



U-47700 (Pink)

Medically reviewed on Nov 28, 2016 by L. Anderson, PharmD

Common or street names: Pink, Pinky, U4

What is U-47700 or Pink?

U-47700, also known as "Pink", "Pinky", or "U4" on the streets, is a synthetic opioid pain medication developed as a dangerous designer drug. Since 2015, reports have surfaced of multiple deaths due to street use of U-47700 or "Pink". Importation into the U.S. is primarily from clandestine chemical labs in China.

U-47700 has been seized by law officials on the street in powder form and as tablets. Typically it appears as a white or light pinkish, chalky powder. It may be sold in glassine bags stamped with logos imitating heroin, in envelopes and inside knotted corners of plastic bags. In Ohio, authorities seized 500 pills resembling a manufacturer's **oxycodone** immediate-release tablets, but they were confirmed by chemical analysis to contain "Pink". U-47700 has also been identified and sold on the Internet misleadingly as a "research chemical" at roughly \$30 per gram.

Even small doses can be very toxic or even deadly. Labels on the products may state "not for human consumption" or "for research purposes only", probably in an effort to avoid legal detection. Fatalities due to U-47700 in the United States join the growing incidence of drug overdose deaths due to **prescription opioids** and other synthetic designer drugs like "spice" and "bath salts." The public using these street or Internet products can never know exactly what is in them, how much, or the degree of toxicity with use.

Extent of Pink (U-47700) Use and Health Hazards?

The Drug Enforcement Agency (DEA) reported at least 46 deaths linked to use of U-47700 that occurred in 2015 and 2016. According to DEA, no other reports of U-47700 use in the U.S. were found prior to 2015.

Populations who abuse U-47700 seem to be similar to those who abuse heroin, prescription pain opioids, designer opioids, and other narcotic-type drugs. Use of this substance may also occur unknown to the user as it may be found in combination with other drugs of abuse bought on the streets, such as **heroin** or **fentanyl**. It has also been confiscated as a separate product, as well. Some illicit "Pink" products have been sold to mimic bags of heroin or prescription opioid tablets.

Those who abuse U-47700 may be at risk of addiction and substance abuse disorder, overdose and death, similar to abuse of other narcotic substances. Fatalities have been reported in New York, New Hampshire, Ohio, Texas, and Wisconsin, North Carolina, with multiple reports from state and local forensics laboratories.

These illicit substances originate from overseas and the identity, purity, and quantity of substances in any one product purchased from the street may be unknown. A user may be told the product contains one substance, while in reality it could contain any dangerous chemical.

In July 2016, a toxicology **case report** was published in the *Annals of Emergency Medicine* that detailed events in which fentanyl and U-47700 were being **sold misleadingly** as the prescription opioid pain medication **Norco** (acetaminophen and hydrocodone) on the streets of Northern and Central California. In one patient who presented to the emergency room, **naloxone (Narcan)** was administered which reversed respiratory depression and pinpoint pupils. After additional chemical analysis, it was found the "Norco" contained hydrocodone, fentanyl, and U-47700.

Reports indicated that Pink and prescription opioid fentanyl may have been contained in the **drug "cocktail"** that led to the death of pop star legend Prince in April 2016. In Utah, two 13-year old boys died in September 2016 reportedly **due to use of U-47700** purchased from the Internet.

What is the Pharmacology of Pink (U-47700)?

U-47700 ("Pink") is a novel synthetic opioid agonist with selective action at the mu-opioid receptor. The chemical designation is 3,4-dichloro-N-[2-dimethylamino)cyclohenyl]-N-methylbenzamide, and it was originally developed by chemists at Upjohn Pharmaceuticals in the 1970's as a potent pain reliever for use in surgery, cancer, or painful injuries. Although it was never commercially made available, the patent and chemical details remained available.

U-47700 has a similar chemical profile as morphine and other mu-opioid receptor agonists; however, it has been reported by the National Institute of Drug Abuse (NIDA) that Pink is "far more potent than morphine" -- possibly seven to eight times more potent. However, the strength of the product can never be assured, and may be much stronger, as it is a designer drug made in illegal labs.

What is the Legal Status of Pink (U-47700) in the United States?

On November 14, 2016, the **DEA placed U-47700**, as well as its related isomers, esters, ethers, and salts into Schedule I of the Controlled Substances Act due to an imminent hazard to public safety and health. Substances in schedule I have a high potential for abuse, no currently accepted medical use, and a lack of accepted safety for use under medical supervision.

Temporary emergency scheduling of **dangerous illicit drugs** is one tool the DEA uses to help restrict potentially fatal and new street drugs. Scheduling will last at least 24 months, with a possible 12-month extension if the DEA needs more time to determine if the chemical should remain permanently in schedule I. According to the Federal Register, there are no current investigational or approved new drug applications for U-47700 which might hinder its placement in **Schedule I**. DEA's Final Order is available in the Federal Register with details on threats to public safety.

Prior to DEA's scheduling, several states had already outlawed the drug under emergency orders, including Florida, Ohio, Wyoming and Georgia.

What Are Pink (U-47700) Effects and Toxicity?

U-47700 or "Pink" is abused for its opioid and narcotic-like effects, and is swallowed, snorted or injected. It is one of many synthetic designer drugs. Effects as reported by users are similar to the effects of opioids, which might include:

- Euphoria and other psychoactive effects
- Sedation, relaxation, numbness
- Potent analgesia
- Severe, possibly fatal respiration depression
- Pinpoint pupils
- Constipation
- Itching
- Drug tolerance, addiction
- Seizures
- Psychosis
- Fatal overdose

Do Drug Tests Identify U-47700 Use?

Currently, U-47700 is not included in standard workplace drug screens in the U.S.; however, forensics or medical laboratory testing may identify U-47700 through analytical techniques such as mass spectrometry.

Bottom Line

U-47700, known on the streets as "Pink" or "U4", is a dangerous designer drug exported from illegal labs in China to the U.S. Its effects are of a strong opioid analgesic, and have been reported to be 7 to 8 times more potent than morphine. Authorities in many U.S. cities have reported that Pink is sold on the streets or over the Internet, often promoted as a prescription opioid like Norco, or as heroin. In fact, many of these products have contained the potent designer drug Pink, as well as fentanyl. U-47700 is now illegal in all forms, and the DEA has temporarily placed the substance into schedule I of the Controlled Substances Act, pending further review, due to an imminent hazard to public safety and health.

Clusters of overdoses and deaths in U.S. cities were reported in 2015 and 2016 with Pink; some in children. According to one case report, the use of naloxone (Narcan) in an emergency setting reversed the effects of U-47700. Emergency physicians should contact their local poison control center, medical toxicologist or public health department in cases where there is a reasonable suspicion of ingestion of designer drugs to help protect the surrounding community. Special lab analysis may be needed to identify drugs like "Pink".

The public should be aware that drugs obtained on the street, even though they look like an authentic prescription medication, may be fake and deadly. Don't take any prescription drug - legal or otherwise - unless it is written for you by a doctor and is dispensed by a reliable pharmacy.