



# Poison HOTLINE

1-800-222-1222

March 2016



## Did you know .....

Last year, activated charcoal (AC) was recommended by the IPCC in less than 1% of the poison exposure patients.

The challenge for clinicians managing poisoned patients is to promptly identify those who are most at risk of developing serious complications and who might potentially benefit from GI decontamination.

Single-dose activated charcoal (AC) should NOT be administered routinely in the management of poisoned patients. The effectiveness of AC decreases with time and AC is more likely to produce a benefit if administered within one hour of poison ingestion.

**National Poison Prevention Week is March 20-26, 2016.**

## Nicotine

Nicotine is found primarily in tobacco-containing products such as cigarettes, cigars, chewing tobacco, and also in nicotine replacement products including gum, nasal sprays, patches, and electronic cigarettes. It is found in the tobacco plant (*Nicotiana tabacum*) as well as some other plant species. It may also be found in high concentrations in some insecticides.

Nicotine binds to the nicotinic acetylcholine receptors that are found throughout the body, mainly in the autonomic nervous system, brain, and neuromuscular junction. Nicotine poisoning follows a characteristic two phase pattern.

- Phase 1: Initial stimulation of nicotinic receptors in the sympathetic and parasympathetic ganglia and neuromuscular junctions.
- Phase 2: Inhibitory phase in which transmission in the autonomic ganglia and neuromuscular junction are blocked.

The toxic effects of nicotine are dose-dependent. Initial symptoms usually develop within 30-90 minutes of an acute exposure and include nausea, vomiting, salivation, dizziness, restlessness, confusion, diaphoresis, hypertension, tachycardia and tachypnea. Then patients can rapidly progress to more serious symptoms including muscle twitching, weakness, seizures, hypotension, bradycardia, respiratory depression, coma and paralysis. The duration of clinical effects is typically 1-2 hours in minor poisonings and up to 24 hours in severe poisonings. Death is usually a result of respiratory failure and may occur as early as one hour post-ingestion.

There is no specific antidote for nicotine poisoning and treatment is primarily symptomatic and supportive care. Benzodiazepines are usually effective for treating seizures. Hypotension should be treated with IV fluids initially and vasopressors if needed. Atropine can be considered for the treatment of clinically significant cholinergic symptoms (e.g. salivation, bronchorrhea) or bradycardia. Respiratory depression may require intubation and mechanical ventilation. A minimum observation time of 4-6 hours after oral exposures should be considered, although ingestions involving intact nicotine patches may require longer observation periods. For treatment advice concerning nicotine, contact the IPCC at **1-800-222-1222**.

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Certified Specialist in Poison Information*

**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. A red pill bottle with a white skull and crossbones symbol is positioned between the two words. Below the logo is the phone number "1-800-222-1222".

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