U.S. DEPARTMENT OF JUSTICE
DRUG ENFORCEMENT ADMINISTRATION

Drugs of Abuse

A DEA RESOURCE GUIDE 2017 EDITION

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Welcome

TO THE LATEST EDITION OF DRUGS OF ABUSE

Education plays a critical role in preventing substance abuse. *Drugs of Abuse, A DEA Resource Guide*, is designed to be a reliable resource on the most commonly abused and misused drugs in the United States. This comprehensive guide provides important information about the harms and consequences of drug use by describing a drug's effects on the body and mind, overdose potential, origin, legal status, and other key facts.

Drugs of Abuse also offers a list of additional drug education and prevention resources, including the DEA websites:

www.DEA.gov; www.JustThinkTwice.com, aimed at teenagers; www.GetSmartAboutDrugs.com, designed for parents, educators, and caregivers; and www.operationprevention.com.

I. Controlled Substances Act

CONTROLLING DRUGS OR OTHER SUBSTANCES THROUGH FORMAL SCHEDULING

The Controlled Substances Act (CSA) places all substances which were in some manner regulated under existing federal law into one of five schedules. This placement is based upon the substance's medical use, potential for abuse, and safety or dependence liability. The Act also provides a mechanism for substances to be controlled (added to or transferred between schedules) or decontrolled (removed from control). The procedure for these actions is found in Section 201 of the Act (21U.S.C. §811).

Proceedings to add, delete, or change the schedule of a drug or other substance may be initiated by the Drug Enforcement Administration (DEA), the Department of Health and Human Services (HHS), or by petition from any interested party, including:

- The manufacturer of a drug
- A medical society or association
- A pharmacy association
- A public interest group concerned with drug abuse
- A state or local government agency
- An individual citizen

When a petition is received by the DEA, the agency begins its own investigation of the drug. The DEA also may begin an investigation of a drug at any time based upon information received from law enforcement laboratories, state and local law enforcement and regulatory agencies, or other sources of information.

Once the DEA has collected the necessary data, the DEA Administrator, by authority of the Attorney General, requests from HHS a scientific and medical evaluation and recommendation as to whether the drug or other substance should be controlled or removed from control. This request is sent to the Assistant Secretary for Health of HHS.

The Assistant Secretary, by authority of the Secretary, compiles the information and transmits back to the DEA: a medical and scientific evaluation regarding the drug or other substance, a recommendation as to whether the drug should be controlled, and in what schedule it should be placed.

The medical and scientific evaluations are binding on the DEA with respect to scientific and medical matters and form a part of the scheduling decision.

Once the DEA has received the scientific and medical evaluation from HHS, the Administrator will evaluate all available data and make a final decision whether to propose that a drug or other substance should be removed or controlled and into which schedule it should be placed.

If a drug does not have a potential for abuse, it cannot be controlled. Although the term "potential for abuse" is not defined in the CSA, there is much discussion of the term in the legislative history of the Act. The following items are indicators that a drug or other substance has a potential for abuse:

(1) There is evidence that individuals are taking the drug or other substance in amounts sufficient to create a hazard to their health or to the safety of other individuals or to the community.

(2) There is significant diversion of the drug or other substance from legitimate drug channels.

(3) Individuals are taking the drug or other substance on their own initiative rather than on the basis of medical advice from a practitioner.

(4) The drug is a new drug so related in its action to a drug or other substance already listed as having a potential for abuse to make it likely that the drug will have the same potential for abuse as such drugs, thus making it reasonable to assume that there may be significant diversions from legitimate channels, significant use contrary to or without medical advice, or that it has a substantial capability of creating hazards to the

health of the user or to the safety of the community. Of course, evidence of actual abuse of a substance is indicative that a drug has a potential for abuse.

In determining into which schedule a drug or other substance should be placed, or whether a substance should be decontrolled or rescheduled, certain factors are required to be considered. These factors are listed in Section 201 (c), [21 U.S.C. § 811 (c)] of the CSA as follows:

(1) *The drug's actual or relative potential for abuse.*

(2) *Scientific evidence of the drug's pharmacological effect, if known.* The state of knowledge with respect to the effects of a specific drug is, of course, a major consideration. For example, it is vital to know whether or not a drug has a hallucinogenic effect if it is to be controlled due to that effect.

The best available knowledge of the pharmacological properties of a drug should be considered.

(3) *The state of current scientific knowledge regarding the substance.* Criteria (2) and (3) are closely related. However, (2) is primarily concerned with pharmacological effects and (3) deals with all scientific knowledge with respect to the substance.

(4) *Its history and current pattern of abuse.* To determine whether or not a drug should be controlled, it is important to know the pattern of abuse of that substance.

(5) *The scope, duration, and significance of abuse.* In evaluating existing abuse, the DEA Administrator must know not only the pattern of abuse, but also whether the abuse is widespread.

(6) *What, if any, risk there is to the public health.* If a drug creates dangers to the public health, in addition to or because of its abuse potential, then these dangers must also be considered by the Administrator.

(7) *The drug's psychic or physiological dependence liability.* There must be an assessment of the extent to which a drug is physically addictive or psychologically habit forming.

(8) *Whether the substance is an immediate precursor of a substance already controlled.* The CSA allows inclusion of immediate precursors on this basis alone into the appropriate schedule and thus safeguards against possibilities of clandestine manufacture. After considering the above listed factors, the Administrator must make specific findings concerning the drug or other substance. This will determine into which schedule the drug or other substance will be placed. These schedules are established by the CSA. They are as follows:

Schedule I

- The drug or other substance has a high potential for abuse.
- The drug or other substance has no currently accepted medical use in treatment in the United States.
- There is a lack of accepted safety for use of the drug or other substance under medical supervision.
- Examples of Schedule I substances include heroin, gamma hydroxybutyric acid (GHB), lysergic acid diethylamide (LSD), marijuana, and methaqualone.

Schedule II

- The drug or other substance has a high potential for abuse.
- The drug or other substance has a currently accepted medical use in treatment in the United States or a currently accepted medical use with severe restrictions.
- Abuse of the drug or other substance may lead to severe psychological or physical dependence.
- Examples of Schedule II substances include morphine, phencyclidine (PCP), cocaine, methadone, hydrocodone, fentanyl, and methamphetamine.

Schedule III

- The drug or other substance has less potential for abuse than the drugs or other substances in Schedules I and II.
- The drug or other substance has a currently accepted medical use in treatment in the United States.
- Abuse of the drug or other substance may lead to moderate or low physical dependence or high psychological dependence.
- Anabolic steroids, codeine products with aspirin or Tylenol, and some barbiturates are examples of Schedule III substances.

Schedule IV

- The drug or other substance has a low potential for abuse relative to the drugs or other substances in Schedule III.
- The drug or other substance has a currently accepted medical use in treatment in the United States.
- Abuse of the drug or other substance may lead to limited physical dependence or psychological dependence relative to the drugs or other substances in Schedule III.
- Examples of drugs included in Schedule IV are alprazolam, clonazepam, and diazepam.

Schedule V

- The drug or other substance has a low potential for abuse relative to the drugs or other substances in Schedule IV.
- The drug or other substance has a currently accepted medical use in treatment in the United States.
- Abuse of the drug or other substances may lead to limited physical dependence or psychological dependence relative to the drugs or other substances in Schedule IV.
- Cough medicines with codeine are examples of Schedule V drugs.

When the DEA Administrator has determined that a drug or other substance should be controlled, decontrolled, or rescheduled, a proposal to take action is published in the Federal Register. The proposal invites all interested persons to file comments with the DEA and may also request a hearing with the DEA. If no hearing is requested, the DEA will evaluate all comments received and publish a final order in the Federal Register, controlling the drug as proposed or with modifications based upon the written comments filed. This order will set the effective dates for imposing the various requirements of the CSA.

If a hearing is requested, the DEA will enter into discussions with the party or parties requesting a hearing in an attempt to narrow the issue for litigation. If necessary, a hearing will then be held before an Administrative Law Judge. The judge will take evidence on factual issues and hear arguments on legal questions regarding the control of the drug. Depending on the scope and complexity of the issues, the hearing may be brief or quite extensive. The Administrative Law Judge, at the close of the hearing, prepares findings of fact and conclusions of law and a recommended decision that is submitted to the DEA Administrator. The DEA Administrator will review these documents, as well as the underlying material, and prepare his/her own findings of fact and conclusions of law (which may or may not be the same as those drafted by the Administrative Law Judge). The DEA Administrator then publishes a final order in the Federal Register either scheduling the drug or other substance or declining to do so.

Once the final order is published in the Federal Register, interested parties have 30 days to appeal to a U.S. Court of Appeals to challenge the order. Findings of fact by the Administrator are deemed conclusive if supported by "substantial evidence." The order imposing controls is not stayed during the appeal, however, unless so ordered by the Court.

Emergency or Temporary Scheduling

The CSA was amended by the Comprehensive Crime Control Act of 1984. This Act included a provision which allows the DEA Administrator to place a substance, on a temporary basis, into Schedule I, when necessary, to avoid an imminent hazard to public safety.

This emergency scheduling authority permits the scheduling of a substance which is not currently controlled, is being abused, and is a risk to public health while the formal rulemaking procedures described in the CSA are being conducted. This emergency scheduling applies only to substances with no accepted medical use.

A temporary scheduling order may be issued for two years with a possible extension of up to one year if formal scheduling procedures have been initiated. The notice of intent and order are published in the Federal Register, as are the proposals and orders for formal scheduling. [21 U.S.C. § 811 (h)]

Controlled Substance analogues

Controlled substance analogues are substances that are not formally controlled substances, but may be found in illicit trafficking. They are structurally or pharmacologically similar to Schedule I or II controlled substances and have no legitimate medical use. A substance that meets the definition of a controlled substance analogue and is intended for human consumption may be treated under the CSA as if it were a controlled substance in Schedule I. [21 U.S.C. § 802(32), 21 U.S.C. § 813]

International treaty obligations

United States treaty obligations may require that a drug or other substance be controlled under the CSA, or rescheduled if existing controls are less stringent than those required by a treaty. The procedures for these scheduling actions are found in Section 201 (d) of the Act. [21 U.S.C. § 811 (d)]

The United States is a party to the Single Convention on Narcotic Drugs of 1961, which was designed to establish effective control over international and domestic traffic in narcotics, coca leaf, cocaine, and cannabis. A second treaty, the Convention on Psychotropic Substances of 1971, which entered into force in 1976 and was ratified by Congress in 1980, is designed to establish comparable control over stimulants, depressants, and hallucinogens.

VIII. Marijuana/Cannabis

WHAT IS MARIJUANA?

Marijuana is a mind-altering (psychoactive) drug, produced by the Cannabis sativa plant. Marijuana contains over 480 constituents. THC (delta-9-tetrahydrocannabinol) is believed to be the main ingredient that produces the psychoactive effect.

WHAT IS ITS ORIGIN?

Marijuana is grown in the United States, Canada, Mexico, South America, Caribbean, and Asia. It can be cultivated in both outdoor and indoor settings.

What are common street names?

Common street names include:

- Aunt Mary, BC Bud, Blunts, Boom, Chronic, Dope, Gangster, Ganja, Grass, Hash, Herb, Hydro, Indo, Joint, Kif, Mary Jane, Mota, Pot, Reefer, Sinsemilla, Skunk, Smoke, Weed, and Yerba

What does it look like?

Marijuana is a dry, shredded green/brown mix of flowers, stems, seeds, and leaves from the Cannabis sativa plant. The mixture typically is green, brown, or gray in color and may resemble tobacco.

How is it abused?

Marijuana is usually smoked as a cigarette (called a joint) or in a pipe or bong. It is also smoked in blunts, which are cigars that have been emptied of tobacco and refilled with marijuana, sometimes in combination with another drug. Marijuana is also mixed with foods or brewed as a tea.

What is its effect on the mind?

When marijuana is smoked, the THC passes from the lungs and into the bloodstream, which carries the chemical to the organs throughout the body, including the brain. In the brain, the THC connects to specific sites called cannabinoid receptors on nerve cells and influences the activity of those cells.

Many of these receptors are found in the parts of the brain that influence:

- Pleasure, memory, thought, concentration, sensory and time perception, and coordinated movement

The short-term effects of marijuana include:

- Problems with memory and learning, distorted perception, difficulty in thinking and problem-solving, and loss of coordination

The effect of marijuana on perception and coordination are responsible for serious impairments in learning, associative processes, and psychomotor behavior (driving abilities). Long term, regular use can lead to physical dependence and withdrawal following discontinuation, as well as psychic addiction or dependence.

Clinical studies show that the physiological, psychological, and behavioral effects of marijuana vary among individuals and present a list of common responses to cannabinoids, as described in the scientific literature:

- Dizziness, nausea, tachycardia, facial flushing, dry mouth, and tremor initially
- Merriment, happiness, and even exhilaration at high doses
- Disinhibition, relaxation, increased sociability, and talkativeness
- Enhanced sensory perception, giving rise to increased appreciation of music, art, and touch

- Heightened imagination leading to a subjective sense of increased creativity
- Time distortions
- Illusions, delusions, and hallucinations are rare except at high doses
- Impaired judgment, reduced coordination, and ataxia, which can impede driving ability or lead to an increase in risk-taking behavior
- Emotional lability, incongruity of affect, dysphoria, disorganized thinking, inability to converse logically, agitation, paranoia, confusion, restlessness, anxiety, drowsiness, and panic attacks may occur, especially in inexperienced users or in those who have taken a large dose
- Increased appetite and short-term memory impairment are common

What is its effect on the body?

Short-term physical effects from marijuana use may include:

- Sedation, bloodshot eyes, increased heart rate, coughing from lung irritation, increased appetite, and decreased blood pressure

Marijuana smokers experience serious health problems such as bronchitis, emphysema, and bronchial asthma. Extended use may cause suppression of the immune system. Withdrawal from chronic use of high doses of marijuana causes physical signs including headache, shakiness, sweating, and stomach pains and nausea.

Withdrawal symptoms also include behavioral signs such as:

- Restlessness, irritability, sleep difficulties, and decreased appetite

What are its overdose effects?

No deaths from overdose of marijuana have been reported.

Which drugs cause similar effects?

Hashish and hashish oil are drugs made from the cannabis plant that are like marijuana, only stronger.

Hashish (hash) consists of the THC-rich resinous material of the cannabis plant, which is collected, dried, and then compressed into a variety of forms, such as balls, cakes, or cookie like sheets. Pieces are then broken off, placed in pipes or mixed with tobacco and placed in pipes or cigarettes, and smoked.

Leaf of marijuana plant

The main sources of hashish are the Middle East, North Africa, Pakistan, and Afghanistan.

Hashish Oil (hash oil, liquid hash, cannabis oil) is produced by extracting the cannabinoids from the plant material with a solvent. The color and odor of the extract will vary, depending on the solvent used. A drop or two of this liquid on a cigarette is equal to a single marijuana joint. Like marijuana, hashish and hashish oil are both Schedule I drugs.

What is its legal status in the United States?

Marijuana is a Schedule I substance under the Controlled Substances Act, meaning that it has a high potential for abuse, no currently accepted medical use in treatment in the United States, and a lack of accepted safety for use under medical supervision.

Although some states within the United States have allowed the use of marijuana for medicinal purpose, it is the U.S. Food and Drug Administration that has the federal authority to approve drugs for medicinal use in the U.S. To date, the FDA has not approved a marketing application for any marijuana product for any clinical indication. Consistent therewith, the FDA and DEA have concluded that marijuana has no federally approved medical use for treatment in the U.S. and thus it remains as a Schedule I controlled substance under federal law.

Marinol, a synthetic version of THC, the active ingredient found in the marijuana plant, can be prescribed for the control of nausea and vomiting caused by chemotherapeutic agents used in the treatment of cancer and to stimulate appetite in AIDS patients. Marinol is a Schedule III substance under the Controlled Substances Act.

Marijuana Concentrates

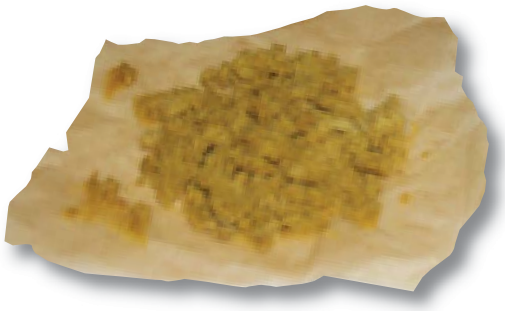
Also Known As: THC Extractions

WHAT ARE MARIJUANA CONCENTRATES?

A marijuana concentrate is a highly potent THC concentrated mass that is most similar in appearance to either honey or butter, which is why it is referred to or known on the street as "honey oil" or "budder."

WHAT IS ITS ORIGIN?

Marijuana concentrates contain extraordinarily high THC levels that could range from 40 to 80 percent. This form of marijuana can be up to four times stronger in THC content than high grade or top shelf marijuana, which normally measures around 20 percent THC levels.



Marijuana concentrate

Many methods are utilized to convert or "manufacture" marijuana into marijuana concentrates. One method is the butane extraction process. This process is particularly dangerous because it uses highly flammable butane to extract the THC from the cannabis plant. Given the extremely volatile nature of butane, this process has resulted in violent explosions. THC extraction labs are being reported nationwide, particularly in the western states and in states where local and state marijuana laws are more relaxed.

What are common street names?

Common street names include:

- 710 (the word "OIL" flipped and spelled backwards), wax, ear wax, honey oil, budder, butane hash oil, butane honey oil (BHO), shatter, dabs (dabbing), black glass, and errl.

What does it look like?

Marijuana concentrates are similar in appearance to honey or butter and are either brown or gold in color.

Marijuana concentrate

How is it abused?

One form of abuse occurs orally by infusing marijuana concentrates in various food or drink products; however, smoking remains the most popular form of ingestion by use of water or oil pipes. A disturbing aspect of this emerging threat is the ingestion of concentrates via electronic cigarettes (also known as e-cigarettes) or vaporizers. Many users of marijuana concentrates prefer the e-cigarette/vaporizer because it's smokeless, odorless, and easy to hide or conceal. The user takes a small amount of marijuana concentrate, referred to as a "dab," then heats the substance using the e-cigarette/vaporizer producing vapors that ensures an instant "high" effect upon the user. Using an e-cigarette/vaporizer to ingest marijuana concentrates is commonly referred to as "dabbing" or "vaping."

What are the Effects of Using Marijuana Concentrates?

Being a highly concentrated form of marijuana, the effects upon the user may be more psychologically and physically intense than plant marijuana use. To date, long term effects of marijuana concentrate use are not yet fully known; but, the effects of plant marijuana use are known. These effects include paranoia, anxiety, panic attacks, and hallucinations. Additionally, the use of plant marijuana increases one's heart rate and blood pressure. Plant marijuana users may also experience withdrawal and addiction problems.