Preventing Poisoning in College-Age Youth: Perspectives from the American Association of Poison Control Centers

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• Introductions
• Who gets poisoned? And why?
• Young adults (18-24) and how they fit in
• Common poisons, deadly poisons
• Prevention in this group
• How your poison center can help

Overview
The nation's 57 poison control centers are members of the American Association of Poison Control Centers.

The AAPCC…

- Provides accreditation of U.S. poison control centers.
- Partners with other organizations and federal agencies to promote poison control center services.
- Complements efforts of poison control centers in educational outreach.
- Provides the media, national organizations, and federal agencies access to an extensive network of toxicologists, specializing in a variety of subject matter.

Who is the AAPCC?
1. Provide immediate, free, confidential access to poison experts through the Poison Help® line, 24 hours, 7 days a week, everywhere in the U.S.

2. Promote poison safety and prevention for all ages.

3. Collect data on poison-related exposures and work with other agencies to protect the public.

Poison Control Centers
Poison Specialists assess whether a poisoning is a life-threatening emergency or safely manageable at home.

About 80% of all exposures reported to poison centers can be safely managed at home with poison control center guidance.

For poisonings that do require emergency medical care, poison centers assist with treatment and follow the case until discharge.

When someone calls...
Poison: Any product or substance that can harm someone if used:

- in the wrong way
- by the wrong person
- in the wrong amount

“Poison is in everything, and no thing is without poison. The dosage makes it either a poison or a remedy.”

Paracelsus (1493-1591)
The CDC defines poisonings as:

“Overdoses of illegal drugs and legal drugs taken for nonmedical reasons, poisoning from legal drugs taken in error or at the wrong dose, and poisoning from other substances (e.g., alcohol, pesticides, or carbon monoxide).”

(Accidental deaths are classified under X40-X49 from the International Classification of Diseases, Tenth Revision, and those determined to be suicidal are coded X60-69, X85-90, Y10-19.)

Definition of “Poisoning”
Every day in the U.S. 117 people die from poisoning.

Poisoning is now the #1 cause of injury death in the US, and *unintentional* poisoning is the #1 cause of death for adults 25-64.

Every day 2,277 people are seen in emergency departments for poisonings.

Poison control centers received about 6,600 calls every day in 2010, for a total of 2.4 million calls.

Data from CDC(2009), AAPCC (2011)
Death Rate per 100,000 for Unintentional Poisoning in the U.S. 1999-2010

Trend over time
• 91% of all unintentional poisoning deaths are caused by drugs, predominately prescription drugs.

• Prescription painkillers, particularly opioids, dominate as the cause of death, followed by cocaine and heroin.

• Non-fatal poisonings treated in ERs typically involve prescription or OTC drugs, particularly opioids and benzodiazepines (such as Valium®). These drugs are frequently abused.

• Medications are 2x as likely to cause ED visits in children than household products.

Most deadly poisons
Poison Deaths by Age (2010)
Poison Deaths – Age 18-24
<table>
<thead>
<tr>
<th>Calls to Poison Control</th>
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<tbody>
<tr>
<td><strong>Young Adults 18-24</strong></td>
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<tr>
<td>• Calls more likely to come from hospital (58.3%)</td>
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<tr>
<td>• More likely to be in regard to intentional poisonings (49.6%)</td>
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<tr>
<td>• Most common single cause: Alcohol</td>
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<tr>
<td><strong>Adults 25-54</strong></td>
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<tr>
<td>• Calls frequently from home, no treatment needed (45%)</td>
</tr>
<tr>
<td>• Calls more likely to be in regard to unintentional poisonings (54.1%)</td>
</tr>
<tr>
<td>• Most common single cause: Benzodiazepines</td>
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Calls to Poison Control

- Young Adults 18-24: 4.8 calls per 1,000 pop.
- Adults 25-54: 4.0 calls per 1,000 pop.
Young adults…

- Express less “general awareness” of poison centers than adults 25-44.
- Are more likely than any other age group to look online for help.
- Are more likely to believe call information will be shared with their doctor or law enforcement.
• Establishing adult risk behavior patterns
  • Substance abuse
  • Stress management
• Lacking resources for managing “daily life crises”
  • cleaning
  • cooking
  • taking medication safely

Why Young Adults Matter
January-April 2013

- Young adults, age 18-24
- Miami-Dade County
- 303 calls about poison exposures
- No fatalities noted

Actual Calls to FPIC-Miami (18-24)
Typical case: 23 year-old male. Call from ER about ingestion of approx. 30 Percocet® four hours previously. Patient received antidote, SPIs suggested multiple tests to look for additional exposures.

- SSRIs
- ½ cup lemon-scented bug spray “on ice”
- 4 Tbsp. of salt
- Acetaminophen
- Degreaser

Self-Harm
Medication Side Effects/Mistakes

- Dextromethorphan side effects
- Diphenhydramine OD
- Sudafed® OD
- Migraine meds
- Hyrdoxycut® + Advil®?

Typical Case: 20 year-old male calling because he’s been taking 2 Tylenol® 2x daily for several days for a toothache and now took 2 Excedrin® and 2 Vicodin®, is worried about toxicity. Calculated level (below threshold), and gave signs of toxicity, safety guidance.
Typical Case: 21 year-old female reports ingesting a small amount of Mistolin® cleaner, then inhaling some after she induced vomiting. SPI recommends emergency care due to the aspiration.

- Bleach & vinegar
- Jalapeño in cut/eyes
- Pine-Sol® ingestion
- Brushed teeth with cortisone
- Moldy fruit in book bag (inhalation)
- Swallowed toothpaste

Household Products
Typical Case: Call from hospital. 20 year-old male uses Xanax® habitually and reports seizures at home the day before, taking marijuana then taking unknown number of Xanax®. Is hallucinating and seizing. SPI advise patient is likely experiencing withdrawal, advised supportive treatment.

- “Molly”
- Heroin
- Meth + alcohol
- Xanax® + Klonopin®
- Coricidin® (CCC)
- Morning glory seeds
- Cocaine

Drugs of Abuse
Typical case: 24 year-old male calls about for a spider bite. Cannot visualize the spider, describes self as being “beyond arachnophobic”. SPI recommends basic insect bite/wound care, reassures caller.

- Spider bite on lip
- Caterpillar stings
- Garter snake bite
- Dog bite – rabies?
- Rock fish sting
- Palm frond puncture wound

Outdoor Hazards
• 24 year-old male snake handler bitten by an Egyptian cobra on the forearm. Antivenom transported and administered with detailed assistance from medical director. Patient saved.
• 24 year-old female calling because she ate an “expired pancake”. Is concerned about food poisoning.
• 24 year-old female working on a Western blot who spilled methanol on her gloved hand. Thinking she would go blind, she drank three shots of vodka before calling poison control.

Interesting calls...
Atypical Case: 21 year-old male ingested 5 tabs of Adderall® during the day, then couldn’t sleep and drank 100mg of Benadryl®. Kept overnight for observation, supportive care. Reported by hospital on campus of major university.

Calls About “Amphetamines and Related Compounds”

Adults 25-54 0.87% calls

Young Adults 18-24 1.5% calls

What’s missing?
• Educate students about prescription drug abuse in addition to alcohol and illicit drugs.

• Provide adequate stress management, substance abuse treatment options to students.

• Understand prevalence and trends of medication abuse in your school/community.

• Screen students for suicidal behaviors, depression.

Preventing Poisonings
• Provide access to convenient urgent care for pain and dental emergencies.

• Provide resources for emergency help:
  • Local police/fire-rescue (911)
  • Poison Help®(1-800-222-1222)
  • National Suicide Hotline (1-800-273-8255)
• Substance Abuse Prevention
• Life Skills
• Community Health
• Suicide Prevention
• Wellness Programs
• Pre-med, Nursing, Pharmacy Programs
• Service Projects

Tie-ins to Existing Programs
• University of Miami
  “PhilAdthropy”
• Social media campaign
• 21 e-posters for sharing
• “Stop searching, just call.”

Accessible at:
http://www.aapcc.org/prevention/

“Unquestionable Answers”
AAPCC Resources

• Facebook® page
• Blog
• Alerts
• You Tube videos
• Radio & TV PSAs
• National Poison Prevention Week
• 57 AAPCC-Certified Regional Poison Control Centers in the U.S.

• Every poison control center has educational resources
  • Brochures, magnets
  • Educator(s)
  • Data
  • Experts/speakers
  • Local partners

Your Poison Center
1. Poison control is there for everybody, 24/7, even for questions.
2. Calls to poison control are fast, free, and fully confidential.
3. Program 1-800-222-1222 into every cell phone -- just in case.
4. Substances of abuse (including prescription drugs) are most common cause of death from poisoning in the U.S.
• National Poison Data System, American Association of Poison Control Centers, Alexandria, VA.
• ToxSentry™, Florida Poison Information Center Network, Jacksonville, FL.
• “Poisoning Fact Sheet” Centers for Disease Control and Prevention, http://www.cdc.gov/homeandrecreationalsafety/poisoning/poisoning-factsheet.html
For more information and ideas on how to promote poison safety in your population, contact the poison center serving your area or contact the AAPCC directly via www.aapcc.org.

Thank you!

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