tox info suisse

Annual report 2023

Tox Info Suisse is the home of poisoning information and advice for private individuals, experts and industry.

Key services at a glance:

→ 24/7 emergency hotline 145
→ Information and advice relating to poisoning for the general public and medical professionals
→ Consultation related to poisons (for theoretical enquiries, Tel.: 044 251 66 66)
→ Website (Tox Blog, Toxicon, information for experts etc.)
→ Tox Info App (for iOS and Android)
→ Antidote monographs and treatment schemes
→ Risk assessments and expert opinions
→ Pharmacovigilance of veterinary drugs
→ Poisoning prevention
→ Accredited training site for specialist medical training in clinical pharmacology and toxicology
→ Research and education
→ Consultation and services for companies

Cover image:
Foxglove with bee – unsplash (Elisa Way)

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Dear Reader,

The enquiries to the Swiss poison information centre have once again risen in 2023 by approximately 2 %. This shows that the general public and experts appreciate and make full use of our 24/7 service. We would like to thank everyone for the trust placed in us!

To ensure Tox Info Suisse remains able to handle the increasing volume of calls, it needs suitable technical support, which is why one of the major themes of last year was to upgrade our consultation software. Many employees spent months discussing, defining and later testing the requirements – alongside their everyday responsibilities. The IT company Ergon supported us in programming matters and we benefited greatly from their expertise and experience. Following in-depth training we were able to start using the basic version of the new IT system as planned in January 2024. We are glad that our consultation software now reflects the current state of technology and makes our processes more efficient. The further development of several functions and updating our communication software in 2025 will mark the end of our general ICT overhaul, which was urgently needed.

Unfortunately, we also need to highlight the lack of funding Tox Info Suisse is experiencing again this year. Despite our utmost efforts to obtain a stable base of supporters, so far this has not been possible to achieve. The inflation of the past few years, the desire to offer competitive salaries and the investment in our computer systems has resulted in losses that can no longer be covered by the reserves in the medium term. The goal is to find a robust, long-term solution in the next few years. We are delighted that the Foundation Council elected Josef Widler as Chair of the Foundation Council at the start of 2024, who can now dedicate himself entirely to this priority and to improve working conditions at our information centre.

Finally, we would like to mention this year's focus topic, which is all about (allegedly) poisonous plants and typical plant mix-ups that Tox Info Suisse deals with on a regular basis. If you are interested in this topic please also visit our website, which was redesigned in June 2023, and read more in our blog posts.

Josef Widler, MD
Chair of the Foundation Council

Damaris Ammann
Managing Director

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Toxicological expertise continues to be in high demand

In 2023, the core tasks of Tox Info Suisse remained telephone advice in response to toxicological emergencies and answering questions about prevention. The extensive specialist knowledge of our toxicologists was also in demand for numerous other activities in the public domain.

Telephone helpline around the clock

In 2023, we provided advice in response to 41 263 enquiries (+ 1.7 % compared with 2022). About 70 % of the enquiries originated from the general public, approximately 25 % from medical professionals and the rest from other sources. Enquiries from the general public increased (+ 3 %), enquiries from hospitals slightly decreased (– 2 %). We saw a slight increase in enquiries from general practitioners of about 2 %, however, enquiries from veterinarians remained stable. The call frequency from pharmacists decreased by 7 %. The website received more than 600 000 visits and the Tox-Info App was downloaded 4 100 times.

Experts on duty

In addition to its emergency telephone service, Tox Info Suisse compiled expert opinions, reports and case analyses for industry and authorities. Senior medical staff took part in clinical toxicology consultations at the University Hospital of Zurich. Tox Info Suisse was also responsible for providing emergency medical advice for pharmaceutical companies, especially outside office hours. Activities also included advice and support relating to safety data sheets and emergency unblinding in clinical trials. Experienced staff additionally responded to various press enquiries.

Active role in the Swiss antidote network

Together with representatives of the Swiss Association of Public Health Administration and Hospital Pharmacists (GSASA) and the Swiss Military Pharmacy, Tox Info Suisse ensured antidote supply in Switzerland as mandated by the Swiss Conference of Cantonal Ministers of Public Health (GDK). Tox Info Suisse is also responsible for updating the Swiss antidote list and publishing monographs and leaflets on antidotes.

Education

Prof. A. Jetter, Head of scientific services and training site at Tox Info Suisse gave lectures for medical students at the University of Zurich. Academic staff at Tox Info Suisse regularly gave lectures as part of professional and continuing education for doctors, other healthcare personnel and professional associations. In addition, once a week structured training sessions were held for staff of Tox Info Suisse and the Clinic for Clinical Pharmacology and Toxicology of the University Hospital of Zurich.

Scientific activities

As part of its association with the University of Zurich, research projects were conducted under the guidance of A. Jetter, MD, C. Reichert, MD, C. Degrandi, MD and K. Faber, MD. The key topics were toxicoepidemiology and the dose-response relationship in human poisoning. Part of this work was performed by doctoral and master students and the results were presented at national and international conferences. Publications of completed projects are listed on page 22 and can be found on the website.

tox 145

for iOS (Apple Store)

for Android (Google Play)

The Tox Info App was created in 2015 and was developed with the support of the Swiss Federal Office of Public Health (FOPH). It provides advice on first-aid measures, explains the hazard symbols for chemical products and presents news in the domain of human toxicology. To make it easier to identify noxious agents, EAN barcodes and photos can be sent directly to Tox Info Suisse using the app when calling the emergency hotline 145. Downloading the Tox Info App is free of charge for iOS and Android operating systems in Switzerland and neighbouring countries.

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Poisonous plants – plant toxins

Image: Tox Info Suisse

Berries have a magical attraction for children and are therefore a common cause of calls to Tox Info Suisse. Adults are mainly worried about confusing safe and poisonous plants. Coming into contact with the majority of native plants in Switzerland is safe and will only cause mild reactions if any. The most common complaints after consuming these plants are gastrointestinal symptoms, and after skin contact, rashes may develop that are painful when exposed to sunlight (photo-toxic reactions). However, there are also a few plants that can cause harmful symptoms.

Most common enquiries relating to children: Red, blue and black berries

While it is easy to identify yew trees and their red fruit, there are various plants in Switzerland that are less well known. What should you do if your child has eaten unknown red berries? Keep calm! The experience of Tox Info Suisse shows that accidents with native red berries normally aren't dangerous for young children. The rule of five red berries applies:

Consuming up to five red berries from native plants will not trigger any severe poisoning symptoms even in young children. It is not always essential to identify the plant.

Red berries aren't the only ones to attract children, blue and black berries also have a strong appeal. The cherry laurel is top of the list of enquiries about dark berries. Fortunately – as for the yew – the ripe berries are harmless. However, the plant itself is toxic and contains hydrogen cyanide compounds.

Mahonia is often described on calls as «holly with blue berries». The matt-blue berries are very soft and dye hands and anything that comes into contact with the squashed berries, bright red. Luckily the entire plant is non-toxic.

Other blue-black berries from plants such as ivy or privet taste bitter. This is why children don't consume enough of the mildly toxic berries to cause a problem and do not normally experience any symptoms. At most, they may get mild gastroin-testinal symptoms.

However, belladonna (deadly nightshade) is dangerous because it is toxic but tastes sweet. Symptoms of poisoning can occur after eating just a few berries and medical treatment is advised. There is an antidote for severe cases.

Tox Info Suisse recommends identifying the plant after eating blue or black berries to exclude belladonna (deadly nightshade).

You can find more information about berries on our website:

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Most common enquiries from adults: Plant mix-ups

Confusion is a significant factor in cases of adult poisoning by plants. For example, the berries of deadly nightshade may be mistaken for blueberries or blackberries. In spring, another common reason for calling Tox Info Suisse is concern over whether the leaves of toxic autumn crocus or lily of the valley have been mistaken for wild garlic leaves and mixed up in a salad or pesto. The fear with autumn crocus is that the toxin colchicine can cause organ failure, which can be fatal if left untreated. Lily of the valley contains glycosides that can cause cardiac arrhythmia. Some of these substances have previously been used in low doses clinically in medication for heart failure. Young arum leaves can also be confused with wild garlic. Arum contains tiny needle-like calcium oxalate crystals, which are harmful to the mucous membrane and have a strong irritating effect. Upon eating, you will instantly experience burning pain in your mouth.

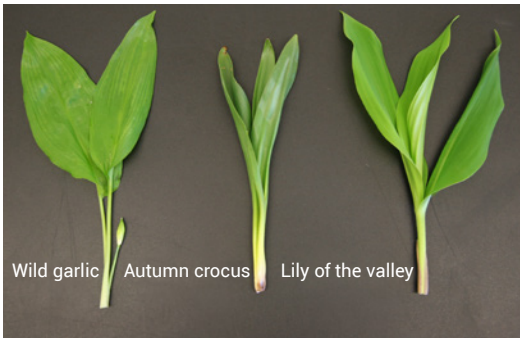

Image: Tox Info Suisse

You can find more information on wild garlic and its lookalikes on our website:

Other, equally dangerous mix-ups are fortunately much rarer. For instance, monkshood roots can be confused with those of horseradish or its leaves with flat parsley. These poisonous plants can cause serious cardiac arrhythmia and numbness. Red foxglove also presents a possibility of being confused for other plants. Particularly before flowering, its leaves may be mistaken for borage leaves. Foxglove contains a similar substance to lily of the valley, which can cause cardiac arrhythmia.

The most common effects of plant toxins affect the gastrointestinal tract and the skin

Tox Info Suisse receives calls on a daily basis relating to small children eating parts of plants. In most of these accidental cases of consumption, the caller can be reassured. Other than gastrointestinal symptoms such as nausea, vomiting, abdominal pain or diarrhoea, there are no further symptoms of poisoning to expect. To ensure Tox Info Suisse can give callers the best possible advice, especially if large quantities have been consumed, it is important to identify the plant as precisely as possible.

In combination with exposure to sunlight, skin that has been in contact with phototoxic plants or sap, may develop a painful rash and in the worst-case scenario, this could lead to blistering and peeling of the upper layers of skin. Clinically, the symptoms present like a burn. Healing usually takes several days to weeks and often the skin will remain a darker colour (hyperpigmentation), only fading after months and years. One example of a typical phototoxic reaction is meadow dermatitis, which is triggered by species of hogweed.

Prevention

- Get to know the plants in your home, your garden, on your balcony and local environment.
- In households with small children: keep poisonous plants out of reach or remove them from your home, balcony or garden.

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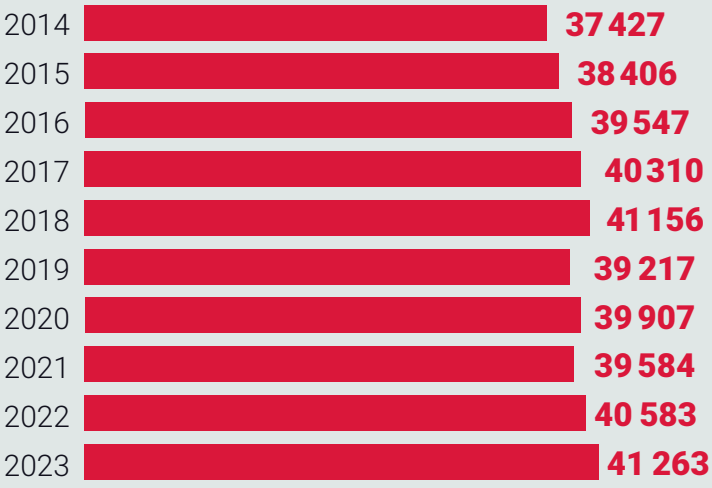
Emergency hotline 145

In 2023, the number of calls rose by 1.7 % compared with the previous year. This exceeded the previous record year for enquiries in 2018. In the past 10 years, the information provided by Tox Info Suisse has increased by around 10 %.

The core service of Tox Info Suisse is its 24/7 emergency telephone helpline for the general public and medical professionals in all cases of acute or chronic poisoning. Tox Info Suisse also answers calls about theoretical exposure, thereby making a significant contribution to preventing accidental poisoning. All enquiries to the consultation service are electronically recorded in a database, which forms the basis for this annual report and for scientific evaluations to continuously improve the quality of consultations. The enquiries are, of course, subject to medical confidentiality and data protection requirements.

General overview of all enquiries

Number of enquiries
In 2023, Tox Info Suisse received 41 263 enquiries (+ 1.7 % compared with 2022).



In the past ten years, demand has risen by around 10 %.

Origin of enquiries
The largest proportion of enquiries came from the general public, which reflects its need for information and the widespread reputation of Tox Info Suisse. Physicians used our service a total of 8 217 times. The majority of these enquiries came from hospital physicians (7 237). General practitioners submitted 980 enquiries to Tox Info Suisse, 1 129 were received from emergency rescue services, 422 from nursing homes, 387 from pharmacists and 107 from veterinarians.

Tox Info Suisse also provided information 63 times to media such as newspapers, radio and television. The remaining enquiries came from industry and other or unspecified organisations.

Enquiries with or without toxic exposure
Calls can be categorised as enquiries of a theoretical nature without exposure and enquiries where an exposure has taken place.

Among the 2 312 theoretical enquiries without exposure, information was provided on drugs and antidotes, the toxicity of plants to children and pets as well as the risk of poisoning e.g. from household products, chemicals, drugs of abuse, spoilt food and venomous animals.
The advice provided by Tox Info Suisse in these instances was predominantly of a preventative nature. This category of theoretical enquiries also includes advice and provision of documentation for authorities, the media, private individuals and various organisations as well as the distribution of fact sheets or referrals to relevant expert bodies.

The 38 941 consultations in total concerning toxic exposure involved 36 930 humans and 2 011 animals.
There were ten calls in which it was not possible to conclusively determine whether a person or an animal had come into contact with a toxin.

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Origin of enquiries by cantons and callers

Canton	Population	General public	Hospital physicians	Practitioners	Pharmacists	Veterinarians	Various	Total	Calls / 1 000 inhabitants	Calls / 1 000 inhabitants
									Public	Physicians
AG	711 232	2 328	604	52	36	8	278	**3 306**	3.3	0.9
AI	16 416	44	–	3	–	1	3	**51**	2.7	0.2
AR	55 759	174	56	9	–	1	29	**269**	3.1	1.2
BE	1 051 437	3 764	893	143	44	16	467	**5 327**	3.6	1.0
BL	294 417	991	236	28	8	3	124	**1 390**	3.4	0.9
BS	196 786	719	384	36	11	4	86	**1 240**	3.7	2.2
FR	334 465	884	127	23	23	4	100	**1 161**	2.6	0.5
GE	514 114	1 330	343	71	46	7	213	**2 010**	2.6	0.8
GL	41 471	91	34	1	2	1	2	**131**	2.2	0.9
GR	202 538	532	214	23	4	3	55	**831**	2.6	1.2
JU	73 865	163	43	4	–	1	10	**221**	2.2	0.6
LU	424 851	1 162	292	55	13	3	136	**1 661**	2.7	0.8
NE	176 571	425	64	9	9	1	68	**576**	2.4	0.4
NW	44 420	119	21	7	–	–	14	**161**	2.7	0.6
OW	38 700	189	22	4	2	–	18	**235**	4.9	0.7
SG	525 967	1 537	415	49	7	3	207	**2 218**	2.9	0.9
SH	85 214	282	136	2	–	2	45	**467**	3.3	1.6
SO	282 408	988	227	32	3	2	117	**1 369**	3.5	0.9
SZ	164 920	442	82	16	1	2	36	**579**	2.7	0.6
TG	289 650	948	190	25	3	4	120	**1 290**	3.3	0.8
TI	354 023	679	243	37	14	4	34	**1 011**	1.9	0.8
UR	37 317	74	20	4	1	–	8	**107**	2.0	0.6
VD	830 431	2 103	390	61	65	13	230	**2 862**	2.5	0.6
VS	357 282	825	156	43	20	3	97	**1 144**	2.3	0.6
ZG	131 164	364	56	18	1	–	37	**476**	2.8	0.6
ZH	1 579 967	6 342	1 416	196	67	13	809	**8 843**	4.0	1.0
FL	39 677	169	23	6	2	–	10	**210**	4.3	0.7
Foreign	–	297	548	12	3	5	86	**951**	–	–
Unknown	–	1 016	2	11	2	3	132	**1 166**	–	–
Total	**8 855 062**	**28 981**	**7 237**	**980**	**387**	**107**	**3 571**	**41 263**	**3.3**	**0.9**
%		70.2 %	17.5 %	2.4 %	0.9 %	0.3 %	8.7 %	100 %	–	–

Source of population figures: Swiss Federal Statistical Office, FSO / Liechtenstein authorities (cut-off date: 1.1.2023)

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Poisoning of humans

Children younger than 5 years old most frequently affected

In 2023, Tox Info Suisse recorded 36 930 consultations for 34 703 cases. The highest number of cases was recorded for children younger than five years old (41.8 %). Overall, more children (52.7 %) were affected by toxic exposures than adults (47.1 %). Looking at the difference between the sexes, the number of cases is slightly higher for boys (51.1 % versus 47.6 %) whereas in adults, significantly more women are affected than men (57.8 % versus 41.6 %). This gender distribution has hardly changed over the years.

Age and gender distribution of human cases with toxic exposure

Age		Female		Male		Unknown	Total	
Children		8 703	47.6 %	9 344	51.1 %	238	18 285	52.7 %
Age	< 5 years	6 836		7 529		136	14 501	
	5 – <10 years	827		1 043		19	1 889	
	10 – <16 years	854		607		6	1 467	
	unknown	186		165		77	428	
Adults		9 448	57.8 %	6 795	41.6 %	102	16 345	47.1 %
Age	16 – <20 years	852		461		–	1 313	
	20 – <40 years	1 616		1 456		3	3 075	
	40 – <65 years	1 320		1 181		4	2 505	
	65 – <80 years	404		296		1	701	
	80 + years	285		161		–	446	
	unknown	4 971		3 240		94	8 305	
Age unknown		22	30.1 %	10	13.7 %	41	73	0.2 %
Total		**18 173**	**52.4 %**	**16 149**	**46.5 %**	**381**	**34 703**	**100 %**

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Most toxic exposures are accidental, in other words unintentional. They primarily involve young children.

More unintentional than intentional poisoning cases

A distinction must be made between the circumstances of poisoning: accidental (unintentional) exposure, intentional exposure and adverse drug reactions. Accident-related exposures can be classified as occurring at home (private residence including garden), at work, or as a result of environmental exposure (caused by human activities via food, drinking water or breathing air). Intentional cases can be divided into suicides and attempted suicides, substance abuse and criminal poisoning (by a third party).

Circumstances of toxic exposure in humans

Circumstances		Acute poisoning (exposure ≤ 8 h)		Chronic poisoning (exposure > 8 h)
Accidental domestic	25 474	73.4 %	537	1.5 %
Accidental occupational	1 233	3.6 %	70	0.2 %
Accidental environmental	31	0.09 %	6	0.02 %
Accidental others	1 200	3.5 %	77	0.2 %
Total accidental	**27 938**	**80.5 %**	**690**	**2.0 %**
Intentional suicide	3 345	9.6 %	50	0.1 %
Intentional abuse	726	2.1 %	113	0.3 %
Intentional criminal	100	0.3 %	24	0.07 %
Intentional others	690	2.0 %	146	0.4 %
Total intentional	**4 861**	**14.0 %**	**333**	**1.0 %**
Total accidental and intentional	**32 799**	**94.5 %**	**1 023**	**2.9 %**

Total acute and chronic	**33 822**	**97.5 %**
Adverse drug reactions	**130**	**0.4 %**
Unclassifiable/others	**751**	**2.2 %**
Total	**34 703**	**100 %**

There is a distinction between acute exposure (≤ 8 hours) and chronic exposure (> 8 hours). Adverse drug reactions are also recorded, which are defined as undesirable reactions in the context of therapeutic drug administration.

Noxious agents

The noxious agents (harmful substances) involved in the enquiries were grouped into 12 categories. The distribution has not changed significantly from the previous year. A supplement with details on the individual agent groups is available at www.toxinfo.ch.

Frequency of agent groups in all human cases with toxic exposure

Agent groups / Age groups	Adults	Children	Age unknown	Total	
Pharmaceuticals	6603	5723	18	12344	35.6 %
Household products	2999	5395	8	8402	24.2 %
Plants	728	2275	6	3009	8.7 %
Technical and industrial products	1857	497	9	2363	6.8 %
Cosmetics and personal care products	419	1823	3	2245	6.5 %
Food and beverages (excl. mushrooms and alcohol)	1032	982	8	2022	5.8 %
Recreational drugs and alcohol	735	497	4	1236	3.6 %
Agricultural and horticultural products	353	296	3	652	1.9 %
Mushrooms	390	186	1	577	1.7 %
Venomous animals	286	138	2	426	1.2 %
Veterinary drugs	72	47	–	119	0.3 %
Other or unknown agents	871	426	11	1308	3.8 %
Total	**16345**	**18285**	**73**	**34703**	**100 %**

Severity of poisoning

In 8055 enquiries from physicians (98 % of the total number of physician enquiries), the cause of poisoning was foreseeable or pre-established. In these cases, the treating physicians received a written assessment from us in addition to the telephone consultation, as well as a request for a report on the outcome. Tox Info Suisse received feedback from physicians on the outcome of the poisoning in 61.5 % of these cases. This expert medical information about the symptoms, clinical outcome and treatment of acute and chronic poisoning is entered in an in-house database, analysed and used to continually improve the quality of consultations related to poisoning.

Data capture and evaluation are standardised according to the circumstances of poisoning, causality of symptoms and findings, as well as the severity of poisoning. Severity is classified in terms of no symptoms, cases with minor, moderate or severe symptoms and cases that are fatal.

Minor symptoms typically require no treatment, moderate symptoms usually need treatment, while treatment for all cases of severe poisoning is essential.

This annual report only takes into account poisoning where the causality was analytically confirmed or established as likely. Confirmed causality means that the noxious agent has been detected in the body, the timing and symptoms are compatible with the agent and the symptoms cannot be explained by an underlying illness or any other cause. Likely causality has the same criteria, but the agent has not been detected.

In total, 4060 toxicological cases in humans had sufficient evidence of causality and could be further analysed with regard to the clinical course (+2 % compared with the previous year).

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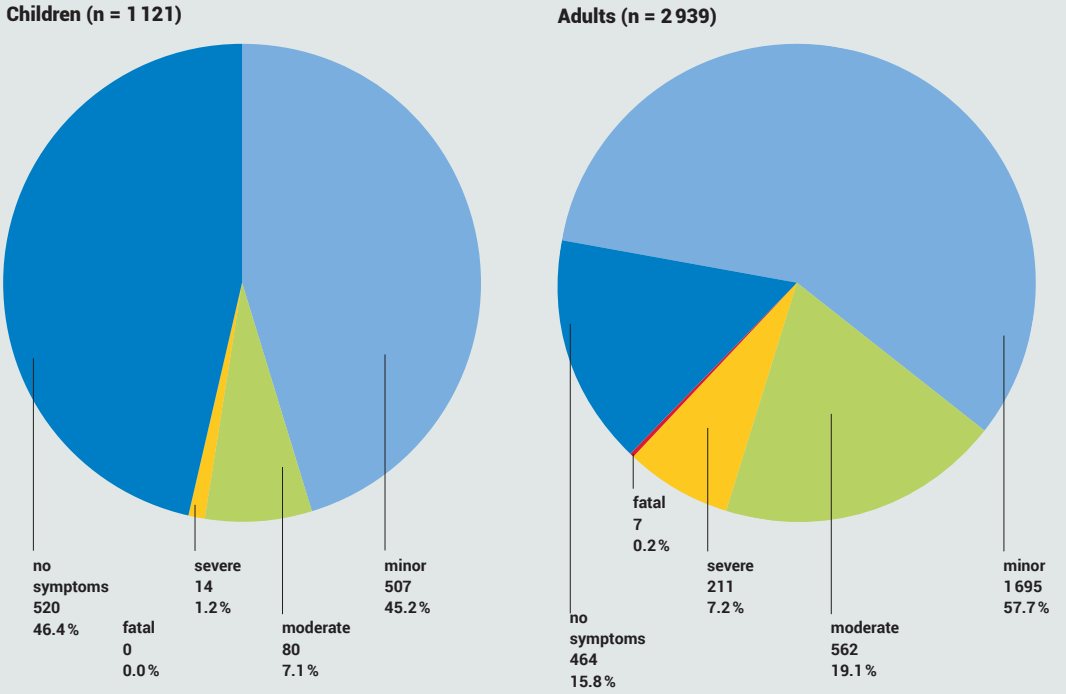
Clinical outcome in children and adults

Of the 4060 responses from doctors relating to confirmed or likely causality, three fifths of cases involved monointoxication (toxic exposure from a single noxious agent). Two fifths of cases occurred as a result of combined intoxication. For reporting purposes these cases have been categorised according to the most important agent.



Frequency of agent groups and severity of human poisoning in cases where medical feedback could be analysed

Agent groups	Adults					Children					Total	
Severity	N	Mi	Mo	S	F	N	Mi	Mo	S	F		
Pharmaceuticals	333	1022	319	153	4	316	266	46	9	–	2468	60.8%
Household products	44	146	27	3	1	77	102	5	1	–	406	10.0%
Technical and industrial products	28	231	48	11	1	16	26	4	–	–	365	9.0%
Recreational drugs and alcohol	8	131	94	29	1	20	30	8	2	–	323	8.0%
Plants	18	32	11	6	–	29	15	3	–	–	114	2.8%
Mushrooms	5	40	30	1	–	11	7	4	–	–	98	2.4%
Cosmetics and personal care products	8	24	4	1	–	18	26	2	1	–	84	2.1%
Food and beverages (excl. mushrooms and alcohol)	6	18	3	–	–	15	8	2	–	–	52	1.3%
Venomous animals	1	11	11	4	–	1	8	4	1	–	41	1.0%
Agricultural and horticultural products	4	3	1	1	–	7	5	1	–	–	22	0.5%
Veterinary drugs	1	5	–	–	–	1	–	–	–	–	7	0.2%
Other or unknown agents	8	32	14	2	–	9	14	1	–	–	80	2.0%
Total	**464**	**1695**	**562**	**211**	**7**	**520**	**507**	**80**	**14**	**–**	**4060**	**100%**

Severity of poisoning: N = no symptoms, Mi = minor, Mo = moderate, S = severe, F = fatal

Poisoning of animals

Affected animals

2011 enquiries relating to 1995 cases also concerned a wide range of different animals: 1547 dogs, 402 cats, 22 equines (horses, ponies, donkeys), 14 bovines (calves, cows, bulls, sheep, goats, llamas), 11 lagomorphs (hares, rabbits, pygmy rabbits), 8 rodents (degus, chinchillas, guinea pigs, mice, rats), 2 primates, 2 tortoises, 1 chicken, 1 pig and 1 ferret.

Frequency of agent groups in all cases of animal poisoning

Agent groups		No. of cases
Food and beverages (excl. mushrooms and alcohol)	591	29.6 %
Pharmaceuticals	359	18.0 %
Plants	312	15.6 %
Household products	221	11.1 %
Agricultural and horticultural products	204	10.2 %
Veterinary drugs	69	3.5 %
Cosmetics and personal care products	40	2.0 %
Technical and industrial products	37	1.9 %
Recreational drugs and alcohol	34	1.7 %
Venomous animals	24	1.2 %
Mushrooms	11	0.6 %
Other or unknown agents	93	4.7 %
Total	**1995**	**100 %**

Severity of poisoning

As with physicians, veterinarians were also asked for feedback on the outcome of the poisoning. Tox Info Suisse received a total of 25 reports on poisoning of animals that could be analysed.

Frequency of agent groups and severity of animal poisoning in cases where veterinary feedback could be analysed

Agent groups	Outcome					Total	
Severity	N	Mi	Mo	S	F		
Pharmaceuticals	3	5	–	–	–	8	32.0 %
Household products	3	1	–	–	–	4	16.0 %
Agricultural and horticultural products	3	1	–	–	–	4	16.0 %
Food and beverages (excl. mushrooms and alcohol)	2	–	1	–	–	3	12.0 %
Plants	1	1	–	–	–	2	8.0 %
Cosmetics and personal care products	–	1	–	–	–	1	4.0 %
Technical and industrial products	–	1	–	–	–	1	4.0 %
Veterinary drugs	–	1	–	–	–	1	4.0 %
Recreational drugs and alcohol	–	–	–	–	–	–	0.0 %
Venomous animals	–	–	–	–	–	–	0.0 %
Mushrooms	–	–	–	–	–	–	0.0 %
Other or unknown agents	–	1	–	–	–	1	4.0 %
Total	**12**	**12**	**1**	**–**	**–**	**25**	**100 %**

Severity of poisoning: N = no symptoms, Mi = minor, Mo = moderate, S = severe, F = fatal

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Financial statements

Income statement

Income	2023	2022
	CHF	CHF
Contributions from founders and supporters	729 271	729 271
Subsidy contracts and service level agreements		
Confederation	569 943	524 643
Cantons	1 651 160	1 592 767
Hospitals	357 496	353 945
Others	352 597	344 859
Professional fees and expert reports	13 862	3 193
Donations	88 432	95 208
Other income	47 148	42 597
Total income	**3 809 908**	**3 686 482**
Expense		
Staff*	3 490 027	3 298 688
Property expenses	190 211	174 824
IT	208 442	339 236
Office and administration	50 114	61 708
Communication	12 421	15 940
Literature and archiving	32 432	12 054
Other operating expenses/ strategic projects	61 936	1 400
Total expense	**4 045 582**	**3 903 850**
Operating result	**– 235 674**	**– 217 368**
Financial income	714	14
Financial expense	– 977	– 5 533
Total financial result	**– 263**	**– 5 519**
Annual loss	**– 235 937**	**– 222 887**

*) corresponds to 23.6 full-time equivalents in 2023

Balance sheet at 31st December

Assets	2023	2022
	CHF	CHF
Current assets		
Cash	2 265 998	3 008 662
Accounts receivable	422 580	481 104
Other current receivables	241	96
Prepaid expenses and accrued income	42 137	4 415
	2 730 956	**3 494 276**
Fixed assets		
Intangible assets	750 000	–
	750 000	**–**
Total assets	**3 480 956**	**3 494 276**
Equity and liabilities		
Current liabilities		
Accounts payable	454 988	10 661
Other current liabilities	37 696	136 748
Accruals and deferred income	339 318	221 976
	832 002	**369 386**
Non-current liabilities		
Provision for IT	–	240 000
Provision for research	260 000	260 000
Provision to ensure liquidity	1 950 000	1 950 000
	2 210 000	**2 450 000**
Equity		
Foundation capital	100 000	100 000
Voluntary retained earnings	300 000	300 000
Capital reserves to ensure liquidity (founder and supporter contributions)	400 400	400 400
Retained earnings	– 361 446	– 125 509
– Profit carried forward	– 125 509	97 378
– Annual loss	– 235 937	– 222 887
	438 954	**674 891**
Total equity and liabilities	**3 480 956**	**3 494 276**

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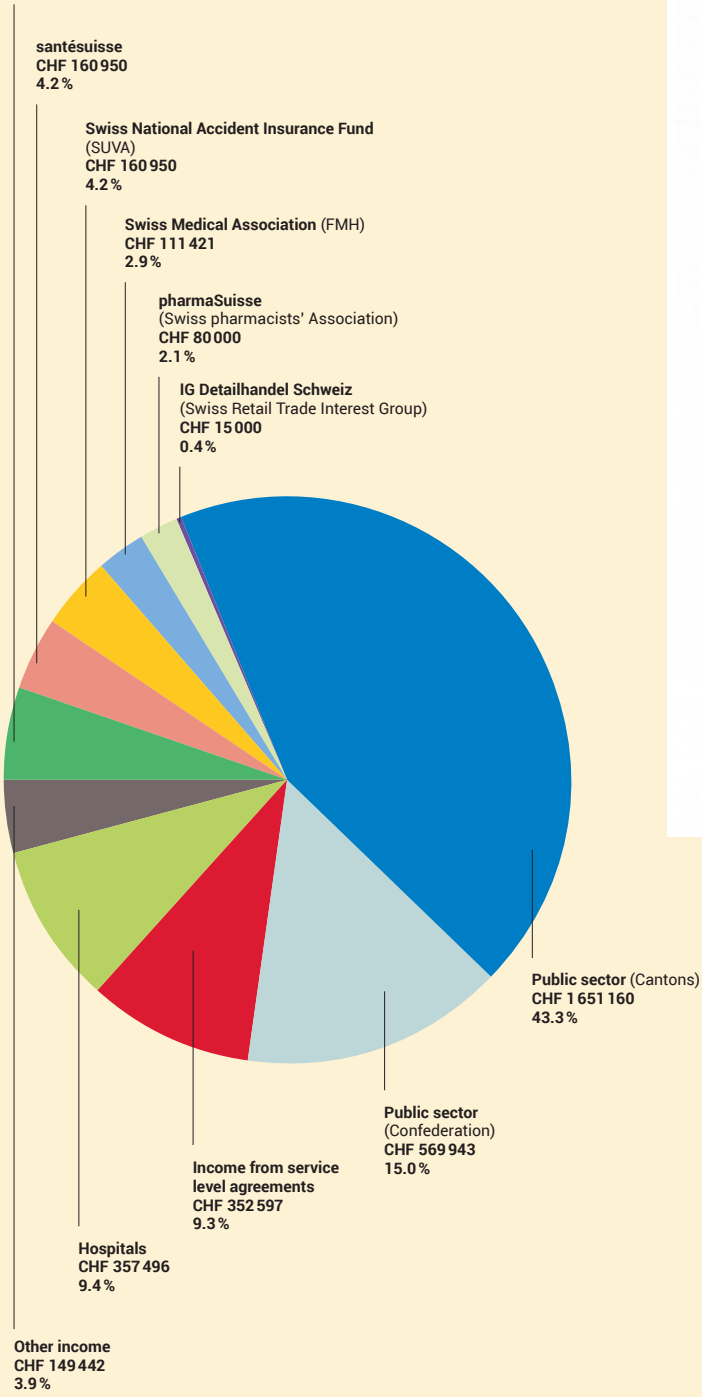
Source of income



Auditor's report

Revision
Beratung

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serves Audit

To the foundation board of

Stiftung Tox Info Suisse

8032 Zürich

Report of the statutory auditors on the limited statutory examination

As statutory auditors, we have examined the financial statements (balance sheet, statement of operations and notes) of the foundation 'Stiftung Tox Info Suisse' for the year ended December 31, 2023.

These financial statements are the responsibility of the foundation board. Our responsibility is to perform a limited statutory examination on these financial statements. We confirm that we meet the licensing and independence requirements as stipulated by Swiss law.

We conducted our examination in accordance with the Swiss standard on the limited statutory examination. This standard requires that we plan and perform a limited statutory examination to identify material misstatements in the financial statements. A limited statutory examination consists primarily of inquiries of company personnel and analytical procedures as well as detailed tests of company documents as considered necessary in the circumstances. However, the testing of operational processes and the internal control system, as well as inquiries and further testing procedures to detect fraud or other legal violations, are not within the scope of this examination.

Based on our limited statutory examination, nothing has come to our attention that causes us to believe that the financial statements do not comply with Swiss law and the foundation's articles of incorporation.

Baden, 13 May 2024

Serves Audit AG

Stefan Hummel
Auditor in charge
Licensed audit expert
RAB-Nr. 112554

Andrea Friedli
Licensed auditor
RAB-Nr. 112996

Annex:
Balance Sheet, Statement of Operations, Notes

EXPERTsuisse zertifiziertes Unternehmen
Mitglied TREUHAND | SUISSE

Thanks to all our donors

Tox Info Suisse is a charitable non-profit private foundation. A considerable part of its funding comes from donations from companies, organisations and private individuals, which are used specifically to support the poisoning information service.

Donations of and above CHF 1 000

Each contribution helps to ensure the future of the poisoning information service!
We thank all donors in advance for their contribution to:

PostFinance:
IBAN CH20 0900 0000 8002 6074 7

Ernst Goehner Foundation (project contribution)	25 000
Jean Pierre Lorent	5 000
GABA Schweiz AG	3 000
Henkel & Cie AG	3 000
Pfizer AG	3 000
Procter & Gamble Switzerland Sàrl	3 000
The Swiss Cosmetic and Detergent Association	3 000
Unilever Schweiz GmbH	3 000
Ideal Chimic SA	2 000
RB Hygiene Home Switzerland AG	2 000
Bayer (Switzerland) AG	1 500
RSG Europe GmbH	1 500
Galepharm AG	1 000
Markus Christian Frey, MD	1 000
IBSA Institut Biochimique SA	1 000
Roche Pharma (Switzerland) Ltd	1 000
Zambon Switzerland Ltd	1 000

We are grateful for all the many smaller donations that are not listed here, which equally help us to continue our work, and we would like to take this opportunity to sincerely thank all our donors.

Donate now with TWINT!

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Confirm amount and donation

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Tox Info Suisse: Quo vadis?

The number of enquiries received annually has increased by about 2 % per year in the past two years. This year, the number of calls has again risen beyond the average population growth. It is important for the Swiss poison information centre to be well equipped to deal with the high volume of calls: The working conditions for employees need to be adjusted as well as the administrative and technical support.

Upgrade to computer systems and telephone service

In January 2024, the basic version of the new consultation software was implemented. Aside from a modern user interface design, staff are also benefiting from the first process improvements. For example, certain evaluations for our contractual partners now take a quarter of the time they did previously. Further optimisation of processes and improvements to data quality are at the core of the second phase of development, which is taking place right now. A modern communication system to be implemented in 2025 will complete this major project. However, continuing to enhance the IT systems is essential to ensure they keep pace with digital developments.

Professionalisation of other areas

A more up-to-date digital presence has been on the organisation's wish list for several years. Following the website's facelift in June 2023 with the new «Tox Blog» and «Toxicon» sections, the marketing team – comprised of staff from our information service – is motivated to take further steps towards raise the visibility of Tox Info Suisse. There are also legislative and regulatory updates that affect Tox Info Suisse. One example is the new data protection act. In general, the administrative workload has risen greatly in the past few years, making it necessary to engage further support in this area in 2024.
Various office management processes have been reviewed. Changes in working practices and better options for home offices, for example, have led to the decision to reduce the office premises from 2025.

Long-term funding stability

Traditionally, Tox Info Suisse has been financially supported as part of a public-private partnership with various organisations. Unfortunately, the income is no longer able to cover the expenses and reserves have had to be liquidated or losses recorded since 2021. Funding the new ICT solution was an additional financial burden. Despite considerable efforts to obtain further private sponsors, this proportion of financing has steadily declined. Many private supporters have even announced that their support will cease in the near future. The prevailing view is that the emergency hotline 145 is a public service and therefore its costs should be covered by the public authorities. In the coming year, the Foundation Council will be negotiating heavily with all stakeholders to find a good solution for the continued existence of the Swiss poison information centre, Tox Info Suisse.

The work of Tox Info Suisse enjoys broad support

Tox Info Suisse is a private foundation. It was founded in 1966 and is now based on a public-private partnership.

Founders and Supporters

pharmaSuisse
Swiss Pharmacists Association

pharmaSuisse is the Swiss pharmacists' Association. It is the founder of the Swiss Toxicological Information Centre in 1966, now Tox Info Suisse.

scienceINDUSTRIES
SWITZERLAND

scienceindustries is the Swiss business association Chemie Pharma Life Sciences. It is the co-founder of the Swiss Toxicological Information Centre in 1966, now Tox Info Suisse.

santésuisse
Die Schweizer Krankenversicherer
Les assureurs-maladie suisses
Gli assicuratori malattia svizzeri

santésuisse is the inter-trade organisation of Swiss health insurance companies in the domain of social health insurance.

suva

Suva is the biggest institution in the field of compulsory accident insurance in Switzerland.

FMH

FMH is the professional association of physicians in Switzerland.

Partners

University Zurich[UZH]

Tox Info Suisse is an associated institute of the University of Zurich in the domains of research and education.

Tox Info Suisse is involved with the European Association of Poisons Centres and Clinical Toxicologists (www.eapcct.org).

klinitox

Tox Info Suisse collaborates closely with the Society of Clinical Toxicology (Gesellschaft für Klinische Toxikologie, GfKT) which is the professional society of the German-speaking poisons information centres and of clinical toxicologists.

scaht
Swiss Centre for Applied Human Toxicology
Schweizerisches Zentrum für Angewandte Humantoxikologie
Centre Suisse de Toxicologie Humaine Appliquée
Centro Svizzero di Tossicologia Umana Applicata

Tox Info Suisse is represented in the foundation council of the SCAHT.

Subsidy contracts and service level agreements

GDK CDS
Konferenz der kantonalen Gesundheitsdirektorinnen und -direktoren
Conférence des directrices et directeurs cantonaux de la santé
Conferenza delle direttrici e dei direttori cantonali della sanità

The services for the general public in Switzerland are regulated by a service level agreement with the Swiss Conference of Cantonal Directors of Public Health (GDK).

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Eidgenössisches Departement des Innern EDI
Bundesamt für Gesundheit BAG

On behalf of the Swiss federal government and based on the Chemicals Act and Ordinance, Tox Info Suisse contributes significantly to emergency consultation and poisoning prevention.

H+
DIE SPITÄLER DER SCHWEIZ
LES HÔPITAUX DE SUISSE
GLI OSPEDALI SVIZZERI

H+ is the national central association of public and private hospitals, infirmaries, and nursing homes.

swissmedic

By order of the Swiss Agency for Therapeutic Products (Swissmedic) Tox Info Suisse provides pharmacovigilance of veterinary drugs.

The people behind Tox Info Suisse

Foundation Council

Chairperson: Annette Messer, pharmaSuisse (until 16.02.2024) / **Josef Widler,** MD, FMH (Chairperson as of 17.02.2024, member as of 1.1.2023)
Vice-Chairperson: Michael Matthes, PhD, scienceindustries (until 16.02.2024, afterwards member) / **Ulrich Schaefer,** PhD, pharmaSuisse (Vice-Chairperson as of 17.02.2024, previously member)
Members: Michael Arand, PhD, University of Zurich / **Orlando Bitzer,** H+ / **Philipp Brugger,** GDK / **Bruno Damann,** MD, GDK (as of 10.06.2023) / **Verena Nold,** santésuisse (until 31.12.2023) / **Cantonal Government Councilor Petra Steimen-Rickenbacher,** GDK (until 31.03.2023) / **Anja Zyska Cherix,** MD, Suva.
Honorary members: Franz Merki, PhD / **Elisabeth Anderegg-Wirth**

Management

Managing Director: Damaris Ammann
Head Physician and Deputy Managing Director: Cornelia Reichert, MD
Senior physicians: Colette Degrandi, MD / **Katrin Faber,** MD
Head of scientific services and training site: Alexander Jetter, MD

Staff

Fabienne Baumann, physician (as of 1.2.2023) / **Ute Maria Bieser,** MD / **Zainab Blattmann,** Pharm. D. (as of 1.3.2023) / **Alexandra Teitelbaum,** RPh / **Danièle Chanson,** executive assistant/certified translator (until 31.8.2023) / **Maya Dekumbis,** physician (as of 1.9.2023) / **Ioanna Farmakis,** cleaning service / **Joan Fuchs,** MD (as of 1.8.2023) / **Mirjam Gessler,** MD / **Karen Gutscher,** MD / **Rose-Marie Hauser-Panagl,** executive assistant / **Teresa Hiltmann,** MD (until 30.4.2023) / **Evelyne Jina Prüss,** MD / **Noëmi Jöhl,** physician / **Irene Jost-Lippuner,** MD / **Seraina Kägi,** MD / **Michael Killian,** physician / **Helen Klingler,** MD / **Janosch Koch,** physician (as of 1.12.2023) / **Sandra Koller-Palenzona,** MD / **Birgit Krueger,** physician / **Jacqueline Kupper,** DVM / **Loredana Lang,** triage / **Max Maane,** physician (until 31.10.2023) / **Nadine C. Martin,** MD / **Noemi Mayr,** physician (as of 1.10.2023) / **Franziska Möhr-Spahr,** triage / **Corinne Nufer,** nurse/expert in emergency care / **Sabrina Raggenbass,** IT support / **Louka Rieser,** physician (until 31.5.2023) / **Fritz Rigendinger,** MD / **Miriam Scheuermann,** HR Manager / **Stefanie Schulte-Vels,** physician / **Julia Schumacher,** project manager (as of 15.6.2023) / **Regina Schwarz,** nurse (as of 1.3.2023) / **Sandra Schweizer,** MD (as of 1.6.2023) / **Joanna Stanczyk Feldges,** MD / **Jolanda Tremp,** office management / **Claudia Umbricht,** IT (until 30.6.2023) / **Simone Vogel,** triage (as of 1.1.2023) / **Anouk Zgraggen,** physician (until 30.11.2023) / **Karin Zuber,** triage.

Students: Rahila Alami (as of 1.7.2023), **Elias Ayadi** (as of 1.7.2023), **Yves Bähler** (4.7.–1.11.2023), **Tania Elavathingal** (as of 4.7.2023), **Adrian Frey** (until 31.7.2023), **Isabella Gatti, Fides Georgi, Florian Hauser, Delia Hausheer, Lara Heer, Gilles Huber** (until 31.7.2023), **Jasmine Kälin** (as of 1.7.2023), **Tobias Kälin** (until 31.8.2023), **Lea Keller, Marie Lefebvre** (until 15.5.2023), **Andreas Nadig, Anna Rohr** (as of 1.7.2023), **Leilah Semeraro** (as of 1.7.2023), **Miriam Stemmler, Ellen Welp** (as of 1.7.2023).

Advisors
Our circle of voluntary advisors include numerous experts from hospitals, institutes and state and federal offices, most notably professor Martin Wilks, MD (SCAHT).

Scientific publications

The list of scientific publications, dissertations and master theses can also be found on the website www.toxinfo.ch.

Accidental clozapine ingestions are of concern [abstract].
Degrandi C, Reichert C.
Clin Toxicol 2023; 61: 96.

Acute toxicity profile of Deanxit®: a consecutive case series of overdoses over 48 years [abstract].
Faber K, Stojkovic A, Reichert C, Jetter A.
Clin Toxicol 2023; 61: 226.

Spinnenbisse und Skorpionstiche – Ein Leitfaden für die Praxis.
Fuchs J, Reichert C.
Prim Hosp Care 2023; 23: 16–18.

Interference of Herbal Medicine with Axitinib in Metastatic Renal Cell Cancer Treatment: A Case Study.
Himmelreich F, Jetter A, Kiessling MK, Kadvany Y, Trojan A.
Case Rep Oncol. 2023; 16: 1362–1369.

Bei Vergiftungen und Vergiftungsverdacht: 145.
Jetter A, Degrandi C, Faber K, Reichert C.
Schweiz Aerzteztg 2023; 104: 38–39.

Are methotrexate plasma quantifications important in intoxications with low-dose methotrexate? [abstract].
Jetter A, Kägi S, Degrandi C, Reichert C, Faber K.
Clin Toxicol 2023; 61: 219.

Acute toxicity profile of promazine in overdose: a consecutive case series [abstract].
Jina Prüss EL, Degrandi C, Faber K, Jetter A.
Clin Toxicol 2023; 61: 218.

Vom Altern und von Wegen zu einer Verlängerung der Gesundheitsspanne.
Kellenberger S, Jetter A, Traber M.
pharmaJournal 2023; 10: 12–16.

Pilzvergiftungen 2022.
Krueger B, Zoller B.
SZP – Schweiz Zeitschr Pilzkd 2023; 101: 29–31.

Acetylcholine and noradrenaline enhance foraging optimality in humans.
Sidorenko N, Chung HK, Grueschow M, Quednow BB, Hayward-Könnecke H, Jetter A, Tobler PN.
Proc Natl Acad Sci U S A. 2023 Sep 5; 120(36):e2305596120.

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INTOXICATION?
145
24-h-emergency number