Drug Facts: Over-The-Counter Medicines

- Over-the-counter (OTC) medicines are those that can be sold directly to people without a prescription, such as cough and cold medicines.
- OTC medicines are misused when taken in a way or dose other than directed; when taken for the effects they cause (e.g., to get high or to manage withdrawal symptoms); and when mixed together to create new products.
- A person can overdose on OTC medicines. Call 911 immediately and administer naloxone for suspected overdoses.

What Are Over-The-Counter (OTC) Medicines?

Over-the-counter (OTC) medicines are those that can be sold directly to individuals without a prescription. OTC medicines treat a variety of illnesses such as pain, coughs and colds, acne, diarrhea, constipation, and other medical issues. Some OTC medicines have active ingredients with the potential for misuse at higher-than-recommended dosages.

How Do People Misuse OTC Medicines?

Misuse of an OTC medicine means:

- Taking medicine in a way or dose other than directed on the package
- Taking medicine for the effect it causes - for example, to get high
- Mixing OTC medicines together to create new products

What Are The Most Commonly Misused OTC Medicines?

There are two OTC medicines that are most frequently misused:

- **Dextromethorphan (DXM)** is a cough suppressant found in many OTC cold medicines. The most common sources of misused DXM are extra-strength cough syrup, tablets, and gel capsules. OTC medications that contain DXM can also contain antihistamines and decongestants. People misuse DXM by swallowing it in its original form or by mixing it with soda for flavor, which is called "robo-tripping" or "skittling." Some individuals inject it. Others misuse these medicines in combination with other drugs, such as alcohol and cannabis (marijuana).

- **Loperamide** is an anti-diarrheal that is available in tablet, capsule, or liquid form. People misuse loperamide by swallowing large quantities of the medicine. It is unclear how often this drug is misused.

How Does The Misuse of These OTC Medicines Affect The Brain?

DXM is an opioid that neither reduces pain nor acts on the opioid receptors in the brain. When taken in large doses, DXM causes a depressant effect and sometimes an hallucinogenic effect, similar to PCP and ketamine. Repeatedly seeking to experience that feeling can lead to addiction - a chronic relapsing brain condition characterized by an inability to stop using a drug despite harmful consequences to a person's life and health.

Loperamide is an opioid designed not to enter the brain. However, when taken in large amounts and combined with other substances, it may cause the drug to act in a way similar to other opioids. Some opioids, such as certain prescription pain relievers and heroin, bind to and activate opioid receptors in many areas of the brain, especially those involved in feelings of pain and pleasure. Opioid receptors are also located in the brain stem, which controls important processes, such as blood pressure, arousal, and breathing.

Wheeler | CONNECTICUT Clearinghouse
a program of the Connecticut Center for Prevention, Wellness and Recovery

800.232.4424 (phone)
www.ctclearinghouse.org

A Library and Resource Center on Alcohol, Tobacco, Other Drugs, Mental Health and Wellness

What Are The Health Effects Of The Misuse of These OTC Medicines?

DXM - Short-term effects of DXM misuse can range from mild stimulation to alcohol- or cannabis-like intoxication. At high doses, a person may have hallucinations or feelings of physical distortion, extreme panic, paranoia, anxiety, and aggression. Other health effects from DXM misuse can include:

- Hyperexcitability
- Poor motor control
- Lack of energy
- Stomach pain
- Vision changes
- Slurred speech
- Increased blood pressure
- Sweating

Misuse of DXM products containing acetaminophen can cause liver damage.

Loperamide - In the short-term, loperamide is sometimes misused to lessen cravings and withdrawal symptoms of opioid misuse; however, it can cause euphoria, similar to other opioids. Loperamide misuse can also lead to fainting, stomach pain, constipation, eye changes, and loss of consciousness. It can cause the heart to beat erratically or rapidly, or cause kidney problems. These effects may increase if taken with other medicines that interact with loperamide.

Connecticut Resources

CT Department of Mental Health and Addiction Services
www.ct.gov/DMHAS

24/7 Access Line
1.800.563.4086

2-1-1 of Connecticut
www.211ct.org or call 2-1-1

National Resources

Substance Abuse and Mental Health Services Administration
www.samhsa.gov

National Institute on Drug Abuse (NIDA)
www.nida.nih.gov

Can A Person Overdose On These OTC Medicines?

Yes, an individual can overdose on cold medicines containing DXM or loperamide. An overdose occurs when someone uses enough of the drug to produce a life-threatening reaction or death. As with other opioids, when people overdose on DXM or loperamide, their breathing often slows or stops. This can decrease the amount of oxygen that reaches the brain, a condition called hypoxia. Hypoxia can have short- and long-term effects and effects on the brain and nervous system, including coma and permanent brain damage and death.

How Can These OTC Medicine Overdoses Be Treated?

A person who has overdosed needs immediate medical attention. Call 911. If the individual has stopped breathing or if breathing is weak, begin CPR. DXM overdoses can also be treated with naloxone. Certain medications can be used to treat heart rhythm problems caused by loperamide overdose. If the heart stops, health care providers will perform CPR and other cardiac support therapies.

Can Misuse Of These OTC Medicines Lead To Addiction?

Yes, misuse of DXM or loperamide can lead to addiction. An addiction develops when continued use of the drug causes issues, such as health problems and challenges in meeting responsibilities at work, school, or home. The symptoms of withdrawal from DXM and loperamide have not been well studied.

How Can Someone Get Treatment For Addiction To These OTC Medicines?

There are no medications approved specifically to treat DXM or loperamide addiction. Behavioral therapies, such as cognitive-behavioral therapy and contingency management, can be helpful. Cognitive-behavioral therapy helps modify a person's substance use expectations and behaviors, and effectively manage triggers and stress. Contingency management provides vouchers or small cash rewards for positive behaviors such as staying drug-free.

dmhas