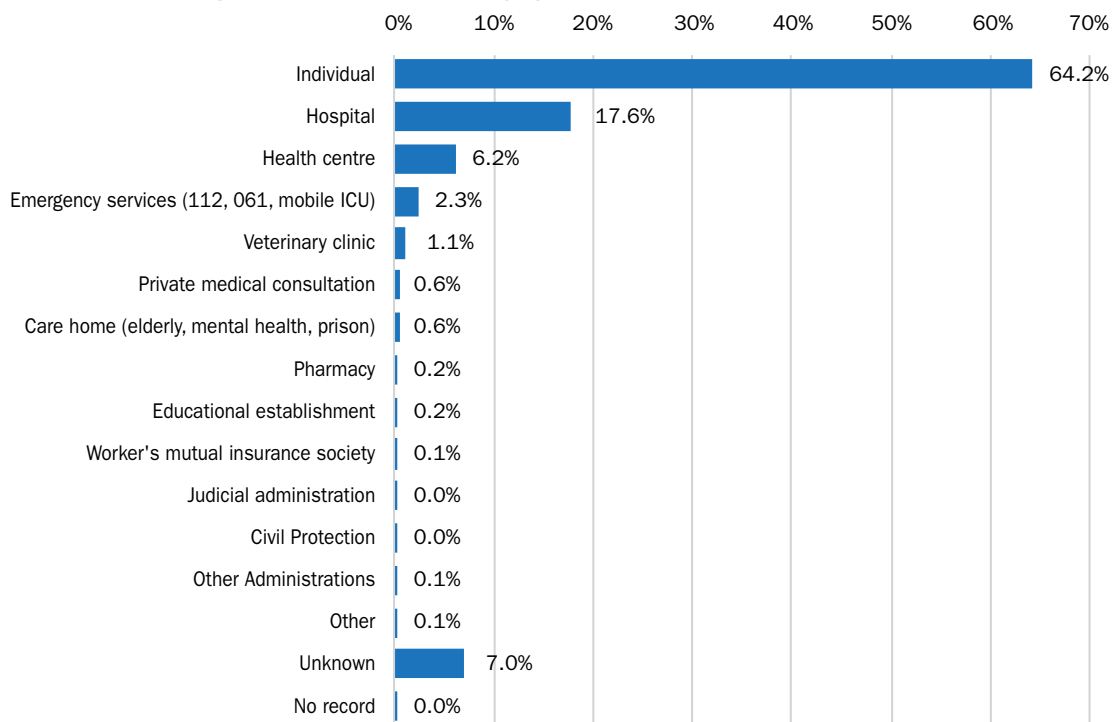


During 2021, the SIT responded to a total of 75,677 telephone consultations, broken down, as per the data shown in Figure 2.1, as follows:

- Consultations in relation to human intoxication: 58,443 (77.2%). These are cases reported following consultations for toxic exposures or intoxications in humans.
- Informative consultations: 9,600 (12.7%). These are calls requesting information but with no record of intoxication.
- Veterinary consultations: 2,081 (2.7%). These are cases related to intoxication in animals.
- Other calls: 4,391 (5.8%). These are consultations that are neither toxicological or informational in content.
- No record: 1,162 (1.5%).

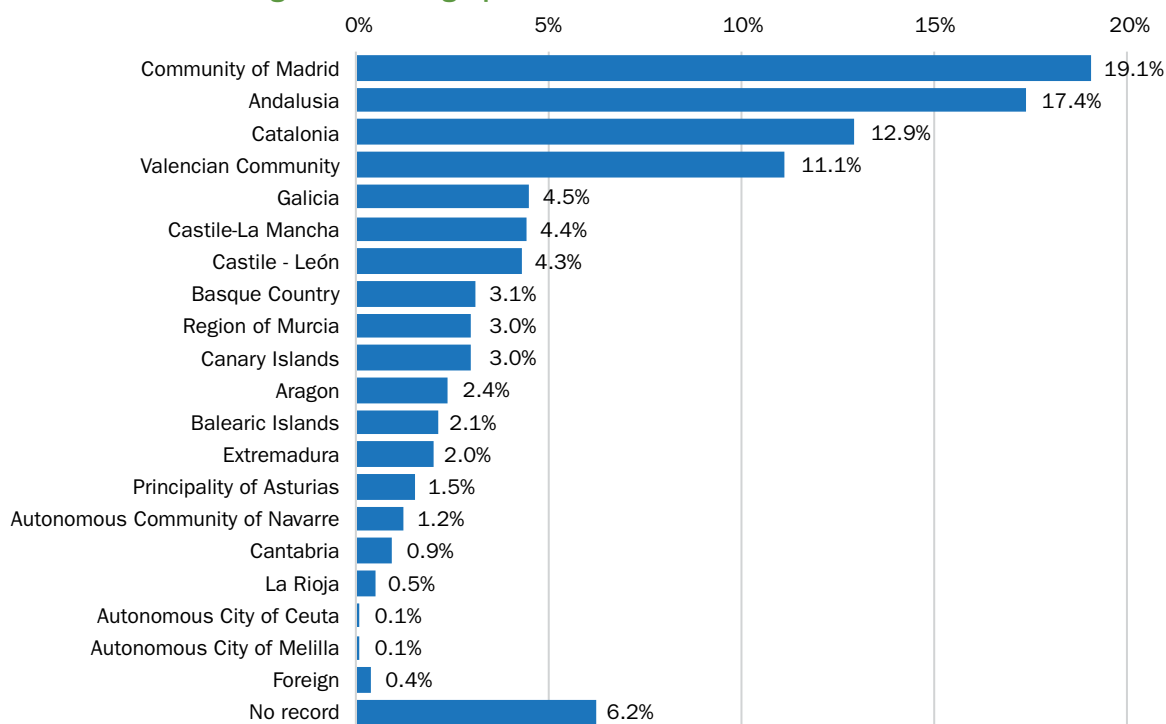


**Figure 2.2. Distribution by type of information requester**



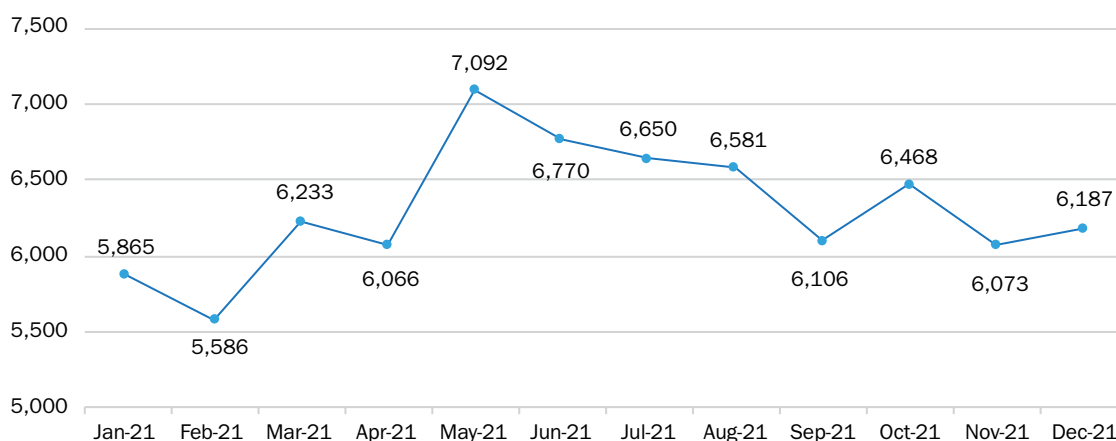
The majority of consultations to the SIT (64.2) were raised by individuals who do not have any type of health training, followed by consultations from health centres or services, which account for approximately 29%.

**Figure 2.3. Geographical distribution of consultations**



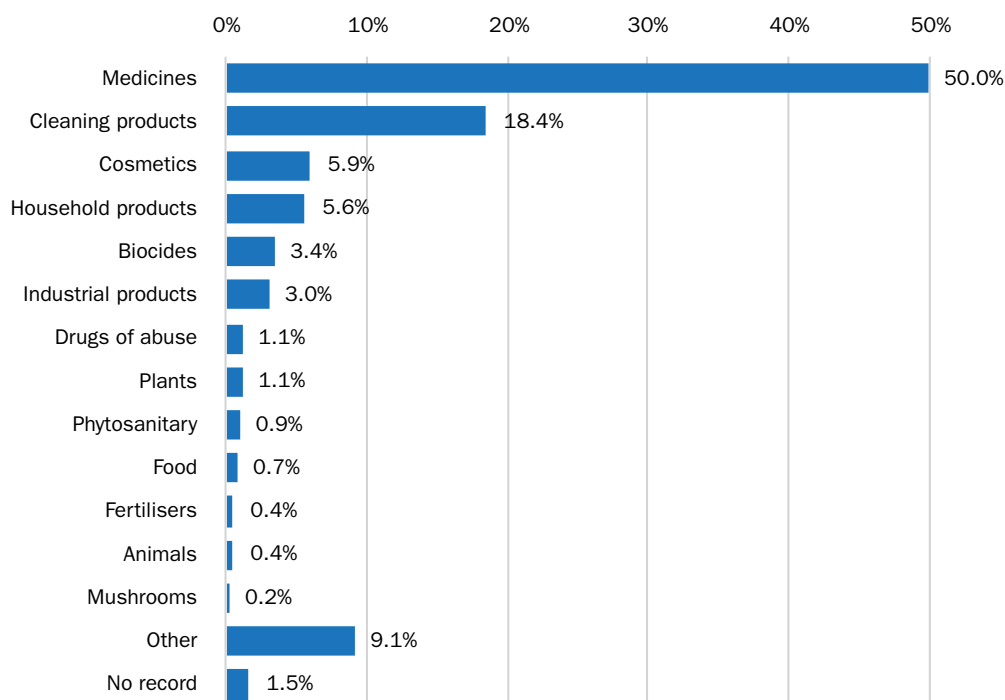
The Community of Madrid, Andalusia, Catalonia and the Valencian Community are the autonomous communities making the most consultations to the SIT. This distribution is similar to that seen in previous years.

**Figure 2.4. Monthly evolution of consultations registered**



The number of consultations remains fairly constant throughout the year, with a slight increase from May to August.

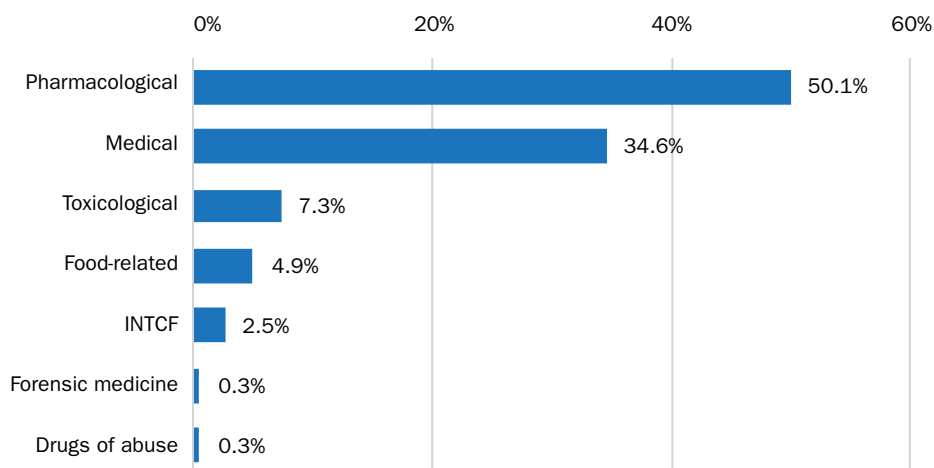
**Figure 2.5. Distribution of consultations by type of product involved**



Medicines are the type of substances for which the highest number of consultations were made to the SIT (50%), followed by cleaning products (18.4%), cosmetic products (5.9%)

and household products (5.6%). Consultations regarding cleaning products are slightly down on last year.

**Figure 2.6. Distribution of informative consultations by type**



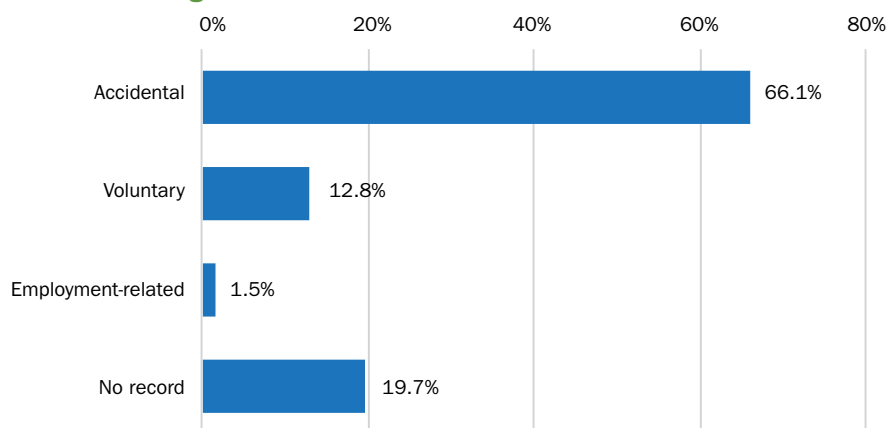
In addition to dealing with consultations about human or veterinary intoxication, the SIT regularly receives consultations asking for information without there actually being any intoxication. These are known as informative consultations. In 2021, 9,600 (12.7%) consultations of this type were received. The types of informative consultations handled by SIT are as follows:

- Pharmacological (50.1%), requesting information related to medicines, such as adverse effects, drug interactions, dosage, theratogenity, use during breastfeeding, etc.
- Medical (34.6%), such as allergic reactions and other consultations received on account of the SIT doctor's accessibility to the general population.
- Toxicological (7.3%), requesting information on substances, chemical mixtures or natural toxins, for prevention purposes, effects on the environment, theratogenity, lactation etc.
- Food-related (4.9%), in most cases related to food poisoning.
- Information about the INTCF and forensic medicine (2.8%), requesting information on the analyses carried out at the INTCF, protocol for sending forensic samples, contact with the various INTCF services, etc.
- Drugs of abuse (0.3%), requesting information on rehabilitation centres, procedures for accessing them, etc.

### 3. CONSULTATIONS IN RELATION TO INTOXICATION AND TOXIC EXPOSURE IN HUMANS

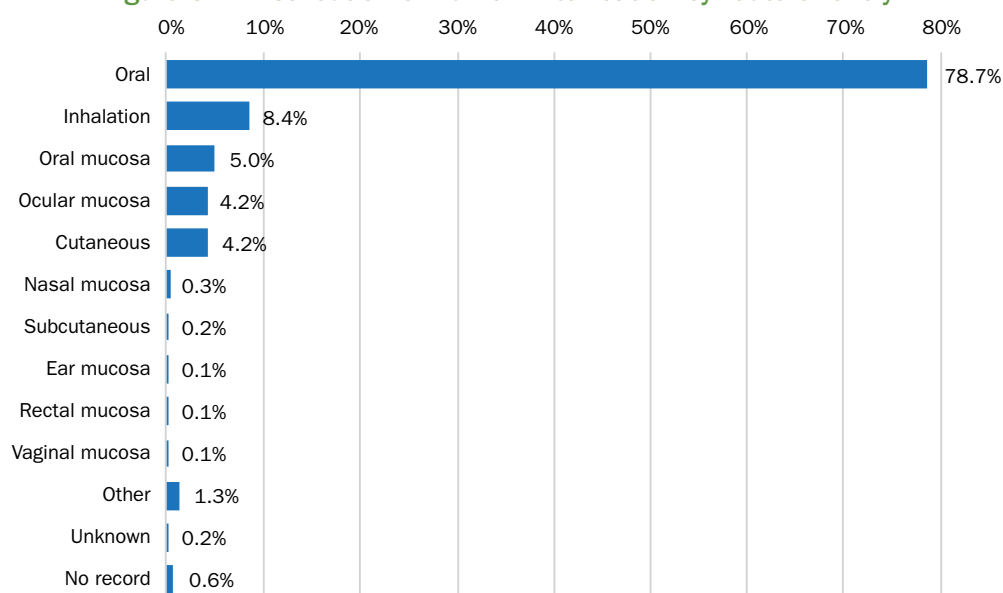
This section provides details of the results of the statistical analysis of intoxications and toxic exposures recorded in humans. This type accounted for the majority (77.2% and 58,443 consultations) of all consultations received by the SIT in 2021.

**Figure 3.1. Aetiological distribution of consultations in relation to human intoxication**



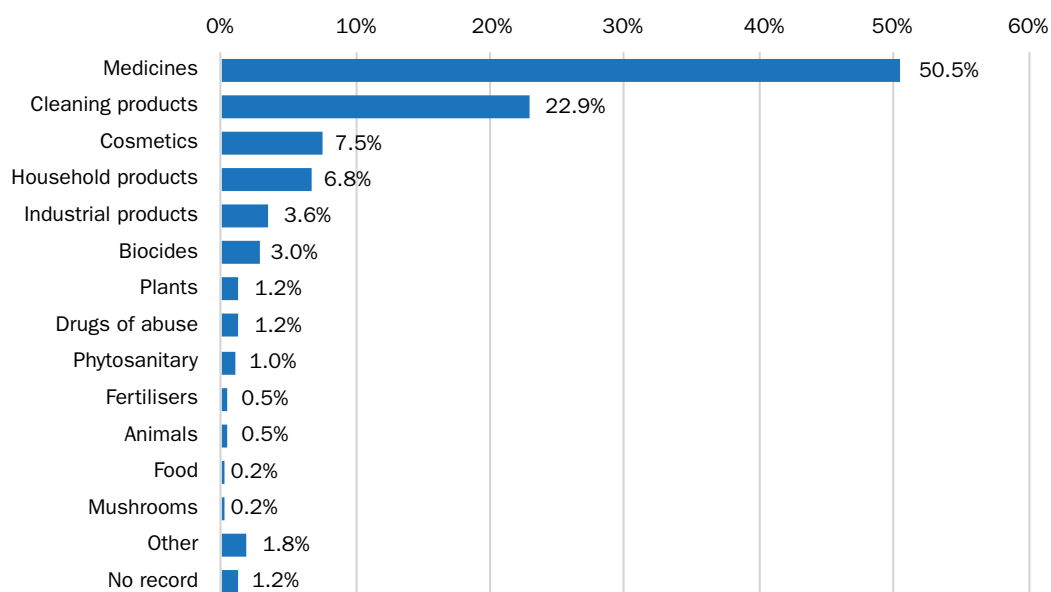
The prevalent aetiology of consultations in relation to human intoxication recorded by the SIT is accidental (66.1%), followed by voluntary (12.8%). The latter, on account of its importance and its increase compared to previous years, will be the subject of a detailed analysis in section 3.4 of this report.

**Figure 3.2. Distribution of human intoxication by route of entry**



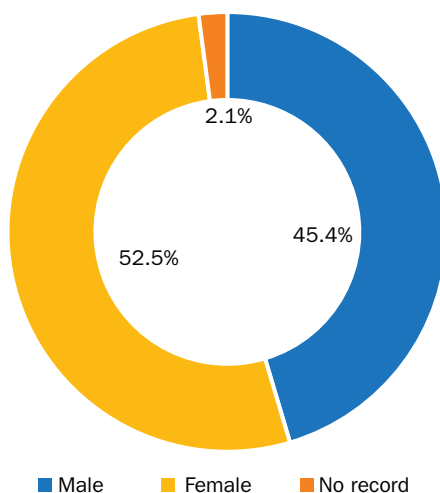
The predominant route of entry in human intoxication is oral (78.7%), followed by inhalation (8.4%). These percentages remain on par with the statistical patterns seen in previous years.

**Figure 3.3. Distribution of intoxications reported by type of product**



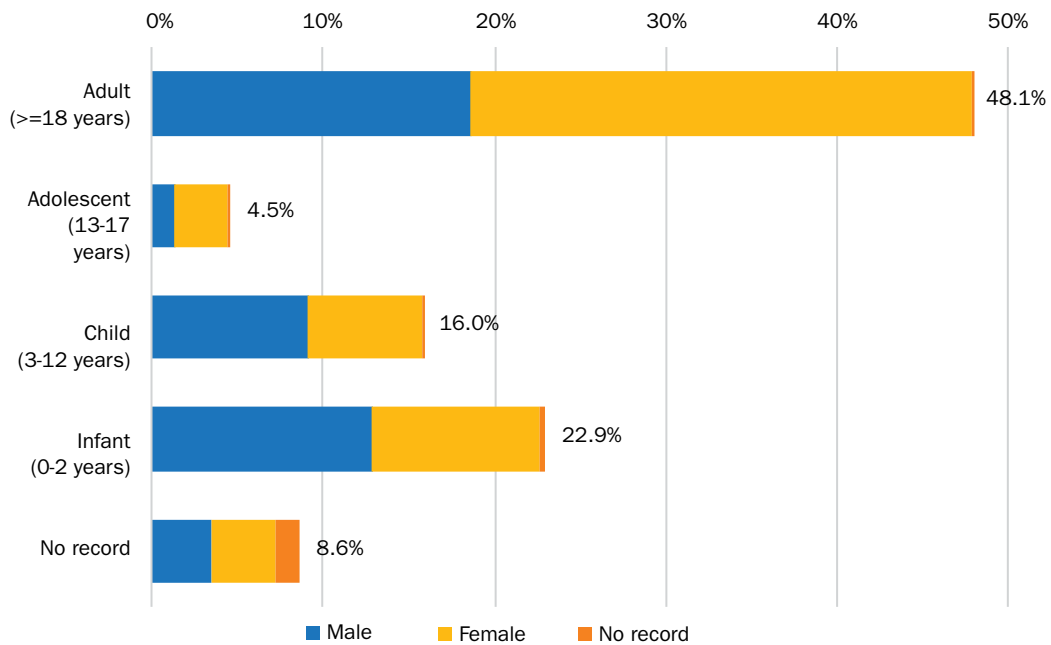
Medicinal products are the predominant type of product in human intoxication recorded by the SIT (50.5%), followed by cleaning products (22.9%), cosmetics (7.5%), household products (6.8%), biocides (3%) and industrial products (3.6%). It is significant that this trend in the type of product responsible for the intoxication has remained the same in recent years in contrast to previous decades, when intoxication was mostly caused by cleaning products. The large decrease in the number of cases of human intoxication caused by biocides (3%), such as insecticides, repellents, rodenticides or pesticides in general, as well as by phytosanitary products, compared to previous years, is also worth particular note.

**Figure 3.4. Gender distribution of intoxicated persons**



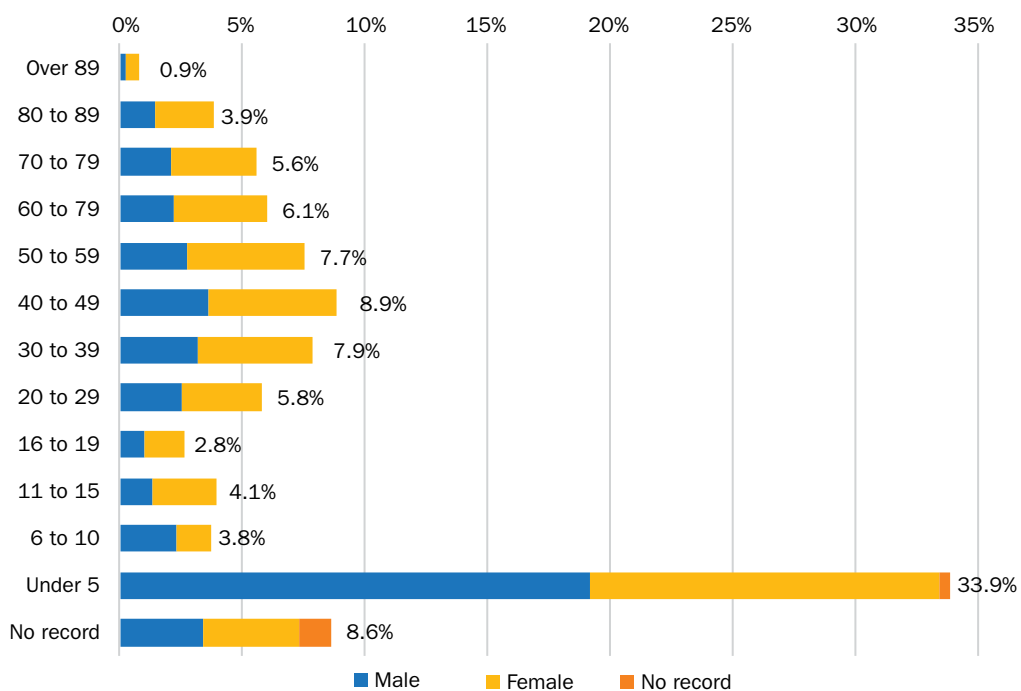
A higher percentage of intoxications occurred in women (52.5) than in men (45.4). This trend remained similar to previous years.

Figure 3.5. Distribution by type and gender of the intoxicated person



The highest percentage of intoxications occurs in the adult population (48.1), with a predominance of intoxications in women (29.2%) compared to men (18.6%). Intoxications in infants and children account for 38.9% of the total number of reported intoxications, of which 21.9% affect males and 16.4% females.

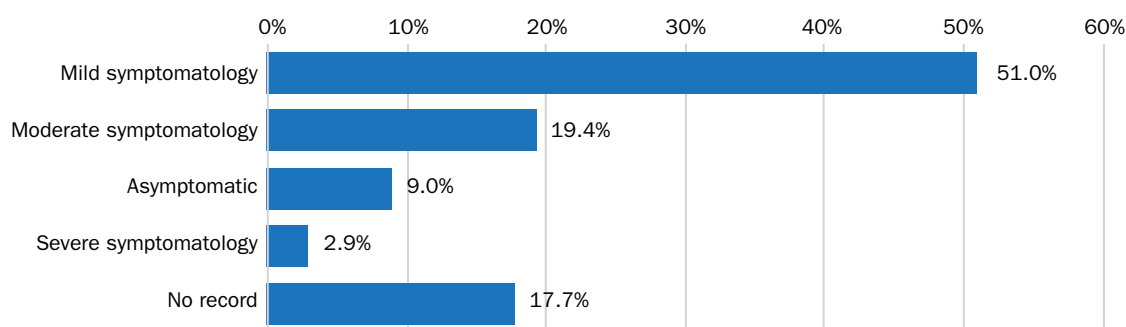
Figure 3.6. Distribution by age range and gender of intoxicated persons



Analysing by age and gender indicates that the highest rate of intoxication (33.9%) occurs in children under 6 years of age, accounting for one third of all intoxications in humans, with a slight predominance in boys (19.2%) compared to girls (14.3%).

As regards the adult population, the percentage distribution by age group is fairly homogeneous, with the highest number of intoxications concentrated in the 30-59 age range (24.5%).

**Figure 3.7. Distribution of reported intoxications according to estimated severity**

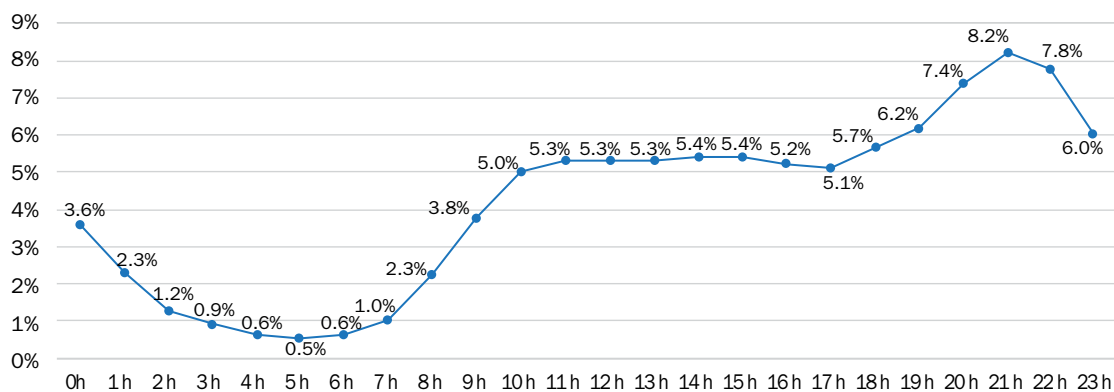


After an initial telephone assessment of the consultations, the SIT doctors, depending on the condition and symptoms reported, estimate the severity of the intoxication using different levels: asymptomatic, mild symptoms, moderate symptomatology or severe symptomatology.

Similar to previous years, 51% of all intoxications (accidental and voluntary) are considered mild, followed by moderate on 19.4% and severe in 2.9 % of consultations.

We will see below that these percentages for estimating severity are different in voluntary intoxications, where moderate symptoms predominate, on 54.5% (Figure 3.4.3).

**Figure 3.8. Time distribution of intoxications in humans**



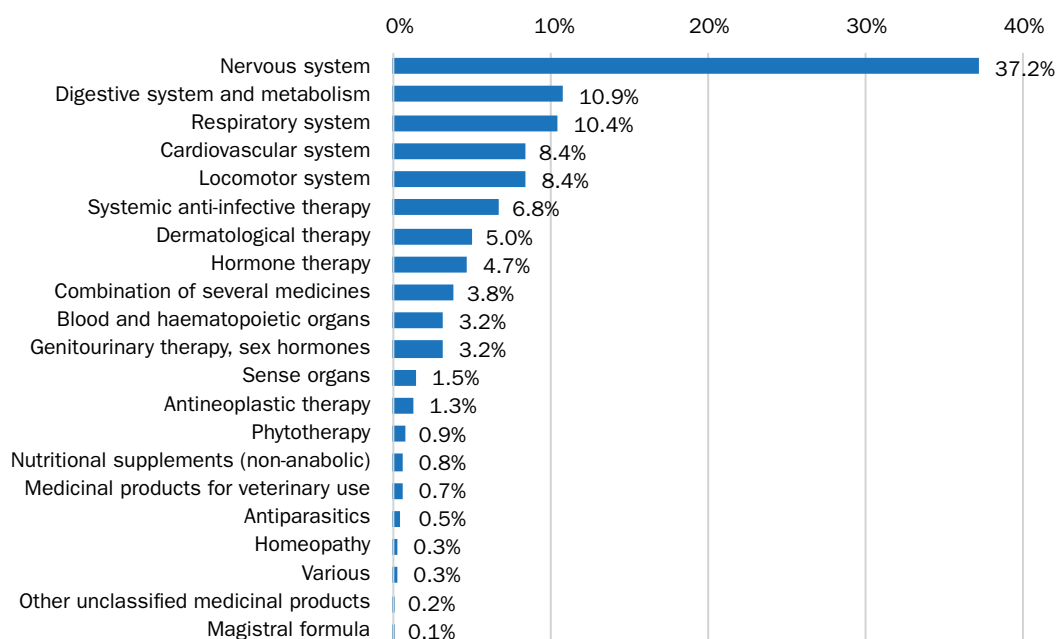
Human intoxications recorded tend to take place in the late afternoon, with a peak in call volume at 9 pm.

The following sections provide details of the results of the statistical analysis of the intoxications occurring most frequently in 2021, classified by the type of product that gave rise to the intoxication (medicines, cleaning products and cosmetics).

### 3.1. Intoxications caused by medicinal products

Figure 3.1.1 reflects the percentage rate of the different intoxications caused by medicines, classified according to the organ or system that they affect, pursuant to the anatomical-therapeutic-chemical classification code assigned by the Collaborating Centre for Drug Statistics Methodology at the World Health Organisation (Anatomical Therapeutic Chemical Classification System, hereinafter ATC).

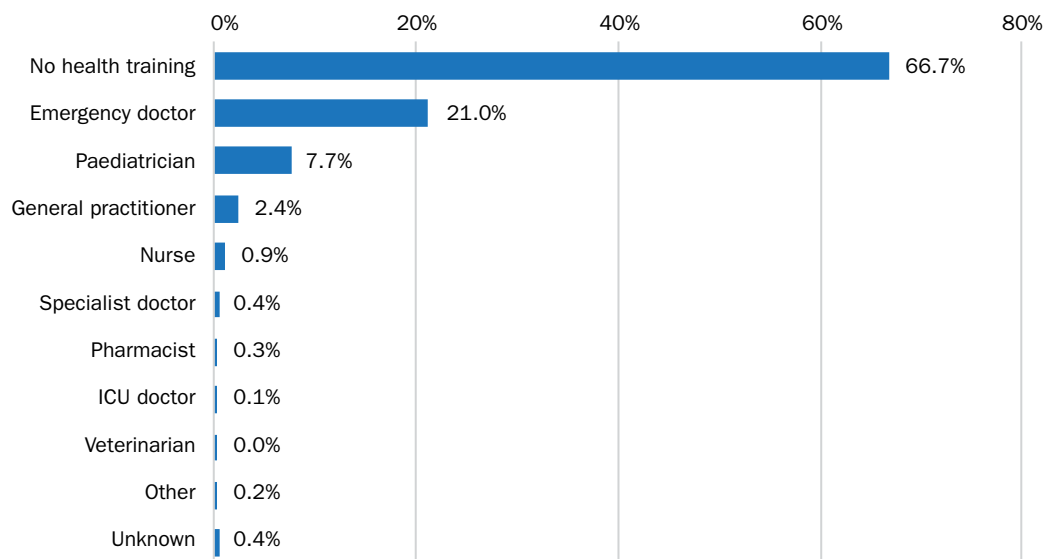
**Figure 3.1.1. Distribution of intoxications by type of medicinal product pursuant to ATC classification**



As can be seen, intoxications caused by drugs that affect the central nervous system are worth particular mention (37.2%, 10,971 consultations), followed by those associated with drugs affecting the digestive system (10.9%, 3,205 consultations), the respiratory system (10.4%, 3,072 consultations), the cardiovascular system (8.4%, 2,487 consultations) and the musculoskeletal system (8.4%, 2,479 consultations).



**Figure 3.1.2. Distribution of drug intoxications by type of health training of the requester**



As can be seen in Figure 3.1.2, in more than two thirds of the intoxications caused by medicinal products (66.7%), the person requesting the information had no health background, making it difficult for them to interact with the medical staff of the SIT and to assess the case, as well as to estimate the severity.

**Figure 3.1.3. Distribution of the type of intoxication (by gender and age) by type of medication**

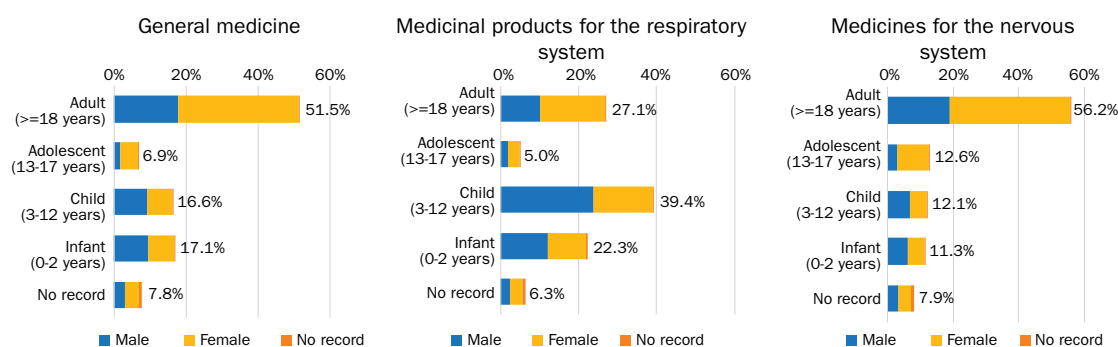
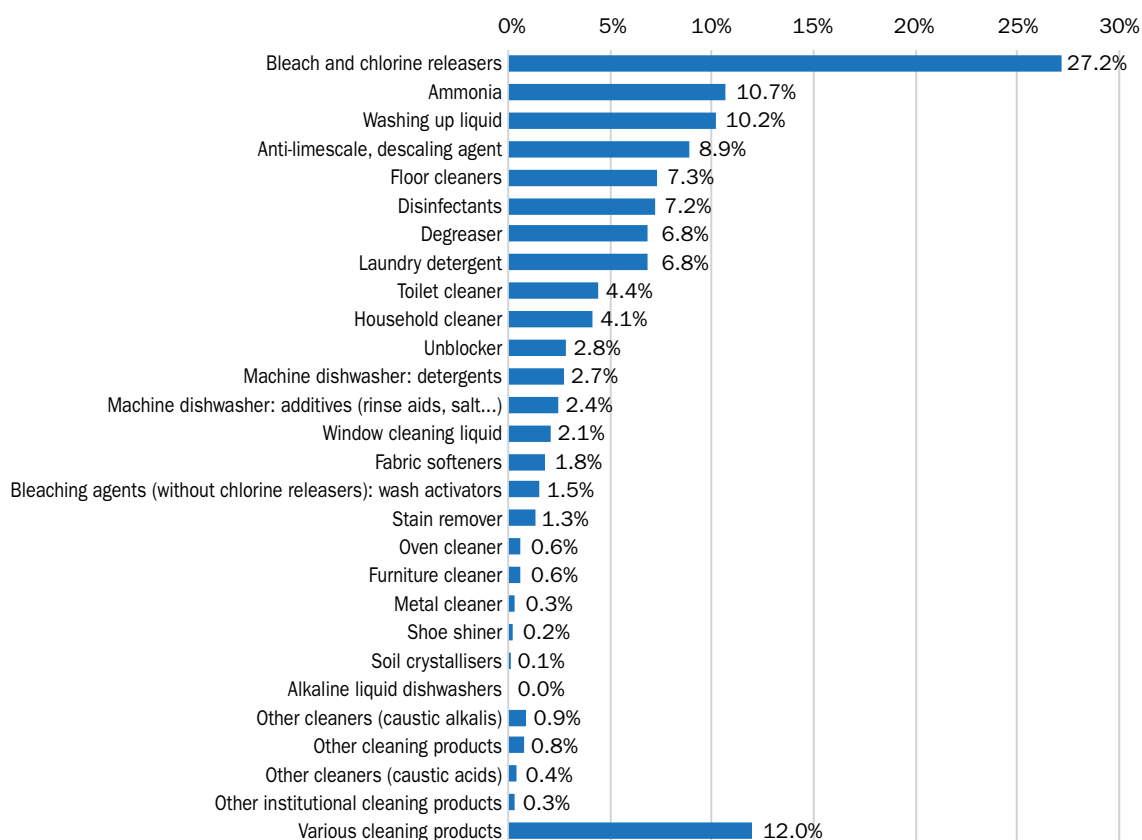


Figure 3.1.3 shows some examples of the different distribution of the type of intoxications (by gender and age) depending on the type of medicine. As illustrated in the figure, in terms of intoxications caused by medicinal products as a whole, as well as for intoxications caused by drugs affecting the central nervous system, a higher rate is observed in adults (51.5% and 56.2% respectively), while for intoxications caused by drugs affecting the respiratory system, a higher rate is observed in infants (22.3%) and children (39.4%) than in adults (27.1%).

### 3.2. Intoxications caused by cleaning products

Consultations related to cleaning products amounted to 13,925 (18.4% of the total), of which 96.2% (13,391 consultations) involved intoxications or toxic exposure in humans. Figure 3.2.1 shows the percentage distribution of this type of intoxication, broken down by type of cleaning product.

**Figure 3.2.1. Distribution of intoxications by type of cleaning product**



Worth particular note is the increase in the number of toxic exposures and intoxications involving cleaning products in humans recorded during 2021 (13,391 consultations) compared to 2020 (11,199 consultations), as well as compared to years prior to the pandemic (less than 8,500 consultations).

With regard to the predominant type of cleaning product, bleaches and chlorine releasers continue to be the most common (27.2%), with a clear increase compared to previous years (around 15%).

Also worth noting is the percentage of intoxications involving several cleaning products (1,605 consultations), which account for 12% of the total number of consultations for intoxication by cleaning products. This is an increase compared to previous years, when

such consultations accounted for only 5% of the total number of cleaning product intoxications.

**Figure 3.2.2. Distribution of intoxicated persons (by sex and age) by type of cleaning product**

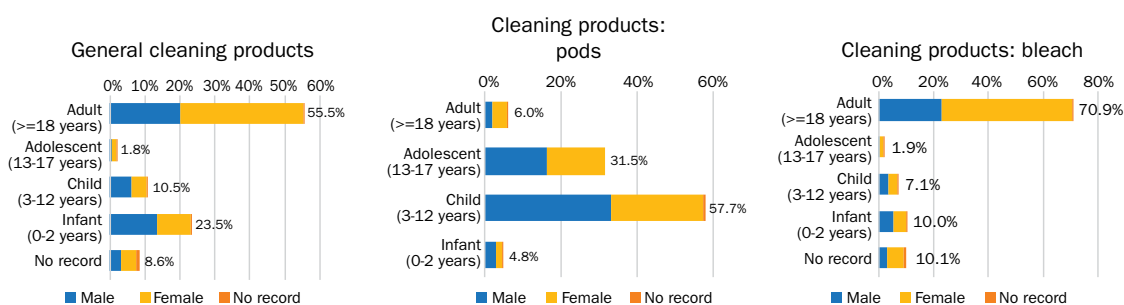
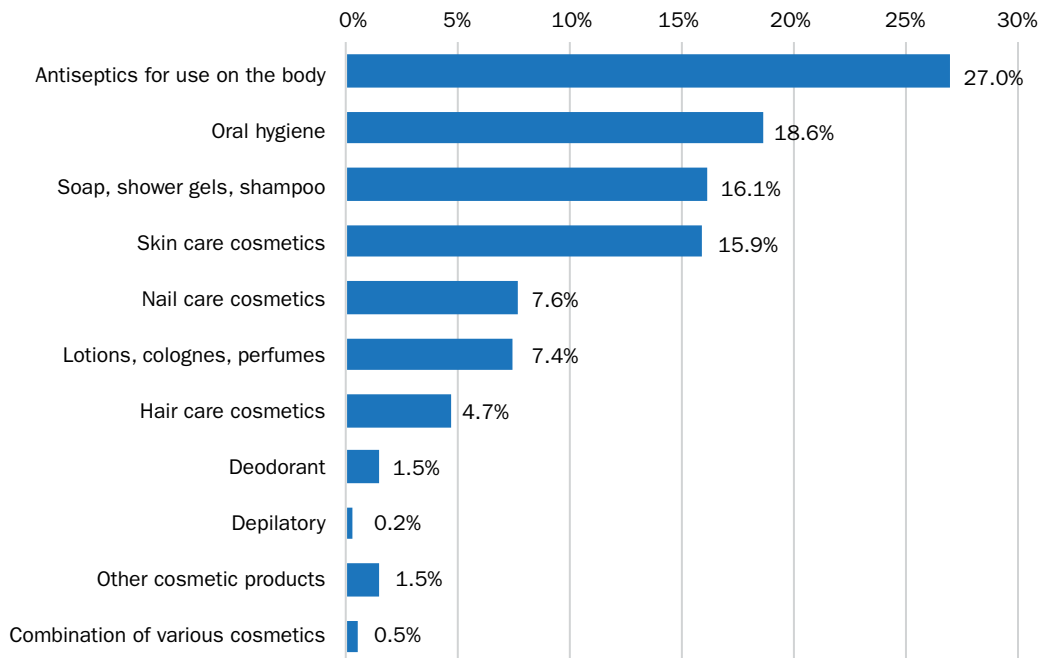


Figure 3.2.2 shows some examples of the different distribution of the type of intoxication (by gender and age) depending on the type of cleaning product or the type of product presentation. As illustrated in the figure, for intoxications caused by cleaning products as a whole, as well as for intoxications caused by bleach, these types of intoxication are mostly observed in adults (55.5% and 70.9%, respectively), while intoxications involving cleaning products in the form of *pods*, are mostly observed in infants (57.7%) and children (31.5%), with a low percentage involving adults (6%).

In 2014, anti poison centres in several Member States, including the SIT as the Spanish anti poison centre, reported an increase in intoxications, especially in young children, caused by the use of soluble single-use containers (so-called *pods*). This alarm led to the publication of Regulation (EU) No 1297/2014 of 5 December (<https://www.boe.es/buscar/doc.php?id=DOUE-L-2014-83641>), which requires the adoption of a set of preventive measures aimed at reducing the attraction of these products and increasing the difficulty of them being accessed by the most vulnerable population. The SIT is currently participating in a multi-centre study, led by the International Association for Soaps, Detergents and Maintenance Products (AISE), to test whether the proposed prevention measures are effective in reducing intoxications caused by *pod* products. As can be seen in Figure 3.2.2, consultations due to exposure to products marketed in this type of *packaging* continue to be very frequent, especially in the younger age group (57.7%).

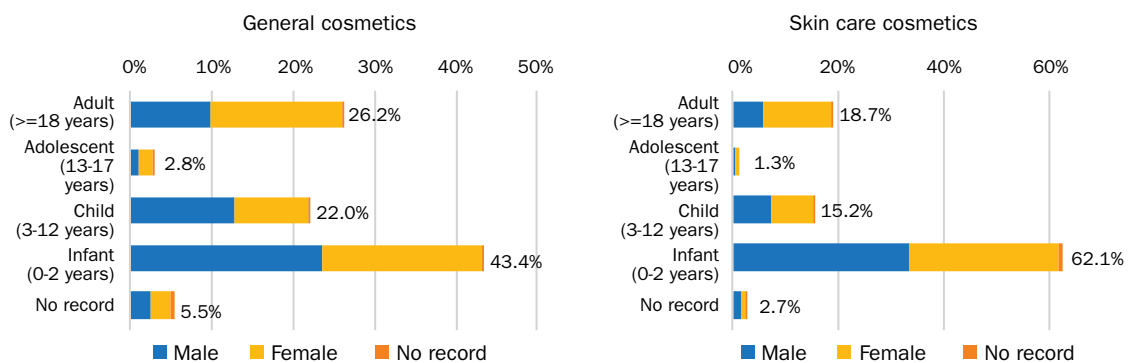
### 3.3. Intoxication caused by cosmetic products

**Figure 3.3.1. Distribution of intoxications by type of cosmetics**



In 2021, 4,371 intoxications involving cosmetic products were reported, accounting for 7.5% of the total number of intoxications, as shown in Figure 3.3.1. This figure includes the different sub-types of cosmetics dealt with by the SIT, with antiseptics for body use accounting for the highest percentage (27%).

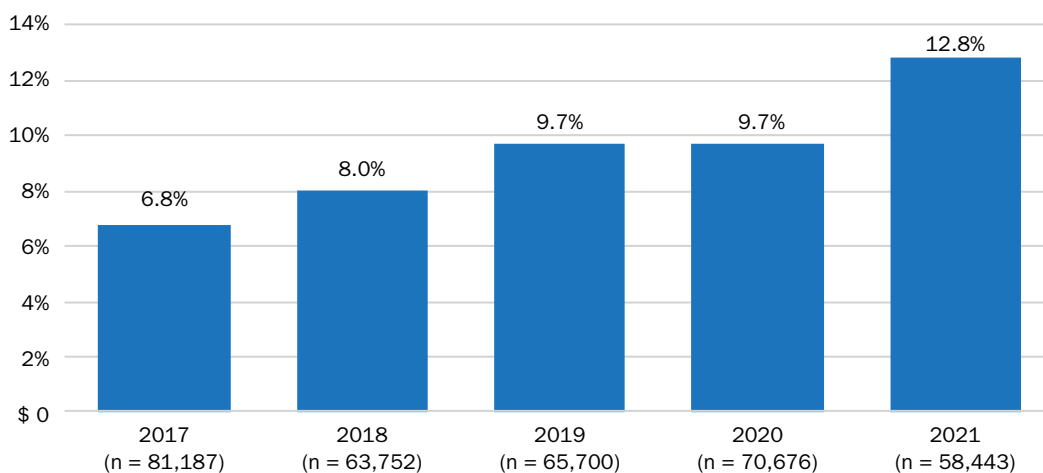
**Figure 3.3.2. Distribution of type of intoxication (by sex and age) for all types of cosmetics and skin care cosmetics**



As shown in Figure 3.3.2, intoxication by cosmetic products in general is highest in infants (43.4%) and children (22%), and in the case of cosmetic skin care products, the rate of intoxication in infants comes to 62.1%.

### 3.4. Voluntary intoxication consultations

**Figure 3.4.1. Evolution of the percentage of voluntary intoxications registered in the SIT between 2017 and 2021**



The distribution of consultations for intoxications in humans (Figure 3.1) includes the distribution corresponding to voluntary intoxication, which represent 12.8% of the total (7,453 cases) and represent an increase compared to previous years, with percentages below 10% of the total number of intoxications (Figure 3.4.1).

**Figure 3.4.2. Distribution of the aetiology of voluntary intoxications**

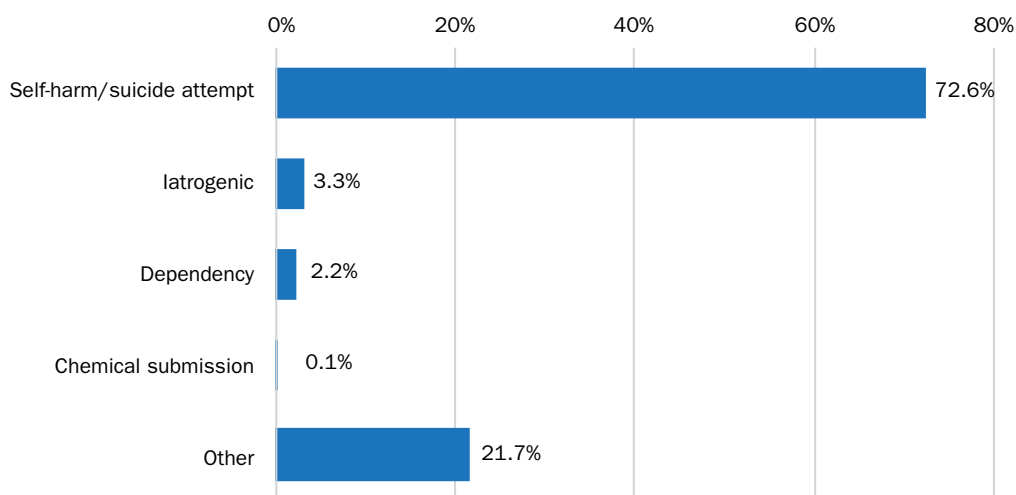
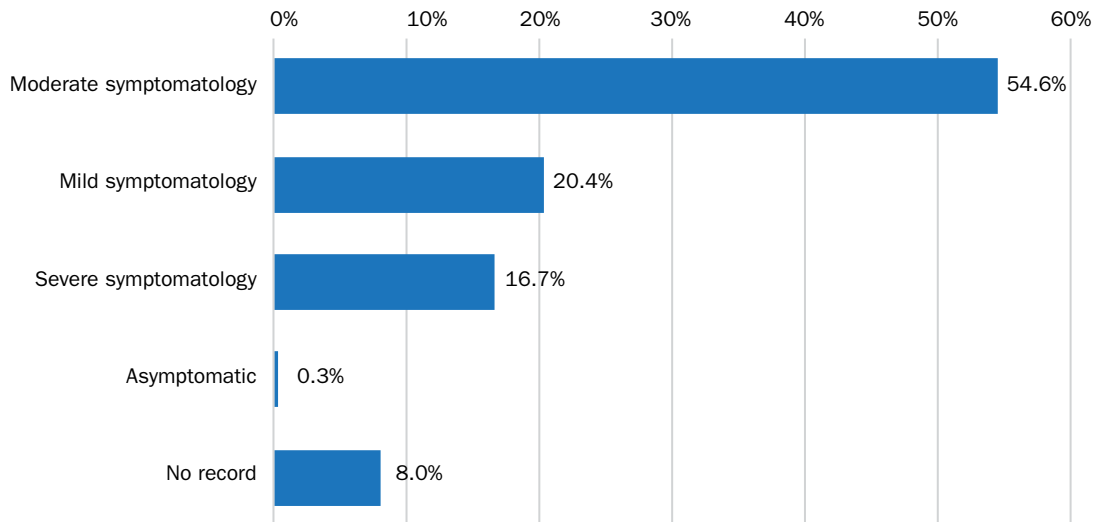


Figure 3.4.2 shows the percentage distribution of the different consultations involving voluntary intoxications based on their aetiology, with attempted suicide or self-harm being the predominant aetiology (72.6%), accounting for 5,411 consultations in 2021.

To obtain objective statistical data, as well as to raise the profile of this type of intoxication, which has important social and health repercussions, a more detailed study was carried out in relation to the consultations caused by self-intoxication or suicide attempts,

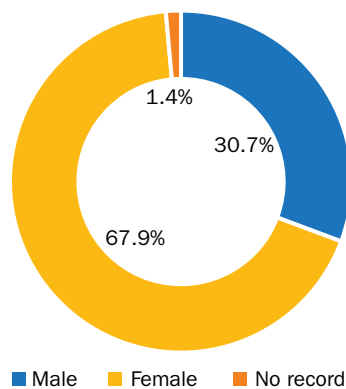
assessing the age range and gender of the intoxicated person, the seriousness of the intoxication, as well as the substances most commonly used and, in particular, the types of medication associated with this type of intoxication.

**Figure 3.4.3. Distribution of voluntary intoxications by autolysis according to estimated severity**



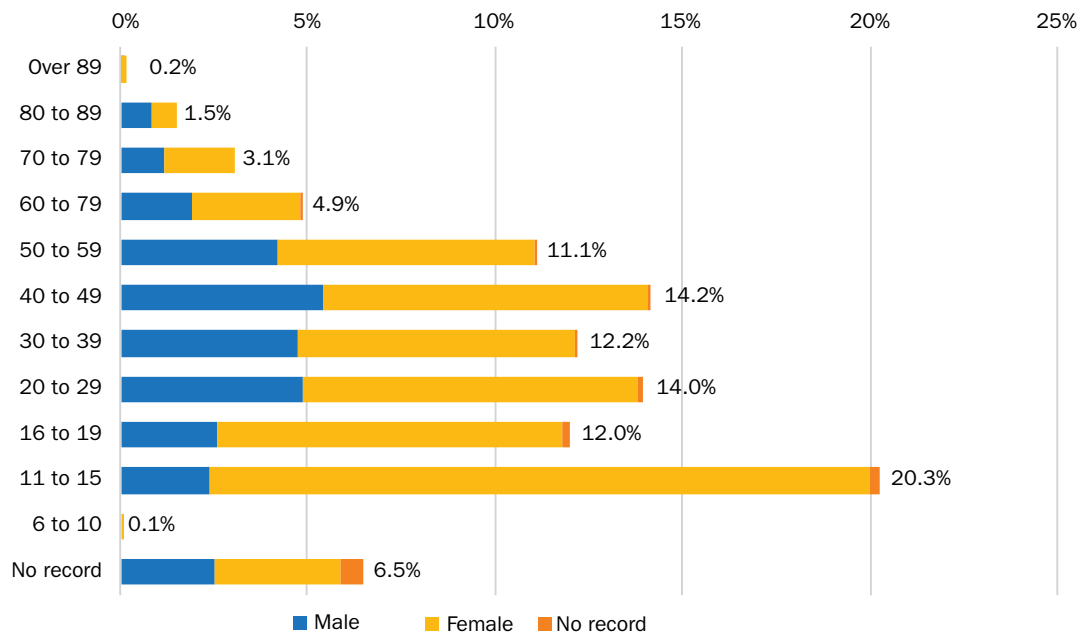
More than half of the cases recorded as voluntary self-inflicted intoxications were estimated to be of a moderate severity (54.6%). Also worth noting is the percentage considered severe (16.7), which is much higher than the percentage of consultations considered severe when it comes to accidental intoxications, which was 2.9% (see Figure 3.7).

**Figure 3.4.4. Distribution of voluntary intoxications by autolysis by gender**



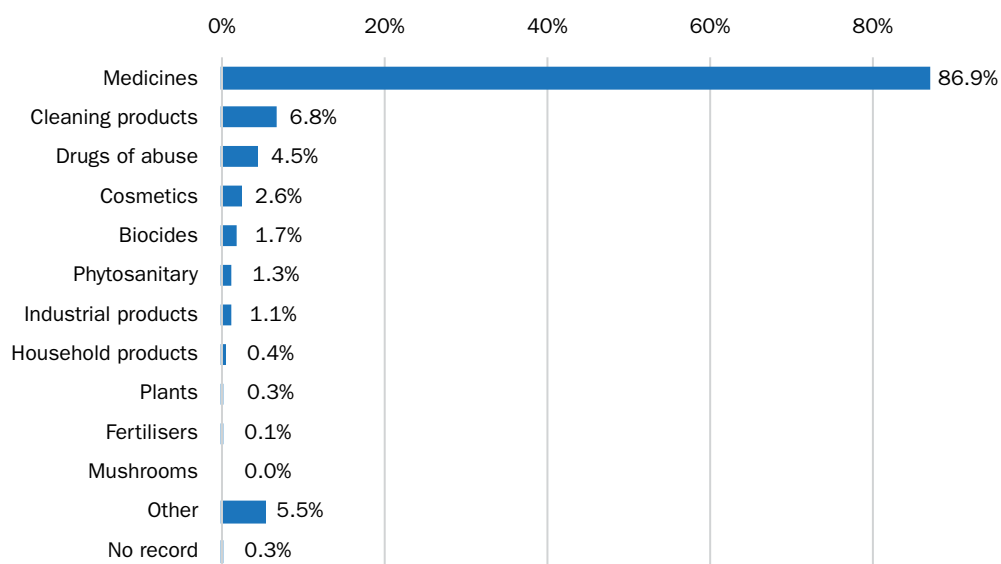
Voluntary intoxications by autolysis are more common in women (67.8%) than in men (30.8%).

**Figure 3.4.5. Distribution of voluntary intoxications by autolysis by age range and gender**



The distribution of the type of intoxicated person by age range and gender (Figure 3.4.5) indicates that suicide attempts occur at a very young age, with 20.3% of cases occurring in the 11-15 age group and mostly in females.

**Figure 3.4.6. Distribution of voluntary intoxications by autolysis by type of product responsible**



The predominant product type in intoxications by autolysis is medicine (86.9%), with a much higher percentage than other products such as cleaning products (6.8%) or drugs of abuse (4.5%). In the case of adolescents aged 11-15 years, medicines account for 92.2% of voluntary self-inflicted intoxications.

**Figure 3.4.7. Distribution of intoxications by autolysis by type of medicine responsible**

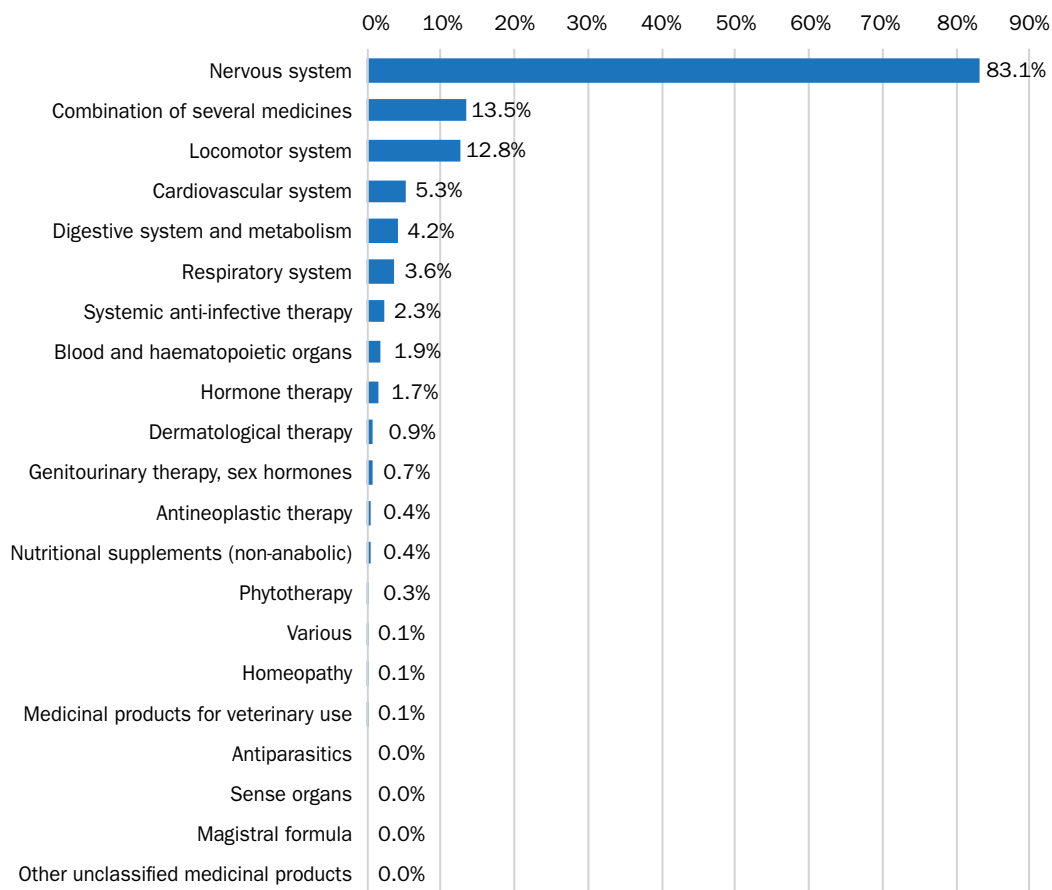
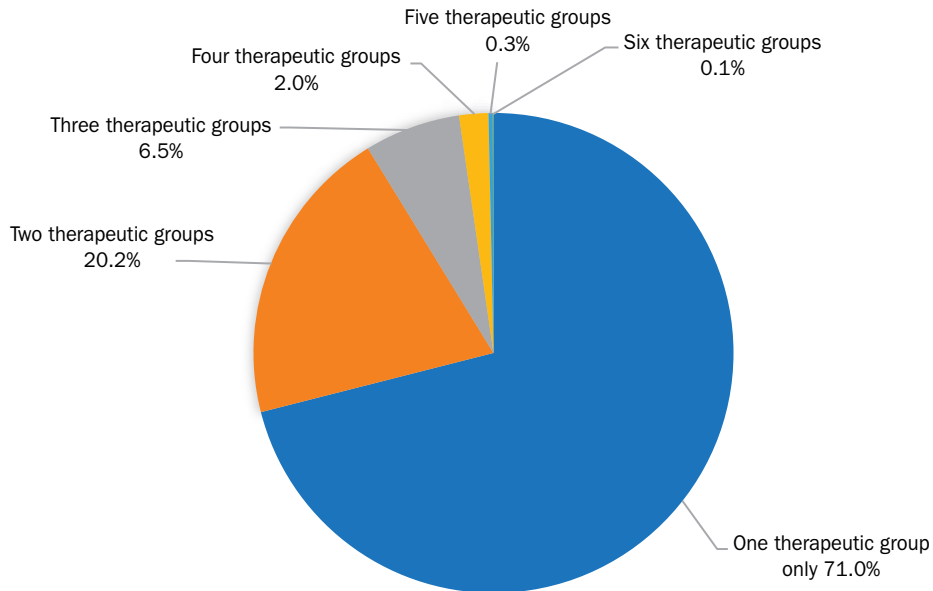


Figure 3.4.7 shows the distribution of the types of medicines responsible for self-inflicted intoxications by ATC classification. As can be seen, self-inflicted intoxications by drugs affecting the central nervous system (83.1%, representing a total of 3,910 consultations) are worth particular note.



**Figure 3.4.8. Distribution of intoxications by autolysis by number of therapeutic groups involved**



In 71% of voluntary self-inflicted intoxications (2,781 consultations), involving nervous system drugs (group N of the ATC classification), the drugs involved belong to a single therapeutic group. However, concomitant ingestion of several drugs belonging to different therapeutic groups is characteristic of these self-inflicted intoxications (29% of these consultations, which amounts to a total of 1,134 consultations).

**Figure 3.4.9. Distribution of self-inflicted intoxications by type of medicine**

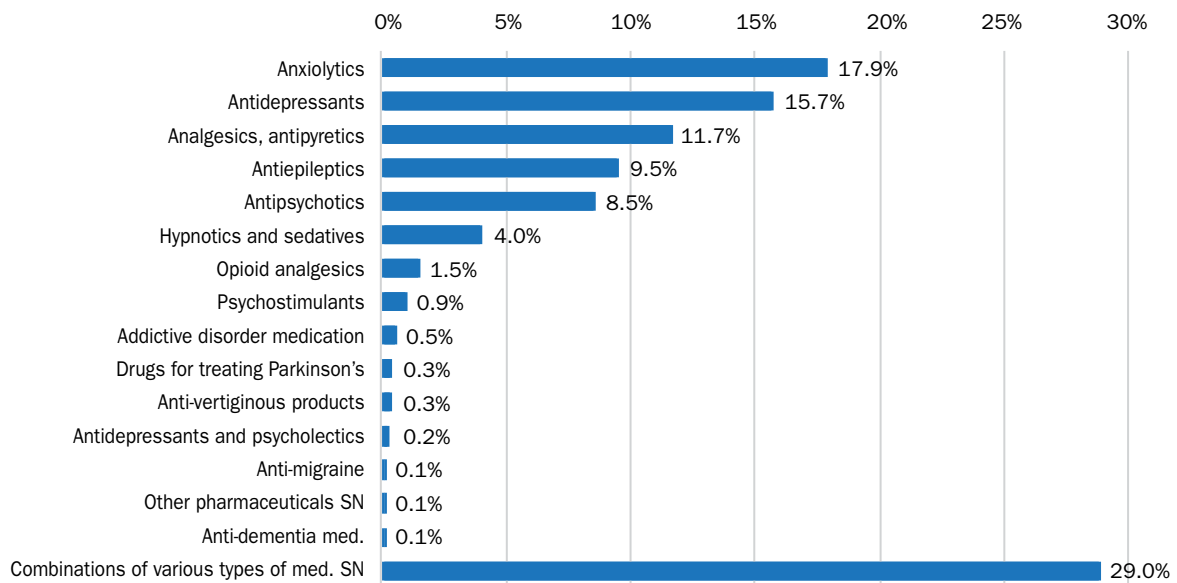


Figure 3.4.9 shows the data on self-inflicted intoxications associated with the ingestion of drugs affecting the nervous system classified by the isolated use of the different

therapeutic groups (71%), as well as the total data on the combined use of several types of drugs (29%). In terms of the isolated use of a single group of medicines, anxiolytics (N05B) stand out, accounting for 17.9% of these consultations, followed by antidepressants (N06A), on 15.7%, and analgesics-antipyretics (N02B), on 11.7%.

A more precise study is detailed below, taking into account the therapeutic groups accounting for the highest percentages of this type of self-induced drug intoxications (anxiolytics, antidepressants, anti-epileptics and analgesics), as well as data on the combined consumption of these groups of drugs.

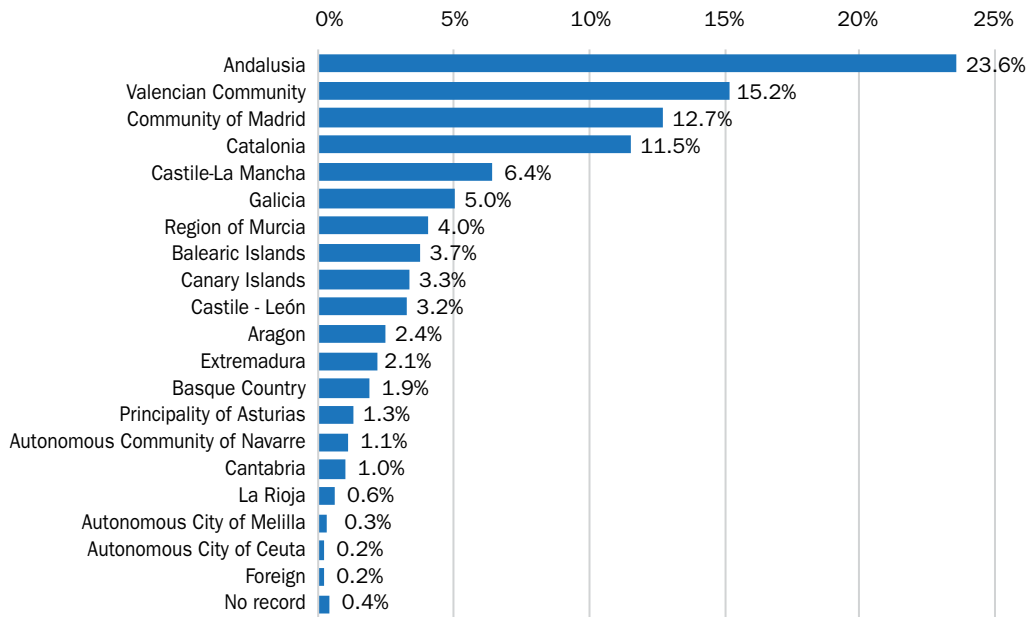
Anxiolytics, especially those derived from benzodiazepines, are involved in 34.8% of consultations for voluntary intoxications by nervous system medicines, either as the sole cause of the intoxication (in 51.3% of consultations) or in association with other pharmaceuticals belonging to different therapeutic groups, mainly antidepressants (13.6%), antipsychotics (5.3%), antiepileptics (5.1%) or analgesics-antipyretics (3.8%).

Antidepressants are present in 32.5% of self-harm consultations registered with the SIT. In 48.3% of these consultations, antidepressants were the sole agent causing intoxication, while in the remaining cases they were associated with anxiolytics (14.6%), antiepileptics (6.5%), antipsychotics (4.5%) or analgesics-antipyretics (2.6%).

Nervous system drugs belonging to the therapeutic group of anti-epileptic drugs, often used for the elimination of neuropathic pain, are involved in 20.6% of voluntary self-inflicted intoxications. In 46% of these consultations, the active substances involved belonged to the same therapeutic group, while 10.3% were associated with antidepressants, anxiolytics (8.7 %) or antipsychotics (5.7 %).

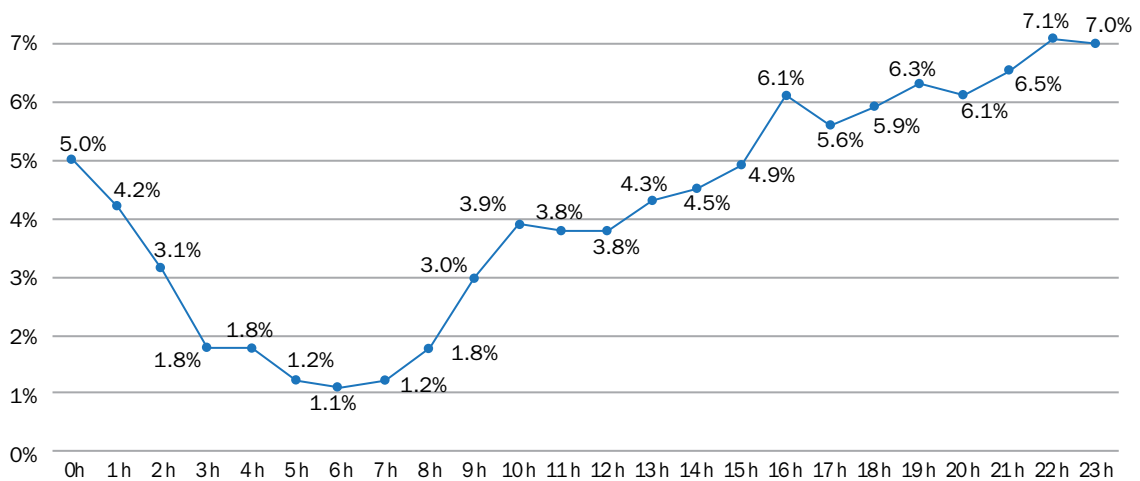
Non-opioid analgesic-antipyretic drugs are less common, accounting for 17% of the voluntary drug intoxications reported to the SIT. In this case, 68.6% of consultations are the only type of medication involved, while 7.8% of consultations are associated with benzodiazepines and 5% with antidepressants.

**Figure 3.4.10. Geographical distribution of voluntary intoxications by autolysis**



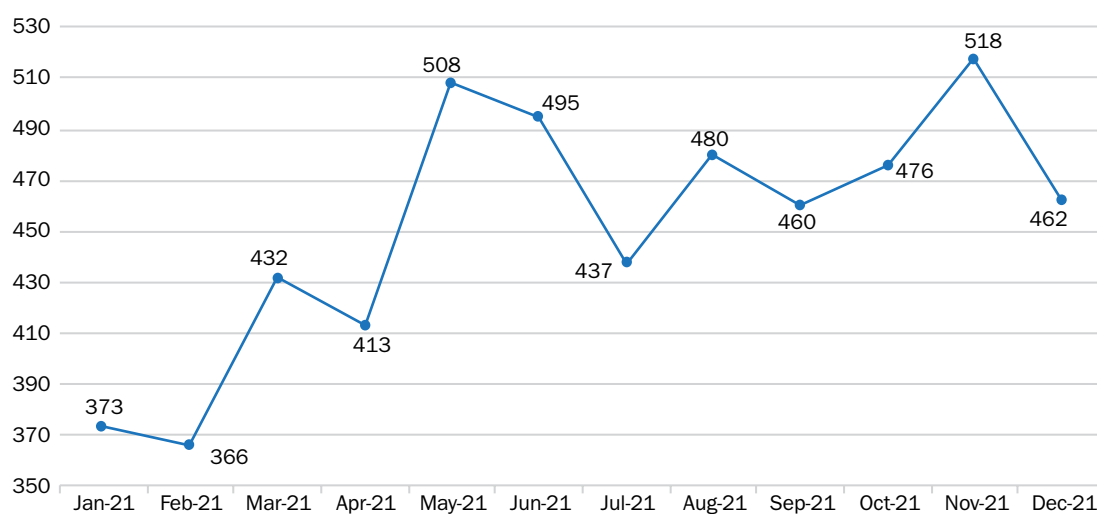
With regard to the autonomous communities with the highest percentage of intoxications by autolysis, Andalusia places first (23.6%), followed by the Valencian Community (15.2%), the Community of Madrid (12.7%) and Catalonia (11.5%).

**Figure 3.4.11. Time distribution of voluntary intoxications by autolysis**



Early at night and in the early hours of the morning when the highest volume of SIT consultations for self-inflicted intoxications is received.

Figure 3.4.12. Monthly evolution of voluntary intoxications by autolysis

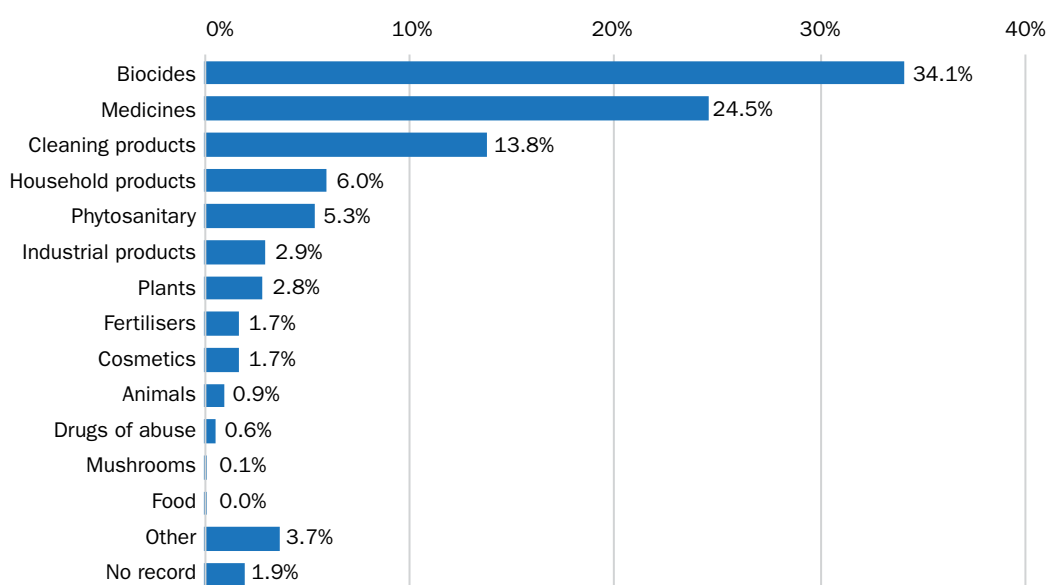


The months with the highest number of voluntary intoxications by autolysis recorded by the SIT are November (518 cases) and May (508 cases). It should be noted that these peaks coincide with the months that are most representative of the autumn and spring seasons, when there is a higher number of events associated with anxiety and depression.

## 4. VETERINARY CONSULTATIONS

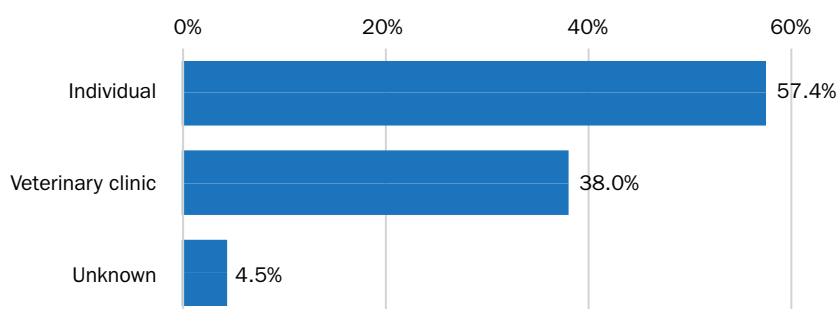
The most representative statistical data in relation to the consultations registered for intoxications in animals (2,081) are shown below. Of these, those caused by medicines are referred to the Veterinary Department at the Spanish Agency for Medicines and Health Products (AEMPS), following the recent collaboration agreement between the INTCF and the AEMPS.

**Figure 4.1. Distribution of intoxications in animals by type of product responsible**



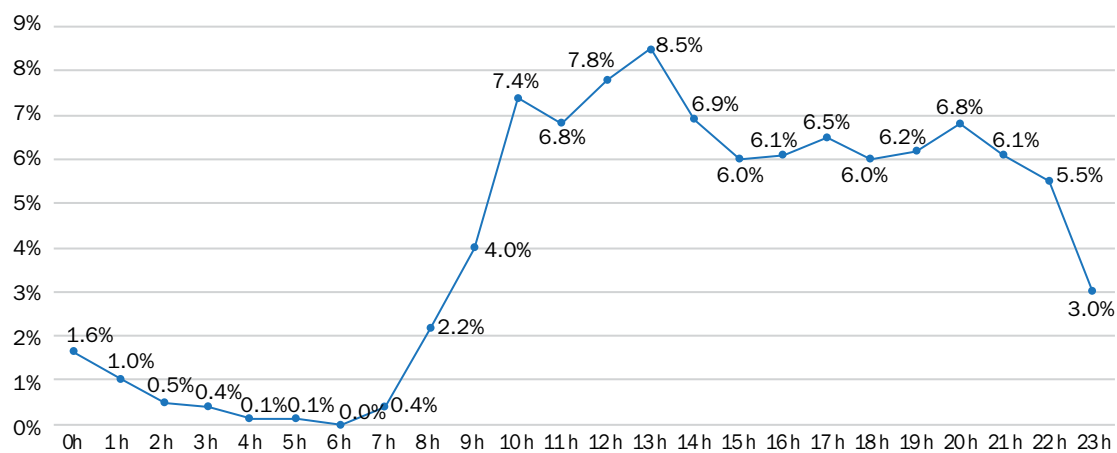
The predominant type of product in animal intoxications is biocides (34.1%). Biocides are mixtures containing one or more active substances that serve to repel, neutralise or destroy harmful organisms, and include, among others, disinfectants, preservatives and pesticides.

**Figure 4.2. Distribution of veterinary consultations by person requesting information**



While most consultations are made by private users (57.4%), it is worth noting that more than one third of veterinary consultations for animal intoxications come directly from veterinary clinics (38%).

**Figure 4.3 Time distribution of veterinary consultations**



In contrast to consultations for intoxications in humans, which are more frequent in afternoons, the predominant time slot for consultations for animal intoxications is in the morning.

## 5. SUMMARY OF THE MOST RELEVANT FINDINGS

### General statistical data on consultations and intoxications

During 2021, the SIT handled a total of 75,677 telephone consultations, of which 58,443 were as a result of intoxications and toxic exposures in humans, 2,081 enquiries were for intoxications in animals and the remainder (13,991) were informative or other types of enquiries not associated with intoxications.

Most human intoxications were accidental (66.1%), followed by voluntary intoxications (12.8%).

The predominant route of entry in human intoxication is oral (78.7%), followed by inhalation (8.4%).

Medicinal products are the predominant type of product in human intoxication recorded by the SIT (50.5%), followed by cleaning products (22.9%), cosmetics (7.5%), household products (6.8%), industrial products (3.6%) and biocides (3%).

The highest percentage of intoxications occurs in the adult population (48.1%), with a predominance of intoxications in women (29.2%) compared to men (18.6%). Intoxications in infants and children account for 38.9% of the total number of reported intoxications, of which 21.9% affect males and 16.4% females.

Analysing by age and gender indicates that the highest rate of intoxication (33.9%) occurs in children under 6 years of age, accounting for one third of all intoxications in humans, with a slight predominance in boys (19.2%) compared to girls (14.3%).

For all human intoxications (accidental and voluntary), 51% are considered mild, followed by moderate on 19.4% and severe symptomatology in 2.9 % of consultations.

### Statistical data on human intoxication caused by medicinal products

Intoxications caused by drugs that affect the central nervous system are worth particular mention (37.2%, 10,971 consultations), followed by those associated with drugs affecting the digestive system (10.9%, 3,205 consultations), the respiratory system (10.4%, 3,072 consultations), the cardiovascular system (8.4%, 2,487 consultations) and the musculoskeletal system (8.4%, 2,479 consultations)

In terms of intoxications caused by medicinal products as a whole, as well as for intoxications caused by drugs affecting the central nervous system, a higher rate is observed in adults (51.5% and 56.2% respectively), while for intoxications caused by drugs affecting the respiratory system, a higher rate is observed in infants (22.3%) and children (39.4%) than in adults (27.1%).

### **Statistical data on human intoxications caused by cleaning products**

Bleaches and chlorine releasers remain the cleaning product responsible for the highest number of cleaning product intoxications (27.2%), with a clear increase compared to previous years (around 15%).

Also worth noting is the percentage of intoxications involving several cleaning products (1,605 consultations), which account for 12% of the total number of consultations for intoxication by cleaning products. There was an increase in intoxications caused by several cleaning products in 2021 compared to previous years, when this type of consultation accounted for just 5% of the total number of intoxications for this reason.

For all cleaning product intoxications, as well as for bleach intoxications, most intoxications occur in adults (55.5% and 70.9% respectively), while for intoxications involving cleaning product in the form of *pods*, most intoxications occur in infants (57.7%) and children (31.5%), with a very low percentage in adults (6%).

### **Statistical data on human intoxications caused by cosmetic products**

In 2021, 4,371 intoxications involving cosmetic products were reported, accounting for 7.5% of the total number of intoxications. Antiseptics for use on the body are the product type with the highest percentage of cosmetic intoxication in humans (27%).

Intoxication by cosmetic products in general is highest in infants (43.4%) and children (22%), and in the case of cosmetic skin care products, the rate of intoxication in infants comes to 62.1%.

### **Statistical data on voluntary self-inflicted intoxications**

In terms of voluntary intoxications, attempted suicide or self-harm is the predominant aetiology (72.5%) with 5,411 consultations recorded in 2021.

More than half of the cases recorded as voluntary self-inflicted intoxications were estimated to be of a moderate severity (54.6%), while the percentage of serious cases was 16.7%.

The distribution of the type of intoxicated person by age range and gender indicates that suicide attempts occur at a very young age, with 20.1% of cases occurring in the 11-15 age group and mostly in females (67.8%).

The predominant product type in intoxications by autolysis is medicine (86.9%), with a much higher percentage than other products such as cleaning products (6.8%) or drugs of abuse (4.5%).

Self-inflicted intoxications by drugs affecting the nervous system (83.1%) representing a total of 3,910 consultations are worth particular note. Seventy-one percent of these



consultations were due to the isolated use of one therapeutic group, while 29% of the consultations were due to the combined use of several types of medicines.

Anxiolytics, especially those derived from benzodiazepines, are involved in 34.8% of consultations for voluntary intoxications by nervous system medicines, either as the sole cause of the intoxication (in 51.3% of consultations) or in association with other pharmaceuticals belonging to different therapeutic groups, mainly antidepressants (13.6%), antipsychotics (5.3%), antiepileptics (5.1%) or analgesics-antipyretics (3.8%).

Antidepressants are present in 32.5% of self-harm consultations registered with the SIT. In 48.3% of these consultations, antidepressants were the sole agent causing intoxication, while in the remaining cases they were associated with anxiolytics (14.6%), antiepileptics (6.5%), antipsychotics (4.5%) or analgesics-antipyretics (2.6%).

Nervous system drugs belonging to the therapeutic group of anti-epileptic drugs, often used for the elimination of neuropathic pain, are involved in 20.6% of voluntary self-inflicted intoxications. In 46% of these consultations, the active substances involved belonged to the same therapeutic group, while 10.3% were associated with antidepressants, anxiolytics (8.7 %) or antipsychotics (5.7 %).

Non-opioid analgesic-antipyretic drugs are less common, accounting for 17% of the voluntary drug intoxications. In this case, 68.6% of consultations are the only type of medication involved, while 7.8% of consultations are associated with benzodiazepines and 5% with antidepressants.

