



# Poison HOTLINE

Partnership between UnityPoint Health and  
University of Iowa Hospitals and Clinics

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## Did you know .....

Vaporizing alcohol and “smoking” the vapors (inhaling is a more accurate term) is a new method for alcohol consumption. The alcohol is poured into a vaporizing machine or over dry ice and inhaled. The alcohol enters the lungs where it is rapidly absorbed into the bloodstream, causing a more rapid buzz. Users describe an “instant hit”. Repeated inhalation of alcohol may cause respiratory irritation.

A serum alcohol level will indicate the presence of alcohol in the blood; however it cannot show the route of intake. As with other substances of abuse, it is pertinent to ask the patient the route of exposure.

## Strychnine Poisoning

Strychnine is a chemical naturally found in the seeds of the tree *Strychnos nux-vomica*. It is mainly used as a pesticide to control rats, moles, gophers, and coyotes. Commercial baits are pelleted and often dyed red or green. Strychnine has on rare occasions been found to be mixed with street drugs such as LSD, heroin, and cocaine.

Strychnine is a white, odorless, bitter tasting crystalline powder that can be taken by mouth, inhaled or given intravenously. Strychnine is highly toxic and only a small amount is needed to produce severe health effects in people. As little as 30 mg may cause death in an adult.

Strychnine blocks the action of the neurotransmitter glycine which controls how nerve signals are sent to muscles. Glycine is an inhibitory neurotransmitter and works like an “off switch” for muscles. When this “off switch” is not working because it is being blocked by strychnine, muscles throughout the body have severe, painful spasms. While these spasms may look like the patient is having a seizure, it is not a true seizure and there is no post-ictal phase. Repetitive muscle spasms caused by strychnine will lead to fever, muscle break down (rhabdomyolysis), severe metabolic acidosis and respiratory failure. The patient will have a normal level of consciousness at first, but a combination of acidosis, hypoxia and fever can lead to decreased level of consciousness and coma.

Following ingestion of strychnine, symptoms begin within 15 to 60 minutes and the initial symptoms include uneasiness, restlessness, anxiety, muscle twitching and stiffness of the neck. Painful muscle spasms in the face, arms, legs and back then occur, with episodes lasting from 30 seconds to 2 minutes.

Strychnine poisoning is an emergency. Treatment should be aimed at controlling muscle spasms and providing supportive care. Administering activated charcoal is a consideration ONLY if it can be given early and safely. Inducing vomiting is absolutely contraindicated. Muscle spasms can be treated with large doses of benzodiazepines. Occasionally, non-depolarizing neuromuscular blocking agents may be needed to stop muscle spasms. Cooling the patient and monitoring core body temperature is critical. Fluids are given to treat hypovolemia, increase urine output and maintain normal kidney function. Intubation and ventilation may be needed.

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**POISON**  
**Help**  
**1-800-222-1222**

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

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](mailto: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](http://www.iowapoisson.org).