



# Poison HOTLINE

1-800-222-1222

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### Did you know .....

The IPCC has seen a recent increase in synthetic cannabinoids exposures. “Synthetic marijuana” products, also known as “fake pot”, are in reality very different from marijuana. Health effects from these chemicals can be life-threatening and can include severe agitation and anxiety, tachycardia, hypertension, vomiting, tremors, seizures, intense hallucinations, psychotic episodes, and suicidal and other harmful thoughts and actions.

To improve state-wide surveillance of incidents involving these synthetic cannabinoids, please call the Iowa Poison Control Center about **all** synthetic cannabinoid exposures in Iowa at **1-800-222-1222**.

## The Cholinergic Toxidrome

A toxidrome is a group of symptoms associated with exposure to a particular class of chemicals or pharmaceuticals. Most of the chemicals and drugs that cause the cholinergic toxidrome inactivate cholinesterase enzymes. This results in the accumulation of acetylcholine and overstimulation at all three types of acetylcholine receptors (the muscarinic, nicotinic, and CNS receptors).

Some cholinergic chemicals include organophosphate and carbamate insecticides (e.g. parathion, diazinon, carbaryl, etc) and military nerve agents (e.g. sarin). Pharmaceuticals capable of causing cholinergic symptoms in overdose include physostigmine, neostigmine, donepezil (Aricept<sup>®</sup>), pilocarpine, bethanechol, rivastigmine (Exelon<sup>®</sup>), galantamine (Razadyne<sup>®</sup>), methacholine and cevimeline (Evoxac<sup>®</sup>).

Cholinergic symptoms that can be divided into two groups: muscarinic symptoms (remembered by the mnemonic “DUMBELS”) and nicotinic symptoms (remembered by the mnemonic “MTWHFS”). The muscarinic effects are frequently emphasized but may not be clinically dramatic due to a counter balance by nicotinic effects. Major causes of mortality are respiratory failure from the bronchorrhea / bronchospasm, and seizures.

MUSCARINIC SYMPTOMS	NICOTINIC SYMPTOMS
<u>DUMBELS</u>	<u>MTWHFS</u>
Diarrhea	Mydriasis
Urination	Tachycardia
Miosis	Weakness
Bronchorrhea / Bradycardia	Hypertension
Emesis	Fasciculations
Lacrimation	Seizures
Sweating	

Treatment starts with decontamination if chemicals are involved. Supportive care, particularly oxygenation and fluid replacement, is important. Atropine treats the muscarinic symptoms. Pralidoxime is used for enzyme reactivation and treating nicotinic symptoms. Benzodiazepines treat seizures and agitation.

For questions regarding these types of exposures and any questions about management please call Iowa Poison Control Center at 1-800-222-1222

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