

Nicotine

NICOTINE INGESTION

What is nicotine?

Nicotine is a toxic substance found in the tobacco plant (*Nicotiana tabacum*). The commercial preparation of the plant involves drying the leaves for the production of chewing tobacco, cigars, cigarettes, and snuff. Nicotine is easily isolated from the plant for use in nicotine replacement products (gum, patches, and nasal spray). It is also one of the active ingredients in some pesticides and has uses in research.

How might I be exposed to nicotine?

Anyone who uses tobacco or tobacco replacement products is exposed to nicotine. When used in this way, small amounts of nicotine are absorbed through the lungs, mouth or skin. People purposely use tobacco products because of the perceived effects and the addictive properties of the low amounts of nicotine. Occasionally, however, people are exposed to higher toxic amounts either because of intentional poisoning (for example a suicide attempt) or accidental, such as children eating cigarettes. Nicotine ingestion occurs when any tobacco product or nicotine preparation (chewing tobacco or spit, cigar, cigarette or butt, snuff, gum, patch, or pesticide) is eaten.

How can nicotine affect my health?

Ingestion of nicotine can cause nicotine poisoning. The severity of symptoms and time until symptoms begin depend on the form of the nicotine and the amount ingested. If enough is ingested to cause illness, symptoms usually begin within 30 to 90 minutes. If the nicotine is in liquid or gum form symptoms may appear in 15 to 30 minutes. Symptoms of mild nicotine poisoning include dizziness, nausea or vomiting, stomach pain, weakness and increased drooling. More severe poisoning may result in abnormal blood pressure or heartbeat, slowed or interrupted breathing, general sluggishness, seizures and coma. No long-term effects of nicotine ingestion have been identified. If the dose is large enough, death can result.

How does nicotine affect children?

Infants and children are especially susceptible to nicotine. Symptoms of nicotine poisoning have been seen in children who have eaten one-half piece of nicotine gum, a cigarette, cigarette butt, or bitten into a nicotine patch.

Is there a medical test to show whether I've been exposed to nicotine?

Hospitals can screen the blood or urine for nicotine. Clinical tests are rarely run to confirm nicotine exposure because nicotine is rapidly eliminated by the body and the test results often detect nicotine from smoking or exposure to second hand smoke.

What treatments are available?

If you suspect nicotine ingestion you should contact poison control immediately. There is no antidote for nicotine poisoning. Treatment is aimed at supportive care and monitoring the patient's breathing and vital signs.

Do not discard any product believed to be responsible for causing nicotine poisoning.

If you have a poisoning emergency call: 1-800-222-1222

References

Public Information:

- National Capital Poison Center Bulletin Vol. 2, No. 4-October 1996
<http://www.poison.org/nicotine.htm>
- National Institute of Health
<http://toxnet.nlm.nih.gov/cgi-bin/sis/search/f?./temp/~AAAN1aiV0:1>
- Oklahoma College of Pharmacy
<http://www.oklahomapoison.org/prevention/nicotine.asp>

Where can I get more information?

For more information, contact:
Michigan Poison Control System 1-800-222-1222
Or
The Michigan Department of Community Health,
Division of Environmental and Occupational Epidemiology's
Toxics and Health Hotline 1-800-648-6942