

Technical paper



# Report of the Poison Control Centre for 2024

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This report of the Poison Control Centre of the Institute for Medical Research and Occupational Health is a continuation of previous reports published in this journal. It brings basic annual statistics that include the number of calls received by the Poison Control Centre from January to December 2024, as well as information on the callers, patients, and poisoning cases.

In 2024, the Poison Control Centre received 3034 phone calls reporting 3082 cases. Of all the cases, 2951 were related to human exposure cases associated with health risks, based on the described symptoms and exposure circumstances (the characteristics of which are described below), 118 were general inquiries about toxicity without actual exposure, and 13 were related to the exposure of animals. Our users were mostly healthcare professionals such as medical doctors or nurses (58 % of the total number of cases related to human exposures) and the general public (42 %). Nine calls were received from other users (workers in a kindergarten and retirement home).

Most of the cases were recorded in July (321 cases) and the least in February (208 cases). If we examine the entire year, the average number of cases was 246 per month.

The age of the exposed persons ranged from newborns to 98. Of the total number of persons whose age was known, the most prevalent were infants and preschool children (from birth to 5 years 46 %; average age two years) and adults (40 %). Overall, both sexes were equally represented (53 % men *vs.* 47 % women). A larger frequency of women was recorded in adolescents (66 %).

The most prevalent substances were household chemicals (41 % of cases with known cause of intoxication) and drugs (34 %). The most commonly reported drugs were psychoactive drugs (40 % of all drug poisonings), including neuroleptics, benzodiazepines, antidepressants, and hypnotics, followed by analgesics and non-steroidal anti-inflammatory drugs (21 %) and cardiac drugs (8 %).

Poisonings by plants (148 cases) generally involved the houseplant *Alocasia odora* or the outdoor plants *Nerium oleander* and *Arum maculatum*.

Bites and stings of poisonous animals (42 cases) included snakes (*Vipera ammodytes* and *V. berus*), fish (most commonly from *Trachinidae*), and arthropods (spiders including black widow spiders).

Among cases with a known route of exposure, ingestion was the most prevalent by far (80 %), followed by inhalation (9 %).

Of the total number of cases with known clinical manifestations at the time of call, 60 % were asymptomatic, 37 % had only mild to moderate signs and symptoms (e.g., gastrointestinal irritation, headache, or irritation of skin and respiratory system), and 3 % had severe symptoms (e.g., serious disturbances of the central nervous system, corrosive injuries of the gastrointestinal tract, or severe respiratory symptoms).

The ratio between suicidal and accidental poisonings was 1:5 (410 *vs.* 2104 cases). Among adolescents, this ratio was reversed, with about twice as many suicidal poisonings than accidental ones.

**Table 1** Causes of human exposure

Substance	Number of cases (% of total)
Household chemicals <sup>a</sup>	1211 (41.0)
Drugs	989 (33.5)
Industrial chemicals <sup>b</sup>	191 (6.5)
Plants <sup>c</sup>	148 (5.0)
Pesticides <sup>d</sup>	68 (2.3)
Food	64 (2.2)
Drugs of abuse	43 (1.5)
Animals	42 (1.4)
Mushrooms	41 (1.4)
Carbon monoxide	19 (0.6)
Foreign body	12 (0.4)
Alcohol	2 (0.1)
Combinations <sup>e</sup>	83 (2.8)
Miscellaneous	36 (1.2)
Unknown	2 (0.1)
TOTAL	2951 (100)

The total number of cases (2951) does not include the 118 inquiries about toxicity without appropriate exposure and the 13 cases of animal exposure.

<sup>a</sup>Products for household use, e.g. detergents and cleaning agents, cosmetics, toys, and school accessories, products containing organic solvents, household insecticides and repellents. <sup>b</sup>Chemicals intended for outdoor or professional use, e.g. motor fuels, mineral fertilizers, professional cleaning products. <sup>c</sup>Mushrooms excluded. <sup>d</sup>Does not include pesticide-containing chemicals sold to the general public. <sup>e</sup>Concomitant exposure to two or more substance categories (mostly drugs and alcohol)

**Table 2** Number of cases according to causes of exposure in different age groups

Substance	Number of cases (% of total)		
	Infants and preschool children	School children and adolescents	Adults
Household chemicals <sup>a</sup>	756 (55.9)	88 (21.7)	367 (30.8)
Drugs	390 (28.8)	220 (54.3)	378 (31.7)
Industrial chemicals	20 (1.5)	15 (3.7)	156 (13.1)
Plants	111 (8.2)	14 (3.5)	23 (1.9)
Pesticides	9 (0.7)	5 (1.2)	54 (4.5)
Food	29 (2.1)	9 (2.2)	25 (2.1)
Drugs of abuse	1 (0.1)	15 (3.7)	27 (2.3)
Animals	8 (0.6)	6 (1.5)	28 (2.4)
Mushrooms	6 (0.4)	1 (0.2)	34 (2.9)
Carbon monoxide	3 (0.2)	5 (1.2)	11 (0.9)
Foreign body	7 (0.5)	4 (1.0)	1 (0.1)
Alcohol	1 (0.1)	/	1 (0.1)
Combinations	3 (0.2)	12 (3.0)	68 (5.7)
Miscellaneous	9 (0.7)	11 (2.7)	16 (1.3)
Unknown	/	/	2 (0.2)
TOTAL	1353 (100)	405 (100)	1191 (100)

The age groups are defined in Figure 1. The total number of cases (2949) does not include the 2 cases with an unknown age group, the 118 inquiries about toxicity without appropriate exposure, and the 13 cases of animal exposure

**Table 3** Route of exposure in cases involving humans

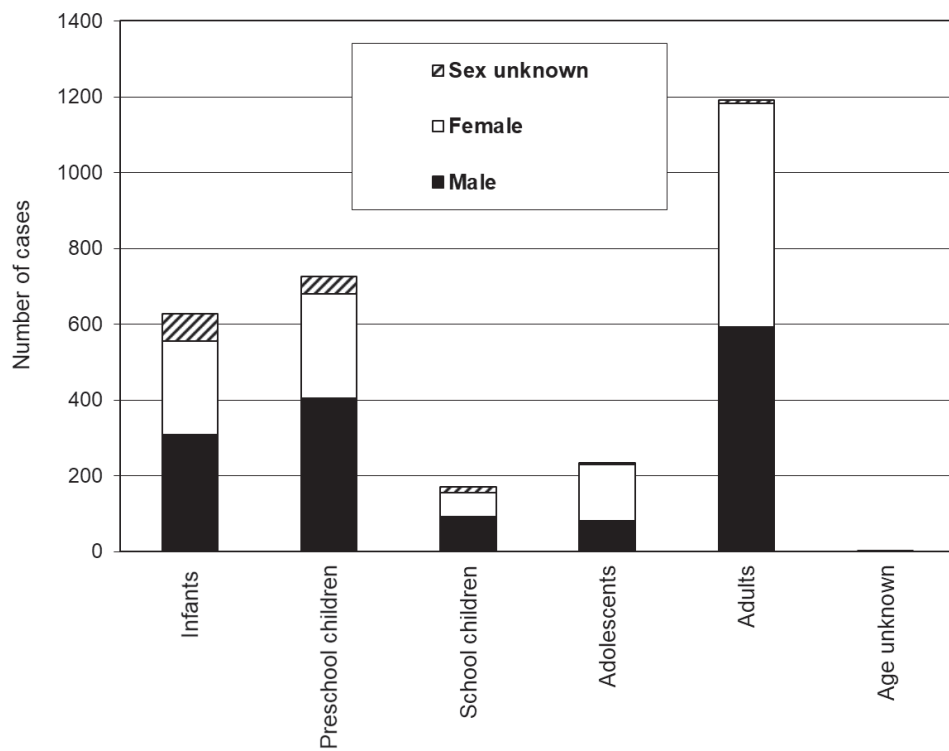
Route of exposure	Number of cases (% of total)
Ingestion	2365 (80.1)
Inhalation	277 (9.4)
Dermal	94 (3.2)
Conjunctival	52 (1.8)
Bite or sting	38 (1.3)
Parenteral	18 (0.6)
Nasal	15 (0.5)
Rectal	4 (0.1)
Breastfeeding	1 (<0.1)
Ear	1 (<0.1)
Gingival	1 (<0.1)
Combination	74 (2.5)
Unknown	11 (0.4)
TOTAL	2951 (100)

The total number of cases (2951) does not include the 118 inquiries about toxicity without appropriate exposure, and the 13 cases of animal exposure

**Table 4** Circumstances of exposure cases or type of information request regarding human exposure

Circumstances of exposure/ type of information request	Number of cases (% of total)
Accidental	2104 (68.6)
Suicidal	410 (13.4)
Educational reasons <sup>a</sup>	118 (3.8)
Intentional, other <sup>b</sup>	146 (4.8)
Psychiatric patient <sup>c</sup>	92 (3.0)
Occupational	74 (2.4)
Substance abuse	69 (2.2)
Iatrogenic	16 (0.5)
Assault	12 (0.4)
Drug side-effect	8 (0.3)
Unknown	20 (0.7)
TOTAL	3069 (100)

The total number of cases (3069) does not include the 13 cases of animal exposure. <sup>a</sup>Enquiries regarding the toxicity of a certain substance, but without exposure. <sup>b</sup>Intentional attempts other than suicide, attacks, or substance abuse. <sup>c</sup>Unaware of the consequences due to severe intellectual disability, dementia, etc.



Age and sex distribution of human exposure cases. Age groups: infants – up to 23 months; preschool children – 2 to 5 years; school children – 6 to 12 years; adolescents – 13 to 17 years; adults – 18 years or more