

# TOXALERT

Newsletter of the MARYLAND POISON CENTER

**Saving  
lives**

**Saving  
dollars**

**SPECIAL EDITION**

The Maryland Poison Center continues to have a dramatic impact on the health and well being of Marylanders. For the first time ever, the MPC received over 60,000 calls!

The MPC was able to successfully manage over 76% of all patients safely and inexpensively at home.

The estimated cost savings of managing these patients at home ranges from \$15,000,000 to over \$30,000,000 per year!

Whenever you have a poisoning question, call the Maryland Poison Center!

## 1998 STATISTICAL REPORT

The Maryland Poison Center (MPC) is a division of the University of Maryland School of Pharmacy and is certified by the American Association of Poison Control Centers as a regional poison center for Maryland. In addition, the MPC serves as consultation center for the Maryland Institute for Emergency Medical Services Systems. This report presents an overview of MPC poisoning data for 1998. Additional information is available upon request. In 1998, the MPC received 60,213 calls. While 38,402 of these calls involved a human exposure, the remaining 21,811 were requests for information where no exposure had occurred.

### GEOGRAPHIC DISTRIBUTION

Area of Maryland	Number	%
Allegany County	580	0.96
Anne Arundel County	7,684	12.76
Baltimore County	11,131	18.49
Baltimore City	10,509	17.45
Calvert County	890	1.48
Caroline County	404	0.67
Carroll County	2,071	3.44
Cecil County	1,162	1.93
Charles County	1,114	1.85
Dorchester County	290	0.48
Frederick County	2,334	3.88
Garrett County	281	0.47
Harford County	3,237	5.38
Howard County	3,386	5.62
Kent County	272	0.45
Montgomery County	3,880	6.44
Prince Georges County	3,198	5.31
Queen Annes County	419	0.70
Saint Marys County	1,002	1.66
Somerset County	177	0.29
Talbot County	485	0.81
Washington County	1,328	2.21
Wicomico County	978	1.62
Worcester County	675	1.12
Maryland Total	57,487	95.47
Other/Unknown	2,726	4.53
<b>Total</b>	<b>60,213</b>	<b>100.00</b>

### AGE

The majority of poison exposures (55%) involve children under the age of six.

Age (Years)	Number	%
<1	2,543	6.62
1	7,148	18.62
2	6,613	17.22
3	2,876	7.49
4	1,318	3.43
5	807	2.10
6-12	2,961	7.71
13-19	2,792	7.27
20-29	2,760	7.19
30-39	3,296	8.58
40-49	2,315	6.03
50-59	1,244	3.24
60-69	658	1.71
>70	833	2.17
Unknown Child	24	0.06
Unknown Adult	147	0.38
Unknown Age	67	0.18
<b>Total</b>	<b>38,402</b>	<b>100.00</b>

### GENDER

Examination of calls for gender shows 48.8% male, 51.1% female and 0.02% unknown.

### SITE OF EXPOSURE

Site of Exposure	Number	%
Residence	36,008	93.77
Workplace	836	2.18
School	701	1.83
Public Area	385	1.00
Health Care Facility	50	0.13
Restaurant	59	0.15
Other	339	0.88
Unknown	24	0.06
<b>Total</b>	<b>38,402</b>	<b>100.00</b>

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**CIRCUMSTANCE**

Acute exposures accounted for 94.6% of the total calls, acute-on-chronic exposures accounted for 4.3% of calls and chronic exposures accounted for 1.1% of calls.

Reason	Number	%
<b>Unintentional</b>		
General	23,622	61.51
Occupational	627	1.63
Environmental	505	1.31
Therapeutic Error	3,256	8.24
Misuse	3,151	8.20
Bite/Sting	728	1.89
Food Poisoning	244	0.63
Unknown	6	0.01
<b>Total</b>	<b>32,050</b>	<b>83.45</b>
<b>Intentional</b>		
Suicidal	4,384	11.41
Misuse	704	1.83
Abuse	436	1.13
Unknown	56	0.14
Total	5,580	14.53
Other		
Contaminant/Tampering	74	0.19
Malicious	114	0.29
<b>Total</b>	<b>188</b>	<b>0.49</b>
<b>Adverse Reaction</b>		
Drug	329	0.85
Food	95	0.24
Other	148	0.38
<b>Total</b>	<b>572</b>	<b>1.49</b>
Unknown	12	0.03
<b>Total</b>	<b>38,402</b>	<b>100.00</b>

**DECONTAMINATION**

Treatment	Number	%*
Ipecac	342	0.89
Charcoal (single)	3,284	8.55
Charcoal (multiple)	168	0.44
Lavage	559	1.46
Cathartic	3,025	7.88
Other emetic	135	0.35
Whole Bowel Irrigation	49	0.13
Dilute/Irrigate/Wash	29,539	76.92
Fresh air	1,447	3.77
Food	551	1.43
<b>Total</b>	<b>39,099</b>	<b>100.00</b>

**TREATMENT LOCATION**

Treatment Location	Number	%
Non-Health Care Facility (HCF)	29,432	76.64
<b>Referred to HCF by MPC</b>		
Treated and Released	1,119	2.91
Admitted for Medical Care	162	0.42
Admitted for Psych Care	145	0.38
Refused Referral	499	1.30
Lost to Follow Up	141	0.37
<b>Total Referred</b>	<b>2,066</b>	<b>5.38</b>

**Patient Already in HCF**

Treated and Released	3,554	9.25
Admitted for Medical Care	1,563	4.07
Admitted for Psych Care	1,134	2.95
Lost to Follow Up	193	0.50
<b>Total Already in HCF</b>	<b>6,444</b>	<b>16.78</b>
Other	433	1.13
Unknown	27	0.0
<b>Total</b>	<b>38,402</b>	<b>100.00</b>

**ROUTE OF EXPOSURE**

Route of Exposure	Number	%*
Oral	32,026	83.40
Ocular	2,562	6.67
Dermal	4,424	11.52
Inhalation	1,613	4.20
Bite/Sting	730	1.90
Parenteral	149	0.39
Aspiration	166	0.43
Other	48	0.12
Unknown	9	0.02
<b>Total</b>	<b>41,727</b>	<b>100.00</b>

**MEDICAL OUTCOME**

The medical outcome is assessed based on the inherent toxicity of the agent and the severity of the clinical manifestations.

Medical Outcome	Number	%
No Effect/Non Toxic	29,060	75.67
Minor Effect	6,090	15.86
Moderate Effect	1,533	3.99
Major Effect	158	0.41
Death	27	0.07
Unrelated Effect	910	2.37
Unknown/Potentially Toxic	624	1.63
<b>Total</b>	<b>38,402</b>	<b>100.00</b>

**AGENTS INVOLVED**

Agents	Number	%*
<b>Drugs</b>		
Analgesics	4,205	10.95
Anesthetics	109	0.28
Anticholinergics	80	0.21
Anticonvulsants	558	1.45
Antidepressants	1,537	4.00
Antihistamines	977	2.54
Antimicrobials	1,064	2.77
Asthma Therapies	298	0.78
Cardiovascular Drugs	911	2.37
Cough & Cold Preparations	1,858	4.84
Diuretics	90	0.23
Electrolytes/Minerals	341	0.89
Eye, Ear, Nose, Throat Preps.	281	0.73
Gastrointestinal Preparations	900	2.34

**With the help of the MPC, over 91% of all people who were poisoned in 1998 developed either no toxicity or only minimal effects from their exposures.**

**By contacting the MPC, we can provide treatment strategies to minimize the likelihood of developing serious toxicity.**

**Whenever you have a poisoning question, call the experts at the Maryland Poison Center!**

(Agents Continued from page 2)

Hormone Products	681	1.77
Muscle Relaxants	281	0.73
Sedative Hypnotics/Antipsychotics	1,668	4.34
Stimulants/Street Drugs	664	1.73
Topicals	1,661	4.32
Veterinary Products	61	0.16
Vitamins	897	2.34
Miscellaneous	377	0.98
Unknown Drugs	151	0.39
<b>Total Drugs</b>	<b>19,650</b>	<b>51.17</b>
<b>Non-Drugs</b>		
Adhesives	298	0.78
Alcohols	1,164	3.03
Arts, Crafts, Writing Products	1,007	2.62
Automotive Products	222	0.58
Batteries	149	0.39
Bites and Envenomations	815	2.12
Building & Construction Products	159	0.41
Chemicals	779	2.03
Cleaning Substances-Household	3,691	9.61
Cleaning substances-Industrial	205	0.53
Cosmetics/Personal Care Products	4,116	10.72
Deodorizers	362	0.94
Dyes	75	0.19
Essential Oils	55	0.14
Fertilizers	188	0.49
Fire Extinguishers	55	0.14
Food Products & Food Poisoning	635	1.65
Foreign Bodies	1,986	5.17
Fumes, Gases, Vapors	535	1.39
Heavy Metals (excluding iron)	95	0.25
Herbicides	78	0.20
Hydrocarbons	926	2.41
Insecticides	668	1.74
Lacrimators	33	0.09
Matches	44	0.11
Mothballs	111	0.29
Mushrooms	125	0.33
Paints, Varnishes, Lacquers	454	1.18
Plants	1,994	5.19
Polishes and Waxes	133	0.35
Rodenticides	250	0.65
Swimming Pools/Aquarium Prod.	133	0.35
Tobacco Products	119	0.31
Misc./Unknown Subst. (non-drug)	226	0.59
<b>Total Non-Drugs</b>	<b>21,208</b>	<b>55.23</b>
<b>Total Agents</b>	<b>40,858</b>	<b>100.00</b>

\* % are based on total number of human exposures

For a complete listing of Research and Presentations, please contact the Maryland Poison Center at 410-706-7604.

## EDUCATIONAL PROGRAMS

The MPC provides public education through presentations, displays, brochures, Mr. Yuk stickers, audiovisual materials, Teacher's Resource Kits and interaction with the media. In 1998, the public education program reached over 6,100 residents of Maryland through 128 public education programs conducted in a variety of settings (early learning/daycare centers, elementary and high schools, libraries, senior centers, family centers, scout troops, and health fairs). The MPC also offers a statewide program of hospital inservices and presentations at grand rounds, paramedic training classes and EMS conferences. Poison center staff conducted 31 presentations in 1998. Toxalert, a newsletter for health professionals, offers current toxicity and treatment information on a variety of topics as well as the MPC's annual report. The MPC also acts as a training site for pharmacy, nursing and paramedic students, emergency medicine, family practice and pediatric residents and fellows, and pharmacy residents.

## PUBLICATIONS/PRESENTATIONS

Anderson BD, Shepherd JG, Klein-Schwartz W. Outcome of acetaminophen overdose (letter). *J Pediatrics* 1998; 132:1080.

Litovitz T, Klein-Schwartz W, Dyer K, Shannon M, Lee S, Powers M. 1997 Annual Report of the American Association of Poison Control Centers Toxic Exposure Surveillance System. *Am J Emerg Med* 1998; 16:443-497.

Shepherd JG, Grover J, Klein-Schwartz W. Prolonged formation of methemoglobin following nitroethane ingestion. *J Tox Clin Tox* 1998; 36 (6):613-616.

Klein-Schwartz W., Oderda GM. *Clinical Toxicology*, in Herfindal ET, Gourley DR. *Textbook of Therapeutics: Drug and Disease Management*, 7th edition, Williams & Wilkins, Baltimore, In Press.

Shepherd JG, Klein-Schwartz W. Anderson BD. Acute Pediatric Brodifacoum Ingestions. *North American Congress of Clinical Toxicology*, Orlando, FL, September 13, 1998.

Palmer M, Haller C, McKinney P, Everson G, Klein-Schwartz W, et al. A Gap in the Safety Net: A Multi-Center Prospective Study of Herbals and Other Dietary Supplements. *North American Congress of Clinical Toxicology*, Orlando, FL, September 13, 1998.

Education is critical to the success of the MPC. In 1998, our public education team reached day care centers, schools, senior centers, health fairs, girl scout troops, and libraries throughout the state.

In addition to public programs, the MPC provides on-site training on the latest in poisoning and overdose care for pharmacy students, emergency medicine residents and fellows, pediatric residents and fellows and other health professionals.

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ADVISORY BOARD**

The following individuals gave their time and energies to help provide guidance and support to the Maryland Poison Center Advisory Board:

**David Booze**  
**Lamont Corprew**  
**Susan Gilson**  
**Richard Gorman**  
**Lucien Tancil**

**Winston Wong**

**William Byrnes**

**AstraZeneca**  
**WJZ TV 13**  
**MD Safe Kids**  
**Pediatrician**  
**Liberty Medical**  
**Center**  
**Blue Cross Blue**  
**Shield of MD**  
**O'Connor, Piper &**  
**Flynn ERA**

**ACKNOWLEDGEMENTS**

The following organizations deserve special thanks for their continued support of the Maryland Poison Center:

University of Maryland School of Pharmacy  
MD Department of Health and Mental Hygiene  
AstraZeneca  
Nationwide Insurance Co.

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