



LabINFO NEWSLETTER

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This newsletter is provided by the Lorain County Crime/Drug Lab discussing technical and general information dedicated to local agencies within Lorain County. The information has been collected from various sources and journals.

HALLUCINOGENS

Hallucinogens are drugs which alters the user's ability to perceive the world as it really is. They may cause a perceived change in auditory, visual, or other sensory abilities.

Psychedelics have a strong effect on mood by affecting the emotional center. Usually will suppress the memory centers and other higher cerebral functions such as judgment and reasoning.

HALLUCINOGENS:

- LSD (Lysergic Acid Diethylamide)- co-developed from a fungal plant rust called "ergot" in 1938
- Psilocybin (Mushrooms)- about 1% as potent as LSD
- Peyote (Mescaline)- spineless cactus found in limestone soils
- Designer Drugs

NATURAL HALLUCINOGENS:

- Peyote
- Psilocybin/Psilocin
- Morning Glory Seeds-active ingredient is Lysergic Acid Amide which is 1/10 as strong as LSD
- Bufotenine/Cohoba- comes from the secretions of the specific toad glands
- Psychedelic Hallucinogens: MDA, MDMA: loosening of emotional inhibitions

ALCOHOL- "The Poison Drug"

Alcohol is classified as a *depressant drug*. The effects of alcohol on central nervous system (CNS) functioning is proportional to the level of alcohol in the blood and the brain.

Ingested alcohol in the brain depends upon rates of absorption, distribution, and elimination.

RESEARCH

- **Found that cigarette smoking increased the likelihood of relapse among people in recovery from substance use disorder (SUD).**
- **Suggests that helping patients quit and remain abstinent from smoking may improve their chances for sustained recovery from use of other drugs.** Source: [www.drugabuse.gov]



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NERVOUS SYSTEM

Alcohol is a protoplasmic poison (influences cell degeneration):

- kills cells in liver and kidneys
- kills nerve cells 10 times faster
- mental sharpness reduced
- impaired memory
- decline in intellect

Effects of alcohol can be felt in 10 to 20 minutes. The greater the consumption per unit of time, the greater the increase in blood alcohol concentration. The greater the concentration, the more noticeable the effects.

Remember at any given blood alcohol level, the effects may differ greatly from person to person. Memory concentration and insight are dulled first, and then lost altogether.

Alcohol can serve as a source of calories, but does not provide for a balanced diet. Vitamin and mineral deficiencies can occur due to this imbalance. Alcohol dependent persons have a decreased ability to absorb B1, B12, and folic acid.

One in every 12 adults suffers from alcohol use disorder!

FACTS

Xanax (generic name: Alprazolam) is the most frequently prescribed benzodiazepine drug in the U.S. with about 49 million prescriptions written in 2011. It is prescribed much higher rates than other benzodiazepines such as:

- Ativan (27 million prescriptions)
- Klonopin (nearly 27 million prescriptions)
- Valium (about 15 million)
- Restoril (about 8.5 million prescriptions)

Nicotine- Tobacco smoke contains about 4000 chemicals of which 400 are toxins and 43 are known carcinogens (cancer producing). Tar affects respiratory. Nitrosamines are carcinogenic.



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Inhalants are sometimes classified as *deliriant*s wide variety of volatile substances gases and liquids that give off fumes. Inhalants are used for their intoxicating and less often psychedelic effect. Inhalants are sniffed or "huffed". They are quick acting and have intense effects. They are absorbed through the lungs into the blood stream and rapidly to the brain. Their intoxicating effects occur within 7-10 seconds and last no more than 30 minutes to 1 hour.

Phencyclidine (PCP) was developed by pharmaceutical companies and used as a human surgical anesthetic in the 1950's. Original trade name: "Sernyl"

PCP was banned for human use in 1967 because of its side effects. Today, all PCP is illicitly manufactured.

Cough syrups and capsules containing dextromethorphan (DXM). These over-the-counter (OTC) cough medicines are safe for stopping coughs during a cold if you take them as directed. Taking more than the recommended amount can produce euphoria (a relaxed pleasurable feeling) but also dissociative effects (like you are detached from your body).

Promethazine-codeine cough syrup. These prescription medications contain an opioid drug called codeine, which stops coughs, but when taken in higher doses produces a "buzz" or "high."

BUPRENORPHINE

[Source: www.deadiversion.usdoj.org]

Buprenorphine was first marketed in the United States in 1985 as a *Schedule V narcotic analgesic*. Diversion, trafficking and abuse of other buprenorphine products have occurred in Europe and other areas of the world.

In October 2002, the Food and Drug Administration (FDA) approved two buprenorphine products (Suboxone and Subutex) for the treatment of narcotic addiction. After reviewing the available data and receiving a Schedule III recommendation from the Department of Health and Human Services (DHHS), the DEA placed buprenorphine and all products containing *buprenorphine into Schedule III in 2002*. Since 2003, diversion, trafficking and abuse of buprenorphine have become more common in the United States.

Like other opioids commonly abused, buprenorphine is capable of producing significant euphoria.



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GABAPENTIN (*Neurontin*)

The third newly popular drug of abuse is *Gabapentin*, this “downer-type” drug is sold under the brand name *Neurontin*. Gabapentin is an anticonvulsant medication that is also used to treat nerve pain. Gabapentin is not an opioid, and as a non-narcotic is a first choice for relieving some types of pain. As a non-opioid and non-narcotic it was thought to have little risk for abuse. However, in the last year some areas of the country have reported increased use of gabapentin by addicts. It is used by addicts to ease withdrawal symptoms, as well as those on methadone to amplify the effects of methadone. Users say it intensifies the methadone, and gives a semi-euphoric feeling. *Gabapentin was the most-prescribed drug of any controlled substance in the state of Ohio in December 2016.*

CONFRONTING THE OPIOID CRISIS IN THE UNITED STATES

[Source: www.opioids.gov]

Drug overdose deaths are now the leading cause of injury death in the United States. In 2016, more than 2 million Americans had an addiction to prescription or illicit opioids!

DEATHS IN 2016:

Total number of drug overdoses: **63,632**

Total number of breast cancer deaths: **41,952**

Total number of vehicle deaths: **38,738**

Number of people 12 years and older who have misused prescription opioids or heroin:

11.8 million In the past year [Source: SAMHSA]

2.3 million For the first time in the past year [Source: SAMHSA]

Over-prescribing of opioids has contributed to rising rates of opioid addiction and overdoses.

731.2 Opioid prescriptions per 1,000 people nationwide

883.5 Average total dose per prescription (higher dosage leads to higher Risk for misuse)

[Source: HHS]

912,305 pounds of drugs collected (At the Fall 2017 National Take Back Day)

[Source: DEA]



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Illicit opioids – including Fentanyl – have flooded into our country through ports, shipments, and border crossings.

SEIZURES IN FY2017

- **2,975**= AIR 51% BORDER 24% SEA 5%

SEIZURES IN FY2016

- **1,847**= AIR 25% BORDER 18% SEA 3%

SEIZURES IN FY2015

- **1,684** AIR 20% BORDER 19% SEA 2%

[Source: CBP]

OVERDOSE RESCUE

244,588- Attempts (Number of overdose reversal attempts made with Naloxone, a medication to reverse an opioid overdose, by emergency medical services personnel. [Source: DOT]

TREATING ADDICTION

691,000- People with an opioid use disorder receiving any addiction treatment. [Source: SAMHSA]

PRACTITIONERS

44,735- Healthcare practitioners that have a special registration from the federal government to prescribe Buprenorphine, a medicine for treating opioid addiction. [Source: SAMHSA]

VETERANS

PREVENTION

90.3% Opioid prescriptions provided to veterans that are for an immediate release (lower risk) opioid rather than extended release (higher risk). [Source: VA]

TREATMENT

35% Veterans who are diagnosed with an opioid use disorder who are receiving medication-assisted treatment (MAT). In fiscal year 2016, this was 34%. [Source: VA]



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Looking at death certificates from 2010-2016, from the National Vital Statistics System, the researchers found that of the 42,249 cases in 2016 where an overdose involving opioids was listed as the cause of death, 19,413 involved synthetic opioids, while 17,087 involved prescription opioids. The third most common drug involved was heroin, which was found in 15,469 cases.

JULLING [Source: www.time.com]

The most popular product in the booming e-cigarette market doesn't look like a cigarette at all.

The **Juul**, a trendy vape that *resembles a flash drive* and can be charged in a laptop's USB port, accounted for 33% of the e-cigarette market as of late 2017. The product is made for and legally available only to adults 18 and older, and its "growth appears to be due to growth with the 18 to 24 year old age group".

But in many cases, media reports suggest, these devices are being used by **kids and teenagers even younger than that** — which has some parents, educators and medical professionals concerned. Each Juul cartridge—which lasts about 200 puffs—has as much nicotine as an entire pack of cigarettes. Here's what to know about "Juuling," the trend sweeping schools nationwide.

Ohio saw 39 percent increase in overdose deaths between July 2016 and July 2017

[Source: CDC]

- 12-month period ending July 2016 = **3,763**
- 12-month period ending July 2017 = **5,232**

Nationally, the Center for Disease Control warned the public about recent increased risks from use of K2/Spice products on April 5, 2018 in the following "Outbreak Alert!!! Potential Life-Threatening Vitamin K-Dependent Antagonist Coagulopathy Associated With Synthetic Cannabinoids Use."

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Should a public policy develop screening of patients for substance abuse disorders prior to prescribing opioid medication?

Enhanced law enforcement is needed to reduce distribution networks of heroin and illicit synthetic opioids in addition to curbing diversion of prescription medications.

Is the local forensic laboratory well funded to quickly identify and purchase necessary standards to keep up with the growing trends of new designer opioids for prosecution? Should toxicological analysis of body fluids be introduced to assist in acknowledging the causes of fatal drug overdoses more efficiently?

Finally, is there a greater need for access to treatment for individuals with opioid use disorders in the community?

DRUG POLICY EXPERT

Robert L. Dupont, M.D. [www.oipoidinstitute.org]
National Rx Drug Abuse & Heroin Summit in Atlanta, April, 2018-05-17

Toxicology reports for overdose deaths found that 95 percent of opioid overdoses involved other drugs as well. The average number of additional drugs was two (2) to four (4), with as many as eleven (11) drugs present the time of death. - Florida Drug-Related Outcomes Surveillance & Tracking System.

The global illegal market is switching to purely synthetic drugs.

Because priming the brain for drug responses in the teenage years is a very big factor in adult drug vulnerability to addiction.

The people using the drugs generally started very early. The earlier they start in their teenage years, the greater their chances of addiction. The unique vulnerability of the adolescent brain to drug of abuse is striking.

It's like with cigarettes. If a kid doesn't start by age 21, the chance he'll start after that age is very low. The same is true for other drugs, too.

Neighborhood is KEY factor in recidivism rates for drug offenders.



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Source: questdiagnostics.com

SYNTHETIC URINE

Synthetic urine has become a popular means of attempting to elude a positive drug test. The sales has attracted the attention of state lawmakers from seventeen (17) states: Alabama, Arkansas, Arizona, Florida, Georgia, Indiana, Kansas, Michigan, Mississippi, Missouri, New Hampshire, North Carolina, Oklahoma, Tennessee, Utah, West Virginia, and Wisconsin. These states have pending legislation banning the use and sale of synthetic urine.

Specimen validity testing is a must to discourage potential cheaters.

CANNABIDIOL (CBD)

Source: www.analyticalcannabis.com

Cannabidiol (CBD), a compound derived from the cannabis plant that does not produce a "high" and has been an increasing focus of medical research, was shown in a new large-scale, randomized, controlled trial to significantly reduce the number of dangerous seizures in patients with a severe form of epilepsy called Lennox–Gastaut syndrome.

Reference

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