

## Poisonings

A poison is anything that someone eats, drinks, breaths in, or gets in their eyes or on their skin that can cause illness or death; poisons can be solids, liquids, gases, or aerosols.<sup>1</sup> Poisonings are a significant cause of injuries and deaths in the United States (U.S.); millions of people are poisoned every year.

Poisonings are the third leading cause of unintentional injury deaths as well as suicide deaths in the U.S. (See Appendix 1)

In 2000, poison control centers in the United States reported nearly 2.2 million poison exposures, more than 500,000 people were treated in health care facilities for poison exposure, and 20,230 exposures resulted in death.<sup>2-3</sup> There were 7.3 deaths and 184.0 nonfatal poisonings per 100,000 population caused by poisonings.<sup>2</sup> Most poisoning deaths are caused by pharmaceutical products, alcohol, gases and fumes, household products, and chemicals.<sup>3</sup> Common poisons include: over-the-counter medications, hair relaxer, hair removal products, mouthwash, cigarettes, alcohol, liquid drain openers, toilet bowl cleaners, oven cleaners, antifreeze, windshield washer fluid, lighter fluid, lamp oil, furniture polish, turpentine, paint thinner, kerosene, carbon monoxide, pesticides, wild mushrooms, house plants.

Poisoning may be chronic or acute. Examples of acute poisonings include unintentional ingestions in toddlers and suicide attempts by poisoning in

adolescents and young adults. Examples of chronic poisonings include chronic lead poisoning by children living in old houses and chronic pesticide exposure in children living on farms.

A child is poisoned every 30 minutes in the United States. Children are at significantly greater risk from poisoning death and exposure than adults because children are more likely to ingest potentially harmful chemicals. In 2000, more than 1.1 million unintentional poisonings among children aged 5 years and under were reported to the American Association of Poison Control Centers (AAPCC) Toxic Exposure Surveillance System (TESS)<sup>3</sup> Of all exposures, 52.7% occurred among children younger than 6 years of age.<sup>3</sup> In addition, 26 children aged 12 years and under died from poisoning; 20 of these children were less than 6 years of age. Between 1996 and 1998, poisoning resulted in 1,252,904 years of potential life lost in the U.S.<sup>4</sup>

Among children aged 5 years and under, more than 50 percent of poisoning exposures come from nonpharmaceutical products such as cosmetics, cleaning substances, plants, foreign bodies, toys, pesticides, and art supplies, the rest come from pharmaceuticals.<sup>3</sup> Immediately calling a poison control center may reduce the likelihood of severe poisoning, may decrease the cost of a poisoning incident, and may prevent the need for a hospital emergency department (ED) visit.

Adolescents are at risk not only for unintentional poisonings, but for intentional poisonings as well. Intentional poisonings among the adolescent and young adult populations are especially prominent among females. In 2000, 94% percent of adolescent deaths by poisoning were intentional.<sup>3</sup>

Being in an unsupervised home setting is an important risks factor for poisonings; more than 90% of poison exposures occur at a residence.<sup>3</sup> In addition, abuse of substances such as drugs and alcohol puts one at risk for both intentional and unintentional poisonings e.g. overdose. Other risk factors for poisonings include African American children less than 5 years of age and males less than 5 years of age.<sup>5</sup>

The total annual cost of poisoning-related injury and death exceeds \$7.6 billion among children aged 14 years and under. Children aged 4 years and under account for \$5.1 billion, or two-thirds, of these costs. Medical expenses associated with a poisoning exposure average \$925 per case. The average cost of inpatient hospital treatment for a poisoning exposure is \$8,700.<sup>6</sup>

## References:

1. American Association of Poison Control Centers.  
<http://www.aapcc.org/> (accessed June 25, 2002).
2. National Center for Injury Prevention and Control, Centers for Disease Prevention. “WISQARS™ (Web-based Injury Statistics Query and Reporting System)”. [Online] Available:  
<http://www.cdc.gov/ncipc/wisqars/> (accessed March, 2003).
3. Litovitz TL, Klein-Schwartz W, White S, et al. 2000 annual report of the American Association of Poison Control Centers Toxic Exposure Surveillance System. *American Journal of Emergency Medicine* 19(5):337-347, 2001.
4. NCHS National Vital Statistics System for numbers of deaths, U.S. Bureau of Census for population estimates. Statistics compiled using WISQARS™ produced by the Office of Statistics and Programming, NCIPC, CDC.
5. National Safe Kids Campaign. “Poison: Why kids are at Risk”. [Online] Available:  
[http://www.safekids.org/tier3\\_cd.cfm?content\\_item\\_id=337&folder\\_id=176](http://www.safekids.org/tier3_cd.cfm?content_item_id=337&folder_id=176) (accessed March, 2003).
6. National Center for Injury Prevention and Control. *Injury Fact Book 2001-2002*. Atlanta, GA: Centers for Disease Control and Prevention; 2001.

## Appendix 1

### 1996-1998 Leading Causes of Injury Death in the United States

#### Unintentional Injury

<u>Cause</u>	<u>Deaths</u>	<u>Percent</u>
MV Traffic	127,053	44.10%
Fall	35,745	12.40%
Poisoning	30,474	10.60%
Suffocation	13,325	4.60%
Drowning	12,416	4.30%
Fire/Burn	10,809	3.70%
Other Causes	58,605	20.30%
	288,427	100.00%

#### Intentional Injury

<u>Cause</u>	<u>Deaths</u>	<u>Percent</u>
Firearm	53,156	57.80%
Suffocation	16,469	17.90%
Poisoning	15,280	16.60%
Other Causes	7,108	7.70%
	92,013	100%