CYP2D6 genetic polymorphisms and their relevance for poisoning due to amphetamines, opioid analgesics and antidepressants


**Introduction**

Cytochrome P450 2D6 (CYP2D6) is a member of the cytochrome P450 (CYP) superfamily involved in the biotransformation of drugs and substances of abuse encountered in clinical toxicology. Among the CYP superfamily, the CYP2D6 gene is considered as the most polymorphic as more than 105 different alleles have been identified so far. CYP2D6 genetic polymorphisms have the potential to affect the toxicity of their substrates.

**Objective**

This review will focus specifically on CYP2D6 genetic polymorphisms and their relevance for poisoning due to amphetamines, opioid analgesics and antidepressants in humans.

**Methods**

PubMed (up to August 2013) was searched with the following selection criteria: ‘CYP2D6 AND (toxicology OR poisoning OR intoxication OR overdose)’. Of the 454 citations retrieved, only 46 papers dealt with the impact of CYP2D6 polymorphisms on poisoning due to amphetamines, opioid analgesics and antidepressants.
**Amfetamines**

While some *in vitro* studies suggest that CYP2D6-mediated metabolites of 3,4-methylene-dioxymethamphetamine (MDMA) are substantially more cytotoxic compared with unchanged MDMA, it is not yet confirmed in human cases of MDMA intoxication that extensive/ultra-rapid CYP2D6 metabolisers could be at higher risk. This would also apply to methamphetamine exposure and the related cardiac and central nervous system toxicity.

**Opioid analgesics**

CYP2D6 ultra-rapid metabolisers are more likely to experience the adverse effects of codeine and tramadol. Opioid analgesics that do not rely on CYP2D6 for therapeutic activity, such as morphine and hydromorphone, may therefore be a better alternative to codeine and tramadol, with the limitation that these drugs have their own set of adverse reactions.

**Antidepressants**

CYP2D6 poor metabolisers are generally more prone to adverse effects. Among them, the four drugs with the highest level of evidence are amitriptyline, nortriptyline, venlafaxine and fluoxetine. Further data are needed, however, for doxepin and paroxetine, while citalopram adverse effects seem definitely less influenced by CYP2D6 genetic polymorphisms.

**Conclusions**

Either poor or extensive/ultra-rapid CYP2D6 metabolisers may be exposed to toxic effects of amfetamines, opioid analgesics and antidepressants. In these three categories, the level of evidence is substance dependent, with differences within the same pharmacological class.

Full text available from: [http://dx.doi.org/10.3109/15563650.2015.1049355](http://dx.doi.org/10.3109/15563650.2015.1049355)

---

**NBOMe and 2C substitute phenylethylamine exposures reported to the National Poison Data System**


**Background**

Hallucinogenic designer drugs, especially NBOMe and the 2C substitute phenylethylamine series, have been increasing ubiquitous in past years. The purpose of this study is to characterize and compare clinical features of NBOMe and 2C exposures in humans.

**Method**

This is a retrospective cohort study of all single agent exposures to NBOMe and 2C substitute phenylethylamine reported to the National Poison Data System (NPDS) from 1st September 2012 to 30th September 2014.

**Results**

Over the study period, there were a total 341 cases including 148 NBOMe exposures and 193 2C exposures. The majority cases involved men (73.9%); median age was 18 years (Interquartile-range, 16-21). Similar clinical effects were reported in both groups including tachycardia (45.2%), agitation/irritable (44.3%), hallucination/delusion (32.0%), confusion (19.1%) and hypertension (18.5%). There were higher incidences of hallucination/delusion, single episode seizure and benzodiazepine administration in NBOMe exposures (40.5%, 8.8% and 50.0% respectively) than those of 2C exposures (25.4%, 3.1%, and 32.6% respectively). There were 2.3% death; no difference between two groups.

**Discussion**

The higher rate of symptoms in NBOMe is consistent with the higher 5HT2A agonistic effects of NBOMe described in both molecular and animal studies.
**Conclusion**

Common clinical effects of NBOMe and 2C exposures were tachycardia, agitation/irritable, hallucination/delusion, confusion, and hypertension. There were higher incidences of hallucination/delusion, single episode seizure and benzodiazepine administration in NBOMe.

Full text available from: [http://dx.doi.org/10.3109/15563650.2015.1054502](http://dx.doi.org/10.3109/15563650.2015.1054502)

---

**Prevalence of levamisole and aminorex in patients tested positive for cocaine in a French University Hospital**


**Context**

The prevalence of levamisole in urine samples of subjects positive for cocaine in the US was estimated at 78% (95% confidence interval or CI: 73%–83%). However, levamisole was not quantified, and at the time of this report, aminorex was not known to be a possible metabolite of levamisole in human. Moreover no data are available in Europe.

**Objective**

The aim of this study was to determine the prevalence and concentration of levamisole and aminorex in positive cocaine urine toxicology tests, and in serum samples of cocaine-positive subjects driving under the influence of drugs or forensic autopsies.

**Materials and methods**

Consecutive urine toxicology samples tested positive for cocaine by immunoassay (EMIT, Siemens) from April to May 2014 at the toxicology laboratory of a French University Hospital, and blood samples of cocaine-positive subjects driving under the influence of drugs or forensic autopsies from April to December 2014 were analyzed by liquid chromatography–tandem mass spectrometry or LC–MS/MS (3200 QTrap, AB Sciex) to detect and quantify the presence of levamisole and aminorex.

**Results**

Forty-two urine samples tested positive for cocaine in 39 patients (79.5% males) with a median age of 43 [range: 20–51] years. Toxicological analyses were mainly required by addictions care centers (n = 17; 40%) in the context of the routine management of addict patients. Cocaine concentrations were above the limit of quantification for 33 patients, with a median value of 228 [0–645,000] ng/ml. Levamisole was detected in 32 urine samples (76%) (median concentration: 1,430 ng/ml, range: 30–258,000). Aminorex was never detected. During the study period, levamisole was detected in 87.5% of cocaine-positive blood samples of the subjects driving under the influence of drugs or forensic autopsies.

**Discussion**

In this prospective study, the prevalence of levamisole in cocaine-positive samples was 76%. Over this period, although clinical complications related to cocaine use were reported (agitation, road accident, and cardiac arrest), no complication specifically related to levamisole or aminorex was reported.

**Conclusion**

Our results show a high prevalence of levamisole in samples of subjects positive for cocaine, close to the prevalence found in the US. This high prevalence raises issues with respect to well-identified health risks associated with regular consumption of levamisole.

Full text available from: [http://dx.doi.org/10.3109/15563650.2015.1054499](http://dx.doi.org/10.3109/15563650.2015.1054499)
**H₂S induced coma and cardiogenic shock in the rat: effects of phenothiazinium chromophores**


**Context**

Hydrogen sulfide (H₂S) intoxication produces an acute depression in cardiac contractility-induced circulatory failure, which has been shown to be one of the major contributors to the lethality of H₂S intoxication or to the neurological sequelae in surviving animals. Methylene blue (MB), a phenothiazinium dye, can antagonize the effects of the inhibition of mitochondrial electron transport chain, a major effect of H₂S toxicity.

**Objectives**

We investigated whether MB could affect the immediate outcome of H₂S-induced coma in un-anesthetized animals. Second, we sought to characterize the acute cardiovascular effects of MB and two of its demethylated metabolites-azure B and thionine-in anesthetized rats during lethal infusion of H₂S.

**Materials and methods**

First, MB (4 mg/kg, intravenous [IV]) was administered in non-sedated rats during the phase of agonal breathing, following NaHS (20 mg/kg, IP)-induced coma. Second, in 4 groups of urethane-anesthetized rats, NaHS was infused at a rate lethal within 10 min (0.8 mg/min, IV). Whenever cardiac output (CO) reached 40% of its baseline volume, MB, azure B, thionine, or saline were injected, while sulfide infusion was maintained until cardiac arrest occurred.

**Results**

Seventy-five percent of the comatose rats that received saline (n = 8) died within 7 min, while all the 7 rats that were given MB survived (p = 0.007). In the anesthetized rats, arterial, left ventricular pressures and CO decreased during NaHS infusion, leading to a pulseless electrical activity within 530 s. MB produced a significant increase in CO and dP/dt_{max} for about 2 min. A similar effect was produced when MB was also injected in the pre-mortem phase of sulfide exposure, significantly increasing survival time. Azure B produced an even larger increase in blood pressure than MB, while thionine had no effect.

**Conclusion**

MB can counteract NaHS-induced acute cardiogenic shock; this effect is also produced by azure B, but not by thionine, suggesting that the presence of methyl groups is a prerequisite for producing this protective effect.

Full text available from: [http://dx.doi.org/10.3109/15563650.2015.1043440](http://dx.doi.org/10.3109/15563650.2015.1043440)

---

**Estimation of monocrotophos renal elimination half-life in humans**


**Introduction**

Monocrotophos, implicated in about 1/4th of organophosphate poisonings in our centre, is associated with the highest mortality (24%). Yet data on its pharmacokinetics in humans is limited. We estimated the renal elimination half-life of monocrotophos.

**Patients and Methods**

Consecutive patients presenting with monocrotophos overdose over a 2-month period who had normal renal function were recruited. Monocrotophos in plasma and urine were quantitated by high-performance liquid chromatography. Urine was obtained from
catheterised samples at 0–2, 2–4, 4–6, 6–8, 8–12 and 12–24 h. Plasma specimens were collected at the time of admission, and at the midpoint of the urine sample collections at 1, 3, 5, 7, 10, 15 and 21 h. Renal elimination half-life was calculated from the cumulative amount excreted in the urine.

**Results**
The cohort of 5 male patients, aged 35.8 ± 2.94 years, presented with typical organophosphate (cholinergic) toxidrome following intentional monocrotophos overdose. All patients required mechanical ventilation; one patient died. Plasma data was available from 5 patients and urine data from 3 patients. The median renal elimination half-life was 3.3 (range: 1.9–5.0 h). Plasma monocrotophos values, as natural log, fell in a linear fashion up to around 10 h after admission. After the 10-hour period, there was a secondary rise in values in all the 3 patients in whom sampling was continued after 10 h.

**Conclusion**
A renal elimination half-life of 3.3 h for monocrotophos is consistent with a water-soluble compound which is rapidly cleared from the plasma. The secondary rise in plasma monocrotophos values suggests possible re-distribution. Determining the elimination profile of this compound will help develop better strategies for treatment.

Full text available from: [http://dx.doi.org/10.3109/15563650.2015.1054500](http://dx.doi.org/10.3109/15563650.2015.1054500)

**Comparison of abdominal computed tomography with and without oral contrast in diagnosis of body packers and body stuffers**


**Context**
Toxicity due to body packing/pushing/stuffing is a major concern in many countries. Of different imaging techniques, computed tomography (CT) scan is described as the method of choice in detecting body couriers, but there is no study to concomitantly compare with- and without-contrast abdominopelvic CTs to determine the more accurate one for this purpose.

**Objective**
We aimed to evaluate the efficacy of abdominopelvic CT "with" and "without" oral contrast in diagnosis of existence, number, and type of packets in body packers/pushers and stuffers.

**Materials and methods**
In a prospective observational case series, all suspected cases of body packing/stuffing were included and underwent abdominopelvic CT with and without oral contrast in a one-year period. CT scans were reported by three independent attending radiologists blind to the demographic and clinical results and compared to our defined "gold standard" which was surgery or expulsion of packets. The existence and number of packets detected by each method were compared to define the better method of diagnosis.

**Results**
Of 11 suspect body packers/pushers, 10 carried packs. Abdominopelvic CT with and without oral contrast detected six and seven of them, respectively. In 24 body stuffers, CT without oral contrast was more accurate in diagnosis of existence (9/24 vs. 7/24, \( p = 0.003 \)) and number (sensitivity and positive predictive values of 29.2% vs. 37.5% and 100% vs. 100% for CTs with and without oral contrast, respectively, \( p = 0.021 \)).
Discussion and conclusions
There is a remarkable gap between detection of existence and number of packets/baggies reported by the radiologists and the real condition of the patients. A close teamwork between radiologists and toxicologists is needed to manage these problematic cases.

Full text available from: http://dx.doi.org/10.3109/15563650.2015.1054501

Management of body stuffers presenting to the emergency department
Abstract and full text available from: http://dx.doi.org/10.1097/MEJ.0000000000000277

Extracorporeal treatment for salicylate poisoning: systematic review and recommendations from the EXTRIP workgroup
Abstract and full text available from: http://dx.doi.org/10.1016/j.annemergmed.2015.03.031

Soft tissue sarcoma, non-Hodgkin's lymphoma and chronic lymphocytic leukaemia in workers exposed to phenoxy herbicides: extended follow-up of a UK cohort
Abstract and full text available from: http://dx.doi.org/10.1136/oemed-2014-102654

Phenoxy herbicides, soft-tissue sarcoma and non-Hodgkin lymphoma: a systematic review of evidence from cohort and case–control studies
Abstract and full text available from: http://dx.doi.org/10.1093/bmb/ldv008
Extracorporeal membrane oxygenation (ECMO) for severe toxicological exposures: review of the toxicology investigators consortium (ToxIC)


Abstract and full text available from: http://dx.doi.org/10.1007/s13181-015-0486-8

Intracranial haemorrhages associated with venom induced consumption coagulopathy in Australian snakebites (ASP-21)


Abstract and full text available from: http://dx.doi.org/10.1016/j.toxicon.2015.05.012

Hepatotoxicity of green tea: an update


Abstract and full text available from: http://dx.doi.org/10.1007/s00204-015-1521-x

Efficacy and safety of pulse immunosuppressive therapy with glucocorticoid and cyclophosphamide in patients with paraquat poisoning: a meta-analysis


Abstract and full text available from: http://dx.doi.org/10.1016/j.intimp.2015.04.030
TOXICOLOGY

Analytical toxicology

Hložek T, Bursová M, Coufal P, Cabala R.
Identification and quantification of acidosis inducing metabolites in cases of alcohol intoxication by GC-MS for emergency toxicology.

Direct injection LC–MS-MS analysis of opiates, methamphetamine, buprenorphine, methadone and their metabolites in oral fluid from substitution therapy patients.

McIntyre IM, Trochta A, Gary RD, Malamatos M, Lucas JR.
An acute acetyl fentanyl fatality: a case report with postmortem contributions.
J Anal Toxicol 2015; online early: doi: 10.1093/jat/bkv043:

Nahar LK, Andrews R, Paterson S.
Validated method for the quantification of buprenorphine in postmortem blood using solid-phase extraction and two-dimensional gas chromatography–mass spectrometry.
J Anal Toxicol 2015; online early: doi: 10.1093/jat/bkv051:

Oledzka I, Kulinska Z, Prahl A, Baczek T.
Simultaneous separation of eight benzodiazepines in human urine using field-amplified sample stacking micellar electrokinetic chromatography.
J Anal Toxicol 2015; online early: doi: 10.1093/jat/bkv042:

Rohrig TP, Hicks CA.
Brain tissue: a viable postmortem toxicological specimen.

Nicotine metabolite ratio (3-hydroxycotinine/cotinine) in plasma and urine by different analytical methods and laboratories: implications for clinical implementation.
Cancer Epidemiol Biomarkers Prev 2015; online early: doi: 10.1158/1055-9965:

Toshima H, Yoshinaga J, Shiraishi H, Ito Y, Kamijima M, Ueyama J.
Comparison of different urine pretreatments for biological monitoring of pyrethroid insecticides.

Vance CS, Carter CR, Carter RJ, Del Valle MM, Peña JR.
Comparison of immediate and delayed blood alcohol concentration testing.

Vikingsson S,Josefsson M, Grén H.
Identification of AKB-48 and SF-AKB-48 metabolites in authentic human urine samples using human liver microsomes and time of flight mass spectrometry.
J Anal Toxicol 2015; online early: doi: 10.1093/jat/bkv045:

Biomarkers

Beger RD, Bhattacharyya S, Yang X, Gill PS, Schnackenberg LK, Sun J, James LP.
Translational biomarkers of acetaminophen-induced acute liver injury.
Arch Toxicol 2015; online early: doi: 10.1007/s00204-015-1519-4:

Ozone exposure and systemic biomarkers: evaluation of evidence for adverse cardiovascular health impacts.

Li P, Li Y, Zhang J, Yu SF, Tong W, Hu X, Jia G.
Biomarkers for lung epithelium injury in occupational hexavalent chromium-exposed workers.

Min Y-S, Lim H-S, Kim H.
Biomarkers for polycyclic aromatic hydrocarbons and serum liver enzymes.

Nicotine metabolite ratio (3-hydroxycotinine/cotinine) in plasma and urine by different analytical methods and laboratories: implications for clinical implementation.
Cancer Epidemiol Biomarkers Prev 2015; online early: doi: 10.1158/1055-9965:

van Zyl PM, Joubert G.
Acetaldehyde production capacity of salivary microflora in alcoholics during early recovery.
Alcohol 2015; 49: 283-90.

Body packers

Comparison of abdominal computed tomography with and without oral contrast in diagnosis of body packers and body stuffers.

Yamamoto T, Malavasi E, Archer JRH, Dargan PI, Wood DM.
Management of body stuffers presenting to the emergency department.

Carcinogenicity

Axelsson G, Andersson EM, Barregard L.
Lung cancer risk from radon exposure in dwellings in Sweden: how many cases can be prevented if radon levels are lowered?
Cancer Causes Control 2015; 26: 541-7.

Lung cancer risk among bricklayers in a pooled analysis of case-control studies.

Glass DC, Heyworth J, Thomson AK, Peters S, Saunders C, Fritschi L.
Occupational exposure to solvents and risk of breast cancer.  

Jayakody N, Harris EC, Coggon D.  
Phenoxy herbicides, soft-tissue sarcoma and non-Hodgkin lymphoma: a systematic review of evidence from cohort and case–control studies.  

Environ Health Perspect 2015; online early: doi: 10.1289/ehp.1307736:


**Cardiotoxicity**

Akhtar S, Rehman A, Bano S, Haque A.  
Accidental phosgene gas poisoning with fatal myocardial dysfunction in two families.  

Acute cardiomyopathy precipitated by lithium: is there a direct toxic effect on cardiac myocytes? A case report and review of literature.  
Am J Emerg Med 2015; online early: doi: 10.1016/j.ajem.2015.03.023:

Recreational drug overdose-related cardiac arrests: break on through to the other side.  
Resuscitation 2015; 89: 177-81.

Ferreiro SF, Carrera C, Vilarino N, Louzao MC, Santamarina G, Cantalapiedra AG, Botana LM.  
Acute cardiotoxicity evaluation of the marine biotoxins OA, DTX-1 and YTX.  
Toxins (Basel) 2015; 7: 1030-47.

Carbon monoxide poisoning-induced cardiomyopathy from charcoal at a barbecue restaurant: a case report.  

Manini AF, Hoffman RS, Stimmel B, Vlahov D.  
Clinical risk factors for in-hospital adverse cardiovascular events after acute drug overdose.  

Nguemo F, Semmler J, Hescheler J.  
Label-free impedance measurements for profiling drug-induced cardiotoxicity.  

Can empirical hypertonic saline or sodium bicarbonate treatment prevent the development of cardiotoxicity during serious amitriptyline poisoning? Experimental research.  

Thiblin I, Garma H, Garle M, Holmberg L, Byberg L, Michaelsson K, Gedeborg R.  
Anabolic steroids and cardiovascular risk: a national population-based cohort study.  
Drug Alcohol Depend 2015; online early: doi: 10.1016/j.drugalcdep.2015.04.013:

Thurston G, Lippman M.  
Ambient particulate matter air pollution and cardiopulmonary diseases.  
Semin Respir Crit Care Med 2015; 36: 422-32.

Associations between short-term exposure to particulate matter and ultrafine particles and myocardial infarction in Augsburg, Germany.  
Int J Hyg Environ Health 2015; online early: doi: 10.1016/j.ijheh.2015.05.002:

Zhi D, Peng P-F, Sun J-L, Guo F, Zhang R, Zhao X, Li B-X.  
The enhancement of cardiac toxicity by concomitant administration of berberine and macrolides.  

**Dermal toxicity**

Anon.  
Topical minoxidil: accidental poisoning in children.  
Prescrire Int 2015; 24: 97.

Chou T-C, Wang P-C, Wu J-D, Sheu S-C.  
Chromium-induced skin damage among Taiwanese cement workers.  
Toxicol Ind Health 2015; online early: doi: 10.1177/0748233715584699:

Lacouture ME.  
Management of dermatologic toxicities.  

Current skin symptoms of Yusho patients exposed to high levels of 2,3,4,7,8-pentachlorinated dibenzofuran and polychlorinated biphenyls in 1968.  
Chemosphere 2015; 137: 45-51.

Nuyen DV, Chu HC, Nguyen DV, Phan MH, Craig T, Baumgart K, van Nunen S.  
HLA-B^*1502 and carbamazepine-induced severe cutaneous adverse drug reactions in Vietnamese.  
Asia Pac Allergy 2015; 5: 68-77.


Occupational toxic epidermal necrolysis associated with dalbergia cochinchinensis: a retrospective comparative study of eight cases in China.  
Developmental toxicology
Erkin-Cakmak A, Harley KG, Chevrier J, Bradman A, Kogut K, Huen K, Eskenazi B.
In utero and childhood polybrominated diphenyl ether exposures and body mass at age 7 years: the CHAMACOS study.

Heppke DHM, Medina-Gomez C, Hofman A, Rivadeneira F, Jadadoe VWW.
Does fetal smoke exposure affect childhood bone mass?
The Generation R Study.

Developmental toxicity assessment of the new turf herbicide, methiozinol ([5-(2,6-difluorobenzyl)oxymethyl-5-methyl-3-[3-methylthiophen-2-yl]-1,2-isoxazoline]], in rabbits.
Regul Toxicol Pharmacol 2015; online early: doi: 10.1016/j.yrtph.2015.05.007:

Associations of perfluoroalkyl substances (PFAS) with lower birth weight: an evaluation of potential confounding by glomerular filtration rate using a physiologically based pharmacokinetic model (PBPK).
Environ Health Perspect 2015; online early: doi: 10.1289/ehp.1408837:

Vilahur N, Vahter M, Broberg K.
The epigenetic effects of prenatal cadmium exposure.

Driving under the influence of alcohol and other drugs
Controlled cannabis vaporizer administration: blood and plasma cannabinoids with and without alcohol.

Jones AW, Holmgren A, Ahiner J.
High prevalence of previous arrests for illicit drug use and/or impaired driving among drivers killed in motor vehicle crashes in Sweden with amphetamine in blood at autopsy.

Epidemiology
Bagi HRM, Tagizadeh M, Moharamzadeh P, Pouraghaei M, Barhagi AK, Nia KS.
Epidemiology of alcohol poisoning and its outcome in the north-west of Iran.

Brandenburg R, Soliman IW, Meulenbelt J, de Lange DW.
Raising awareness for a low health-related quality of life in intoxicated ICU patients.

Buckley NA, Whyte IM, Dawson AH, Isbister GK.

Burch JB, Everson TM, Seth RK, Wirth MD, Chatterjee S.

Chan TYK.
Incidence and causes of Aconitum alkaloid poisoning in Hong Kong from 1989 to 2010.
Phytother Res 2015; online early: doi: 10.1002/ptr.5370:

Hao Y, Balluz L, Stosnider H, Wen XJ, Li C, Qualters JR.
Ozone, fine particulate matter and chronic lower respiratory disease mortality in the United States.
Am J Respir Crit Care Med 2015; online early: doi: 10.1164/rccm.201410-1852OC:

Hashemian M, Kamalbeik S, Razi PHS, Barari B, Salimi A, Talaei H, Mahdvinejad A.
VAP or poisoning; which one has more effect on patients’ outcomes in toxicological ICU? 

Hegazy RM, Kamel HFM.
Evaluation of the pattern of organophosphate poisoning, two years analysis, 2009-2011 DAMNAM poisoning control centre (PCC), KSA, retrospective cohort community study.

Heinonen JA, Littonius E, Pitkänen M, Rosenberg PH.
Incidence of severe local anaesthetic toxicity and adoption of lipid rescue in Finnish anaesthesia departments in 2011-2013.
Acta Anaesthesiol Scand 2015; online early: doi: 10.1111/aas.12545:

Marteau D, McDonald R, Patel K.
The relative risk of fatal poisoning by methadone or buprenorphine within the wider population of England and Wales.

Mohankumar P, Sivagurunathan C, Umadevi R.
Study on the clinico-epidemiological profile and the outcome of snake bite victims in a rural health centre in Kancheepuram district, Tamil Nadu.


Sorge M, Weidhase L, Bernhard M, Gries A, Petros S.
Anaesth Intensive Care 2015; online early: doi: 10.1007/s00101-015-0030-x:

Zyoud SH, Al-Jabi SW, Sweileh WM, Awang R, Waring WS.
Bibliometric profile of the global scientific research on methanol poisoning (1902–2012).

Forensic toxicology
Andersson M, Björkhem-Bergman L, Beck O.
Possible mechanism for inhibition of morphine formation from 6-acetylmorphine after intake of street heroin.

Busardo FP, Kyriakou C. GHB in biological specimens: which cut-off levels should be taken into consideration in forensic toxicological investigation? Recent Pat Biotechnol 2015; online early: doi: 10.2174/1872083966150504143155:


Oshima T, Yonemitsu K, Sasao A, Ohtani M, Mimasaka S. Detection of carbon monoxide poisoning that occurred before a house fire in three cases. Leg Med 2015; online early: doi: 10.1016/j.legalmed.2015.05.003:


Tattoli L, Krocker K, Sautter J, Tsokos M. Multidrug-related leukocytoclastic vasculitis raising suspicion of sexual homicide—things are not always what they seem.

Int J Legal Med 2015; online early: doi: 10.1007/s00414-015-1202-6:

Genotoxicity


Hepatotoxicity


Liver transplant associated with paracetamol overdose: results from the seven-country SALT study.


Arch Toxicol 2015; online early: doi: 10.1007/s00204-015-1521-x:


Iran Red Crescent Med J 2015; 17: e17973.

Dichlorvos overdose in adults. Where do we stand?

Expert Opin Drug Saf 2015; 14: 815-


Mechanisms of toxicity


Medication errors


Metabolism


Nephrotoxicity


Inhalation toxicity

Draid MM, Ben-Elhaj KM, Ali AM, Schmid KK, Gibbs SG. Lung function impact from work in the pre-revolution Libyan quarry industry.


Neghab M, Derisi FZ, Hassanzadeh J. Respiratory symptoms and lung functional impairments associated with occupational exposure to asphalt fumes.


Int J Hyg Environ Health 2015; online early: doi: 10.1016/j.ijhhe.2015.04.004:


Occupational toxicology


Draad MM, Ben-Elhaj KM, Ali AM, Schmid KK, Gibbs SG.


Jiménez Barbosa IA, Boon MY, Khoo SK. Exposure to organic solvents used in dry cleaning reduces low and high level visual function. PLoS ONE 2015; 10: e0121422.


Ocular toxicity


Azodo CC, Ezeja EB.
Work-related ocular events among Nigerian dental surgeons.

Debellemanniè re G, Flores M, Tumahai P, Meillat M, Garnier MB, Delbosc B, Saleh M.
Assessment of parafoveal cone density in patients taking hydroxychloroquine in the absence of clinically documented retinal toxicity.

Synergism between anticholinergic and oxime treatments against sarin-induced ocular insult in rats.

Kumar A.
Diffuse epithelial keratopathy following a single instillation of topical lignocaine: the damaging drop.
Cutan Ocul Toxicol 2015; online early: doi: 10.3109/15569527.2015.1039126:

Onodera H, Sasaki S, Otake S, Tomohiro M, Shibuya K, Nomura M.
General considerations in ocular toxicity risk assessment from the toxicologists’ viewpoints.

Paediatric toxicology

Anon.
Topical minoxidil: accidental poisoning in children.
Prescrire Int 2015; 24: 97.

Achana FA, Sutton AJ, Kendrick D, Wynn P, Young B, Jones DR, Hubbard SJ, Cooper NJ.
The effectiveness of different interventions to promote poison prevention behaviours in households with children: a network meta-analysis.

Agay-Shay K, Martinez D, Valvi D, Garcia-Esteban R, Basagafia X, Robinson O, Casas M, Sunyer J, Vrijheid M.
Exposure to endocrine-disrupting chemicals during pregnancy and weight at 7 years of age: a multi-pollutant approach.
Environ Health Perspect 2015; online early: doi: 10.1289/ehp.1409049:

Ananda PM, Krishnamurthy S, Srinivasaraghavan R, Mahadevan S, Harichandrakumar KT.
Predictors of myocardial dysfunction in children with Indian red scorpion (Mesobuthus tamulus) sting envenomation.
Indian Pediatr 2015; 52: 297-301.

Basco WT, Jr., Ebeling M, Garner SS, Hulsey TC, Simpson K.
Opioid prescribing and potential overdose errors among children 0 to 36 months old.

Bernardi N, Gentile N, Mañas F, Méndez Á, Gorla N, Aiassa D.
Assessment of the level of damage to the genetic material of children exposed to pesticides in the province of Córdoba.

Arch Dis Child 2015; online early: doi: 10.1136/archdischild-2014-307224:

Carignan CC, Cottingham KL, Jackson BP, Farzan SF, Gandolfi AJ, Punshon T, Folt CL, Karagas MR.
Estimated exposure to arsenic in breastfed and formula-fed infants in a United States cohort.

Plasma exchange parameter selection and safety observation of children with severe ricinism.
Genet Mol Res 2015; 14: 4169-76.

Cohen MC, Morley SR, Coombs RC.
Maternal use of methadone and risk of sudden neonatal death.

Davanzo JR, Rizk E.
Baclofen overdose from possible intrinsic malfunction of SynchroMed II pump.
J Neurosurg Pediatr 2015; online early: doi: 10.3171/2015.1.PEDS14500:

Desai RJ, Huybrechts KF, Hernandez-Diaz S, Mogun H, Patorno E, Kaltenbach K, Kerzner LS, Bateman BT.
Exposure to prescription opioid analgesics in utero and risk of neonatal abstinence syndrome: population-based cohort study.

Etzel RA.
Environmental hazards that matter for children’s health.
Hong Kong J Paediatr 2015; 20: 86-94.

Prenatal exposure to phthalates and neuropsychological development during childhood.
Int J Hyg Environ Health 2015; online early: doi: 10.1016/j.ijheh.2015.05.006:

Hertzog JH, Radwick A.
Acute alcohol intoxication in a child following ingestion of an ethyl-alcohol-based hand sanitizer.
Int J Clin Pharmacol Ther 2015; online early: doi: 10.5414/CP202362:

Chinese pediatrician attitudes and practices regarding child exposure to secondhand smoke (SHS) and clinical efforts against SHS exposure.

Jez E, Lestan D.
Prediction of blood lead levels in children before and after remediation of soil samples in the upper Meza Valley, Slovenia.

Risk factors for elevated blood lead levels among children aged 6–36 months living in Greece.
Child Care Health Dev 2015; online early: doi: 10.1111/cch.12254:


**Polymorphisms**


**Psychiatric aspects**


van Heugten-Van der Kloet D, Giesbrecht T, van Wel J, Bosker WM, Kuypers KPC, Theunissen EL, Spronk DB, Jan Verkes R, Merckelbach H, Ramaekers JG.

Reprotoxicity
Parodi DA, Sjarif J, Chen Y, Allard P.
Reproductive toxicity and meiotic dysfunction following exposure to the pesticides maneb, diazinon and fenarimol. Toxicol Res (Camb) 2015; 4: 645-94.

Pascotto VM, Guerra MT, Franci JAA, de Camargo JLV, Kempinas WG, Franchi CAS.

Risk assessment
Ayedun H, Gbadebo AM, Idowu OA, Arowolo TA.

Bearth A, Cousin M-E, Siegrist M.
"The dose makes the poison": informing consumers about the scientific risk assessment of food additives. Risk Anal 2015; online early: doi:10.1111/rusa.12410:

Bedi JS, Gill JP, Aulakh RS, Kaur P.

Farsalinos KE, Voudris V, Poulas K.

Joseph T, Dubey B, McBean EA.
Human health risk assessment from arsenic exposures in Bangladesh. Sci Total Environ 2015; online early: doi: 10.1016/j.scitotenv.2015.05.053:


Onodera H, Sasaki S, Otake S, Tomohiro M, Shibuya K, Nomura M.


Pivato A, Barausse A, Zecchinato F, Palmeri L, Raga R, Lavagnolo MC, Cossu R.

Sweeney LM, Kester JE, Kirman CR, Gentry RP, Banton MI, Bus JS, Gargas ML.

Tuyet-Hanh TT, Minh NH, Vu-Anh L, Dunne M, Toms L-M, Tenkate T, Thi M-HN, Harden F.

Yang X, Duan J, Wang L, Li W, Guan J, Beecham S, Mulcahy D.

Suicide

Jung HM, Paik JH, Kim JH, Han SB.


Kulkarni RR, Kumar RGH, Kulkarni PR, Kotabagi RB.

Liu Z, Sun M, Zhao H, Zhao M.

Mkoko P.

Shringi KL, Dulaara SC, Aseri RK, Daria U.

Tattoli L, Krocker K, Sautter J, Tsokos M.
Multidrug-related leukocytoclastic vasculitis raising suspicion of sexual homicide—things are not always what they seem. Int J Legal Med 2015; online early: doi: 10.1007/s00414-015-1202-6:

Incidence of severe local anaesthetic toxicity and adoption of lipid rescue in Finnish anaesthesia departments in 2011-2013. 
Acta Anaesthesiol Scand  2015; online early: 
doi: 10.1111/aas.12545:

Herning JM, McMichael MA, Corsi R, Wurlod V. 
Intravenous lipid emulsion therapy in three cases of canine naproxen overdose. 
J Vet Emerg Crit Care  2015; online early: 
doi: 10.1111/jec.12307:

Selenium 
Bjorklund G. 
Selenium as an antidote in the treatment of mercury intoxication. 
BioMetals 2015; online early: doi: 10.1007/s10534-015-9857-5:

Silibinin 
An open-label, randomized and multi-center clinical trial to evaluate the efficacy of silibinin in preventing drug-induced liver injury. 

Sodium bicarbonate 
Can empirical hypertonic saline or sodium bicarbonate treatment prevent the development of cardiotoxicity during serious amitriptyline poisoning? Experimental research. 

Clonidine 
El-Ebiary AA, Gad SA, Wahdan AA, El-Mehallawi IH. 
Clonidine as an adjuvant in the management of acute poisoning by anticholinesterase pesticides. 
Hum Exp Toxicol 2015; online early: doi: 10.1177/0960327115586822:

Creatine 
Folic acid and creatine as therapeutic approaches to lower blood arsenic: a randomized controlled trial. 
Environ Health Perspect  2015; online early: 
doi: 10.1289/ehp.1409396:

Dobutamine 
Abroug F, Ouanes-Besbes L, Elatrous S. 
Should dobutamine be used in severe scorpion envenomation. 

Extracorporeal treatments 
Juurlink DN, Gosselin S, Kielstein JT, Ghannoum M, Lavergne V, Nolin TD, Hoffman RS. 
Extracorporeal treatment for salicylate poisoning: systematic review and recommendations from the EXTRIP workgroup. 
Ann Emerg Med  2015; online early: 
doi: 10.1016/j.annemergmed.2015.03.031:
**Extracorporeal membrane oxygenation**

**Haemodialysis**

**Haemoperfusion**

**MARS**

**Plasma exchange**

**Plasmapheresis**

**Folic acid**

**Herbal medicines**

**Hyperbaric oxygen therapy**

**Monoclonal antibodies**
Kirley TL, Norman AB.


**Opioid maintenance therapy**


**Buprenorphine**


**Methadone**

**Naloxone**
Coe MA, Walsh SL. Distribution of naloxone for overdose prevention to chronic pain patients. Prev Med 2015; online early: doi: 10.1016/j.ypmed.2015.05.016:

Naltrexone
Brewer KL, Tran T, Meggs WJ.
Chronic treatment with naltrexone prevents memory retention deficits in rats poisoned with the sarin analog diisopropylfluorophosphate (DFP) and treated with atropine and pralidoxime.

Pamidronate
Sagask E, Savas-Erdeye S, Kesklin M, Cenikica Y, Aycan Z.
The use of pamidronate for acute vitamin D intoxication, clinical experience with three cases.

Penehyclidine hydrochloride
Liang MJ, Zhang S.
Clinical analysis of penehyclidine hydrochloride combined with hemoperfusion in the treatment of acute severe organophosphorus pesticide poisoning.

DRUGS General
Abdelaziz K, Abdelrahim ME.
Identification and categorisation of drug-related problems on admission to an adult intensive care unit.

Basden C.
Medication- and toxin-induced neurologic syndromes.
Prim Care 2015; 42: 259-65.

Arch Dis Child 2015; online early: doi: 10.1136/archdischild-2014-307224:

Buckley NA, Whyte IM, Dawson AH, Isbister GK.

Ferrari A, Baraldi C, Sterrnieri E.
Medication overuse and chronic migraine: a critical review according to clinical pharmacology.
Expert Opin Drug Metab Toxicol 2015; online early: doi: 10.1517/17425255.2015.1042625:

Drug-induced liver injury with HHV-6 reactivation.

Grillo MP.
Detecting reactive drug metabolites for reducing the potential for drug toxicity.
Expert Opin Drug Metab Toxicol 2015; online early: doi: 10.1517/17425255.2015.1048222:

An open-label, randomized and multi-center clinical trial to evaluate the efficacy of silibinin in preventing drug-induced liver injury.

Manini AF, Hoffman RS, Stimmel B, Vlahov D.
Clinical risk factors for in-hospital adverse cardiovascular events after acute drug overdose.

Naiido S, Meyers AM.
Drugs and the kidney.

Nguemo F, Semmler J, Hescheler J.
Label-free impedance measurements for profiling drug-induced cardiotoxicity.

Prakash S, Patel V, Kakked S, Patel I, Yadav R.
Mild serotonin syndrome: a report of 12 cases.

Singh G, Bhatia D, Harikumar SL.
Chemicals/drugs-hepatotoxins: an overview.

Tattoli L, Krocker K, Sautter J, Tsokos M.
Multidrug-related leukocytoclastic vasculitis raising suspicion of sexual homicide-things are not always what they seem.
Int J Legal Med 2015; online early: doi: 10.1007/s00414-015-1202-6:

Acetaminophen (see paracetamol)

1,3-dimethylamylamine
Van Hout MC, Hearne E.
"Plant or poison": a netnographic study of recreational use of 1,3-dimethylamylamine (DMAA).

Adrenaline
Su Y-J.
A report of acute atrial fibrillation induced by misapplication of epinephrine.

Amphetamines and MDMA (ecstasy)
Haufroid V, Hantsom P.
CYP2D6 genetic polymorphisms and their relevance for poisoning due to amphetamines, opioid analgesics and antidepressants.

Jones AW, Holmgren A, Ahlner J.
High prevalence of previous arrests for illicit drug use and/or impaired driving among drivers killed in motor vehicle crashes in Sweden with amphetamine in blood at autopsy.
Anticoagulants

Anabolic steroids

Anaesthetics

Lignocaine

Propofol

Angiotensin receptor blockers
Valsartan

Antibiotics
Colistin

Vancomycin

Anticoagulants
Cvit Care 2015; 19: 203.

Anticonvulsants

Carbamazepine

Levetiracetam

Phenytoin

Valproate

Trazodone

Antifungal drugs

Voriconazole

Antineoplastics
**Bortezomib**
Thawani SP, Tanji K, De Sousa EA, Weimer LH, Brannagan TH, III.
Bortezomib-associated demyelinating neuropathy: clinical and pathologic features.

**Everolimus**
Badar Q, Masood N, Abbasi AN.
Everolimus induced pneumonitis.

**Ifosfamide**
The neurotoxicity and pharmacokinetics of oral ifosfamide.

**Pazopanib**
Pazopanib and pancreatic toxicity: a case report.
BMC Res Notes 2015; 8: 196.

**Temozolomide**
Grieco A, Tafuri MA, Biolato M, Diletto B, Di Napoli N, Balducci N, Vecchio FM, Miele L.
Severe cholestatic hepatitis due to temozolomide: an adverse drug effect to keep in mind. Case report and review of literature.
Medicine (United States) 2015; 94: e476.

**Antipsychotics**
**Quetiapine**
Fan K-Y, Chen W-Y, Huang M-C.
Quetiapine-associated leucopenia and thrombocytopenia: a case report.

**Antiviral drugs**
**Telaprevir**
Rivero-Juarez A, Camacho A, Rivero A.
Pharmacokinetic and pharmacodynamic evaluation of telaprevir for the treatment of hepatitis C.
Expert Opin Drug Metab Toxicol 2015; online early: doi: 10.1517/17425255.2015.1049532:

**Arsenic trioxide**
Perreault S, Moeller J, Patel K, Eyler R, Pham T, Russell K, Podoltsve N.
Use of arsenic trioxide in a hemodialysis-dependent patient with relapsed acute promyelocytic leukemia.

**Ayahuasca**
Lanaro R, Calemi DBA, Togni LR, Costa JL, Yonamine M, Cazenave SOS, Linardi A.

**Baclofen**
Davanzo JR, Rizk E.
Baclofen overdose from possible intrinsic malfunction of SynchroMed II pump.
J Neurosurg Pediatr 2015; online early: doi: 10.3171/2015.1.PEDS14500:

**Barbiturates**
**Phenobarbital**
Anon.
Kaneuron: an oral solution of phenobarbital with dangerous packaging.
Prescrire Int 2015; 24: 95.

**Benzodiazepines**
Aljarallah S, Al-Hussain F.
Acute fatal posthypoxic leukoencephalopathy following benzodiazepine overdose: a case report and review of the literature.

Oledzka I, Kulinska Z, Prahl A, Baczek T.
Simultaneous separation of eight benzodiazepines in human urine using field-amplified sample stacking micellar electrokinetic chromatography.
J Anal Toxicol 2015; online early: doi: 10.1093/jat/bkv042:

**Lorazepam**
Singh SP, Kaur S, Singh D, Aggarwal A.
Lorazepam: a weapon of offence.

**Berberine**
Zhi D, Feng P-F, Sun J-L, Guo F, Zhang R, Zhao X, Li B-X.
The enhancement of cardiac toxicity by concomitant administration of berberine and macrolides.

**Caffeine**
Cappelletti S, Daria P, Sani G, Aromatario M.
Caffeine: cognitive and physical performance enhancer or psychoactive drug?

Harris JL, Munsell CR.
Energy drinks and adolescents: what's the harm?

**Calciferol**
Sagsak E, Savas-erdove S, Keskin M, Cetinkaya S, Aycan Z.
The use of pamidronate for acute vitamin D intoxication, clinical experience with three cases.

**Calcium channel blockers**
**Amiodipine**
Gérard L, Galloy A-C, Capron A, Hantsen P.
Mixed amiodipine/valsartan overdose treated by the molecular adsorbent recirculating system (MARS™).

**Cannabis (marijuana)**
Bui QM, Simpson S, Nordstrom K.
Psychiatric and medical management of marijuana intoxication in the emergency department.

Crocker CE, Tibbo PG.
Cannabis and the maturing brain: role in psychosis development.

Goldsmith RS, Targino MC, Fanciullo GJ, Martin DW, Hartenbaum NP, White JM, Franklin P.


Panillio LV, Goldberg SR, Justinova Z.

Porath-Waller AJ, Notarandrea R, Vaccarino FJ.

**Cocaine**
Eiden C, Peyrière H, Diot C, Mathieu O.
Kirley TL, Norman AB.

Origer A, Le Bihan E, Baumann M.

Yogarajah M, Pervil-Ulysse M, Sivasambu B.

**Designer drugs**
Asser A, Taba P.

Postmortem distribution of AB-CHMINACA, 5-fluoro-AMB, and diphenidine in body fluids and solid tissues in a fatal poisoning case: usefulness of adipose tissue for detection of the drugs in unchanged forms. Forensic Toxicol 2015; 33: 45-53.

Hieger MA, Rose SR, Cumpston KL, Stromberg PE, Miller S, Wills BK.

**Ethylone**
Lee D, Chonister CW, Hoyer J, Goldberger BA.

**Phenethylamines**
Srisuma S, Bronstein AC, Hoyte CO.
NBOMe and 2C substitute phenethylamine exposures reported to the National Poison Data System. Clin Toxicol 2015; online early: doi: 10.3109/15563650.2015.1054502:

**Piperazines**
Dias-Da-Silva D, Arbo MD, Valente MJ, Bastos ML, Carmo H.

**Synthetic cannabinoids**
Greene W, Kinzie E.

Obafemi AI, Kleinschmidt K, Goto C, Fout D.

Vikingsson S, Josefsson M, Gréen H.

**Synthetic cathinones**
Karch SB.

**Digoxin**
Opie LH.

**Gamma hydroxybutyrate**
Busardo FP, Jones AW.

Busardo FP, Kyriakou C.
GHB in biological specimens: which cut-off levels should be taken into consideration in forensic toxicological investigation? Recent Pat Biotechnol 2015; online early: doi: 10.2174/1872208309666150504143155:

**Herbal medicines, ethnic remedies and dietary supplements**
Boqari DT, Al Faraj S, Arafah M, Aloudah N, Alkhairy KS, Alsuhaiibani A, Alsaad KO.

Brancheau D, Patel B, Zhuhaib M.
Karuppaiai P, Tsay HS.
Therapeutic values, chemical constituents and toxicity of Taiwanese Dysosma pleiantha - A review.

Toxic metal content in 52 frequently prescribed herbal medicines on the Korean market.
Food Addit Contam Part B Survell 2015; online early: doi: 10.1080/19393210.2015.1046405:

Heroin (diacetylmorphine)
Anderson M, Björkhem-Bergman L, Beck O.
Possible mechanism for inhibition of morphine formation from 6-acetylmorphine after intake of street heroin.

Czyz CN, Piehota PG, Strittmatter AM.
Acute onset esotropia after heroin withdrawal.

Lethality of opioid overdose in a community cohort of young heroin users.

Hydroxychloroquine
Debellemainière G, Flores M, Tumahai P, Meillat M, Garnier MB, Delbosc B, Saleh M.
Assessment of parafocal cone density in patients taking hydroxychloroquine in the absence of clinically documented retinal toxicity.

Immunosuppressants
Sirolimus
Ceschi A, Heistermann M, Gros S, Reichert C, Kupferschmidt H, Banner NR, Krähenbühl S, Taegtmeyer AB.
Acute sirolimus overdose: a multicenter case series.

Levamisole
Eiden C, Peyrière H, Diet C, Mathieu O.
Prevalence of levamisole and aminorex in patients tested positive for cocaine in a French University Hospital.
Clin Toxicol 2015; online early: doi: 10.3109/15563650.2015.1054499:

Lithium
Acute cardiomyopathy precipitated by lithium: is there a direct toxic effect on cardiac myocytes? A case report and review of literature.
Am J Emerg Med 2015; online early: doi: 10.1016/j.ajem.2015.03.023:

Methotrexate
Jacob LA, Sreevalsa A, Chinnagiriyappa LK, Dasappa L, Suresh TM, Babu G.
Methotrexate-induced chemical meningitis in patients with acute lymphoblastic leukemia/lymphoma.

Minoxidil
Anon.
Topical minoxidil: accidental poisoning in children.

Prescrire Int 2015; 24: 97.

Naproxen
Herring JM, McMichael MA, Corsi R, Wurlod V.
Intravenous lipid emulsion therapy in three cases of canine naproxen overdose.

Nicotine
Kim S, Goniewicz ML, Yu S, Kim B, Gupta R.
Variations in label information and nicotine levels in electronic cigarette refill liquids in South Korea: regulation challenges.

Nicotine metabolite ratio (3-hydroxycotinine/cotinine) in plasma and urine by different analytical methods and laboratories: implications for clinical implementation.
Cancer Epidemiol Biomarkers Prev 2015; online early: doi: 10.1158/1055-9965:

Varlet V, Farsalinos K, Augsburger M, Thomas A, Etter J-F.
Toxicity assessment of refill liquids for electronic cigarettes.

NSAIDs
Sulindac
Vaughn JL, Shah KV, Ghosein MM, Meyer WL, Kirkpatrick RB.
Acute kidney injury, hyperbilirubinemia, and ischemic skin necrosis due to massive sulindac overdose.
Curr Drug Saf 2015; 10: 190-2:

Opioids
Agarin T, Tresco AM, Agarin A, Lesanics D, Decastro C.
Reducing opioid analgesic deaths in America: what health providers can do.

Bascio WT, Jr., Ebeling M, Garner SS, Hulsey TC, Simpson K.
Opioid prescribing and potential overdose errors among children 0 to 36 months old.

Desai RJ, Huybrechts KF, Hernandez-Diaz S, Mogun H, Patorno E, Kaltenbach K, Kerzner LS, Bateman BT.
Exposure to prescription opioid analgesics in utero and risk of neonatal abstinence syndrome: population based cohort study.

Dunn KE, Saulsgiver KA, Miller ME, Nuzzo PA, Sigmon SC.
Characterizing opioid withdrawal during detoxification.

Reducing opioid analgesic deaths in America: what health providers can do.

Eiben E, Ebeling M, Garner SS, Hulsey TC, Simpson K.
Opioid prescribing and potential overdose errors among children 0 to 36 months old.

Varlet V, Farsalinos K, Augsburger M, Thomas A, Etter J-F.
Toxicity assessment of refill liquids for electronic cigarettes.

NSAIDs
Sulindac
Vaughn JL, Shah KV, Ghosein MM, Meyer WL, Kirkpatrick RB.
Acute kidney injury, hyperbilirubinemia, and ischemic skin necrosis due to massive sulindac overdose.
Curr Drug Saf 2015; 10: 190-2:

Opioids
Agarin T, Tresco AM, Agarin A, Lesanics D, Decastro C.
Reducing opioid analgesic deaths in America: what health providers can do.

Bascio WT, Jr., Ebeling M, Garner SS, Hulsey TC, Simpson K.
Opioid prescribing and potential overdose errors among children 0 to 36 months old.

Desai RJ, Huybrechts KF, Hernandez-Diaz S, Mogun H, Patorno E, Kaltenbach K, Kerzner LS, Bateman BT.
Exposure to prescription opioid analgesics in utero and risk of neonatal abstinence syndrome: population based cohort study.

Dunn KE, Saulsgiver KA, Miller ME, Nuzzo PA, Sigmon SC.
Characterizing opioid withdrawal during detoxification.

Reducing opioid analgesic deaths in America: what health providers can do.

Eiben E, Ebeling M, Garner SS, Hulsey TC, Simpson K.
Opioid prescribing and potential overdose errors among children 0 to 36 months old.

Varlet V, Farsalinos K, Augsburger M, Thomas A, Etter J-F.
Toxicity assessment of refill liquids for electronic cigarettes.

NSAIDs
Sulindac
Vaughn JL, Shah KV, Ghosein MM, Meyer WL, Kirkpatrick RB.
Acute kidney injury, hyperbilirubinemia, and ischemic skin necrosis due to massive sulindac overdose.
Curr Drug Saf 2015; 10: 190-2:

Opioids
Agarin T, Tresco AM, Agarin A, Lesanics D, Decastro C.
Reducing opioid analgesic deaths in America: what health providers can do.

Bascio WT, Jr., Ebeling M, Garner SS, Hulsey TC, Simpson K.
Opioid prescribing and potential overdose errors among children 0 to 36 months old.

Desai RJ, Huybrechts KF, Hernandez-Diaz S, Mogun H, Patorno E, Kaltenbach K, Kerzner LS, Bateman BT.
Exposure to prescription opioid analgesics in utero and risk of neonatal abstinence syndrome: population based cohort study.

Dunn KE, Saulsgiver KA, Miller ME, Nuzzo PA, Sigmon SC.
Characterizing opioid withdrawal during detoxification.
Haufrroid V, Hantson P.
CYP2D6 genetic polymorphisms and their relevance for poisoning due to amphetamines, opioid analgesics and antidepressants.

Predictors of opioid-related death during methadone therapy.
J Subst Abuse Treat 2015; online early: doi: 10.1016/j.jsat.2015.04.008:

Direct injection LC–MS–MS analysis of opiates, methamphetamine, buprenorphine, methadone and their metabolites in oral fluid from substitution therapy patients.

Marteau D, McDonald R, Patel K.
The relative risk of fatal poisoning by methadone or buprenorphine within the wider population of England and Wales.

Origer A, Le Bihan E, Baumann M.
A social gradient in fatal opioids and cocaine related overdoses?


White M, Burton R, Darke S, Eastwood B, Knight J, Millar T, Musto V, Marsden J.
Fetal opioid poisoning: a counterfactual model to estimate the preventive effect of treatment for opioid use disorder in England.
Addiction 2015; online early: doi: 10.1111/add.12971:

Defining risk of prescription opioid overdose: pharmacy shopping and overlapping prescriptions among long-term opioid users in Medicaid.

**Buprenorphine**

Nahar LK, Andrews R, Paterson S.
Validated method for the quantification of buprenorphine in postmortem blood using solid-phase extraction and two-dimensional gas chromatography–mass spectrometry.
J Anal Toxicol 2015; online early: doi: 10.1093/jat/bkv051:

Welle-Strand GK, Skurtveit S, Tanum L, Waal H, Bakstad B, Bjarkø L, Ravndal E.

**Fentanyl**

Doris MK, Sandilands EA.
Life-threatening opioid toxicity from a fentanyl patch applied to eczematous skin.
BMJ Case Rep 2015; doi: 10.1136/bcr-2014-208945:

McIntyre IM, Troche A, Gary RD, Malamatos M, Lucas JR.
An acute acetyl fentanyl fatality: a case report with postmortem concentrations.
J Anal Toxicol 2015; online early: doi: 10.1093/jat/bkv043:

Mounteney J, Giraudon I, Denissov G, Griffiths P.
Fentanyls: are we missing the signs? Highly potent and on the rise in Europe.

**Methadone**

Cohen MC, Morley SR, Coombs RC.
Maternal use of methadone and risk of sudden neonatal death.

Effects of hemodialysis on methadone pharmacokinetics and QTc.
Clin Ther 2015; online early: doi: 10.1016/j.clinthera.2015.04.009:

Welle-Strand GK, Skurtveit S, Tanum L, Waal H, Bakstad B, Bjarkø L, Ravndal E.

**Paracetamol (acetaminophen)**

Beger RD, Bhattacharyya S, Yang X, Gill PS, Schnackenberg LK, Sun J, James LP.
Translational biomarkers of acetaminophen-induced acute liver injury.
Arch Toxicol 2015; online early: doi: 10.1007/s00204-015-1519-4:

Liver transplant associated with paracetamol overdose: results from the seven-country SALT study.

Mullins ME, McGovern AJ.
Challenges with AST/ALT ratio in acetaminophen poisoning – the authors reply.

O’Malley GF, Mizrahi F, Giraldo P, O’Malley RN, Rollins D, Wilkins D.
Protein-derived acetaminophen-cysteine can be detected after repeated supratherapeutic ingestion of acetaminophen in the absence of hepatotoxicity.

Psychotropic drugs

Salicylate

SSRIs and SNRIs

Fluoxetine

Steroids

Substance abuse


Tricyclic antidepressants
Amotriltyline

Tryptamines

CHEMICAL INCIDENTS AND POLLUTION
Air pollution


Kristensen LJ. Quantification of atmospheric lead emissions from 70 years of leaded petrol consumption in Australia. Atmos Environ 2015; 111: 195-201.


**Exhaust fumes**


**Chemical incidents**


**Pollution and hazardous waste**


**Water pollution**


CHEMICALS

General

Duntas LH. Chemical contamination and the thyroid. Endocrine 2015; 48: 53-64.


4-methyl-1-cyclohexanemethanol


Acrylamide

Katen AL, Roman SD. The genetic consequences of paternal acrylamide exposure and potential for amelioration.

Mutat Res 2015; 777: 91-100.


Alcohol (ethanol)


Alkali


Dioxins


Disinfectants


Dust


E-cigarettes


Endocrine disrupting chemicals

Exposure to organic solvents used in dry cleaning reduces low and high level visual function. PloS ONE 2015; 10: e0121422.

Ozone

Hao Y, Balluz L, Strosnider H, Wen XJ, Li C, Qualties JR.
Ozone, fine particulate matter and chronic lower respiratory disease mortality in the United States. Am J Respir Crit Care Med 2015; online early; doi: 10.1164/rcrm.201410-18520C:

Associations of ozone and PM2.5 concentrations with Parkinson’s disease among participants in the Agricultural Health Study. J Occup Environ Med 2015; 57: 509-17.

Perchloroethylene
Assessment of exposure to perchloroethylene and its clinical repercussions for 50 dry cleaning employees. J Occup Environ Hyg 2015; online early; doi: 10.1080/15459624.2015.1048346:

Perfluorinated compounds

Associations of perfluoroalkyl substances (PFASs) with lower birth weight: an evaluation of potential confounding by glomerular filtration rate using a physiologically based pharmacokinetic model (PBPK). Environ Health Perspect 2015; online early; doi: 10.1289/ehp.1408837:

Petrol (gasoline)
Sammarco PW, Kolan SJ, Warby RA, Bouldin JL, Subra WA, Porter SA.
Concentrations in human blood of petroleum hydrocarbons associated with the BP/Deepwater Horizon oil spill, Gulf of Mexico. Arch Toxicol 2015; online early; doi: 10.1007/s00204-015-1526-5:

Liquefied petroleum gas
Godani M, Canaveses F, Migliorini S, Del Sette M.

Petroleum gas
Sampson LWJ, van der Schyff N, Cupido C.
The unsuspected killer: liquefied petroleum gas over-exposure in South Africa.

**Phosphine**


**Phthalate esters**


Philippat C, Bennett D, Calafat AM, Picciotto IH. Exposure to select phthalates and phenols through use of personal care products among Californian adults and their children. Environ Res 2015; 140: 369-76.

**Polbrominated diphenyl ether**


**Polychlorinated biphenyls**


**Polychlorinated dibenzofurans**


**Polycyclic aromatic hydrocarbons**


**Polystyrene**


**Polytetrafluoroethylene**

Radon
Axelsson G, Andersson EM, Barregard L.
Lung cancer risk from radon exposure in dwellings in Sweden: how many cases can be prevented if radon levels are lowered?
Cancer Causes Control 2015; 26: 541-7.

Site enhancement oil
Petersen ML, Colville-Ebeling B, Jensen THL, Hougen HP.
Intramuscular injection of "site enhancement oil": forensic considerations.

Smoke
Heppe DHM, Medina-Gomez C, Hofman A, Rivadeneira F, Jaddoe VWV.
Does fetal smoke exposure affect childhood bone mass? The Generation R Study.
Osteoporos Int 2015; 26: 1319-29.

Sodium ferrocyanide
Liu Z, Sun M, Zhao H, Zhao M.
Acute self-induced poisoning with sodium ferrocyanide and methanol treated with plasmapheresis and continuous renal replacement therapy successfully: a case reports.
Medicine 2015; 94: e890.

Solvents
Glass DC, Heyworth J, Thomson AK, Peters S, Saunders C, Fritschi L.
Occupational exposure to solvents and risk of breast cancer.

Surfactants
Hitosugi M, Tsukada C, Yamauchi S, Matsushima K, Furukawa S, Morita S, Nagai T.
An autopsy case of fatal repellent air freshener poisoning.
Leg Med 2015; online early:
doi: 10.1016/j.legalmed.2015.04.004:

Tobacco
Chinese pediatrician attitudes and practices regarding child exposure to secondhand smoke (SHS) and clinical efforts against SHS exposure.

Toluene
Kulkarni RR, Kumar RGH, Kulkarni PR, Kotabagi RB.
Psychological autopsy and necropsy of an usual case of suicide by intravenous toluene.

Trichloramines
Seys SF, Feyen L, Keirsbilck S, Adams E, Dupont LJ, Nemery B.
An outbreak of swimming-pool related respiratory symptoms: an elusive source of trichloramine in a municipal indoor swimming pool.

Triclosan
Mitochondrial toxicity of triclosan on mammalian cells.

Trihalomethane
Burch JB, Everson TM, Seth RK, Wirth MD, Chatterjee S.

Volatile organic compounds
He Q, Yan Y, Zhang Y, Wang Y, Wang Y.
Coke workers’ exposure to volatile organic compounds in northern China: a case study in Shanxi Province.

Wood smoke
Kajbafzadeh M, Brauer M, Karlen B, Carlsten C, Van Eeden S, Allen RW.
The impacts of traffic-related and woodsmoke particulate matter on measures of cardiovascular health: a HEPA filter intervention study.

METALS

General
Afridi HI, Talpur FN, Kazi TG, Kazi N, Arain SS, Shah F.
Estimation of calcium, magnesium, cadmium, and lead in biological samples from paralized quality control and production steel mill workers.

Callan AC, Devine A, Qi L, Ng JC, Hinwood AL.
Investigation of the relationship between low environmental exposure to metals and bone mineral density, bone resorption and renal function.

Farsalinos KE, Voudris V, Poulas K.
Are metals emitted from electronic cigarettes a reason for health concern? A risk-assessment analysis of currently available literature.

George J, Mastro RE, Ram LC, Das TB, Rout TK, Mohan M.
Human exposure risks for metals in soil near a coal-fired power-generating plant.

Gil F, Hernández AF.
Toxicological importance of human biomonitoring of metallic and metalloid elements in different biological samples.

Iwegbue CMA.
Evaluation of metals exposure from some popular brands of underarm cosmetics in Nigeria.
Regul Toxicol Pharmacol 2015; online early: doi: 10.1016/j.yrtph.2015.05.020:

Jallad KN.
Heavy metal exposure from ingesting rice and its related potential hazardous health risks to humans.

Katsnelson BA, Panov VG, Minigalievyea IA, Varaksin AN, Privalova LJ, Slyshkina TV, Grebenkina SV.
Further development of the theory and mathematical description of combined toxicity: an approach to classifying
types of action of three-factorial combinations (a case study of manganese-chromium-nickel subchronic intoxication).
Toxicology 2015; 334: 33-44.

Toxic metal content in 52 frequently prescribed herbal medicines on the Korean market.
Food Addit Contam Part B Surveill 2015; online early: doi: 10.1080/19393210.2015.1046405:

Simultaneous exposure to heavy metals among residents in the industrial complex: Korean National Cohort Study.

Concentration of lead, mercury, cadmium, aluminum, arsenic and manganese in umbilical cord blood of Jamaican newborns.

The effects of heavy metals and their interactions with polycyclic aromatic hydrocarbons on the oxidative stress among coke-oven workers.

Yang X, Duan J, Wang L, Li W, Guan J, Beecham S, Mulcahy D.
Heavy metal pollution and health risk assessment in the Wei River in China.

Arsenic
Carignan CC, Cottingham KL, Jackson BP, Farzan SF, Gandolfi AJ, Punshon T, Folt CL, Karagas MR.
Estimated exposure to arsenic in breastfed and formula-fed infants in a United States cohort.

A concurrent exposure to arsenic and fluoride from drinking water in Chihuahua, Mexico.

Hu Y, Zhang A, Yao M, Tang X, Huang X.
Expression of thioredoxin reductase 1 in liver and peripheral blood of human and rats exposed to airborne arsenic through coal-burning.

Joseph T, Dubey B, McBean EA.
A critical review of arsenic exposures for Bangladeshi adults.
Sci Total Environ 2015; online early: doi: 10.1016/j.scitotenv.2015.05.035:

Joseph T, Dubey B, McBean EA.
Human health risk assessment from arsenic exposures in Bangladesh.
Sci Total Environ 2015; online early: doi: 10.1016/j.scitotenv.2015.05.053:

Evaluation of an elementary school-based educational intervention for reducing arsenic exposure in Bangladesh.
Environ Health Perspect 2015; online early: doi: 10.1289/ehp.1409462:

Influence of low level arsenic exposure through drinking water on human peripheral blood cells.

Human electrocardiogram changes caused by exposure to arsenic through drinking water.

Pregnant women in Timis County, Romania are exposed primarily to low-level (<10 µg/l) arsenic through residential drinking water consumption.

Folic acid and creatine as therapeutic approaches to lower blood arsenic: a randomized controlled trial.
Environ Health Perspect 2015; online early: doi: 10.1289/ehp.1409396:

Zheng LY, Umans JG, Yeh F, Francesconi KA, Goessler W, Silbergeld EK, Bandeen-Roche K, Guallar E, Howard BV, Weaver VM, Navas-Acien A.
The association of urine arsenic with prevalent and incident chronic kidney disease: evidence from the Strong Heart Study.

Cadmium
Vilahur N, Vahter M, Broberg K.
The epigenetic effects of prenatal cadmium exposure.

Chromium
Callender VD, Cardwell LA, Munhutu MN, Bigby U, Rodney D.
Cutaneous metallosis in patient with knee prosthesis composed of cobalt-chromium molybdenum alloy and titanium-aluminum-vanadium alloy.

Chou T-C, Wang P-C, Wu J-D, Sheu S-C.
Chromium-induced skin damage among Taiwanese cement workers.
Toxicol Ind Health 2015; online early: doi: 10.1177/0748233715584699:

Establishment of a reference value for chromium in the blood for biological monitoring among occupational chromium workers.
Toxicol Ind Health 2015; online early: doi: 10.1177/0748233715580227:

Li P, Li Y, Zhang J, Yu SF, Tong W, Hu X, Jia G.


Cobalt

Copper

Lead


Kristensen LJ. Quantification of atmospheric lead emissions from 70 years of leaded petrol consumption in Australia. Atmos Environ 2015; 111: 195-201.


Lithium

Manganese

Mercury

Dos Santos FA, Cavecci B, Vieira JCS, Franzini VP, Santos A, de Lima Leite A, Buzalaf MAR, Zara LF, de Magalhães Padilha P. A metalloproteomics study on the association of mercury with breast milk in samples from lactating women in the Amazon region of Brazil. Arch Environ Contam Toxicol 2015; online early: doi: 10.1007/s00244-015-0161-8:


Wright DL, Afeiche MC, Ehrlich S, Smith K, Williams PL, Chavarro JE, Batsis M, Toth TL, Hauser R.
Hair mercury concentrations and in vitro fertilization (IVF) outcomes among women from a fertility clinic.

**Thallium**

A case-control study of prenatal thallium exposure and low birth weight in China.
Environ Health Perspect 2015; online early: doi: 10.1289/ehp.1409202:

**Uranium**

Mathews G, Nagalath N, Kumar MBK, Ambika MR.
Radiological and chemical toxicity due to ingestion of uranium through drinking water in the environment of Bangalore, India.

**PESTICIDES**

**General**

Aroonvilairat S, Kespichayawattana W, Somprachum T, Chaisuriya P, Swadune T, Ratanabanangkon K.
Effect of pesticide exposure on immunological, hematological and biochemical parameters in Thai orchid farmers- A cross-sectional study.

Bedi JS, Gill JP, Aulakh RS, Kaur P.
Pesticide residues in bovine milk in Punjab, India: spatial variation and risk assessment to human health.
Arch Environ Contam Toxicol 2015; online early: doi: 10.1007/s00244-015-0163-6:

El-Ebiary AA, Gad SA, Wahdan AA, El-Mehallawi IH.
Clonidine as an adjuvant in the management of acute poisoning by anticholinesterase pesticides.
Hum Exp Toxicol 2015; online early: doi: 10.1177/0960327115586822:

Testing a cumulative and aggregate exposure model using biomonitoring studies and dietary records for Italian vineyard spray operators.
Food Chem Toxicol 2015; 79: 54-64.

Testing a new approach to uncertainty analysis for use in aggregate and cumulative risk assessment of pesticides.
Food Chem Toxicol 2015; 79: 54-64.

Pascotto VM, Guerra MT, Franci JAA, de Camargo JLV, Kempinas WG, Franchi CAS.
Effects of a mixture of pesticides on the adult female reproductive system of Sprague-Dawley, Wistar, and Lewis rats.

Risk factors associated with purchasing pesticide from shops for self-poisoning: a protocol for a population-based case-control study.

**Pesticides and cancer**

Coggan D, Ntani G, Harris EC, Jayakody N, Palmer KT.
Soft tissue sarcoma, non-Hodgkin’s lymphoma and chronic lymphocytic leukaemia in workers exposed to phenoxy herbicides: extended follow-up of a UK cohort.

**Aluminium phosphide**

Akhtar S, Rehman A, Bano S, Haque A.
Accidental phosphine gas poisoning with fatal myocardial dysfunction in two families.

**Carbamate insecticides**

**General**

Li Q, Kobayashi M, Kawada T.
Carbamate pesticide-induced apoptosis in human T lymphocytes.

**Aldicarb**

Michael AP, Mostafa A, Cooper JM, Grice J, Roberts MS, Isbister GK.
The pharmacokinetics and pharmacodynamics of severe aldicarb toxicity after overdose.
Clin Toxicol 2015; online early: doi: 10.3109/15563650.2015.1054504:

**Maneb**

Parodi DA, Sjarif J, Chen Y, Allard P.
Reproductive toxicity and meiotic dysfunction following exposure to the pesticides maneb, diazinon and fenarimol.

**Fipronil**

de Medeiros HCD, Constantin J, Ishii-Iwamoto EL, Mingatto FE.
Effect of fipronil on energy metabolism in the perfused rat liver.
Toxicol Lett 2015; 236: 34-42.

**Fungicides**

**Dithiocarbamates**

Kanemoto-Kataoka Y, Oyama TM, Ishibashi H, Oyama Y.
Dithiocarbamate fungicides increase intracellular Zn2+ levels by increasing influx of Zn2+ in rat thymic lymphocytes.
Chem Biol Interact 2015; online early: doi: 10.1016/j.cbi.2015.05.014:

**Fenarimol**

Parodi DA, Sjarif J, Chen Y, Allard P.
Reproductive toxicity and meiotic dysfunction following exposure to the pesticides maneb, diazinon and fenarimol.

**Herbicides**

Coggan D, Ntani G, Harris EC, Jayakody N, Palmer KT.
Soft tissue sarcoma, non-Hodgkin’s lymphoma and chronic lymphocytic leukaemia in workers exposed to phenoxy herbicides: extended follow-up of a UK cohort.

**Methiozolin**

Developmental toxicity assessment of the new turf herbicide, methiozinol ([5-(2,6-difluorobenzyl)oxy methyl-5-methyl-3-(3-methylthiophen-2-yl)-1,2-oxazoline]), in rabbits. Regul Toxicol Pharmacol 2015; online early: doi: 10.1016/j.yrtph.2015.05.007.

**Phenoxycetate herbicides**

**Methyl bromide**

**Organochlorine pesticides**

**General**


**Chlordecone**

**DDT**
Osunkentan AO, Evans D. Chronic adverse effects of long-term exposure of children to dichlorodiphenyltrichloroethane (DDT) through indoor residual spraying: a systematic review.

**Organophosphorus insecticides**

**General**


**Diazinon**

**Dichlorvos**

**Monocrotophos**

**Paraquat and diquat**

Gong P, Lu Z, Xing J, Wang N, Zhang Y.
Traditional Chinese medicine *Xuebijing* treatment is associated with decreased mortality risk of patients with moderate paraquat poisoning. 

Efficacy and safety of pulse immunosuppressive therapy with glucocorticoid and cyclophosphamide in patients with paraquat poisoning: a meta-analysis. 
Int Immunopharmacol 2015; 27: 1-7.

Paraquat induces cell death through impairing mitochondrial membrane permeability. 

External validation of the prognostic index in acute paraquat poisoning. 

Yao R, Cao Y, He Y, Lau WB, Zeng Z, Liang Z. 
Adiponectin attenuates lung fibroblasts activation and pulmonary fibrosis induced by paraquat. 

Pneumomediastinum predicts early mortality in acute paraquat poisoning. 

**Pyrethroid insecticides**

**General** 

Association of urinary 3-phenoxycarbonyl acid levels with self-reported depression symptoms in a rural elderly population in Asan, South Korea. 

Toshima H, Yoshinaga J, Shiraishi H, Ito Y, Kamijima M, Ueyama J. 
Comparison of different urine pretreatments for biological monitoring of pyrethroid insecticides. 

Wagner-Schuman M, Richardson JR, Auinger P, Braun JM, Lanphear BP, Epstein JN, Yolton K, Froehlich TE. 
Association of pyrethroid pesticide exposure with attention-deficit/hyperactivity disorder in a nationally representative sample of U.S. children. 
Environ Health 2015; 14: 44.

**Transfluthrin** 

Shringi KL, Dulara SC, Aseri RK, Daria U. 
Uncontrolled seizures and unusual rise in leucocyte counts: transfluthrin, liquid mosquito repellent suicidal poisoning. 

**CHEMICAL WARFARE, BIOLOGICAL WARFARE AND RIOT CONTROL AGENTS**

**Biological warfare**

**Ricin** 

Plasma exchange parameter selection and safety observation of children with severe ricinism. 
Genet Mol Res 2015; 14: 4169-76.

**Chemical warfare**

**General** 

López-Maya E, Montoro C, Rodríguez-Albelo LM, Cervantes SDA, Lozano-Pérez AA, Cenís JL, Barea E, Navarro JAR. 
Textile/metal-organic-framework composites as self-detoxifying filters for chemical-warfare agents. 

**Nerve agents** 

Is rivastigmine safe as pretreatment against nerve agents poisoning? A pharmacological, physiological and cognitive assessment in healthy young adult volunteers. 
Neurotoxicology 2015; online early: doi: 10.1016/j.neuro.2015.05.003.

**Sarin** 

Brewer KL, Tran T, Meggs WJ. 
Chronic treatment with naltrexone prevents memory retention deficits in rats poisoned with the sarin analog disopropylfluorophosphate (DFP) and treated with atropine and pralidoxime. 

Synergism between anticholinergic and oxime treatments against sarin-induced ocular insult in rats. 

**Soman** 

A wrench in the works of human acetylcholinesterase: soman induced conformational changes revealed by molecular dynamics simulations. 

α-acetyl-aspartyl-glutamate and inhibition of glutamate carboxypeptidases protects against soman-induced neuropathology. 

**PLANTS**

**Aconitum spp.** 

Chan TYK. 
Incidence and causes of *Aconitum* alkaloid poisoning in Hong Kong from 1989 to 2010.
Phytother Res 2015; online early: doi: 10.1002/ptr.5370

Camellia sinensis (Tea)
Mazzanti G, Di Sotto A, Vitalone A.
Hepatotoxicity of green tea: an update.
Arch Toxicol 2015; online early: doi: 10.1007/s00204-015-1521-x:

Cinnamon
Brancheau D, Patel B, Zughail M.
Do cinnamon supplements cause acute hepatitis?

Dysosma pleiantha
Karuppayai P, Tsay HS.
Therapeutic values, chemical constituents and toxicity of Taiwanese Dysosma pleiantha - A review.

Mushrooms
Rahmani F, Bakhtavat HE, Ghavidel A.
Acute hepatorenal failure in a patient following consumption of mushrooms: a case report.
Iran Red Crescent Med J 2015; 17: e17973.

ANIMALS
General
Hobbs P.
A spur to atavism: placing platypus poison.
J Hist Biol 2015; online early: doi: 10.1007/s10739-015-9409-4:

Fish/marine poisoning
Burrell S, Clion V, Auroy V, Foley B, Turner AD.
Heat treatment and the use of additives to improve the stability of paralytic shellfish poisoning toxins in shellfish tissue reference materials for internal quality control and proficiency testing.

Dysosma pleiantha
Karuppayai P, Tsay HS.
Therapeutic values, chemical constituents and toxicity of Taiwanese Dysosma pleiantha - A review.

Mushrooms
Rahmani F, Bakhtavat HE, Ghavidel A.
Acute hepatorenal failure in a patient following consumption of mushrooms: a case report.
Iran Red Crescent Med J 2015; 17: e17973.

ANIMALS
General
Hobbs P.
A spur to atavism: placing platypus poison.
J Hist Biol 2015; online early: doi: 10.1007/s10739-015-9409-4:

Fish/marine poisoning
Burrell S, Clion V, Auroy V, Foley B, Turner AD.
Heat treatment and the use of additives to improve the stability of paralytic shellfish poisoning toxins in shellfish tissue reference materials for internal quality control and proficiency testing.

Dysosma pleiantha
Karuppayai P, Tsay HS.
Therapeutic values, chemical constituents and toxicity of Taiwanese Dysosma pleiantha - A review.

Mushrooms
Rahmani F, Bakhtavat HE, Ghavidel A.
Acute hepatorenal failure in a patient following consumption of mushrooms: a case report.
Iran Red Crescent Med J 2015; 17: e17973.

ANIMALS
General
Hobbs P.
A spur to atavism: placing platypus poison.
J Hist Biol 2015; online early: doi: 10.1007/s10739-015-9409-4:

Fish/marine poisoning
Burrell S, Clion V, Auroy V, Foley B, Turner AD.
Heat treatment and the use of additives to improve the stability of paralytic shellfish poisoning toxins in shellfish tissue reference materials for internal quality control and proficiency testing.

Dysosma pleiantha
Karuppayai P, Tsay HS.
Therapeutic values, chemical constituents and toxicity of Taiwanese Dysosma pleiantha - A review.

Mushrooms
Rahmani F, Bakhtavat HE, Ghavidel A.
Acute hepatorenal failure in a patient following consumption of mushrooms: a case report.
Iran Red Crescent Med J 2015; 17: e17973.

ANIMALS
General
Hobbs P.
A spur to atavism: placing platypus poison.
J Hist Biol 2015; online early: doi: 10.1007/s10739-015-9409-4:

Fish/marine poisoning
Burrell S, Clion V, Auroy V, Foley B, Turner AD.
Heat treatment and the use of additives to improve the stability of paralytic shellfish poisoning toxins in shellfish tissue reference materials for internal quality control and proficiency testing.

Dysosma pleiantha
Karuppayai P, Tsay HS.
Therapeutic values, chemical constituents and toxicity of Taiwanese Dysosma pleiantha - A review.

Mushrooms
Rahmani F, Bakhtavat HE, Ghavidel A.
Acute hepatorenal failure in a patient following consumption of mushrooms: a case report.
Iran Red Crescent Med J 2015; 17: e17973.

ANIMALS
General
Hobbs P.
A spur to atavism: placing platypus poison.
J Hist Biol 2015; online early: doi: 10.1007/s10739-015-9409-4:

Fish/marine poisoning
Burrell S, Clion V, Auroy V, Foley B, Turner AD.
Heat treatment and the use of additives to improve the stability of paralytic shellfish poisoning toxins in shellfish tissue reference materials for internal quality control and proficiency testing.

Dysosma pleiantha
Karuppayai P, Tsay HS.
Therapeutic values, chemical constituents and toxicity of Taiwanese Dysosma pleiantha - A review.

Mushrooms
Rahmani F, Bakhtavat HE, Ghavidel A.
Acute hepatorenal failure in a patient following consumption of mushrooms: a case report.
Iran Red Crescent Med J 2015; 17: e17973.

ANIMALS
General
Hobbs P.
A spur to atavism: placing platypus poison.
J Hist Biol 2015; online early: doi: 10.1007/s10739-015-9409-4:

Fish/marine poisoning
Burrell S, Clion V, Auroy V, Foley B, Turner AD.
Heat treatment and the use of additives to improve the stability of paralytic shellfish poisoning toxins in shellfish tissue reference materials for internal quality control and proficiency testing.

Dysosma pleiantha
Karuppayai P, Tsay HS.
Therapeutic values, chemical constituents and toxicity of Taiwanese Dysosma pleiantha - A review.

Mushrooms
Rahmani F, Bakhtavat HE, Ghavidel A.
Acute hepatorenal failure in a patient following consumption of mushrooms: a case report.
Iran Red Crescent Med J 2015; 17: e17973.
Influence of thyroid states on the local effects induced by Bothrops envenoming.

**Spiders**
Abraham M, Tilzer L, Hoehn KS, Thornton SL.

**INDEX**

<table>
<thead>
<tr>
<th>Term</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,3-dimethylamylamine</td>
<td>20</td>
</tr>
<tr>
<td>4-methyl-1-cyclohexanemethanol</td>
<td>28</td>
</tr>
<tr>
<td>Acetaminophen</td>
<td>25</td>
</tr>
<tr>
<td>Aconitum spp</td>
<td>38</td>
</tr>
<tr>
<td>Acrylamide</td>
<td>28</td>
</tr>
<tr>
<td>Adrenaline</td>
<td>20</td>
</tr>
<tr>
<td>Air pollution</td>
<td>26</td>
</tr>
<tr>
<td>Alcohol</td>
<td>28</td>
</tr>
<tr>
<td>Aldicarb</td>
<td>36</td>
</tr>
<tr>
<td>Algae</td>
<td>39</td>
</tr>
<tr>
<td>Alkali</td>
<td>28</td>
</tr>
<tr>
<td>Aluminium phosphide</td>
<td>36</td>
</tr>
<tr>
<td>Amphetamines</td>
<td>20</td>
</tr>
<tr>
<td>Amitriptyline</td>
<td>26</td>
</tr>
<tr>
<td>Amodipine</td>
<td>22</td>
</tr>
<tr>
<td>Anabolic steroids</td>
<td>21</td>
</tr>
<tr>
<td>Anaesthetics</td>
<td>21</td>
</tr>
<tr>
<td>Analytical toxicology</td>
<td>8</td>
</tr>
<tr>
<td>Angiotensin receptor blockers</td>
<td>21</td>
</tr>
<tr>
<td>Animals, general</td>
<td>39</td>
</tr>
<tr>
<td>Antibiotics</td>
<td>21</td>
</tr>
<tr>
<td>Anticoagulants</td>
<td>21</td>
</tr>
<tr>
<td>Anticonvulsants</td>
<td>21</td>
</tr>
<tr>
<td>Antidepressants</td>
<td>21</td>
</tr>
<tr>
<td>Antibiotics</td>
<td>18</td>
</tr>
<tr>
<td>Antifungal drugs</td>
<td>21</td>
</tr>
<tr>
<td>Antineoplastics</td>
<td>21</td>
</tr>
<tr>
<td>Antipsychotics</td>
<td>22</td>
</tr>
<tr>
<td>Antiviral drugs</td>
<td>22</td>
</tr>
<tr>
<td>Arsenic</td>
<td>34</td>
</tr>
<tr>
<td>Arsenic trioxide</td>
<td>22</td>
</tr>
<tr>
<td>Asbestos</td>
<td>29</td>
</tr>
<tr>
<td>Asphalt</td>
<td>29</td>
</tr>
<tr>
<td>Ayahuasca</td>
<td>22</td>
</tr>
<tr>
<td>Baclofen</td>
<td>22</td>
</tr>
<tr>
<td>Barbiturates</td>
<td>22</td>
</tr>
<tr>
<td>Barium sulphate</td>
<td>29</td>
</tr>
<tr>
<td>Benzene</td>
<td>29</td>
</tr>
<tr>
<td>Benzodiazepines</td>
<td>22</td>
</tr>
<tr>
<td>Berberine</td>
<td>22</td>
</tr>
<tr>
<td>Biological warfare</td>
<td>38</td>
</tr>
<tr>
<td>Biomarkers</td>
<td>8</td>
</tr>
<tr>
<td>Bisphenol A</td>
<td>29</td>
</tr>
<tr>
<td>Bittern solution</td>
<td>29</td>
</tr>
<tr>
<td>Body packers</td>
<td>8</td>
</tr>
<tr>
<td>Bortezomib</td>
<td>22</td>
</tr>
<tr>
<td>Buprenorphine</td>
<td>19, 25</td>
</tr>
<tr>
<td>Cadmium</td>
<td>34</td>
</tr>
<tr>
<td>Caffeine</td>
<td>22</td>
</tr>
<tr>
<td>Calciferol</td>
<td>22</td>
</tr>
<tr>
<td>Calcium channel blockers</td>
<td>22</td>
</tr>
<tr>
<td>Camellia sinensis</td>
<td>39</td>
</tr>
<tr>
<td>Cannabis</td>
<td>22</td>
</tr>
<tr>
<td>Carbamate insecticides</td>
<td>36</td>
</tr>
<tr>
<td>Carbamazepine</td>
<td>21</td>
</tr>
<tr>
<td>Carbon black</td>
<td>29</td>
</tr>
<tr>
<td>Carbon monoxide</td>
<td>29</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>8</td>
</tr>
<tr>
<td>Cardiotoxicity</td>
<td>9</td>
</tr>
<tr>
<td>Chelating agents</td>
<td>18</td>
</tr>
<tr>
<td>Chemical incidents</td>
<td>27</td>
</tr>
<tr>
<td>Chemical warfare, general</td>
<td>38</td>
</tr>
<tr>
<td>Chemicals, general</td>
<td>28</td>
</tr>
<tr>
<td>Chlordecone</td>
<td>37</td>
</tr>
<tr>
<td>Chromium</td>
<td>34</td>
</tr>
<tr>
<td>Ciguatera</td>
<td>39</td>
</tr>
<tr>
<td>Cinnamon</td>
<td>39</td>
</tr>
<tr>
<td>Clonidine</td>
<td>18</td>
</tr>
<tr>
<td>Cobalt</td>
<td>35</td>
</tr>
<tr>
<td>Cocaine</td>
<td>23</td>
</tr>
<tr>
<td>Colistin</td>
<td>21</td>
</tr>
<tr>
<td>Contrast media</td>
<td>29</td>
</tr>
<tr>
<td>Copper</td>
<td>35</td>
</tr>
<tr>
<td>Cosmetics</td>
<td>29</td>
</tr>
<tr>
<td>Creatine</td>
<td>18</td>
</tr>
<tr>
<td>Crotaлиne</td>
<td>39</td>
</tr>
<tr>
<td>DDT</td>
<td>37</td>
</tr>
<tr>
<td>Dermal toxicity</td>
<td>9</td>
</tr>
<tr>
<td>Designer drugs</td>
<td>23</td>
</tr>
<tr>
<td>Developmental toxicology</td>
<td>10</td>
</tr>
<tr>
<td>Diacetyl morpholine</td>
<td>24</td>
</tr>
<tr>
<td>Diazinon</td>
<td>37</td>
</tr>
<tr>
<td>Dichlorvos</td>
<td>37</td>
</tr>
<tr>
<td>Dietary supplements</td>
<td>23</td>
</tr>
<tr>
<td>Digoxin</td>
<td>23</td>
</tr>
<tr>
<td>Dioxin</td>
<td>29</td>
</tr>
<tr>
<td>Dioxins</td>
<td>30</td>
</tr>
<tr>
<td>Diquat</td>
<td>37</td>
</tr>
<tr>
<td>Disinfectants</td>
<td>30</td>
</tr>
<tr>
<td>Dithiocarbamates</td>
<td>36</td>
</tr>
<tr>
<td>Driving under the influence</td>
<td>10</td>
</tr>
<tr>
<td>Drugs, general</td>
<td>20</td>
</tr>
<tr>
<td>Dust</td>
<td>30</td>
</tr>
<tr>
<td>Dysosma pleiantha</td>
<td>39</td>
</tr>
<tr>
<td>E-cigarettes</td>
<td>30</td>
</tr>
<tr>
<td>Ecstasy</td>
<td>20</td>
</tr>
<tr>
<td>Endocrine disrupting chemicals</td>
<td>30</td>
</tr>
<tr>
<td>Epidemiology</td>
<td>10</td>
</tr>
<tr>
<td>Ethanol</td>
<td>28</td>
</tr>
<tr>
<td>Ethnir remedies</td>
<td>23</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>30</td>
</tr>
<tr>
<td>Ethylene</td>
<td>23</td>
</tr>
<tr>
<td>Everolimus</td>
<td>22</td>
</tr>
<tr>
<td>Exhaust fumes</td>
<td>27</td>
</tr>
<tr>
<td>Extracorporeal membrane oxygenation</td>
<td>19</td>
</tr>
<tr>
<td>Extracorporeal treatments</td>
<td>18</td>
</tr>
<tr>
<td>Fenamol</td>
<td>36</td>
</tr>
<tr>
<td>Fentanyl</td>
<td>25</td>
</tr>
<tr>
<td>Ferric oxide</td>
<td>30</td>
</tr>
<tr>
<td>Fipronil</td>
<td>36</td>
</tr>
<tr>
<td>Fislymarine poisoning</td>
<td>39</td>
</tr>
<tr>
<td>Flame retardants</td>
<td>30</td>
</tr>
<tr>
<td>Fluoride</td>
<td>30</td>
</tr>
<tr>
<td>Fluroxetine</td>
<td>26</td>
</tr>
<tr>
<td>Folic acid</td>
<td>19</td>
</tr>
<tr>
<td>Food additives</td>
<td>30</td>
</tr>
</tbody>
</table>
Current Awareness in Clinical Toxicology is produced monthly for the American Academy of Clinical Toxicology by the Birmingham Unit of the UK National Poisons Information Service, with contributions from the Cardiff, Edinburgh, and Newcastle Units.

The NPIS is commissioned by Public Health England