

RIA Reaching Others: DXM (Cough Suppressant) Abuse

A dangerous chemical kick may be no farther away than your medicine cabinet... about 1 in 20 teens have gotten high on dextromethorphan (DXM) – the active ingredient in over 100 over-the-counter (OTC) cold remedies like Robitussin, Coricidin, Vicks 44, and NyQuil, to name just a few.



Therapeutic use of DXM at recommended dosages (typically 15-30mg, 3-4 times a day) has few if any side effects. **Recreational "megadoses"** (250-1500 mg), however, produce a euphoria-like and dissociative "out-of-body" experience.

In 1958, DXM was approved for use as a safe, nonaddictive cough suppressant. The drug's deliberately unpleasant taste, combined with other cough/cold remedy ingredients (e.g., expectorants) that induce vomiting when consumed in large quantities, effectively discouraged widespread recreational abuse... until the 1990s. The invention of the gelcaps and the on-line availability of practical tips for "safe" megadosing may have contributed to the growth of DXM abuse over the past 15 years.

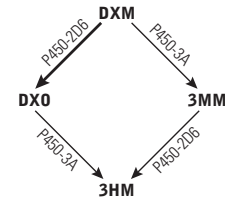
- ⊖ In 2006, about 3.1 million Americans aged 12 to 25 (5.3%) had used cough and cold remedies nonmedically at least once in their lifetime; nearly 1 million (1.7%) had done so in the past year.
- ⊖ After peaking in 2006, DXM abuse has since leveled off and declined slightly, perhaps due to increased public awareness and risk perception.
- ⊖ 33% to 50% of individuals who experiment with DXM go on to abuse it regularly.
- ⊖ Patients aged 12-20 account for 51% of emergency department visits for nonmedical DXM use.
- ⊖ Between 2000 and 2010, there were 44,206 DXM abuse calls to U.S. poison control centers, including 17 fatalities.

Effects of DXM abuse:

Physical Symptoms: increased heart rate, blood pressure, and body temperature, vomiting, slurred speech, loss of motor coordination, and hypoxic brain damage.

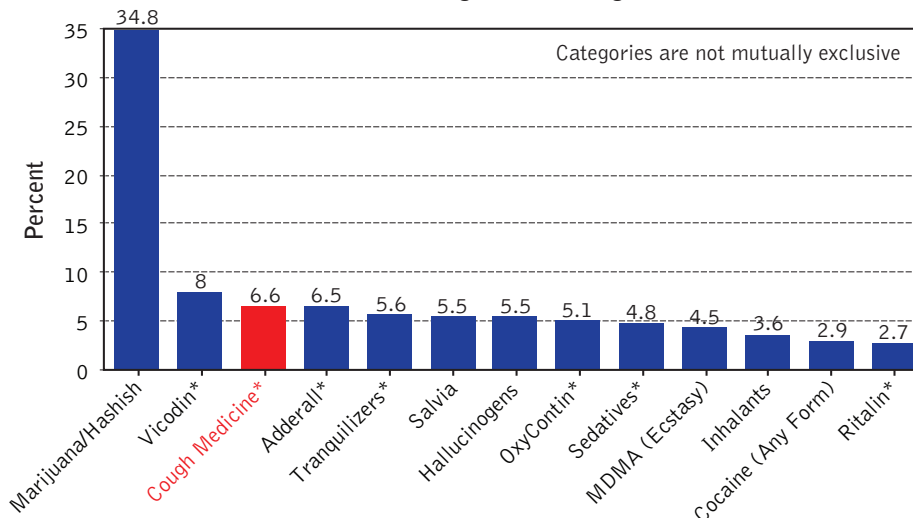
Sensory Symptoms: blurred or double vision, altered time perception, intense hallucinations.

Psychological symptoms: sedation to agitation, mania, delusions.



DXM Metabolism

Prevalence of Past Year Drug Use Among 12th Graders



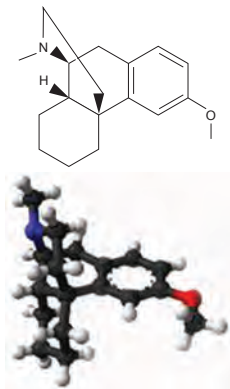
Source: University of Michigan, 2010 Monitoring the Future

Legal Status:

Concerns regarding DXM have led to several educational and legislative efforts to curb its abuse. The FDA published a public warning about the risks of abusing cough medicines in 2005. In 2010, the DEA requested an FDA evaluation of DXM for possible classification as a controlled substance. A New York State Senate bill is now pending (January 2013) that would require behind-the-counter placement of DXM products as well as a ban on sales of DXM to minors.

Complications

The long-term effects of DXM abuse are not clear. Although dependence on DXM is rare, habitual abusers do develop an escalating tolerance and craving for the drug and may experience withdrawal symptoms when discontinuing use. Although the immediate effects of DXM abuse are rarely fatal, the accompanying loss of sensory and motor control also increases the risk of victimization or accidental injury. Serious adverse reactions are most likely to occur when DXM is combined with alcohol, opioids, or other drugs of abuse. DXM-based cold remedies also tend to contain other active ingredients that may be dangerous if misused; for example, excessively large doses of acetaminophen may cause severe liver damage.



Dextromethorphan

Robo-what?!

The technical name for DXM (d-3-methoxy-N-methyl-morphine) is a mouthful. Common slang terms derive from the drug's most popular brand names (Coricidin Cough and Cold = Triple C, Robitussin = robo) or appearance in typical gelcap form (skittles, red devils, red hots, rojo, candy). DXM abuse is also known as robo-tripping, skittling, or dexing.

⊖ What parents can do...

- ▶ Monitor OTC medications in the household – even those that seem “harmless.”
- ▶ Be alert to physiological symptoms and/or behavioral changes that could indicate abuse.
- ▶ Talk to children about potential consequences of DXM abuse and interactions.



⊖ What physicians can do...

- ▶ Screen for DXM abuse in routine medical visits.
- ▶ Be alert to physiological symptoms and/or behavioral changes that could indicate abuse.
- ▶ Provide education on potential consequences of DXM abuse and interactions.

⊖ What pharmacists can do...

- ▶ Put cough/cold remedies at risk for abuse behind the counter to discourage shoplifting.
- ▶ Track sales and monitor inventory of DXM-containing products.
- ▶ Provide education on potential consequences of DXM abuse and interactions.

For More Information:

Stop Medicine Abuse: What Is DXM? <http://stopmedicineabuse.org/how-can-you-prevent-abuse>

DEA Advisory on DXM http://www.deadiversion.usdoj.gov/drug_chem_info/dextro_m/dextro_m.pdf

National Survey Results on Drug Use http://www.monitoringthefuture.org/pubs/monographs/mtf-vol1_2011.pdf

Bulletin on DXM (Dextromethorphan) <http://www.justice.gov/archive/ndic/pubs11/11563/11563p.pdf>

NIDA: Facts on Dextromethorphan http://teens.drugabuse.gov/sites/default/files/peerx/pdf/PEERx_Toolkit_FactSheets_DXM.pdf

DXM: What's the Big Deal? <http://www.dxmstories.org/.samhsa.gov/data/2k8/cough/cough.htm>

The NSUDH Report <http://www.samhsa.gov/data/2k8/cough/cough.htm>

- ❖ **DXM is easy to obtain.** Most households keep cough/cold remedies containing DXM on hand, and they are easily available in grocery stores and pharmacies. Although legislation is under consideration (see “Legal Status”), at the time of this writing there are no legal restrictions on purchase or use by minors.
- ❖ **DXM is cheap.** Cough/cold remedies cost far less than most illicit drugs. If acquired from the family medicine cabinet or via shoplifting, they're even cheaper. And cheap often means accessible.
- ❖ **The risks of DXM are likely to be underestimated.** Even though OTC drugs have a variety of adverse health effects, they may be perceived as “safe” because they are legal and their use in therapeutic doses is almost universally endorsed. Risks may be underestimated not only by users but by parents and physicians as well; only a third of parents discuss cough medicine abuse with their teens.
- ❖ **DXM abuse can be overlooked by parents, physicians, and authorities monitoring for drug use.** As most households routinely use DXM for therapeutic purposes, it may not register on the radar as a drug with potential for abuse. Even if abuse is detected, DXM does not carry the same social stigma as other illicit forms of drug abuse.

