

# Unintentional Poisoning

## Overview

Almost three-fourths of fatal poisonings in the United States are unintentional.<sup>1</sup>

Unintentional poisoning occurs when a person taking or giving a substance causes harm without intending to do so. It includes the use of drugs or chemicals for recreational purposes in excessive amounts, such as an “overdose,” as well as the excessive use of drugs or chemicals for non-recreational purposes, such as by a toddler.<sup>1</sup>

- Many items can be poisonous, including household products, chemicals, legal or illegal drugs, snake bites, spider bites, scorpion stings, plants and carbon monoxide. Poisons can enter the body through the eyes, ears, skin, lungs or mouth.<sup>2</sup>
- At least two million unintentional poisoning or poison exposure cases were reported to poison control centers in 2009.<sup>3</sup>
- Every day, close to 2,000 people are treated in emergency departments for unintentional poisoning.<sup>1</sup>
- The odds a person will die from unintentional poisoning increased from 1 in 22,900 in 1999 to 1 in 10,870 in 2006.<sup>5</sup>
- The majority of poison-related costs are among people ages 25-44, an age range that includes much of the workforce.<sup>6</sup>

The most common poisons affecting adults are pain medicines, sedatives, cleaning products, antidepressants, cardiovascular drugs and alcohol. Children are most commonly poisoned by cosmetics/personal

**In 2006, drug overdoses were second only to motor vehicle crashes as the leading cause of injury death in the United States. Drug overdoses account for most poisoning deaths in the U.S.<sup>4</sup>**

care products, cleaning products, pain medicines and foreign bodies, including toys.<sup>3</sup>

## Costs and Impact

- Poisoning injuries account for 6% of all injury-related costs even though they are only 2.5% of all injuries.<sup>6</sup>
- In 2000, poisoning caused \$23.7 billion of productivity loss, equating to more than \$33 billion in 2010 dollars.<sup>6</sup>
- Each nonfatal, hospitalized poisoning episode costs \$2,602 in productivity loss [2010 dollars].<sup>6</sup>
- Each nonfatal, non-hospitalized poisoning episode costs \$728 in productivity loss [2010 dollars].<sup>6</sup>
- In 2006, the estimated total cost in the United States of nonmedical use of prescription opioids was \$53.4 billion, of which \$42 billion (79%) was attributable to lost productivity.<sup>7</sup>



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## Employer Strategies for Prevention

### ON THE JOB

- Incorporate information about the **safe use of chemicals** into trainings at the workplace. Consider distributing flyers that remind employees of the proper ways to store occupational and household chemicals and drugs.
- Take advantage of the [Annual National Poison Prevention Week](#) (the third week in March) to educate your employees on how to prevent poisoning at home and work.
- Ensure that **warnings and instructions** on handling chemicals or other potentially hazardous substances are posted in visible areas and written in a culturally appropriate manner (i.e., pictures and symbols, multiple languages, etc.)
- Dispose of **light bulbs** appropriately. Fluorescent light bulbs contain silica or mercury and should be handled and replaced by professionals. The same goes for energy-efficient compact fluorescent light (CFL) bulbs.<sup>8</sup>
- Provide outdoor workers, especially those who are particularly vulnerable to poisonous plants, with protective gear, first aid topical treatments and respirators (when they're burning plants).<sup>9</sup>
- Improve employee awareness on the availability of **substance abuse treatment** services and substance abuse counseling through employee assistance programs.<sup>4</sup>
- Work with health plans to educate physicians and pharmacists about **closely monitoring patients** who are taking opioid painkillers on a long-term basis. This may include the use of urine drug testing.<sup>4</sup>
- Use **insurance mechanisms** to modify the behavior of patients using dangerous amounts of prescription drugs. A number of states use information about drug use

collected on their Medicaid populations to identify inappropriate use such as multiple prescriptions from different prescribers in short time periods. Talk with your health plan and pharmacy benefit managers about options such as “locking in” such users to a single provider and a single pharmacy to reduce the likelihood of “doctor shopping.”<sup>4</sup>

- Work with your health plans to ensure providers are following **opioid recommendations**:<sup>4</sup>
  - Use opioids only after alternative treatments have failed, and prescribe them at the lowest effective dose.
  - Do not prescribe long-acting or controlled-release opioids for acute pain.
  - Periodically request reports from the state prescription drug monitoring program on any opioids prescribed to their patients by other providers.

### IN THE HOME

Encourage employees to be proactive about practicing safety at home by:

- Following the **directions on the labels** when taking medicines, and reading all warning labels.<sup>10</sup>
- Keeping all medicines in their **original bottles** so that medical personnel can access these labels in the event of an emergency.<sup>10</sup>
- Keeping opioid pain **medications in a safe place** that is only accessible to the person they have been prescribed for and disposing of any unused prescription medications.<sup>10</sup>
- Keeping chemical products in their original containers, and always **reading the label** before using them.<sup>10</sup>
- Posting the **poison control number (1-800-222-1222)** in highly visible locations, such as on or near the home telephones and in cellphones.<sup>10</sup>
- Maintaining a vigilant watch **when children are present**. Never leave children



alone with household products or drugs. If you are using chemical products or taking medicine and you have to leave the room for a moment, take any young children with you.<sup>10</sup>

- Identifying and **removing poisonous plants** from the reach of children and pets.<sup>10</sup>
- Installing a **carbon monoxide detector** in the home; checking the battery every spring and fall when daylight saving time begins and ends.<sup>11</sup>

## Useful Resources

- American Association of Poison Control Centers: [Poison Prevention Tips](#).
- Poison Prevention Council: [Poison Prevention website](#)
- American Academy of Pediatrics: [Poison Prevention Tips](#).
- Centers for Disease Control and Prevention. [Workplace Safety and Health Topics: Industries and Occupations](#).

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## References

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- <sup>2</sup> American Association of Poison Control Centers. *Frequently asked questions*. <http://www.aapcc.org/dnn/PoisoningPrevention/FAQ/tabid/117/Default.aspx>. Accessed April 28, 2010.
- <sup>3</sup> Bronstein A, Cantilena L, Green J, Rumack B. 2009 Annual Report of the American Association of Poison Control Centers' National Poison Data System (NPDS): 27th Annual Report. *Clin Toxicol*. 2010;48:979–1178.
- <sup>4</sup> National Center for Injury Prevention and Control. *Unintentional drug poisoning in the United States*. <http://www.cdc.gov/HomeandRecreationalSafety/pdf/poison-issue-brief.pdf>. Accessed April 22, 2010.
- <sup>5</sup> Harvard Injury Control Research Center. News and Research Reports. 2008.
- <sup>6</sup> Finkelstein E, Corso PS, Miller TR. The incidence and economic burden of injuries in the United States. New York, NY: Oxford University Press; 2006.
- <sup>7</sup> Hansen RN OG, Edelsberg J, Woody GE, Sullivan SD. Economic Costs of Nonmedical Use of Prescription Opioids. *Clin J Pain*. 2011; 27(3):194-202.
- <sup>8</sup> American Association of Poison Control Centers. Caution: Protect yourself from workplace poisons. *Sun Sentinel*. December 2, 2010.
- <sup>9</sup> Centers for Disease Control and Prevention. NIOSH Workplace Safety and Health Topics: Poisonous Plants.
- <sup>10</sup> Centers for Disease Control and Prevention. Tips to prevent poisonings. <http://www.cdc.gov/ncipc/factsheets/poisonprevention.htm>. Accessed January 11, 2011.
- <sup>11</sup> Centers for Disease Control and Prevention. *Carbon monoxide poisoning*. <http://www.cdc.gov/co/guidelines.htm>. Accessed April 28, 2010.



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