



Poison HOTLINE

1-800-222-1222

January 2015



Did you know

The IPCC still receives 10-20 calls each year regarding substances withdrawn and no longer on the market. The medications propoxyphene and phenylpropanolamine (withdrawn in 2010 and 2006, respectively) were involved in overdoses in 2014. Poisonous household products that had been taken off the market were also involved in poisonings last year. Two examples are Terro Ant Killer, which contains arsenic and was removed in 1989, and lead-based paint (the amount of lead in house paint was restricted in 1970). While these and many other products are no longer available for purchase, homeowners may still have them in their possession, and thus can still be involved in poisonings.

Toxidromes

The December, 2014, issue of *Poison Hotline* covered "Five Tips for Managing the Poisoned Patient." The third tip was to consider toxidromes as a cause of the patient's symptoms. This issue will discuss some common toxidromes.

The word "toxidrome" is a combination of the words "toxic" and "syndrome." Toxidromes are a specific group of signs and symptoms that are caused by certain groups of medications or chemicals. In the same way that a heart attack can present with a specific group of signs and symptoms (chest pain, shortness of breath, EKG changes, elevated cardiac enzymes, etc.), exposure to certain drugs and chemicals can also present with a specific group of signs and symptoms.

The most commonly encountered toxidromes are the: (a) anticholinergic, (b) cholinergic, (c) opioid, (d) sedative-hypnotic, and (e) sympathomimetic (also known as the adrenergic or stimulant) toxidromes. Other toxidromes include serotonin syndrome, neuroleptic malignant syndrome, bradycardia-hypotension, and the toxic alcohols (ethylene glycol, methanol, etc.).

The symptoms of the anticholinergic and sympathomimetic toxidromes are similar. Both have fever, tachycardia, hypertension, mydriasis and mental status changes. The difference is that the anticholinergic patient has dry, red (flushed) skin, constipation and delirium while the sympathomimetic patient has pale, diaphoretic skin, increased GI motility and is typically agitated.

Likewise the opioid and sedative-hypnotic toxidromes are similar. The differences are that the opioid toxidrome has miosis and respiratory depression while the sedative-hypnotic toxidrome patient may have any size pupils and rarely has respiratory depression.

The table on the following page gives a description of the five most common toxidromes. Note the symptoms and causes lists are not all-inclusive of the symptoms and drugs / chemicals associated with each toxidrome.

For specific treatment recommendations for a patient whose symptoms fit a toxidrome, call the IPCC at **800-222-1222**.

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POISON
Help
1-800-222-1222

The logo for Poison Help, featuring the word "POISON" in a bold, sans-serif font above the word "Help" in a larger, bold, sans-serif font. To the right of the word "Help" is a red pill bottle with a white skull and crossbones symbol on it. Below the logo is the phone number "1-800-222-1222".

Post and share this edition of **Poison Hotline** with your colleagues. Send comments or questions to Poison Hotline, 712-234-8775 (fax) or Tammy.Noble@UnityPoint.org. To subscribe or unsubscribe from this distribution list, contact the IPCC education office at 712-279-3717. Read past issues of **Poison Hotline** at www.iowapoisson.org.



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| TOXIDROME | SYMPTOMS | CAUSES |
|---|---|---|
| Sympathomimetic (Adrenergic) (Stimulant) | <ul style="list-style-type: none"> • Agitation, tremors, delirium • Mydriasis • ↑ HR, BP, RR and temp • Diaphoresis • Increased bowel motility • Seizures | <ul style="list-style-type: none"> • Amphetamine, methamphetamine, cocaine • Pseudoephedrine, phenylephrine • Methylphenidate, lisdexamfetamine • Ephedra • Caffeine • “Bath salts” (synthetic cathinones) |
| Anticholinergic | <ul style="list-style-type: none"> • Altered mental status (agitated) • Mydriasis • ↑ HR, BP, RR and temp • Flushed, red skin • Dry mucous membranes • Decreased bowel motility • Urinary retention • Seizures | <ul style="list-style-type: none"> • Antihistamines: Diphenhydramine, etc. • Tricyclic Antidepressants: Amitriptyline, etc. • Phenothiazines: Chlorpromazine, etc. • Antispasmodics: Dicyclomine, oxybutynin, etc. • Skeletal Muscle Relaxants: Cyclobenzaprine, orphenadrine • Plants: Jimsonweed, deadly nightshade, etc. • Atropine, benzotropine, scopolamine |
| Cholinergic | <ul style="list-style-type: none"> • Drooling, Diaphoresis, Diarrhea • Urination • Miosis • Bronchospasm • Bronchorrhea (pulm. edema) • Bradycardia • Emesis • Lacrimation • Seizures, Salivation • Muscle weakness • Respiratory arrest | <ul style="list-style-type: none"> • Nicotine • Pharmaceuticals (General): Neostigmine, physostigmine, pyridostigmine, pilocarpine • Pharmaceuticals (Alzheimer’s Rx): Galantamine, donepezil, tacrine, rivastigmine • Nerve agents: sarin, soman, VX, etc. • Carbamate insecticides: carbaryl, aldicarb, etc. • Organophosphate pesticides: malathion, chlorpyrifos, dichlorvos, etc. |
| Opioid | <ul style="list-style-type: none"> • CNS depression • Miosis • Respiratory depression | <ul style="list-style-type: none"> • Morphine, oxymorphone, hydromorphone, meperidine, methadone, fentanyl, heroin, pentazocine, tramadol, etc. |
| Sedative-Hypnotic | <ul style="list-style-type: none"> • Confusion, delirium, somnolence, stupor, coma • Diplopia, nystagmus • Ataxia • Slurred speech • Potential for respiratory depression or hypotension with either a large or a multiple-substance ingestion | <ul style="list-style-type: none"> • “Z Drugs”: Zolpidem, zaleplon, eczopiclone • Antiepileptic: Gabapentin, valproic acid, etc. • Barbiturates: Phenobarbital, secobarbital, etc. • Benzodiazepines: alprazolam, clonazepam, triazolam, chlordiazepoxide, clonazepam, etc. • Antipsychotics: Chlorpromazine, quetiapine, risperidone, olanzapine, etc. • Ethanol, chloral hydrate, GHB, others |

Note: The lists of causes are not all-inclusive.