tox info suisse

Annual report 2021

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 private individuals and medical professionals
→ Consultation related to poisons (theoretical enquiries, Tel.: 044 251 66 66)
→ Tox Info App (free for iOS and Android)
→ Documentation and treatment schemes
→ Consultation and services for companies
→ Risk assessments and expert opinions
→ Poisoning prevention
→ Veterinary pharmacovigilance
→ Accredited training site (category B) for specialist medical training in clinical pharmacology and toxicology
→ Research and education

Cover image:
A call for help from a teenager during the Covid-19 pandemic – Tox Info Suisse, Zurich

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Contents

Dear Reader,

Maintaining the high quality of our consultation service has remained a top priority through the second year of the pandemic. To ensure a continued information service and protect our staff, we forged ahead with digitalisation as well as remote working and simplified processes. Transparent communication throughout and the involvement of all our staff in important decisions led to a burst of new, positive energy being released.

Unfortunately, we have also experienced how the difficult situation in the past two years has particularly affected young people: The number of consultations concerning attempted suicide by children and adolescents has increased sharply during the pandemic. Read more about this in our focus topic.

It is incredibly important for us to continuously expand and share our knowledge. Which is why we were delighted to welcome Alexander Jetter, MD to our team in September 2021. Appointed as head of our training site, he also became head of scientific services at the beginning of 2022.

Our dedication is paying off. In many cases, our expert advice eliminated the need to attend medical facilities as we were able to alleviate any concerns. This service has been financed by various supporting bodies since 1966. We hope we can continue to count on our long-standing sponsors in the future, while also attracting new supporters. This helps us continue to be available to the Swiss population 24 hours a day, every day, with our usual reliability and expertise.

Hans Rudolf Keller, PhD
Chairman

Damaris Ammann
Managing Director

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Tox Info Suisse keeps its eye on the ball – even and especially during the pandemic

In 2021, 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 2021, we provided advice in response to 39 584 enquiries (–1 % compared with 2020). Approximately 70 % of the enquiries originated from the general public, 25 % from medical professionals and 5 % from other sources. The website with up-to-date information related to poisoning was visited more than 666 000 times (+3 % compared with 2020).

Enquiries from the general public decreased slightly (–3 %), but enquiries from hospitals increased by 8 % to 7 458. We saw a reduction in enquiries from general practitioners of approx. 10 %, and a 30 % decrease in enquiries from veterinarians. The call frequency from pharmacists remained the same.

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 material safety data sheets and emergency unblinding in clinical trials. Experienced staff also 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, in 2021 Tox Info Suisse also 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

Tox Info Suisse was actively involved in medical training courses at the University of Zurich; S. Weiler also served as lecturer at the University of Basel. 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 S. Weiler and C. Reichert. 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.

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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Attempted suicide by adolescents

In the past few months, numerous publications have been released on the topic of mental health, especially in adolescents. This has also been reported repeatedly in the Swiss media. According to the website of Pro Juventute, counseling on the topic of suicidal thoughts increased by 40 % in 2021 compared with the previous year. In a study from the Canton of Zurich, the proportion of adolescents with self-harming behaviour rose from 31 % in 2019 to 48 % in 2021. Emergency psychiatric consultations rose by 40 % in this period, with the number of crisis interventions soaring to 230 % higher[1].
This trend was also noted by Tox Info Suisse. The following sections present several studies using data from Tox Info Suisse.

Rise in attempted suicide by children and adolescents

An initial analysis at the start of 2021 reported a significant increase in advice provided relating to attempted suicide by children and adolescents up to the age of 18. Researchers compared the first quarter of each year from 2016 to 2021. In comparison with the average case numbers from 2016 to 2020, the number of cases in 2021 rose by 70 %. The increase was especially high for children and teenagers younger than 15 years old[2] (Fig. 1).

Influence of different stages of the Covid-19 pandemic

Social life was severely restricted during the pandemic, which was especially stressful for children and adolescents. An analysis of 6 981 cases from 1st January 2016 to 31st December 2021 shows that attempted suicide cases did not increase during the first lockdown when schools were closed in spring 2020. The rise in the number of cases from autumn 2020 was therefore all the more pronounced (Fig. 2). The 13–17 year old age group was most affected while the increase was lower for 18–22 year olds. An earlier study by Tox Info Suisse revealed a similar picture for the younger age group[3].

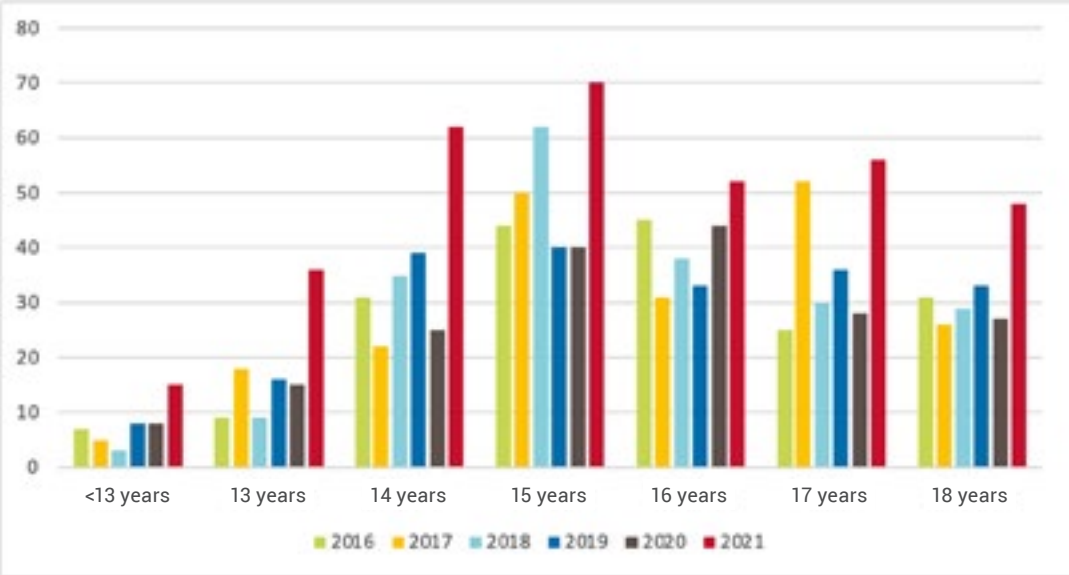

Figure 1: Number of attempted suicide cases involving poisoning in adolescents according to age for the first quarter of each year 2016–2021.

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Girls and women are more commonly affected

Attempted suicide by poisoning is significantly more common in women than in men and applies to both adolescents and young adults. In a publication from as far back as 2014, we could show that in the under 20 age group attempted suicide by poisoning was five times more common in girls than in boys[4]. In another more recent study by Tox Info Suisse looking at 7697 cases of adolescents and young adults aged between 10 and 25, more than three times as many females as males attempted suicide. In the 13–17 year old age group, the proportion of females is even higher[3].

Paracetamol is top of the list

Medication from home medicine cabinets, particularly readily available painkillers such as paracetamol (acetaminophen) or ibuprofen, play a large part in suicide attempts by adolescents. In a recent Swiss publication on emergency consultations due to intoxication from medicines, more than 40 % of cases in people under 20 years old were caused by an overdose of paracetamol. This proportion is much lower for those over 30 (< 15 %)[5]. A data analysis conducted by Tox Info Suisse of 7697 attempted suicide cases by adolescents and young adults aged between 10 and 25 also put paracetamol in the top spot, followed by ibuprofen. Paracetamol is used in about a quarter of cases, ibuprofen in approx. 13 % of cases. The 13–17 year old age range also stood out in this analysis because both types of painkiller were used much more than in the 18–25 year old age group[6]. Paracetamol poisonings are more relevant from a medical and health policy perspective, as without treatment they can cause liver failure and frequently require hospitalisation for treatment with an antidote.

References
1. Berger G, Häberling I, Lustenberger A, et al. The mental distress of our youth in the context of the COVID-19 pandemic. Swiss Med Wkly 2022;152:w30142.
2. Degrandi C, Reichert C. Alarming increase in suicide attempts in children and adolescents during the COVID-19 pandemic reported to a National Poisons Information Centre. Clin Toxicol 2021;59(11):1098.
3. Degrandi C, Faber K. Suicide attempts by poisoning in adolescents and young adults in Switzerland before and after the beginning of the COVID-19 pandemic. Clin Toxicol 2022;60(S1):98.
4. Degrandi C, Hofer KE, Rauber-Lüthy C, et al. Clinical and toxicological features of attempted suicides by deliberate self-poisoning in adolescents in Switzerland. Swiss Med Wkly 2014; 144(Suppl 203):48.
5. Kummer M, Müller T, Exadaktylos AK, et al. Characteristics of presentations to the emergency department following attempted suicide with drugs. Int J Environ Res Public Health 2021;18(19):10232.
6. Faber K, Degrandi C. Suicide attempts by overdose of paracetamol and ibuprofen in adolescents and young adults in Switzerland before and after the beginning of the COVID-19 pandemic. Clin Toxicol 2022;60(S1):98.

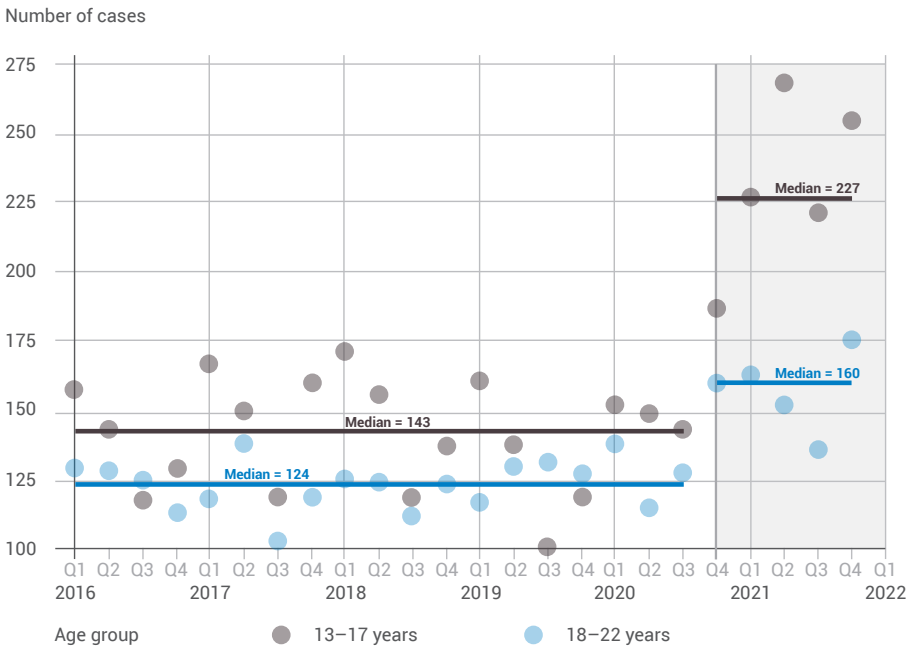

Figure 2: Average number of cases per quarter according to age group

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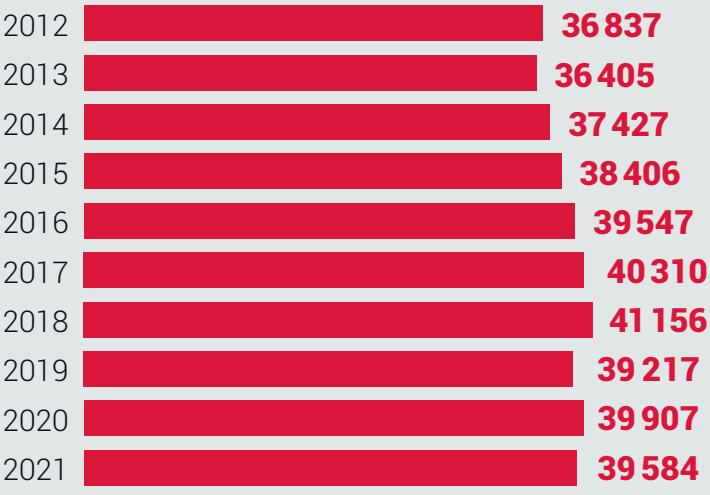
Emergency hotline 145

The number of calls in 2021 remained steady compared with the previous year, however demand has increased by around 7 % over the past ten years. This corresponds more or less to the population growth (9 %) over this period.

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 2021, Tox Info Suisse received 39 584 enquiries (–1 % compared with 2020).



In the past ten years, demand has risen by about 7 %.

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 8 478 times. The majority of these enquiries came from hospital physicians (7 458). General practitioners submitted 1 020 enquiries to Tox Info Suisse, 1 072 were received from emergency services, 343 from pharmacists and 98 from veterinarians.

Tox Info Suisse also provided information 54 times to media such as newspapers, radio and television. The remaining enquiries came from nursing homes (461), industry, poison centres abroad 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 2 474 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 from household products, chemicals, 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 37 107 consultations in total concerning toxic exposure involved 35 538 humans and 1 569 animals.

The reason for calling was unknown in three instances.

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Origin of enquiries by cantons and callers

Canton	Population	General public	Hospital physicians	Practioners	Pharmacists	Veterinarians	Various	Total	Calls/1000 inhabitants	Calls/1000 inhabitants
									Public	Physicians
AG	694072	2158	663	34	21	8	243	**3127**	3.1	1.0
AI	16293	41	1	2	–	–	3	**47**	2.5	0.2
AR	55309	150	34	3	1	–	26	**214**	2.7	0.7
BE	1043132	3641	955	117	39	12	434	**5198**	3.5	1.0
BL	290969	952	202	34	8	4	85	**1285**	3.3	0.8
BS	196735	669	372	48	12	–	91	**1192**	3.4	2.1
FR	325496	860	123	24	12	2	79	**1100**	2.6	0.5
GE	506343	1250	377	54	42	3	209	**1935**	2.5	0.9
GL	40851	91	34	6	2	1	9	**143**	2.2	1.0
GR	200096	537	204	37	7	3	35	**823**	2.7	1.2
JU	73709	133	34	4	4	1	11	**187**	1.8	0.5
LU	416347	1171	344	70	8	3	168	**1764**	2.8	1.0
NE	175894	412	69	7	11	–	63	**562**	2.3	0.4
NW	43520	96	27	4	–	–	9	**136**	2.2	0.7
OW	38108	158	30	4	2	–	13	**207**	4.1	0.9
SG	514504	1530	408	70	10	3	164	**2185**	3.0	0.9
SH	83107	265	101	7	–	1	31	**405**	3.2	1.3
SO	277462	863	189	26	3	1	113	**1195**	3.1	0.8
SZ	162157	453	86	18	6	1	34	**598**	2.8	0.6
TG	282909	889	206	32	8	2	68	**1205**	3.1	0.8
TI	350986	611	316	44	14	5	34	**1024**	1.7	1.0
UR	36819	84	24	5	–	–	9	**122**	2.3	0.8
VD	814762	2175	435	77	34	10	200	**2931**	2.7	0.6
VS	348503	744	160	31	28	3	108	**1074**	2.1	0.6
ZG	128794	377	71	12	4	–	48	**512**	2.9	0.6
ZH	1553423	6116	1472	237	63	22	724	**8634**	3.9	1.1
FL	39055	112	25	6	–	–	11	**154**	2.9	0.8
Foreign	–	246	495	4	3	10	85	**843**	–	–
Unknown	–	681	1	3	1	3	93	**782**	–	–
Total	**8709355**	**27465**	**7458**	**1020**	**343**	**98**	**3200**	**39584**	**3.2**	**1.0**
%		69.4%	18.8%	2.6%	0.9%	0.2%	8.1%	100%	–	–

Source of population figures: Swiss Federal Statistical Office, FSO / Liechtenstein authorities (cut-off date: 1.1.2021)

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Human poisoning

Children younger than 5 years old most frequently affected

In 2021, Tox Info Suisse recorded 35 538 consultations for 32 928 cases. The highest number of cases was recorded for children younger than five years old (43.7 %). Overall, more children (54.0 %) were affected by toxic exposures than adults (45.8 %). Looking at the difference between the sexes, the number of cases is slightly higher for boys (50.9 % versus 48.2 %) whereas in adults, significantly more women are affected than men (58.9 % versus 40.8 %). 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		8573	48.2 %	9053	50.9 %	150	17776	54.0 %
Age	< 5 years	6771		7523		90	14384	
	5 – <10 years	743		910		6	1659	
	10 – <16 years	882		463		5	1350	
	unknown	177		157		49	383	
Adults		8888	58.9 %	6155	40.8 %	54	15097	45.8 %
Age	16 – <20 years	796		442		1	1239	
	20 – <40 years	1588		1282		4	2874	
	40 – <65 years	1237		1027		1	2265	
	65 – <80 years	379		290		1	670	
	80+ years	258		158		–	416	
	unknown	4630		2956		47	7633	
Age unknown		10	18.2 %	7	12.7 %	38	55	0.2 %
Total		**17471**	**53.1 %**	**15215**	**46.2 %**	**242**	**32928**	**100 %**

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

Accidental poisoning more common than intentional poisoning

A distinction must be made between the circumstances of poisoning: accidental (unintentional) exposure, intentional exposure and adverse drug reactions. Accidental exposure 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, abuse (substance abuse) and criminal poisoning (by a third party).

Circumstances of toxic exposure in humans

Circumstances of toxic exposures		Acute poisoning (exposure ≤ 8 h)		Chronic poisoning (exposure > 8 h)
Accidental domestic	23 648	71.8 %	545	1.7 %
Accidental occupational	1 037	3.1 %	71	0.2 %
Accidental environmental	11	0.03 %	9	0.03 %
Accidental others	1 390	4.2 %	75	0.2 %
Total accidental	**26 086**	**79.2 %**	**700**	**2.1 %**
Intentional suicide	3 541	10.8 %	56	0.2 %
Intentional abuse	694	2.1 %	101	0.3 %
Intentional criminal	72	0.2 %	9	0.03 %
Intentional others	724	2.2 %	120	0.4 %
Total intentional	**5 031**	**15.3 %**	**286**	**0.9 %**
Total accidental and intentional	**31 117**	**94.5 %**	**986**	**3.0 %**

Total acute and chronic	**32 103**	**97.5 %**
Adverse drug reactions	**149**	**0.5 %**
Unclassifiable/others	**676**	**2.1 %**
Total	**32 928**	**100 %**

In comparison with the previous year, there are more intentional cases. This increase is mainly due to cases of suicidal intent in children and adolescents. Read more in our focus topic.

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	6253	5826	10	12089	36.7 %
Household products	2807	5353	10	8170	24.8 %
Plants	702	2184	5	2891	8.8 %
Technical and industrial products	1672	435	5	2112	6.4 %
Cosmetics and personal care products	351	1654	–	2005	6.1 %
Food and beverages (excl. mushrooms and alcohol)	998	858	8	1864	5.7 %
Recreational drugs and alcohol	692	408	2	1102	3.3 %
Agricultural and horticultural products	292	304	–	596	1.8 %
Mushrooms	330	196	3	529	1.6 %
Venomous animals	207	114	–	321	1.0 %
Veterinary drugs	68	55	–	123	0.4 %
Other or unknown agents	725	389	12	1126	3.4 %
Total	**15097**	**17776**	**55**	**32928**	**100 %**

Severity of poisoning

In 8316 enquiries from physicians (98.1 % 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. The doctors provided Tox Info Suisse with feedback on the outcome of the poisoning in 65.9 % of these cases. Tox Info Suisse therefore received expert medical information about the symptoms, clinical outcome and treatment of acute and chronic poisoning. This 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 analytically detected.

In total, 4235 toxicological cases in humans had sufficient evidence of causality and could be further analysed with regard to the clinical course (+5 % compared with the previous year).

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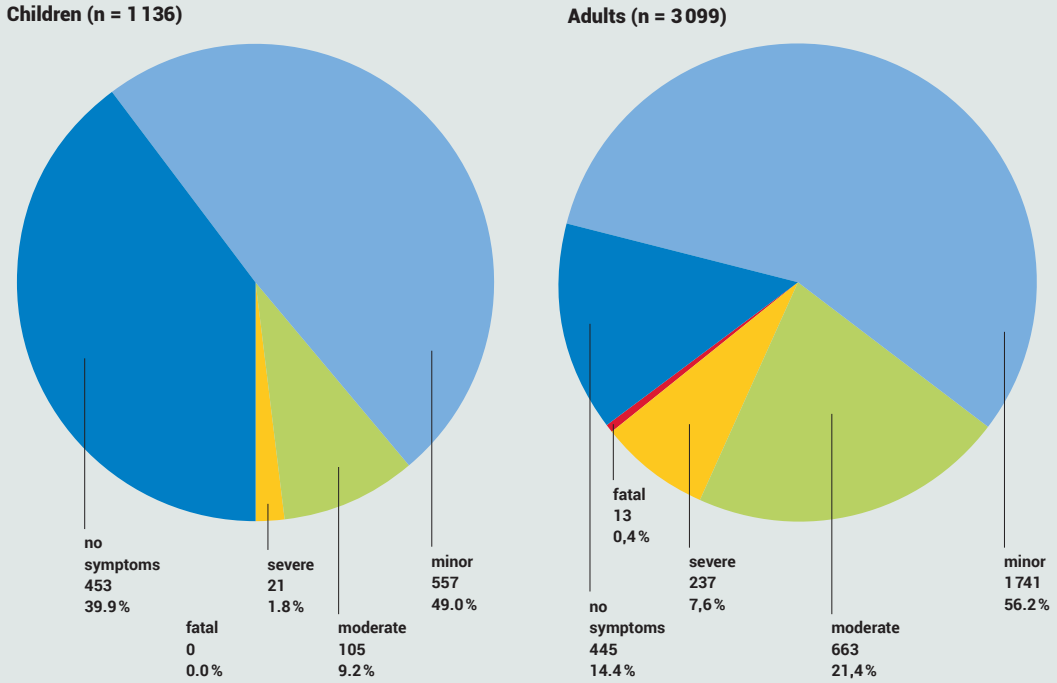
Clinical outcome in children and adults

In comparison with recent years, there are considerably more children's cases that are classified as severe. Read more in our focus topic.

Of the 4235 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 of poisoning	N	Mi	Mo	S	F	N	Mi	Mo	S	F		
Pharmaceuticals	338	1 094	386	171	8	283	312	64	13	–	2 669	63.0 %
Recreational drugs and alcohol	11	148	145	46	2	13	24	13	4	–	406	9.6 %
Household products	26	124	29	5	1	74	129	11	1	–	400	9.4 %
Technical and industrial products	31	225	38	4	1	15	26	2	–	–	342	8.1 %
Plants	7	43	16	2	1	18	15	5	1	–	108	2.6 %
Cosmetics and personal care products	7	19	1	–	–	18	24	1	–	–	70	1.7 %
Mushrooms	5	18	16	–	–	12	5	1	–	–	57	1.3 %
Food and beverages (excl. mushrooms and alcohol)	5	13	7	2	–	5	8	1	–	–	41	1.0 %
Venomous animals	1	12	8	2	–	2	3	5	–	–	33	0.8 %
Agricultural and horticultural products	4	9	6	3	–	6	–	1	1	–	30	0.7 %
Veterinary drugs	–	8	2	1	–	2	–	–	–	–	13	0.3 %
Other or unknown agents	10	28	9	1	–	5	11	1	1	–	66	1.6 %
Total	**445**	**1 741**	**663**	**237**	**13**	**453**	**557**	**105**	**21**	**–**	**4 235**	**100 %**

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

Animal poisoning

Affected animals

1 569 consultations relating to 1 551 cases also concerned a wide range of different animals in 2021: 1 171 dogs, 298 cats, 31 equines (donkeys, horses, ponies), 20 lagomorphs (hares, rabbits), 13 bovines (bulls, calves, cows, goats, sheep), 10 rodents (guinea pigs, hamsters, mice, rats), 4 birds (chickens, ducks), 3 pigs, 1 tortoise.

Frequency of agent groups in all cases of animal poisoning

Agent groups		No. of cases
Food and beverages (excl. mushrooms and alcohol)	404	26.0 %
Plants	289	18.6 %
Pharmaceuticals	271	17.5 %
Agricultural and horticultural products	212	13.7 %
Household products	140	9.0 %
Veterinary drugs	47	3.0 %
Recreational drugs and alcohol	37	2.4 %
Technical and industrial products	34	2.2 %
Cosmetics and personal care products	28	1.8 %
Mushrooms	20	1.3 %
Venomous animals	19	1.2 %
Other or unknown agents	50	3.2 %
Total	**1 551**	**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 39 reports on animal poisoning 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 of poisoning	N	Mi	Mo	S	F		
Pharmaceuticals	7	4	1	–	–	12	30.8 %
Agricultural and horticultural products	4	2	1	1	–	8	20.5 %
Plants	4	1	–	–	–	5	12.8 %
Veterinary drugs	3	–	1	–	–	4	10.3 %
Household products	1	1	1	–	–	3	7.7 %
Food and beverages (excl. mushrooms and alcohol)	–	–	1	–	1	2	5.1 %
Venomous animals	–	–	–	1	1	2	5.1 %
Mushrooms	1	1	–	–	–	2	5.1 %
Technical and industrial products	–	1	–	–	–	1	2.6 %
Recreational drugs and alcohol	–	–	–	–	–	–	0.0 %
Cosmetics and personal care products	–	–	–	–	–	–	0.0 %
Other or unknown agents	–	–	–	–	–	–	0.0 %
Total	**20**	**10**	**5**	**2**	**2**	**39**	**100 %**

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

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Financial statements

Income statement

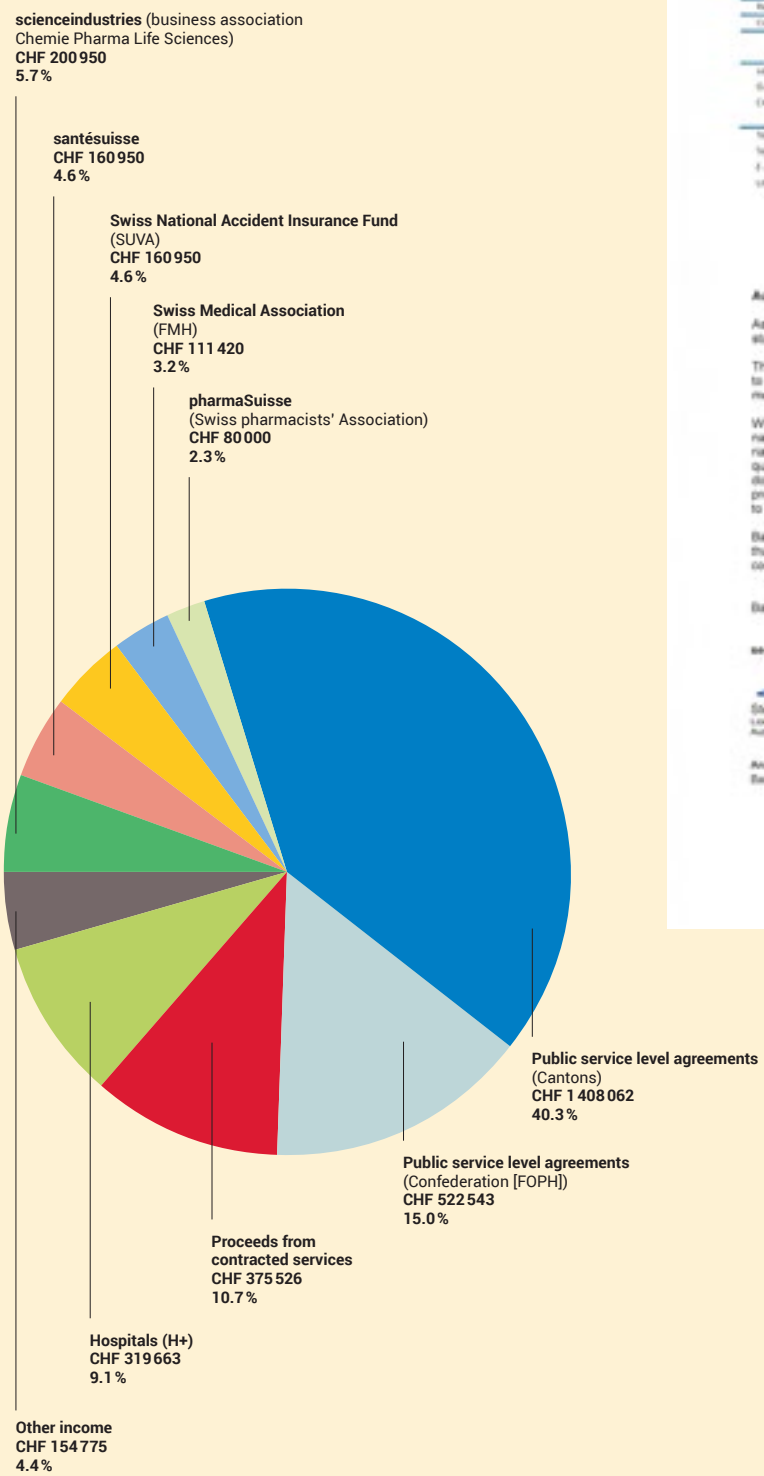
Income	2021	2020
	CHF	CHF
Contributions from founders and supporters	714 270	616 950
Service level agreements		
Confederation (FOPH)	522 543	522 243
Cantons	1 408 062	1 397 984
Hospitals (H+)	319 663	293 526
Others	375 526	370 274
Professional fees and expert reports	1 730	13 800
Research projects	–	6 510
Donations	105 240	80 504
Other income	47 805	43 319
Total income	**3 494 839**	**3 345 110**
Expense		
Staff*	2 936 671	2 746 546
Rent	159 574	149 806
Furniture and equipment	9 012	16 256
IT	310 789	218 441
Office and administration	44 670	25 287
Communication	17 123	9 154
Literature and archiving	14 340	2 792
Research and education	–	500
Telephone, postage	36 681	31 622
Other operating expense/ strategic projects	109 907	199 819
Total expense	**3 638 767**	**3 400 223**
Operating result	**– 143 928**	**–55 113**
Financial income	– 3 171	50
Financial expense	– 337	– 413
Total financial result	**– 3 508**	**– 363**
Liquidation of provision to ensure liquidity	150 000	63 455
Net profit	**2 564**	**7 979**

*) corresponds to 20.7 full-time equivalents in 2021

Balance sheet at 31st December

Assets	2021	2020
	CHF	CHF
Current assets		
Cash	3 186 334	3 385 786
Accounts receivable	378 866	350 577
Prepaid expenses and accrued income	23 294	4 174
Total assets	**3 588 494**	**3 740 537**
Equity and liabilities		
Current liabilities		
Accounts payable	12 042	29 823
Other current liabilities	23 206	31 987
Accruals and deferred income	205 468	183 512
	240 716	**245 322**
Non-current liabilities		
Provision for IT	240 000	240 000
Provision for research	260 000	260 000
Provision to ensure liquidity	1 950 000	2 100 000
	2 450 000	**2 600 000**
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	97 378	94 815
– Profit carried forward	94 813	86 836
– Net profit	2 564	7 979
	897 778	**895 215**
Total equity and liabilities	**3 588 494**	**3 740 537**

Source of income



Auditor's report

serves control

Report of the statutory auditors to the foundation board of

Stiftung Tox Info Suisse
8032 Zürich

Auditor's report on the limited examination

As statutory auditors we have examined the financial statements (balance sheet, income statement and notes) of Foundation Tox Info Suisse for the year ended December 31, 2021.

These financial statements are the responsibility of the board of directors. 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 examination. This standard requires that we plan and perform a limited examination to identify material misstatements in the financial statements. A limited 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 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, 28 April 2022

serves control gmbh

Stefan Hummel
Licensed Audit expert
Auditor in charge

Andrea Friedli
Licensed Auditor

Annex:
Balance Sheet, Statement of Operations and Notes

Member 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 1000

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

OPO Foundation (project contribution)	50 000
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
Reckitt Benckiser (Switzerland) AG	2 000
Amavita	1 000
Dr. med. Markus Christian Frey	1 000
IBSA Institut Biochimique SA	1 000
Ideal Chimic SA	1 000
IVF Hartmann AG	1 000
RSG Europe GmbH	1 000
Swiss Revision AG	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.

Continuous professional development in all areas

Switzerland continues to need a poisoning information service of the highest standard, as shown by the number of calls and the favourable feedback from our callers. To ensure this remains the case in the future, Tox Info Suisse has to continuously improve and to further develop its services, capabilities and administration.

Optimisation of the funding strategy

Tox Info Suisse has ambitious goals: One of which is to obtain greater sponsorship commitment by adapting its funding strategy. The necessary contributions for 2024–2028 will hereby be guaranteed. A wide range of highly constructive discussions and round tables with all parties over the past months allow a positive interim assessment. However, for long-term financial stability our foundation also needs an even broader sponsorship base and a greater readiness on the part of individual companies, associations and the general public to donate.

Major ICT overhaul

The consultancy software used by Tox Info Suisse is outdated and must be replaced. Over the pandemic, the requirements on a purely digital workplace in the office and remotely have also increased. Interactions with related institutions and poison information centres abroad have shown that we need to completely upgrade our information and communication technology (ICT) – including the setup, processes and ICT skills within Tox Info Suisse. This major ICT overhaul has begun and should be implemented progressively over the next two years.

Review of core processes

Analysing the existing ICT infrastructure and processes revealed the need to modify several routine processes. At the end of 2021, we therefore began to review our core processes internally and redesign them using “design thinking”. Initial results can already be seen, which motivates us to continue on this path. We are convinced that continuing to improve our processes ensures the quality of our advisory service and ability to adapt even in difficult circumstances.

Education, training and continuous professional development

The professional development of all staff is key to an expert organisation and is also a high priority for us. Tox Info Suisse invests continually in the education, training and continuous development of our medically trained personnel. The high level of training of medical specialists will be maintained and optimised even further. We have also increased the number of work placements for medical students since the summer of 2021. Students support the evening shift on a daily basis, thereby having the opportunity to deepen their knowledge and gain an insight into an organisation that provides emergency services. At the same time, their support helps us to better handle the increased call volume received in the evening. An adapted organisational chart with new areas of competence also provides professional growth for our administrative employees.

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.

Service Level Agreements

The services for the general population 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

By order of the Swiss Federation, and on the basis of the law and ordinance on chemicals, 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 veterinary pharmacovigilance.

The people behind Tox Info Suisse

Foundation Council

Chairperson: Elisabeth Anderegg-Wirth, pharmaSuisse (until 31.3.2021) / **Hans Rudolf Keller**, PhD, pharmaSuisse (as of 1.4.2021)
Vice-Chairman: Marcel Sennhauser, scienceindustries
Members: Michael Arand, PhD, University of Zurich / **Orlando Bitzer**, H+ / **Philipp Brugger**, GDK / **Roland Charrière**, PhD, Federal Office of Public Health (until 2.7.2021) / **Verena Nold**, santésuisse / **Ulrich Schaefer**, PhD, pharmaSuisse (as of 1.3.2021) / **Jana Siroka**, MD, FMH (as of 1.3.2021) / **Cantonal Government Councilor Petra Steimen-Rickenbacher**, GDK / **Fabian Vaucher**, pharmaSuisse (until 28.2.2021) / **Josef Widler**, MD, Conference of the Cantonal Medical Associations (until 28.2.2021) / **Anja Zyska Cherix**, MD, Suva.
Honorary members:
Franz Merki, PhD / **Elisabeth Anderegg-Wirth** (as of 1.4.2021)

Management

Managing Director: Damaris Ammann (as of 1.4.2021)
Head Physician and Deputy Managing Director: Cornelia Reichert, MD
Senior physicians: Colette Degrandi, MD / **Katrin Faber**, MD / **Katharina Hofer**, MD / **Katharina Schenk**, MD (until 31.5.2021)
Head of scientific services: Stefan Weiler, MD (until 30.9.2021)
Head of training site: Stefan Weiler, MD (until 31.8.2021), **Alexander Jetter**, MD (as of 1.9.2021)
Head of administration: Maja Surbeck

Staff

Natascha Anders, nurse / **Eugenia Becker**, project leader (as of 1.9.2021) / **Alexandra Bloch-Teitelbaum**, RPh / **Danièle Chanson**, executive assistant / certified translator / **Trudy Christian**, triage / **Ioanna Farmakis**, cleaning service / **Joan Fuchs**, MD (until 31.7.2021) / **Mirjam Gessler**, MD / **Karen Gutscher**, MD / **Rose-Marie Hauser-Panagl**, triage / **Teresa Hiltmann**, MD / **Cynthia Huppermans**, physician (as of 1.10.2021) / **Evelyne Jina Prüss**, MD / **Noëmi Jöhl**, physician / **Irene Jost-Lippuner**, MD / **Seraina Kägi**, MD / **Helen Klingler**, MD / **Sandra Koller-Palenzona**, MD / **Birgit Krueger**, physician / **Jacqueline Kupper**, DVM / **Loredana Lang**, triage / **Max Maane**, physician (as of 1.11.2021) / **Nadine C. Martin**, MD / **Franziska Möhr-Spahr**, triage / **Corinne Nufer**, nurse / expert in emergency care / **Louka Rieser**, physician (as of 1.8.2021) / **Stefanie Schulte-Vels**, physician / **Joanna Stanczyk Feldges**, MD / **Jolanda Tremp**, triage / **Sonja Tscherry**, nurse (until 30.9.2021) / **Claudia Umbricht**, IT / **Margot von Dechend**, MD / **Anouk Zgraggen**, physician (as of 1.4.2021) / **Karin Zuber**, triage.
Medical students: Sandra Bachmann (as of 1.8.2021), **David Balsiger** (as of 1.11.2021), **Leandra Ehrat** (as of 1.7.2021), **Hanna Fischer** (as of 1.11.2021), **Adrian Frey** (as of 1.11.2021), **Theresa Friederici** (as of 1.7.2021), **Fides Georgi** (as of 1.11.2021), **Florian Hauser**, **Sakiz Hüseyin** (1.7.–30.9.2021), **Tobias Kälin** (as of 1.11.2021), **Marie Lefebvre**, **Max Maane** (until 31.7.2021), **Andreas Nadig** (as of 1.7.2021), **Yael Schollenberger** (as of 1.11.2021).

Advisors
Our circle of voluntary advisors include numerous experts from hospitals, institutes and state and federal offices, most notably **Jean-Pierre Lorent** (former managing director) and professor **Martin Wilks**, MD (SCAHT).

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Scientific publications

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

Some of the listed publications can be downloaded from our website www.toxinfo.ch. All others are available from scientific libraries.

Systemische Mykosen.
Cornely OA, Weiler S.
In: Herold G, Herold Verlag, Köln. Innere Medizin 2021; 389–92.

Alarming increase in suicide attempts in children and adolescents during the COVID-19 pandemic reported to a National Poisons Information Centre [abstract].
Degrandi C, Reichert C.
Clin Toxicol 2021; 59: 1098.

Favorable acute toxicity profile of the hiking stimulant nikethamide [abstract].
Degrandi C, Tscherry S, Reichert C.
Clin Toxicol 2021; 59: 558–59.

In vino veritas: accidental MDMA poisoning by illicit drug trafficking [abstract].
Faber K, Hofer KE, Lanzo F, Schulte-Vels S, Weiler S.
Clin Toxicol 2021; 59: 555.

Exotic venomous snakebites in Switzerland reported to the National Poisons Information Centre over 22 years [abstract].
Fuchs J, Gessner T, Kupferschmidt H, Weiler S.
Clin Toxicol 2021; 59: 579–80.

Indigenous venomous snakebites in Switzerland: analysis of reports to the National Poisons Information Centre over 22 years.
Fuchs J, Gessner T, Kupferschmidt H, Weiler S.
Swiss Med Wkly 2021; 151: w30085.

Oral hydrogen peroxide (H_2O_2) exposures related to dental treatments during and before COVID-19 [abstract].
Fuchs J, Weiler S.
Prim Hosp Care 2021; 21(Suppl. 11): 20.

Possible envenomation by a sting by Pleurodeles waltl (Iberian Ribbed Newt) resulting in mild symptoms.
Fuchs J, Hvozdara L, Weiler S.
Clin Toxicol 2021 [early online]. (Clin Toxicol 2022; 60: 137–39).

Venomous Pets: exotic venomous snakebites in Switzerland reported to the National Poisons Information Centre over 22 years [abstract].
Fuchs J, Gessner T, Kupferschmidt H, Weiler S.
Prim Hosp Care 2021; 21(Suppl. 11): 97.

Epidemiology of fatal poisoning in Switzerland over 12 years [abstract].
Gessler M, Reichert C, Junker Ch, Kupferschmidt H, Weiler S.
Prim Hosp Care 2021; 21 (Suppl. 11): 9–10.

Global adverse events reported for direct-acting antiviral therapies for the treatment of hepatitis C: an analysis of the World Health Organization VigiBase.
Hayes KN, Burkard T, Weiler S, Tadrous M, Burden AM.
Eur J Gastroenterol Hepatol 2021; 33 (1S Suppl 1): e1017–21.

Extracorporeal life support as bridge to recovery in yew poisoning: case reports and literature review.
Hermes-Laufer J, Meyer M, Rudiger A, Henze J, Enselmann K, Kupferschmidt H, Müller D, Herzog A, Bettex D, Keller DI, Krüger B, Engeler J.
ESC Heart Fail 2021; 8: 705–09.

Benzodiazepin-Intoxikation: Ein Hypnotikum-Toxidrom.
Hofer KE, Weiler S.
Prim Hosp Care 2021; 21: 191–93.

The impact of the first wave of COVID-19 on Poison Centre (PC) activities in 4 European countries: a pilot study [abstract].
Hondebrink L, Faber K, Zammit M, Hoegberg LCG, Lonati D.
Clin Toxicol 2021; 59: 542.

Impact of the COVID crisis on European Poison Centres [abstract].
Lonati D, Hondebrink L, Faber K, Hoegberg L, Hermanns-Clausen M, Zammit M, Thiermann H.
Toxicology Letters 2021; S19.

Bunte Gelkugeln und Wasserperlen: Wie gefährlich ist die Einnahme?
Martin NC, Weiler S, Hofer KE.
Prim Hosp Care 2021; 21: 100–101.

Vergiftungen in der Schweiz.
Zur Beratungstätigkeit 2019 von Tox Info Suisse.
Reichert C, Degrandi C, Hofer KE.
Schweiz Aerzteztg 2021; 102: 1440–44.

Coadministration of tizanidine and ciprofloxacin: a retrospective analysis of the WHO pharmacovigilance database.
Rudolph A, Dahmke H, Kupferschmidt H, Burden A, Weiler S.
Eur J Clin Pharmacol 2021; 77: 895–902.

CME: Achtung, Lamelle! Pilzvergiftungen in der Praxis.
CME: Mushroom Poisoning in the Family Practice.
Schenk-Jäger K, Gessler M, Weiler S.
Praxis 2021; 110: 543–53.

Renal ischemic adverse drug events related to tranexamic acid in women of child-bearing age: an analysis of pharmacovigilance data.
Stämpfli D, Weiler S, Weiniger CF, Burden AM, Heesen M.
Eur J Clin Pharmacol 2021; 77: 913–19.

Cardiovascular safety profile of romosozumab: a pharmacovigilance analysis of the US Food and Drug Administration Adverse Event Reporting System (FAERS).
Vestergaard Kvist A, Faruque J, Vallejo-Yagüe E, Weiler S, Winter EM, Burden AM.
J Clin Med 2021; 10: 1660.

Deprescribing: Pharmakotherapie optimieren.
Weiler S, Gysling E.
pharma-kritik 2021; 43: 18–23.

TAM-ing the CIA-tumor-associated macrophages and their potential role in unintended side effects of therapeutics for cancer-induced anemia.
Weiler S, Nairz M.
Front Oncol 2021; 11: 627223.

Andexanet alfa.
Weiler S.
pharma-kritik 2021; 43: 34.

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