

Fall 2020

Understanding Drugs

Michelle Rustin
mrustin@live.com

Follow this and additional works at: <https://digitalcommons.murraystate.edu/bis437>

Recommended Citation

Rustin, Michelle, "Understanding Drugs" (2020). *Integrated Studies*. 288.
<https://digitalcommons.murraystate.edu/bis437/288>

This Thesis is brought to you for free and open access by the Center for Adult and Regional Education at Murray State's Digital Commons. It has been accepted for inclusion in Integrated Studies by an authorized administrator of Murray State's Digital Commons. For more information, please contact msu.digitalcommons@murraystate.edu.

Understanding Drugs

By
Michelle Rustin

Project submitted in partial fulfillment of the
requirements for the
Bachelor of Integrated Studies Degree

Murray State University
October 28, 2020

Abstract

The first time someone drinks alcohol or takes a drug, it is a voluntary choice. At some point during use, brain flips a switch and use becomes no longer voluntary. The drug, rerouting its reward circuit, hijacks the brain. Anyone can become addicted to drugs. After the initial exposure to drugs, no one chooses how their brain will react. Addiction is not a choice, a moral failing, a character flaw, or something that only bad people do. Scientists and experts agree that it is a disease caused by biology, environment, and other factors. Understanding drugs and their harmful effects at an early age through in school prevention programs should be the focus of the United States. If we can create a system for early education this action, can pave a road to prevention and reduce the rate of addiction. This thesis will examine how school age children can have drug education incorporated into their daily curriculum.

Keywords: alcohol, drugs, addiction, prevention

Table of Contents

Abstract	i
Introduction	1
Literature Review	3
What are Drugs	3
The Controlled Substance Act of 1970	6
What is Abuse and Addiction	31
Treatment and Recovery	36
Early Prevention	38
Kentucky Specialty Courts	43
Findings	46
Recommendations	48
Conclusion	49
References	51

Introduction

The United States is in a war within itself. This crisis that dates to the Pilgrims landing on Plymouth Rock. The war is with drugs. The United States is fighting a war that we are unfortunately losing. Drug abusers and addicts fill our courtrooms, hospitals, and prisons. Those not incarcerated are placing innocent lives in danger on the streets. Children of addicts are victims of neglect, abuse, used in sex trade for drugs, abandoned or left to be a burden on the system of foster care or other family members. The US has spent countless dollars in the effort to control drugs but has been unsuccessful thus far.

Drugs began to surface in the United States as early as the 1600s during the colonization of early America. Alcohol was highly thought of by the Colonist. During the 1800s opium, chewing tobacco, cigars, cigarettes, cocaine, and morphine grew in popularity. Cocaine was an ingredient in Coca-Cola until 1903 (SAMHSA, n.d.).

In 1920, the 18th Amendment and the Volstead Act marked the beginning of Prohibition. This legislation stopped the legal sale, manufacturing, and shipping of alcohol in the United States. Once prohibition was repealed, the Alcohol Beverage Control (ABC) laws allowed the manufacturing and sales with restrictions. In 1906, Congress passed the Pure Food and Drug Act requiring labels to list active ingredients in an effort to control addiction. This regulation led to the subsequent formation of the Food and Drug Administration (FDA), which required the testing of all drugs before they were available to the consumer. Drugs were no longer reviewed as harmless ways to cure aches and pains (SAMHSA, n.d.).

The Harrison Act created in 1914 and was the first federal drug policy. The act restricted the manufacturing and sale of marijuana, cocaine, heroin and morphine. Doctors who were found to be treating addicts in a rehab program were punished. Over 5,000 physicians were

convicted and fined between 1915 and 1938. In the 1940s, the disease of alcoholism emerged. By the 1960s, the focus of alcoholism became on an individual's vulnerability and questioned if it was genetic, biochemical, psychological, social or cultural (SAMHSA, n.d.)

By 1970, alcohol and drugs were recognized as major health concerns. The National Institute of Alcohol Abuse and Alcoholism (NIAAA) was implemented in 1970 and the National Institute on Drug Abuse (NIDA) in 1974. In 1970, President Nixon also declared the "War on Drugs" which entailed Comprehensive Drug Abuse Prevention and Control Act and the Controlled Substance Act (CSA). The CSA a classification of drugs called scheduling which identifies their use and potential for abuse. The 1980s brought about the "Just Say No" campaign and the creation of Mothers against Drunk Driving (MADD). In the 1990s the Substance Abuse and Mental Health Services Administration (SAMHSA) was established (SAMSHA, n.d.).

While the government has made these great strides to wage the war on drugs, the country is still failing at this task. I feel the key to drug control is understanding drugs, abuse, and addiction at an early age. We need to educate children at an early age about the toxicity of drugs on their bodies and the demise they bring to society. Many people think that drug addicts or abusers have no morals or no work ethic. Drugs have an impact individual across a diverse background, and they do not discriminate against age color, religion, gender, ethnic group, or social status.

Literature Review

What Are Drugs?

Wilson and Kolander (2011) suggest that one can define drugs in many ways. A definition could include a large variety of substances that will change the structure and function of the body. The substances that are most abused alter the mind or the nervous system. To Wilson and Kolander they primarily recognize that the term drugs can include over-the-counter medication, prescription medication, caffeinated beverages, alcohol, tobacco, illegal substances, herbs, and harsh chemicals like airplane glue, correction fluid, and paint.

Drugs changes a person's mental or physical state of being. They can affect the way your brain works, how you feel and behave, your understanding and your senses. This is why drugs are unpredictable and dangerous, especially for young people. The effects of drugs are different for each person and drug. Drugs change the way your body or brain works (U.S. Department of Health and Human Services, n.d).

People may choose to take drugs for a variety of reasons: they take them out of curiosity, to conform to social situations or to enjoy the effects on their body such as excitement or calming effects. Drugs help user's cope with situations such as pain management or stress relief or they've have a drug dependency and need to keep taking them to avoid withdrawal symptoms. Drugs can make you feel like you are on top of the world or they can block the world that you are afraid to face. Drugs can provide elation or escape from reality. (U.S. Department of Health and Human Services, n.d).

Drugs come in many varieties and are made from different ingredients such as plants, processed plants or synthetic chemicals. The processes to make certain drugs varies widely, but all drug products have two main types of ingredients, active ingredients and inactive ingredients.

Active ingredients are what affects the body and inactive ingredients are other agents that have no effect on you. Drugs that have been legally manufactured will list all active and inactive ingredients. Street drugs or illegal drugs can contain any type of ingredients, many of which the user may not be familiar with and you have no clue what you are taking (Drugs.com, n.d.).

People consume drugs in different ways. One method for consuming drugs is swallowing tablets or drinking liquids so that the body absorbs the drug through the stomach lining. You can inhale them by breathing them into the lungs and this method causes the body absorbs the drug through the lining of the lungs. You can snort drugs into the nose and the body will absorb the drug through the thin nasal lining. Drugs can be injected by a needle allowing the user to inject the drug directly into the bloodstream. Drugs can be ingested through the skin and the body will slowly absorb the drug from a cream or patch. Drugs can also be inserted rectally or vaginally as a suppository and the body absorbs the drug through the bowel or vaginal lining. No matter which way you take a drug, it will end up in your bloodstream and affect different parts of your body (U.S. Department of Health and Human Services, n.d).

There are two types of drugs, in the eyes of the law, legal or illegal. Drugs such as alcohol, caffeine, and nicotine while legal are still subject to restrictions. The active ingredients in legal drugs are regulated. Drugs like cannabis, amphetamines, ecstasy, cocaine and heroin, are illegal and the ingredients are not regulated. Without regulations, different batches of an illegally manufactured drug may have different levels of chemicals as well as other unidentified additives. Illicit drugs is another term for illegal drugs, prescription medicines that have been obtained illegally or they are not being used the way they were prescribed, other items that are being used inappropriately such as sniffing glue or inhaling paint thinner. Polydrug use is mixing drugs or taking one drug together with another drug. Combining drugs carries extra risks and can be

extremely dangerous. The more of a drug a person takes at a time, the more chance there is of something going wrong (U.S. Department of Health and Human Services, n.d.).

Drugs can affect each person differently because of factors like size, weight, health, whether any other drugs are already in your system or the number of drugs that you have taken. Drugs can have negative after-effects, which are experienced once the drugs wear off. These effects may vary depending on the drug taken (U.S. Department of Health and Human Services, n.d.).

Drug use can have a wide range effects on people based on short or long-term use. The effects depend on the drug or drugs ingested, how they are taken, how much, personal health, and other factors. Short-term effects could range from changes in appetite, wakefulness, heart rate, blood pressure, and/or mood to heart attack, stroke, psychosis, overdose, and even death. These effects can be felt after just one use. Long-term effects can include heart disease, lung disease, cancer, mental illness, HIV/AIDS, hepatitis, as well as many other problems. Long-term drug use can lead to addiction. However, not everyone who uses drugs becomes addicted. Addiction causes changes in the brain's circuit. Changes in the brain interfere with life's normal pleasures like food, sex, how they cope with stress, decision-making, and their ability to learn or retain information. These changes make it difficult for someone to stop taking drugs even though it is having negative effects on their life and they want to quit. Drug use can cause indirect effects on the people taking drugs and, on their peers, and family. This can include affecting nutrition, sleep, decision-making, impulsivity, risk of trauma, violence or injury, and communicable diseases. Women who use drug while pregnant can harm their babies causing negative outcomes for the child (NIDA, n.d.).

The Controlled Substance Act of 1970

The Controlled Substances Act (CSA) Title II of the Comprehensive Drug Abuse Prevention and Control Act of 1970 is the federal U.S. drug policy under which the manufacture, importation, possession, use and distribution of certain narcotics, stimulants, depressants, hallucinogens, anabolic steroids and other chemicals is regulated. The CSA was signed into law by President Richard Nixon on October 27, 1970. The addition, deletion or change of controlled substance schedule of a medicine or other chemical may be requested by the U.S. Drug Enforcement Agency (DEA), the Department of Health and Human Services, the U.S. Food and Drug Administration (FDA), or from any other party via petition to the DEA. The Drug Enforcement Agency (DEA) implements the CSA and may prosecute violators of these laws at both the domestic and international level (drugs.com, n.d.).

According to the DEA “Drugs, substances, and certain chemicals used to make drugs are classified into five (5) distinct categories or schedules depending upon the drug’s acceptable medical use and the drug’s abuse or dependency potential. The abuse rate is a determinate factor in the scheduling of the drug; for example, Schedule I drugs have a high potential for abuse and the potential to create severe psychological and/or physical dependence. As the drug schedule changes-- Schedule II, Schedule III, etc., so does the abuse potential-- Schedule V drugs represent the least potential for abuse” (DEA, n.d.).

CSA Scheduling has a list of all controlled substances. The lists describe in detail the basic or parent chemicals and do not necessarily describe the salts, isomers and salts of isomers, esters, ethers and derivatives which may also be classified as controlled substances. It is a general reference list but not a comprehensive list of all controlled substances.” The substances do not have to be listed as a controlled substance to be treated as a Schedule I substance for criminal

prosecution. A substance is considered controlled when it is intended for human consumption and is structurally or pharmacologically substantially like a Schedule I or Schedule II substance and is not an approved medication in this country.

The CSA's five controlled substance schedules at the federal level (Schedules I-V) that are used to classify drugs based upon their abuse potential, accepted medical applications in the U.S. and safety and potential for addiction. Individuals who order, handle, store, and distribute controlled substances must be registered with the DEA to perform these functions. They must maintain accurate inventories, records, and security of the controlled substances. (DEA, n.d.).

The Controlled Substances Act (CSA) schedule information displayed applies to substances regulated under federal law. There may be variations in CSA schedules between individual states. The schedules are listed as follows:

Schedule I

- The drug, substance, or chemical has a high potential for abuse.
- The drug, substance, or chemical has no currently accepted medical use in treatment in the U.S.
- There is a lack of accepted safety for use of the drug, substance, or chemical under medical supervision.

Examples of Schedule I drugs are: heroin, lysergic acid diethylamide (LSD), marijuana (cannabis) at the Federal level, 3,4-methylenedioxymethamphetamine (Ecstasy), methaqualone, and peyote.

Heroin, for example, has no acceptable medical use in the United States. It is a natural version of manmade prescription opioid narcotic. At first heroin will give you an exhilarating rush but once it wears off your system slows down. Your motor skills and brain will move much

slower and you suffer from chills, nausea, or nervousness. Once you are coming down one feels a strong need to take more heroin to reach elation (DEA, 2020).

Marijuana is also a Schedule I drug. It has no approved medical use and a high potential for abuse. According to the National Institute on Drug Abuse (NIDA), marijuana is the most abused drug in the US. However, marijuana has been legalized in a growing number of states for medical uses. A few states even allow recreational marijuana. However, in most states it is still illegal. Marijuana causes relaxation. It can make you feel silly and laugh for no reason, or you may feel sleepy and forgetful (DEA, 2020).

Schedule II / IIN

- The drug, substance, or chemical has a high potential for abuse.
- The drug, substance, or chemical has a currently accepted medical use in treatment in the U.S. or a currently accepted medical use with severe restrictions.
- Abuse of the drug, substance, or chemical may lead to severe psychological or physical dependence and are considered dangerous.

Examples of Schedule II narcotics include hydromorphone (Dilaudid), methadone (Dolophine), meperidine (Demerol), oxycodone (OxyContin, Percocet), and fentanyl (Sublimaze, Duragesic). Other Schedule II narcotics include morphine, opium, codeine, and hydrocodone. Examples of Schedule IIN stimulants include amphetamine (Dexedrine, Adderall), methamphetamine (Desoxyn), and methylphenidate (Ritalin). Other Schedule II substances include amobarbital, cocaine, glutethimide, and pentobarbital.

Cocaine is classified as a Schedule II drug, which means there is strong potential for abuse. However, a physician for legitimate medical uses can administer it. In street form, it is an illegal drug, and it speeds up your whole body. You may talk, move, or think much

faster. Feelings of happiness and increased energy engulf you. However, those feelings may then shift to anger. Feelings of paranoia can strike making you feel like someone is out to get you. Using cocaine for a long period time will lead to strong cravings for the drug. Most users report that they need more of the drug with each use to get that surge of energy they received with the first use (DEA, 2020).

Schedule III / IIIN

- The drug, substance, or chemical has a potential for abuse less than the drugs in schedules I and II, but more than Schedule IV drugs.
- The drug, substance, or chemical has a currently accepted medical use in treatment in the U.S.
- Abuse of the drug, substance, or chemical may lead to a moderate to low potential for physical dependence but high psychological dependence.

Examples of Schedule III narcotics include products containing not more than 90 milligrams of codeine per dosage unit (Tylenol with Codeine), and buprenorphine (Suboxone) (DEA, 2020).

Schedule IV

- The drug, substance, or chemical has a low potential for abuse and low risk of dependence compared to Schedule III.
- The drug, substance, or chemical has a currently accepted medical use in treatment in the U.S.

Examples of Schedule IV drugs include: alprazolam (Xanax), carisoprodol (Soma), clonazepam (Klonopin), clorazepate (Tranxene), diazepam (Valium), lorazepam (Ativan),

midazolam (Versed) temazepam (Restoril), tramadol (Conzip, Ultram), triazolam (Halcion), pentazocine, zolpidem (Ambien) (DEA, 2020).

Schedule V

- The drug, substance, or chemical has a low potential for abuse relative to the drugs in schedule IV
- The drug, substance, or chemical has a currently accepted medical use in treatment in the U.S.
- Drugs, substances, or chemicals in schedule V primarily consist of preparations containing limited quantities of certain narcotics. Schedule V drugs are generally used for antidiarrheal, antitussive, and analgesic purposes.

Examples of Schedule V drugs are atropine / diphenoxylate (Lomotil), pregabalin (Lyrica) (DEA, 2020).

Alcohol, cigarettes and other tobacco products are not scheduled drugs. Their ingredients are regulated, but they create abuse and addiction issues. Alcohol abuse is the second most common form of substance abuse in the United States, after tobacco addiction. Alcohol and tobacco rank among the leading causes of preventable deaths in the United States. Research show that people who smoke are more likely to drink and vice versa. Alcohol and tobacco dependence is correlated meaning if you are dependent on alcohol you are more apt than others be smokers and people who addicted to tobacco are four times more likely to drink alcohol (<https://pubs.niaaa.nih.gov>).

If an individual's drinking causes distress or harm that is considered alcohol use disorder. There is no certain way to know why one person will abuse alcohol and another will not. A family history of alcohol addiction puts one at a higher risk to abuse alcohol. The children of

parents with alcohol use issues are more likely to abuse alcohol. A person who is a heavy drinker is more likely to suffer from liver damage, stomach issues, heart problems, and brain and nervous system disruptions. Alcohol increases the risk of cancer of the mouth, throat, larynx, and esophagus. Women who abuse alcohol drink heavily are at higher risk of developing breast cancer and osteoporosis. In addition, people who drink heavily may not eat adequately, so they may develop vitamin and mineral deficiencies. (Health havard.edu).

There is no secret that smoking or chewing tobacco is dangerous for your health. Nicotine, which is the main ingredient in tobacco products, is the key factor that causes addiction. The World Health Organization reports that over 1.1 billion people smoke tobacco and more than 7 million die each year from this addiction (Gisel, 2019, p.124). Nicotine immediately absorbs into the blood when a person uses it. Once nicotine enters the blood, it immediately stimulates the adrenal glands to release the adrenaline. Epinephrine stimulates the central nervous system and increases blood pressure, breathing, and heart rate. Like cocaine and heroin, nicotine readily activates the brain's reward circuits and increases the body's level of *dopamine*. *Research shows* other chemicals in tobacco like acetaldehyde, can increase nicotine's effects on the brain (drugabuse.gov). Smoking can cause lung cancer as well as other types of cancer, heart disease, respiratory problems, stomach ulcers and acid reflux, gum disease, and pregnant women risk damage to their babies. Chewing tobacco is just as bad as cigarette smoke. Cigarettes contain tar, carbon monoxide, DDT (pesticide), arsenic, and formaldehyde. Tar and carbon monoxide cause serious respiratory problems. Chewing tobacco can create mouth sores and white patches. Chewing tobacco can lead to diseases and cancers of the mouth, gums, and throat. One chew contains 15 times more nicotine than a cigarette, which creates a greater risk of addiction (Family Care Network, n.d.).

The Controlled Substances Act (CSA) places all substances, that are regulated under existing federal law into one of the five schedules. Placement in scheduling is based upon the substance's accepted medical use, potential for abuse, and safety or dependence liability. The CSA also provides grounds for a substance to be controlled by being added at any time or the ability to be transferred between schedules or removed from control list altogether. The procedure for these actions is found in Section 201 of the Act (21U.S.C. §811) (DEA, 2020).

Proceedings to add, delete, or change a drug's placement in the scheduling is initiated by one of the following Drug Enforcement Administration (DEA), the Department of Health and Human Services (HHS), or by petition from any interested individual or party. The manufacturers of a drug, a medical society or association, a pharmacy association, a public interest group concerned with drug abuse, state or local government agency, or an individual citizen can also request for a drug to be added, deleted or have its ranking changed (DEA, 2020).

Once a petition is received by the DEA, the agency starts an investigation of the drug. The DEA can also investigate a drug at any given time based upon information of concern 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 their medical and scientific research relating to the drug or other substance. 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 the drug or substance be removed or placed on control and into which schedule it should be placed. If a drug does not have a potential for abuse, it cannot be controlled (DEA, 2020).

To determine if a substance has the potential for abuse there must be a great deal of proof to prove that people are taking the drug or substance in large enough amounts to create a hazard to their health or for the safety of others or to the community. They must determine if the supply is significant enough from legitimate drug sources. They must decide if people are choosing to take the drug or substance at their own will instead or is it at the basis of advice from their doctor. A drug is determined to be new but is related to a drug or substance that is already marked, as be a drug that creates potential for abuse. There should also be sufficient evidence of actual abuse of the drug or substance. When the DEA Administrator has determined that a drug or other substance should be controlled, uncontrolled, or rescheduled, a proposal to take action is published in the Federal Register. Factors in determining if a drug should be controlled, uncontrolled or rescheduled can be found in Section 201 (c), [21 U.S.C. § 811 (c)] of the CSA. Relative factors to the process are as follows: the drug's actual or relative potential for abuse, and the scientific evidence of the drug's pharmacological effect, if known. Knowing the effects of a specific drug is a major factor for consideration. An example would be to know if a drug has a hallucinogenic effect so it can be controlled for that reason. The state of current scientific knowledge regarding the substance. History and current pattern of abuse of the drug, which is important in determining if a drug should be controlled. The scope, duration, and significance of abuse, pattern of abuse, and if it is widespread. Are there any risk there to the public health? The drug's psychic or physiological dependence so there has to be an assessment of the extent to which a drug is physically addictive or psychological dependence. It must be determined of the

substance is an immediate precursor to any substance already being 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 (DEA, 2020).

Along with drugs and substances being placed into schedules the Controlled Substances Act (CSA) also regulates drugs and substances into five classes: narcotics, depressants, stimulants, hallucinogens, and anabolic steroids. These classes have distinguishing properties and the drugs in each class produce similar effects. However, all controlled substances, regardless of class, share a number of common features. All controlled substances have abuse potential or are immediate precursors to substances with abuse potential. With the exception of anabolic steroids, controlled substances are abused to alter mood, thought, and feeling through their actions on the central nervous system (brain and spinal cord). Some of these drugs alleviate pain, anxiety, or depression. Some induce sleep and others energize. Though some controlled substances are therapeutically useful, the “feel good” effects of these drugs contribute to their abuse. The extent to which a substance is reliably capable of producing intensely pleasurable feelings (euphoria) increases the likelihood of that substance being abused. (DEA, 2020).

Narcotics, also known as opioids, refer to a wide variety of substances that dull the senses and relieve pain. Some people refer to all drugs as narcotics, but narcotics refer to opium, opium derivatives, and their semi-synthetic substitutes. Examples of narcotics include heroin and pharmaceutical drugs like OxyContin, Vicodin, codeine, morphine, methadone, and fentanyl. Narcotics are prescribed by doctors for pain, suppress cough, cure diarrhea, and as a sleep aid.

Narcotics are a controlled substance and vary from Schedule I to Schedule V drug depending on their medical purpose. Schedule I narcotics, like heroin, have no medical use in the U.S. and are illegal to distribute, purchase, or use outside of medical research (DEA, 2020).

Natural opioids are made from the *Papaver somniferous* variety of poppies and synthetic opioids are made in a lab. Synthetic opioids include meperidine, fentanyl, and methadone. Semi-synthetic opioids are made from products, such as morphine, codeine. Narcotics can easily be obtained from friends, family members, medicine cabinets, pharmacies, nursing homes, hospitals, hospices, doctors, and the Internet. Some common street names for narcotics are: Smack, Horse, Mud, Brown Sugar, Junk, Black Tat, Big H, Paregoric, Dover's Powder, MPTP (New Heroin), Hillbilly Heroin, Lean or Purple Drank, OC, Ox, Oxy, Oxycotton, Sippin Syrup. Narcotics come in many forms such as tablets, capsules, skin patches, powder, chunks in varying colors, liquid, syrups, suppositories, and lollipops (DEA, 2020).

They are consumed by being swallowed, smoked, sniffed, or injected. Outside of their prescribed purpose, they create an overall feeling of well-being reducing tension, anxiety, and aggression. In a therapeutic setting these are the feelings one sets out to achieve but there is a great risk of psychological dependence when using the drugs. Once the physical need for the drug has reached its peak the user may feel they have to have drug to cope with their daily life. The effect the drug has depends on the dose, and how it is consumed and any previous exposure to the drug. The drug can create decreased physical activity, constriction of the pupils, flushing of the face and neck, constipation, nausea, vomiting, and shallow breathing (DEA, 2020).

In certain forms, these drugs are so potent that a one dose can be lethal. Physical dependence is a side effect of chronic opioid use and once you discontinue use withdrawal symptoms will occur. The withdrawal symptoms depend on the drug, amount consumed,

frequency of doses, period used, and the mental and physical state of the user. Symptoms of withdrawal usually appear before the next scheduled dose. Early signs of withdrawal can include watery eyes, runny nose, yawning, and sweating. Once they worsen symptoms can include restlessness, irritability, loss of appetite, nausea, tremors, drug craving, severe depression, vomiting, increased heart rate and blood pressure, and chills alternating with flushing and excessive sweating. Once withdrawal runs its course most physical symptoms will disappear within a few days or weeks depending on the particular drug. It is not uncommon to overdose on narcotics. Physical signs of overdose can include constricted pupils, clammy skin, confusion, convulsions, extreme drowsiness, and shallow breathing (DEA, 2020).

The class of drugs called depressants can induce sleep, relieve anxiety and muscle spasms, and prevent seizures. These drugs include barbiturates, Butalbital, phenobarbital, Pentothal, Seconal, and Nembutal. You can rapidly develop dependence and tolerance to barbiturates. Once a tolerance is built up more and more of the drug is needed to feel and function normally which makes them hazardous. Benzodiazepines were developed to replace barbiturates examples are Valium, Xanax, Halcion, Ativan, Klonopin, and Restoril. Rohypnol is a form of a benzodiazepine not legally manufactured or sold in the United States. Sedative-hypnotics Lunesta, Ambien, and Sonata are approved for the short-term treatment of insomnia in the United States. Depressants can also include meprobamate, methaqualone, and the illicit drug GHB. These drugs are legitimate pharmaceutical products but somehow manage to make their way to the illicit market. These drugs are readily available for teens to get their hands on in the family medicine cabinet, friends, family members, the Internet, doctors, and hospitals. These drugs on the street can be called: Barbs, Benzos, Downers, Georgia Home Boy, GHB, Grievous Bodily Harm, Liquid X, Nerve Pills, Phennies, R2, Reds, Roofies, Rophies, Tranks, and Yellows

and can come in the form of pills, syrups, and injectable liquids. Depressants are abused to experience euphoria. Depressants like GHB and Rohypnol can also be misused to facilitate sexual assault. When prescribed depressants induce sleep, relieve anxiety, relieve muscle spasms, and prevent seizures. Depressants can also cause amnesia, slowed reaction time, impaired mental functioning and judgment, and increased confusion. Long-term use of these drugs produces psychological dependence and tolerance. Some depressants can cause unwanted side effects of slurred speech, loss of motor skills, weakness, headache, blurred vision, dizziness, nausea, vomiting, low blood pressure, and shallow breathing. Long-term use can lead to physical dependence even when doses are regulated recommended for medical treatment. Most depressants are controlled substances ranging from Schedule I to Schedule IV under the Controlled Substances Act, based upon their risk for abuse and if have an accepted medical use. Many of the depressants have FDA-approved medical uses. Withdrawal from depressants can be life threatening (DEA, 2020).

The class of drugs called stimulants speed up the body's systems. This class of drugs includes using prescribed drugs like amphetamines (Adderall and Dexedrine), methylphenidate (Concerta and Ritalin), weight loss aids (Didrex, Bontril, Preludin, Fastin, Adipex P, Ionomin, and Meridia) and other illicit drugs such as methamphetamine, cocaine, methcathinone, and synthetic cathinones that are commonly sold as bath salts. Stimulants are derived from legitimate sources and manufactured exclusively for the illicit market. On the street stimulants are referred to as: Bennies, Black Beauties, Cat, Coke, Crank, Crystal, Flake, Ice, Pellets, R-Ball, Skippy, Snow, Speed, Uppers, and Vitamin R. They come in the form of pills, powder, rocks, and injectable liquids. They can be swallowed, smoked, snorted, and injected. When used, stimulants produce a sudden sensation called a flash or rush. Stimulants are often used by

bingeing, which is taking them sporadically, consuming large doses in a short amount of time. Heavy users can inject themselves multiple times a day until they have depleted their drug supply or until they reach the point of delirium, psychosis, or physical exhaustion. During this type of use, all other interests become secondary. When taken without a doctor's supervision they abused to produce a sense of exhilaration, improve self-esteem, improve mental and physical capacity, increase activity, reduce appetite, extend awake time, and get high. Chronic, high-dose usage commonly associated with agitation, hostility, panic, aggression, suicidal or homicidal tendencies, paranoia, that can be accompanied by auditory and visual hallucinations. Tolerance is when higher doses are required to produce the usual effects, develops rapidly, and psychological dependence occurs. The strongest psychological dependence occurs with the more potent stimulants, like amphetamine, methylphenidate, methamphetamine, cocaine, and methcathinone. Suddenly stopping use can cause depression, anxiety, drug craving, and extreme fatigue. Stimulants reverse the effects of fatigue on mental and physical tasks. From a therapeutic standpoint, stimulants can produce exhilaration, extended wakefulness, and loss of appetite. The effects of stimulants are heightened as doses taken. Consuming a dose that is too large or taking them in mass over an extended period may cause such physical side effects of dizziness, tremors, headache, flushed skin, chest pain with palpitations, excessive sweating, vomiting, and abdominal cramps. In the case of an overdose, unless there is medical intervention, high fever, convulsions, and cardiovascular collapse may precede death. Accidental deaths are partially related to the effects of stimulants on the body's cardiovascular and temperature regulation circuit (DEA, 2020).

The class of drugs known as hallucinogens can be found in plants and fungi or they can be synthetically produced in a lab. Hallucinogens are among the oldest known group of

drugs. They are consumed based on their ability to alter the human perception and mood. The common street names are Acid, Blotter, Cubes, Fry, Mind Candy, Mushrooms, Shrooms, Special K, STP, X, and XTC. Hallucinogens come in a variety of forms, MDMA (ecstasy) are tablets that come in many colors and logos to attract youth and LSD is sold in the form of saturated paper usually imprinted with colorful graphic designs. Junior and senior high school students are known to be the largest group to abuse hallucinogenic mushrooms, LSD, and MDMA (ecstasy). Hallucinogens may be taken orally, or they can be smoked. Hallucinogens affect the mind by creating perceptual distortions that vary with dose, setting, mood and time may seem to stop. Some people may experience what is referred to as Hallucinogen Persisting Perception Disorder (HPPD) or experience flashbacks weeks or months after use. The physical effects on the body can include elevated heart rate, increased blood pressure, dilated pupils, and often can induce nausea and vomiting. Deaths from an overdose are extremely rare. Death is more likely to occur from suicide, accidents, and dangerous behavior, or due to the person inadvertently eating poisonous plant material. Severe overdoses are likely to cause respiratory depression, coma, convulsions, seizures, and death due to respiratory arrest. Many hallucinogens are considered Schedule I drugs under the Controlled Substances Act, because they have a high potential for abuse and currently there is no accepted medical use in treatment in the United States (DEA, 2020).

Steroids or anabolic steroids are synthetically produced variants of the naturally occurring male hormone testosterone that are abused to promote muscle growth, enhance athletic or other physical performance, and improve physical appearance. Testosterone, trenbolone, oxymetholone, methandrostenolone, nandrolone, stanozolol, boldenone, and oxandrolone are the most common encountered by law enforcement (DEA, 2020).

Smuggling and the Internet is the most common means of buying and selling anabolic steroids. Steroids can be bought and sold at gyms, bodybuilding competitions, at school from teammates, coaches, or trainers. On the street steroids can be called arnolds, juice, pumpers, roids, stackers, and weight gainers. They are available in tablets and capsules, sublingual-tablets, liquid drops, gels, creams, transdermal patches, subdermal implant pellets, and water or oil based injectable solutions their appearance varies depending on the type and manufacturer. Typically, they can be ingested orally, injected intramuscularly, or applied to the skin. Doses abused are often 10 to 100 times higher than the approved therapeutic and medical treatment dosages. Users typically take two or more anabolic steroids at the same time in a cyclic manner, believing that this will improve their effectiveness and minimize the adverse effects (DEA, 2020).

Case studies and scientific research indicate that high doses of anabolic steroids may cause mood and behavioral effects. In some individuals, anabolic steroid use can cause dramatic mood swings, increased feelings of hostility, impaired judgment, and increased levels of aggression (often referred to as “roid rage”). When users stop taking steroids, they may experience depression that may be severe enough to lead one to commit suicide. Anabolic steroid use can also cause psychological dependence and addiction. Steroids can cause a wide range of adverse effects on the body associated with their use and abuse. These side effects can vary depend on several factors including: age, sex, steroid used, amount used, and duration of use (DEA, 2020).

In adolescents, anabolic steroid use can stunt the ultimate height that an individual might otherwise achieve. In boys, anabolic steroid use can cause early sexual development, acne, and stunted growth. In adolescent girls and women, anabolic steroid use can induce permanent physical changes, such as deepening of the voice, increased facial and body hair growth,

menstrual irregularities, male pattern baldness, and lengthening of the clitoris. In men, anabolic steroid use can cause shrinkage of the testicles, reduced sperm count, enlargement of the male breast tissue, sterility, and an increased risk of prostate cancer. In both men and women, use can cause high cholesterol levels and fluid retention. Oral preparations can damage the liver. Injecting can cause various infections from non-sterile injection techniques or sharing of contaminated needles. Steroids prepared in non-sterile environments may also cause infections. These factors put users at risk for contracting viral infections such as HIV/AIDS or hepatitis B or C, and bacterial infections. Users may also develop endocarditis, a bacterial infection that causes a potentially fatal inflammation of the heart lining. Steroids are not associated with overdoses. Several substances produce similar effects as steroids, which are the human growth hormone (hHG), clenbuterol, gonadotropins, and erythropoietin. Anabolic steroids are considered a Schedule III substance under the Controlled Substances Act. However, only a small number of anabolic steroids are approved for either human or veterinary use and they must be prescribed by a licensed physician (DEA, 2020).

The Drug Enforcement Administration (DEA) has employed multifaceted approaches to put a stop to drug trafficking including enforcement, interdiction, and education. Another approach, which combines elements from all three of these facets, is chemical control. Manufacturers require large quantities of chemicals to synthesize, extract, and purify most illicit drugs. The 1980s have proved there was an abundant increase in the production of controlled substances, especially methamphetamines. In turn, there was also a growth in backdoor laboratories producing copycat controlled substances. These copycat substances were very potent and dangerous variations of, narcotics, stimulants, and hallucinogens. Furthermore, the DEA learned that U.S. firms were exporting mass quantities of chemicals such as acetone,

methylethylketone, and potassium permanganate to cocaine producing countries. It became clear that immediate action needed to be taken to control the distribution of these chemicals in order to decrease the problems with the labs producing the illegal substances (DEA, 2020).

The DEA embarked upon a broad chemical control program in 1989 that began with the Chemical Diversion and Trafficking Act (CDTA) of 1988. The CDTA regulates 12 precursor chemicals, eight essential chemicals, tableting machines, and encapsulating machines by imposing recordkeeping and import/export reporting requirements on transactions involving these products. This resulted in effectively reducing the supply of illicit methamphetamines. The number of backdoor laboratories seized within the first three years of the CDTA's implementation reversed the trend of the previous three decades and resulted in a decline production. The DEA currently regulates 42 chemicals commonly used in illicit drug production. Maintaining this success requires continuous monitoring to keep traffickers' never-ending search for new methods at bay (DEA, 2020).

The foundation of the government's program to prevent chemical diversion is based on additional laws such as the Domestic Chemical Diversion Control Act of 1993 (DCDCA), the Comprehensive Methamphetamine Control Act of 1996 (MCA), the Methamphetamine Anti-Proliferation Act of 2000 (MAPA), and the Combat Methamphetamine Epidemic Act of 2005 (CMEA). With the enactment of the new laws there was a noticeable shift in the drug world. When the U.S. began to control the quantity of chemicals shipped to countries that manufactured cocaine there was a decline in product. Chemical suppliers from other parts of the world emerged as suppliers causing the U.S. government to then undertake a new approach. They created an international campaign to educate and request the support of other countries in developing chemical control (DEA, 2020).

Today, there is vast international agreement in regard to controlling the chemical supply. With government controls in place, ephedrine and other chemicals used to manufacture methamphetamine have become much more difficult to divert. Traffickers started using over-the-counter capsules and tablets to manufacture their drugs. The chemicals used to make the drugs that were legitimate had been exempt from the CDTA. The DCDCCA managed to close this loophole and require DEA registration for anyone associated with List I chemicals. Thus, requiring recordkeeping and reporting requirements for transactions involving any ephedrine products. The backdoor labs started to use pseudoephedrine. This caused the MCA to begin expansion of regulatory control of lawfully marketed drug products containing ephedrine, pseudoephedrine, and phenylpropanolamine (PPA)¹. The MAPA then drew its focus to continued retail restrictions. A purchaser is allowed nine grams in a single transaction instead of the 24 grams (DEA, 2020).

The CMEA further restricted retail level transactions by redefining nonprescription products. All regulated sellers had to be certified and they were required to keep all SLCPs behind the counter. When someone wanted to buy SLCPs, they were required to show their ID and sign a log that they had made the purchase and sales were limited to 3.6 grams per day and 9 grams within a 30-day period. The DEA encourages each entity to be vigilant and to become a partner in combating the diversion of chemicals used in illegal drug production. The goal of the DEA is to effectively regulate while still maintaining a positive working relationship with the regulated community. They also keep the regulated community educated on the multiple laws regarding precursor chemicals and implementing regulations. The DEA does its best to serve the public interest by working in cooperation with the chemical industry in developing programs designed to prevent the diversion of regulated chemicals into the illicit market (DEA, 2020).

Everyday household products do not fall under the drug schedules or classes of drugs however, they remain a problem in society because people have found ways to abuse them like drugs. People have found to abuse these products they can inhale them, which is why they are called inhalants. Inhalants are invisible substances found in household products that produce chemical vapors that are inhaled to induce psychoactive or mind-altering effects. There are over 1,000 products that are hazardous once inhaled. Common products such as glue, lighter fluid, cleaning fluids, paint typewriter correction fluid, air conditioning refrigerant, felt tip markers, spray paint, air freshener, butane, and even cooking spray. For a more in-depth list of these type of products, please refer to www.inhalants.org/product.htm (National Inhalant Prevention Coalition, n.d.). Other substances can be inhaled but the term inhalants refers to these substances because they are rarely, if ever, other than by being than inhaled. Products may be consumed by sniffing or inhaling fumes from substances sprayed or deposited inside a plastic or paper bag, huffing from an inhalant-soaked rag stuffed in the mouth, or inhaling from balloons filled with nitrous oxide (DEA, 2020).

These are often among the first drugs that young children abuse. By eighth grade, almost 1 in 5 children report having tried inhalants. Inhalants can cause damage to the parts of the brain that control thinking, moving, vision, and hearing. Cognitive abnormalities can vary from mild impairment to severe dementia. When chemicals are inhaled, they are rapidly absorbed through the lungs into the bloodstream, this quickly distributes them to the brain and other organs. Depending on the degree of abuse, the user can experience slight stimulation, feeling of less inhibition, or loss of consciousness. Within minutes of inhalation, the user experiences intoxication along with other effects similar to those produced by alcohol. These effects may include slurred speech, an inability to coordinate movements, euphoria, and dizziness. After

heavy use of inhalants, users may feel drowsy for several hours and experience a lingering headache. Symptoms exhibited by long-term include weight loss, muscle weakness, disorientation, inattentiveness, lack of coordination, irritability, depression, and damage to the nervous system and other organs. Damaging effects to the body may be at least partially reversible if abuse is stopped but the effects from prolonged abuse are irreversible. Prolonged abuse of highly concentrated chemicals in solvents or aerosol sprays can cause irregular and rapid heart rhythms that lead to heart failure and death within minutes. Signs to look for in children include failing grades, chronic absences, and general apathy. Other outward signs include paint or stains body or clothes, sores around the mouth, red or runny eyes or nose; chemical breath odor, drunk, dazed, or dizzy appearance, nausea, loss of appetite, anxiety; excitability, and irritability. To overdose on inhalants, one must inhale repeatedly over the course of several hours because intoxication lasts only a few minutes. Users try to prolong the high by continually inhaling which is a very dangerous practice. With continuous inhalation, users may suffer loss of consciousness and/or death. Once this occurs, it is called sudden sniffing death it can result from a single session of inhalant use by an otherwise healthy young person and is associated with butane, propane, and chemicals in aerosols. Inhalants can also cause death by asphyxiation by repeated inhalations, which causes high concentrations of fumes displacing the available oxygen in the lungs, suffocation by blocking air from the lungs when inhaling from a plastic bag placed over the head or choking from swallowing vomit after inhaling substances. Most inhalants produce a rapid high that is like the effects of alcohol intoxication. These products are legal in the United States solely because they are common household products they are just misused as inhalants. Even though the Controlled Substances

Act does not currently regulate these substances, they do pose a risk to those who abuse them (DEA, 2020).

Another group of drugs of concern is designer drug or synthesized drugs. The abuse of designer drugs or synthesized drugs has recently re-emerged as a major worldwide issue. These illicitly produced substances differ slightly from controlled substances in their chemical makeup while maintaining the same pharmacological effects. Some of the well-known designer drugs are coined as bath salts, K2 and Spice. These drugs can fall under several categories (DEA, 2020).

Designer drugs often called bath salts are from the synthetic cathinone class of drugs. A synthetic cathinone is a central nervous system stimulant and mimics the effects of cocaine, methamphetamine, and MDMA (ecstasy). These illicit substances can often be labeled as bath salts, research chemicals, plant food, or glass cleaner. Their labeling states not for human consumption in order to sidestep the Controlled Substance Analogue Enforcement Act. This form of labeling conceals the identity of the product. Synthetic cathinones are manufactured in East Asia and are distributed in the wholesale market all over Europe, North America, Australia, and other parts of the world. Common street names for these designer drugs include: bliss, blue silk, cloud nine, drone, energy-1, ivory wave, lunar wave, meow meow, ocean burst, pure ivory, purple wave, red dove, snow leopard, stardust, vanilla sky, white dove, white knight, and white lightning. These products come in a powder form or in gelatin capsules. Synthetic stimulants can be purchased at smoke shops, head shops, convenience stores, adult bookstores, gas stations, and on Internet labeled “not for human consumption” to conceal their identity. Bath salts are usually ingested by sniffing or snorting but can also be taken orally, smoked, or made into a solution and injected. These drugs create feelings such as euphoria and alertness. Adverse

effects can include psychological effects such as confusion, acute psychosis, agitation, and combativeness, aggressive, violent, and self-destructive behavior. Other physical effects can include rapid heartbeat, hypertension, hyperthermia, prolonged dilation of the pupils, breakdown of muscle fibers that causes muscle fiber contents to be released into bloodstream, teeth grinding, sweating, headaches, palpitations, seizures, paranoia, hallucinations, and delusions. Overdose of synthetic cathinones can lead to death. Synthetic cathinones are subject to prosecution under the Controlled Substance Analogue Enforcement Act and can be treated as Schedule I controlled substances if certain criteria can be met (DEA, 2020).

Designer drugs K2 and Spice are intended to be a recreated form of THC, the main psychoactive ingredient of marijuana. These drugs are created from synthetic cannabinoids are often sold under the guise of being herbal incense or potpourri. Synthetic cannabinoids are not organic, but instead are chemical compounds created in a lab. Since 2009, law enforcement has encountered hundreds of different forms of synthetic cannabinoids that are being sold as legal alternatives to marijuana. These products abused for their psychoactive properties and sold without packaging information as to their health and safety risks. Synthetic cannabinoids are sold in small convenience stores, head shops, gas stations, and via the Internet from both domestic and international sources. To avoid criminal prosecution manufacturers, label these products as not for human consumption. Synthetic cannabinoid manufacturing occurs in Asia where there are no rules or quality control laws. These products are then smuggled into the United States. Designer drugs are sold under names that are said to appeal to and entice younger include : Spice, K2, Blaze, RedX Dawn, Paradise, Demon, Black Magic, Spike, Mr. Nice Guy, Ninja, Zohai, Dream, Genie, Sence, Smoke, Skunk, Serenity, Yucatan, Fire, and Crazy Clown. The chemical compounds come in a powder form, dissolved in a solution like acetone, and then

applied to a dry plant material. Once this process is complete, it is prepared for retail sale. The powder is also be dissolved for use in e-cigarettes or other vaping devices. There are several side effects including agitation, anxiety, seizures, stroke, coma, and death. Synthetic cannabinoids can cause acute psychotic episodes, dependence, withdrawal, hallucinations, agitation, disorganized thoughts, paranoid delusions, and violence. Public health officials have warned about the health risks linked to abuse synthetic cannabinoids. The side they listed are tachycardia, elevated blood pressure, unconsciousness, tremors, seizures, vomiting, hallucinations, agitation, anxiety, pallor, numbness, and tingling. These substances have no accepted medical use in the United States. As of date, the Controlled Substance Act lists 43 substances as Schedule I. Synthetic cannabinoids may be subject to prosecution under the Controlled Substance Analogue Enforcement Act (DEA, 2020).

Synthetic opioids have become another drug that causes alarm among substances that are abused. These drugs are created in a lab and target the brain the same as a natural opioids like morphine or codeine. They create pain relief. However, organic opioids are natural substances extracted from the seedpods of certain poppies. Fentanyl and methadone are synthetic opioids but they have been approved for medical use. Synthetic opioids illicitly produced to resemble fentanyl, a Schedule II opioid analgesic, were rampant on the West Coast in the late 1970s and 1980s. However, in the 1980s, the DEA gained control of numerous synthetic opioids such as alphamethylfentanyl, 3-methylthiofentanyl, acetyl-alphamethylfentanyl, beta-hydroxy-3-methylfentanyl, alpha-methylthiofentanyl, thiofentanyl, betahydroxyfentanyl, para-fluorofentanyl, and 3-methylfentanyl. In 2013 these drugs began a resurgence in trafficking and abuse of several types of synthetic opioids this included substances related to fentanyl. Some of the drugs that law enforcement is finding are acetyl fentanyl, butyryl fentanyl, beta-

hydroxythiofentanyl, furanyl fentanyl, 4-fluoroisobutyryl fentanyl, acryl fentanyl, and U-47700. These synthetically produced opioids are morphine that is more powerful and heroin and have an increased risk of a fatal overdose. These synthetic opioids create feelings of relaxation, euphoria, pain relief, sedation, confusion, drowsiness, dizziness, nausea, vomiting, urinary retention, pupillary constriction, and respiratory depression. Signs of an overdose can range from stupor, changes in pupillary size, cold and clammy skin, cyanosis, coma, to respiratory failure causing death. Symptoms such as coma, pinpoint pupils, and respiratory depression signs of opioid poisoning. Multiple synthetic opioids that fall under the Controlled Substances Act. The DEA temporarily placed fentanyl-related substances in Schedule I of the CSA in February 2018. The DEA has been able to investigate and prosecute individuals for trafficking and selling synthetic opioids under Controlled Substances Analogue Enforcement Act (DEA, 2020).

The Controlled Substances Act does not regulate all substances even though some still pose risks to individuals who do not take them correctly. Dextromethorphan (DXM), a cough suppressant, found in over 120 over-the-counter (OTC) cold medications is one of these substances. DXM can be a standalone item or combined with analgesics, antihistamines, decongestants, and/ or expectorants. An adult dosage for a cough is 15 to 30 mg taken three to four times a day. DXM effects last for 5 to 6 hours. DXM can be purchased most pharmacies or supermarkets. People who abuse DXM look for the products with the highest concentration of the drug in cough and cold medicines. On the street the drug can be called: CCC, Dex, DXM, Poor Man's PCP, Robo, Rojo, Skittles, Triple C, and comes in syrup, tablets, capsules, or powder. DXM is abused by taking higher than prescribed dosages. Various amounts are taken depending on body weight and the effect high they want to achieve. Users can ingest 250 to 1,500 milligrams in a single dose which is more than a recommended dosage. On the street abusing

DXM is called robo-tripping, skittling, or dexing. Robitussin and Coricidin HBP are the most abused OTC drugs. While drinking large doses of DXM was the traditionally way to abuse the drug now abuse of tablet and gel capsule has increased. Tablets and gel caps appeal to users because they are to take, carry, and conceal. This allows for easier consumption during the day so you can take them if you are at work or school. DXM, also sold over the Internet, in a powder form serves as a source of DXM for abuse. People illicitly manufacture tablets containing pure DXM or lace them with drugs like pseudoephedrine and/ or methamphetamine. DXM can be abused by people of all ages, but teenagers and young adults are of the most concern. DXM is easy to abuse because of its OTC availability. The Internet also has a large amount of information about how to abuse DXM, which is readily available to anyone. Abuse of DXM can cause confusion, inappropriate laughter, agitation, paranoia, euphoria, hallucinations, sensory changes, and changes in hearing and touch. DXM abuse can create psychological dependence. A DXM high creates over-excitability, lethargy, loss of coordination, slurred speech, sweating, hypertension, nausea, vomiting, and eyeball spasms. Combining DXM with alcohol or other drugs is dangerous and can lead to death. Mixing DXM with antidepressants can fatal. A DXM overdose is treatable and usually does not cause severe medical issues or death. DXM related deaths are usually caused by taking it with other drugs or impairment of the senses that causes accidents. DXM can produce effects similar to marijuana or ecstasy. In some instances, moderate to high doses have, caused effects are like ketamine or PCP. DXM is a legally marketed in the United States as a cough suppressant and it is not a controlled substance or a regulated chemical (DEA, 2020).

What is Abuse and Addiction?

Abuse can be defined as a continual behavior for an extended length of time. In diagnosing abuse, a person must show signs that the substance is keeping them from participating in normal daily routines. People who abuse substances start to decline and can may experience feelings of depression, face personality changes, experience depression, become withdrawn, face irritability, or even angry. They will deny that their use is causing problems or that their personality is changing. They will attempt to hide their use to avoid questions and concern from family and friends (Webmd, n.d.).

However according to the DEA “drug abuse is when a controlled substance is used in a manner or amount inconsistent with the legitimate medical use.” The illegal use of substances in the CSA’s scheduling I through V is warranted as drug abuse. The legal drugs under the CSA are prescribed for patients to be used for medical purposes but if these substances are used outside, the prescribed manner is considered drug abuse. Most controlled substances are capable of producing be physical or psychological dependence. Physical dependence refers to changes that occur in the body after continual use of a drug that creates a need for continued administration of the drug to prevent a withdrawal. The side effects of withdrawal can vary from mildly unpleasant to life threatening. The symptoms of withdrawal can vary depending on the drug being used, dose and route of administration, use of other drugs, frequency and duration of use, age, sex, health, and genetic makeup of the abuser. Psychological Dependence relates to the need or craving of the user for a drug. Individuals who are psychologically dependent think they cannot function without the drug. Physical dependence can disappear within days or weeks of ending drug use. Psychological dependence lasts longer and is a primary reason for relapse. Physical dependence does not mean someone is addicted to drugs. Individuals with a substance

use disorder are usually physically dependent on a drug but this can exist without addiction. For example, patients who take narcotics for chronic pain management or benzodiazepines to treat anxiety are likely to be physically dependent on that medication (DEA, 2020).

According to Abadi et al. (2014)

Drug abuse is one of the greatest medical, social, economic and cultural problems. Despite drug abuse being socially frowned upon, different classes of people are seriously involved with it, in a way that drug abuse not only threatens individual health, but also compromises family and public health, causing psychological and moral decline.

Addiction and drug abuse stem from social, familial, and personality factors [3]. Children's educational underachievement, increased divorce rate, and domestic violence are among the consequences of addiction [4]. Among the personal risk factors, genetic background, personality traits, positive outlook on drugs, and the pleasant influence of drugs on some people are considerable. Genetic background and personality traits are of special importance for identifying high-risk individuals [3,5]. According to a belief held by many researchers, personality is the most important underlying factor for addiction. It is believed that drug abusers have personality weaknesses, making them vulnerable to drug abuse and becoming addicted [1,2]. Numerous studies have been conducted on the relationship between drug abuse and personality structure (p 531-532).

Recovering addict now neuroscientist, Judith Grisel, describes her harrowing experience with being addicted to drugs to becoming a neuroscientist in her book *Never Enough the Neuroscience and Experience of Addiction*. Grisel (2019) writes:

The first time I got drunk, at thirteen, I felt as Eve should have felt after tasting the apple. Or as a bird hatched in a cage would feel upon being unexpectedly set free. The drug provided physical relief and spiritual antidote for the persistent restlessness I'd been unable to identify or share. An abrupt shift of perspective coincident with guzzling a half gallon of wine in my friend's basement somehow made me feel sure that both life and I were going to be all right. Just as light is revealed by darkness, and joy by sorrow, alcohol provided powerful subconscious recognition of my desperate strivings for self-acceptance and existential relationships, fears, and hopes. At the same time, it seemed to deliver, on a satin pillow, the key to all my blooming angst. Abruptly relieved from an existence both harsh and lackluster, I had finally discovered ease.

I hadn't consciously recognized that I'd been just enduring, but that evening, as I leaned out the open window of my friend's bedroom, gazing at the stars, I took what felt like my first truly deep breaths (p 5).

Gisel started with elation and determination from that first drink to consume as much as she could and as often as she could get away with drinking. She was only in seventh grade when she started down this path. School became her escape to drink as much as possible before, during and after classes. As she continued to drink, she never got that same feeling of contentment but any release was better than none for her. Gisel (2019) further explains:

The next ten years were characterized by the simple philosophy and practice: I sought any opportunity to use mind-altering drugs and paid any cost. My actions only made sense in terms of that guiding principle; virtually every moment was shaped by an orientation toward escaping sober awareness. If my first good drink

gave men sense of peace, the first time I got high was plain fun. Alcohol made life bearable, but weed made it hilarious! And coke made it “hot,” and meth, exciting, and acid, interesting... For all this pharmacological conjuring, I traded myself away a piece at a time. (p. 8)

Gisel was kicked out of college and her parents cut her off financially which she saw only as more freedom. She worked various jobs to pay for her next high. Many times, she was homeless. She stole money from the places she worked. She eventually turned to hard-core use with needles. All the while, she was telling herself that she was still a good person. She says she tells her story of her and her friends not to scare and offend people but so they can see the dark path of addiction.

On her 23rd birthday, Gisel’s father took her to dinner. During the course of this dinner, her father tells her he only wants her to “be happy.” She began to sob and tell him how miserable she was. This was a turning point in her life. Her parents took her away to a treatment center far from home. After 28 days in a treatment facility and three months in a halfway house, she realized her misconception of alcohol and drugs. She set out to find a cure for people like her and to understand trigger in the brain led people to choose addiction like her. Her desire to find the why was also her need to understand her failure. Gisel has done in-depth studies of the CSA’s scheduled drugs to the drugs in all of the DEA’s classification. She has never found her personal why but has made great advances in the study of addiction. Findings are that addiction is a disease of the brain and more than our biological makeup shape our brains. Our environment effects our brains as much as our genetics.

Keegan much like Gisel started his journey into addiction with alcohol. Keegan & Moss, (2008) feel it is important to know the difference between substance abuse and substance

dependence which some just refer to as abuse/use and addiction. They define abuse in relation to youth as using alcohol or drugs regardless of the negative outcome. They call addiction substance dependence and consider it as a loss on control when taking drugs, mental and behavioral disturbances, and harmful physical symptoms. Like others, they believe abuse can turn into addiction (Keegan & Moss, 2008, p. 9).

In the section about who becomes addicted and who, does not Keegan and Moss (2008) write:

Why some people become addicted to substances and others do not is a mystery that scientist have yet to fully solve. Lots of scientific studies suggest that no single element in one's life can account for addiction. Rather, the process involves a mix of factors, and which ones are most important probably varies among individuals. These characteristics raise risk-they don't determine behavior. It's very complicated, and to complicate things even more, even if a person does appear to have one or more of the risk factors, that does not guarantee that he or she will use drugs or become addicted (p. 33).

What does appear clear to scientist is that certain factors increase the risk of drug use and abuse such as biology, genetics, social pressures, and mental issues along with environmental and personal experiences. When someone becomes addicted it is very likely that one if not all of these factors are apparent reasons (Keegan & Moss, 2008, p. 9). Studies show that abuse and addiction happen in more than one area of the brain. The reward circuit has proven to be the area affected. This circuit system in the brain controls pain, pleasure, eating and sleeping. Drugs manipulate the reward circuit to reroute what is essential for surviving (Keegan & Moss, 2008, p. 61).

The human brain rewards us when we do something pleasurable. Exercising, eating, and other pleasurable behaviors. While this not only makes us feel good, it encourages us to keep doing what we are doing. Our brains then learn to repeat these behaviors. Drugs trigger that same part of the brain. However, the extreme extent they take it too is rewiring the brain in harmful ways. When someone takes a drug, their brain releases extreme amounts of dopamine. The brain then overreacts, reducing dopamine production to normalize these sudden increased levels the drugs have created. Thus, the cycle of addiction now begins. Once someone is addicted, they do not use drugs to feel good, they using drugs to feel normal (Shatterproof, n.d.).

Addiction is chronic, which means it is a long-term disease, but it can be preventable and treatable. The disease cannot be cured, but it can be manageable with treatment. It is crucial that treatment immediately address any co-occurring neurological or psychological disorders that can cause individuals to consume drugs and become addicted in the first place. While there is not a cure for addiction, many proven treatments are effective at managing the illness. Like any chronic illness, addiction requires continual maintenance that might include medication, therapy, and lifestyle change. Once a person begins recovery from addiction, they can go on to live a healthy and successful life. Addiction is treatable and recovery is the expected outcome of treatment (Shatterproof, n.d.).

Treatment and Recovery

The first step for treatment and recovery is recognition of the problem. Treatment and recovery can be difficult if a person denies having a substance abuse problem. Intervention of concerned friends and family often prompts treatment. Formal assessment by a healthcare provider should be sought to determine if a substance use disorder exists. Some of the extreme

cases can benefit from treatment. Sadly, a great deal of people who could benefit from treatment do not receive help (NIDA, 2020).

Based on evidence that addiction affects so many aspects of a person's life, more than one type of treatment may be often required. Most often, a combination of medication and therapy proves to be most effective. Specific treatment aimed at an individual's level of abuse and any existing medical, psychiatric or social issues can lead to a life of sustained recovery. During treatment, medication is used to control cravings and relieve withdrawal. Therapy can help an addict understand their behavior and motivations for drug use, develop self-esteem, deal with stress, and address any mental health issues. Treatment can come in many forms such as hospitalization, therapeutic communities, or outpatient programs (NIDA, 2020).

Many of those suffering from addiction are unable to recover and maintain a sober lifestyle alone. Therefore, many addicts find the help and support they need to maintain a sober lifestyle in a treatment facility. There are many benefits obtained by utilizing the aptitude of a treatment center. Treatment is beneficial to those who suffer from drug and alcohol abuse when it begins to cause them problems (Wilson & Kolander, 2011, p. 269).

Wilson and Kolander (2011) suggest that treatment be taken with trained professionals and that the addict must be committed to the program for it to be successful (p. 7). In 2003, almost \$21 billion was spent on drug treatment. Many people who need treatment refuse to enter programs or do not have access to treatment (Wilson & Kolander, 2011, p. 267).

One of the best ways to stay on the path of recovery is to avoid environmental factors that can cause relapse. Avoid your old friends and hangout places. Some professionals say to terminate all of your old friendships. The same applies to family members that may drink or take drugs. Cut the ties so there are no temptations. Another sure step in recovery is to remain in

therapy because this is how recovery started. Aftercare therapy programs help you stay on track by providing the support you need to stay clean. Once you are in recovery you may find it difficult to find your place in society and regain the trust of people you hurt. This process will take time and after care can play a role in reentry (Keegan & Moss, 2008).

The period of your youth should be spent on finding your identity and growing up. If substance abuse begins this early in life, you will have wasted a great deal of time before you find yourself. Keegan lost many years of his life to addiction before he found himself. He started using drugs at 16 and when he stopped, he was still 16 emotionally (Keegan & Moss, 2008).

Early Prevention

Wilson and Kolander (2011) write that “prevention is an organized activity designed to avoid or decrease health problems” (p 7). Prevention should focus on drugs, individuals, and community settings. They feel prevention should be in homes, schools, churches, and other community settings. However, they report that the prevention strategy would reach far more people if it began with education (Wilson & Kolander, 2011, p. 7).

According to the National Institute on Drug Abuse’s (NIDA) guide Principles of Substance Abuse Prevention for Early Childhood, “substance abuse and addiction are preventable disorders.” (NIDA) Abuse and addiction interferes with healthy functioning, contributes to physical and behavioral problems, injuries, loss of income, and family dysfunction. Typically use begins during the early adolescence however, biological, psychological, social, and environmental factors that contribute to the risk. Armed with this information we can intervene early in a child’s life to prevent substance use.

NIDA reports:

By adolescence, children's attitudes, behaviors, family interactions, and relationships—factors that may influence propensity to try or become addicted to drugs—are well established and not as easily changed. For young children already exhibiting serious risk factors for later drug use, delaying intervention until later childhood or adolescence may make it more difficult to overcome accumulated risk factors and achieve positive outcomes.

Too Good for Drugs (TGFD) is a school-based drug intervention program designed to diminish alcohol, tobacco, and other drugs (ATOD) use among children and youth and to diminish risk factors and enhance protective factors. Through each grade level, K through 12, TGFD uses a developmental curriculum based on five interwoven components: Goal Setting, Decision Making, Bonding with Prosocial Others, Identifying and Managing Emotions, and Communicating Effectively (Mendez Foundation, 2020).

The curriculum focuses on peer pressure, normal behaviors, and the consequences of drug use. It also shows the benefits of a drug-free life. In each of the grades, the curriculum allows students to increase their skills from year to year. Interactive workbooks are provided to students, and home workout activities are assigned to enhance parent involvement. The program is designed to deliver a classroom style setting for support of individual, paired and group learning. Teachers, counselors, prevention specialist, community youth educators, mental health professionals, law enforcement officers, student peers or youth focused mentors, guides and educators implement it (Mendez Foundation, 2020).

The program promotes the social and emotional skills development and educates youth about the consequences of bad behaviors such as substance abuse and violence. Protective factors used for targeted increase in awareness include social and emotional competency skills,

personal efficacy, exposure for schools, community and cultural norms that frown on substance use, knowledge of the harm of the negative effects of substance use, and positive school connection. In trial uses, students have reported that because of exposure to the program they do not intend to use. TGFD puts social and emotional skills to work with fun and interactive lesson building the groundwork for self-confidence that young people need to make healthy choices (Mendez Foundation, 2020).

At the elementary school level, additional skills and developmental topics build on the core skill set to broaden the student's sense of self-efficacy and confidence. Lesson designs are tailored to the intellectual, cognitive, and social development of the student. Interactive games and activities help students visualize and apply the strategies and skills directly so they can begin to apply them in their daily life right away. These additional concepts include Managing Mistakes and Disappointment, Resisting Peer Pressure, Understanding Peer Influence and Making Healthy Choices. Substance use and its effect on the body are introduced when developmentally appropriate. In the youngest grades, the lessons develop an understanding of what is healthy to put in the body and what is not. This foundation prepares students for discussions about tobacco, alcohol, and other drug use in later elementary years and include Safe Use of Medicines - Grades K – 5, Effects of Nicotine Use - Grades 2 – 5, Effects of Alcohol Use - Grades 3 – 5, and Effects of Marijuana and THC Use - Grade 5 (Mendez Foundation, 2020).

For grades 6, 7, and 8 the program empowers teens to meet the challenges of middle school life. Students set and reach goals that are more complex and develop stronger decision-making skills and effective-communication skills. They also learn to identify and manage their emotions groups. The program addresses environmental and developmental risk factors related to ATOD.

Substance use topics are discussed in the context of expectations, peer pressure and influence, and the role of the media. Interactive games and activities create an experiential learning environment so students can learn and apply the skills in the classroom setting. Additional skills and developmental topics build on the core social skill set to broaden the student's sense of self-efficacy and confidence and are designed to the intellectual, cognitive, and social development of the student. Substance use and its effects on the body are introduced when developmentally appropriate (Mendez Foundation, 2020).

For high school grades, TGFD applies real world challenges teens may face related to prescription drug misuse, underage drinking, marijuana abuse, opioid abuse, and nicotine use. Students also explore the stages of addiction and the risks associated with experimentation. Social emotional skill development is at the core of TGFD to promote social awareness and self-awareness to equip teens to evaluate the social and peer influences. Interactive activities challenge students to explore healthy alternatives to unhealthy risks as they work to reach their goals. Additional skills and developmental topics build on the core social skill set to broaden the student's sense of self-efficacy and confidence and are tailored to the intellectual, cognitive, and social development of the student (Mendez Foundation, 2020).

In regards to the TGFD program Hall, et al report:

In this study, we identified three levels of risk among participating 6th graders, based on degree of reported early experimentation with drugs. The results show the effectiveness of the TGFD school-based program in diminishing reported smoking behavior, alcohol consumption, binge drinking, and marijuana use among high risk 6th graders, and enhancing those R&P factors that can strengthen their resiliency related to drug use. Based on post-survey effect sizes for the 30-

day usage outcomes (.56 to 1.03) and for the R&P factors (.33 to .76), the short-term impact of the program for the high risk students was broad and substantive. The positive effects, though attenuated by time, were still present 6 months after treatment for the 30-day usage outcomes (ESs of .46 to .65), and for most of the R&P factor outcomes (ESs of .22 to .63). Also, the reported use of cigarettes, alcohol, and marijuana over the past year showed a diminution (ESs of .26 to .57) favoring high risk students receiving the program.

A study by Kumar, et al., (2001) looked at the importance of state, local, and commercially developed substance abuse prevention programs in middle and high schools from 2001 to 2007. Based on the school's administration reports schools and school districts offer students an average of 1.62 prevention programs during their school years. Schools in the West had significantly fewer prevention programs than those in other regions of the country. Students in mainly white and in higher socioeconomic status (SES) schools received significantly more prevention programs than students in majority of blacks, Hispanics, or in lower SES affluent schools. The program that students received were locally developed. D.A.R.E. The results from this study suggest that schools often develop their own curriculum to suit their students' needs. Multiple governmental and nongovernmental agencies, including the Center for Substance Abuse Prevention (CSAP) in the Substance Abuse and Mental Health Services Administration (SAMHSA), support health education designed to include tobacco and drug prevention education. Several states, school districts, and schools have developed their own drug prevention curricula. Which has resulted in an increasing demand for accountability by legislators as well as researchers. In the Principles of Effectiveness stated in the Safe and Drug-Free Schools and Communities Act of 2002 school districts are required to implement evidence-based prevention

programs. The purpose of the study was to report on the existing status of schools in regard to what was being offered for prevention. The information found in the report was valuable however, there were faults in the study as not all programs were research based. Some teachers implemented their own curricula. Some programs had a large base of research while other programs had none. Some programs offered were developed the districts themselves, which had no research or data to evaluate their effectiveness. However, this was the first study to be documented based on a national level of all types of schools. This will help determine if a one-type program needs to be implemented or if local programs will suffice for prevention.

Kentucky Specialty Courts

Over the past two decades, the number of incarcerations in the United States have rapidly been increasing. Tougher laws and penalties for drug related offenses have contributed to this increase. There has been tremendous advances in the study of the nervous system and addiction. These advances have led to the discovery that addiction is a brain disorder with genetic components. However, a large gap remains in the research and the treatment especially for those incarcerated. Prisoners who could benefit from treatment are not receiving it. These offenders are at risk of infectious diseases like human immunodeficiency virus (HIV) and Hepatitis C. Leaving these offenders untreated is a disservice to the public for health and safety reasons. Treatment could improve their health and the risk of being a repeat offender (Chandler et. al.,2009).

If the abuse or addiction leads to incarceration, help is available in the state of Kentucky for nonviolent offenders whose main problem stems from substance abuse. The Department for Specialty Courts provides Drug Court to give eligible participants a chance to make positive changes in their life. The Administrative Office of the Courts provides specialty Court programs,

and they pay for treatment, drug testing, and case management. There is no fee charged to the participants in Drug Court. The programs are conducted under strict enforcement by a judge, Specialty Court staff, local criminal justice officials, treatment providers, and a representative who creates a program that is jurisdiction specific. The program takes 22-25 months to complete, consists of three phases and aftercare (Kentucky Drug Court, 2020).

The first drug court was established in Miami, Dade County, Florida in 1989. The Kentucky Drug Court was created in 1996. Drug Court allows eligible defendants to enter the program one of three ways: a diversion based on approved local procedures, a condition of their probation or through deferred prosecution (Teeters, 2018, pp 13).

In 1996 when a Drug Court panel met, they had no guidelines they based their outline on instincts, personal observations and experience thus creating Ten Key Components for Drug Court. The Kentucky Drug Court Ten Key Components are; drug courts integrate alcohol and other drug treatment services with justice system case processing, using a non-adversarial approach. Prosecution and defense counsel promote public safety while protecting participants' due process rights. The eligible participants are identified early and promptly placed in the drug court program. Drug court provides a continuum of alcohol, drug and other treatment and rehabilitative services. Frequent alcohol and other drug testing monitor abstinence. A coordinated strategy governs drug court responses to participants' compliance. Ongoing judicial interaction with each drug court participant is essential. Monitoring and evaluation measure the achievement of program goals and gauge effectiveness. Continuing interdisciplinary education promotes effective drug court planning, implementation, and operations. The forging partnerships among drug courts, public agencies, and community-based organizations generates local support and

enhances drug court program effectiveness. Success is based on these standards (Teeters, 2018, pp 21-49).

Phase I is the stabilization phase. Participants must consent to the all requirements for this phase. You will provide a minimum of three random urine drug/alcohol screens per week. You must attend at least three clinical contact hours per week. You will attend one court session each week. You have to obtain/maintain court-approved, full-time employment, training, or education. You must obtain/maintain court-approved housing. You must arrange to pay court obligations. You are required to make individual contact with Drug Court staff once a week. You must be able to show understanding of substance abuse treatment. You will enroll/attend 12 step program and drug free for 30 consecutive days before promotional consideration into Phase II (Teeters, 2018, pp. 54-55).

Phase II is the educational phase of the program. During this phase, you must submit two random urine drug/alcohol screens per week. You must make two clinical contact hours per week and one court session every two weeks. You are still required to maintain court approved full-time employment, training, or education. You will maintain court approved housing. Continual payments of court obligations. You are required to make one individual contact with Drug Court staff once a week. You must demonstrate that you understand the recovery principles. Continue participation in the 12-step program and remain drug free for 90 consecutive days before promotional consideration into the next phase (Teeters, 2018, pp. 55).

Phase III is the self-motivational phase of the drug court program. In phase III, you must submit one random urine drug/alcohol screens per week. You must have one clinical contact hour per week. Partake in one court session every three weeks. You must continue to maintain court approved full-time employment, training, or education. You are still required to maintain court

approved housing. You must continue to pay of court obligations. You will make one individual contact with Drug Court staff once a week. You must demonstrate understanding of recovery lifestyle. You must still be in a 12-step program, drug free for 180 consecutive days before being considered for aftercare (Teeters, 2018, pp. 55-56).

Successful completion of the program requires that all three phases of Drug Court are completed, aftercare has been completed, all restitution owed is paid, drug free for 180 consecutive days and no pending criminal charges. In addition to leading a recovery lifestyle participant may be eligible for legal relief by having their charges dismissed or their record expunged, probation time could be conditionally discharged (Teeters, 2018, pp. 55-56).

Drug court began to aid the addicted in the criminal justice sector. Drug Court is achieving what it set out to do. It has reduced drug use and criminal behavior in drug offenders. After a more than 20-year solid track record it has convinced leaders of state government along with local judges, prosecutors and treatment providers that Drug Court is an essential part of the Kentucky court system. The program is demanding but communities have become safer and family ties have improved (Teeters, 2018, pp. 56-57).

Finding

Drug use is a worldwide issue that has no boundaries. Drugs do not discriminate against age, color, religion, ethnic group, gender, political party, social status, or financial status. To understand drug use one must first understand the difference between drugs, abuse, and addiction. Many people believe that drug users are morally lacking, impoverished people but that could not be further from the reality. Our country has been fighting the war on drugs for almost a century. Four Presidents have personally waged a war on drugs to no avail. Addicts and abusers continue to fill our courtrooms, hospitals, and prisons. Drug sales can lead to violent

crimes that ravage our lives and neighborhoods. Children of addicts and abusers can be neglected, abused, and even abandoned. Prevention programs exist to stop use before it starts but we lack the early education programs in schools. Scientific studies regarding the Mendez Foundation's Too Good For Drugs program shows that early prevention programs do work. People with abuse and addiction issues are more likely to be incarcerated than treated. In Kentucky, we have developed a Specialty Court that may have alternative options for individuals that meet a certain criterion for aid versus incarceration.

Not everyone who uses drugs will become addicted. Our bodies and brains are all different. Each person can react to drugs differently. There is no set standard for when or how fast someone can become addicted. People do not

set out with the intention to become addicted to drugs. People may like how the drug makes them feel when they first take alcohol or drugs. Everyone thinks can control how much and how often they use the drug. Drugs take away people's ability of control and change the brain. After the first rush, you may feel good but in time, you might need to take the drug just to feel normal. The drug may require you to start taking more just to get the same high.

A great deal of people faces situations that they cannot deal with alone and therefore they cannot function properly. The stress they face may be mounting up more than normal and their ability to cope is not sufficient. Whatever the situation may be a great number of people turn to drugs to cope with problems they feel they cannot control. In some instances, the situation may be beyond their control and they find that drugs make it easier to cope.

To understand drug use you first must understand the difference between drugs, abuse and addiction. Many people believe that drug users are poor people that have no morals but that could not be farther from the truth. Our country has been fighting the war on drugs for almost a

century. Four Presidents have personally waged war on drugs. Unfortunately, we are losing this war. Addicts and abusers continue to overflow our courtrooms, hospitals, and prisons. Drug use and sales can lead to violent crimes that ravage our lives and neighborhoods. Children of addicts and abusers can be neglected, abused, and even abandoned. Prevention programs do exist to stop use before it starts but we lack the early education programs in schools. People with abuse and addiction issues are more likely to be incarcerated than treated. In Kentucky, we have developed a Specialty Court that may have alternative options for individuals that meet a certain criterion to receive help versus going to prison.

Recommendations

To solve the drug addiction problem faced by the United States we need to focus our efforts on early prevention. I feel that in order to better care for our communities and environment we need to educate people about the types of drugs and the dangers they propose not only to the user but to the people surrounding them too. Early prevention programs have shown that when implemented correctly they reduce the rate of substance use. Given this information, the United States Department of Education should focus on implementing the same program nation-wide in all school districts. Training should be provided for the educators, so the same techniques are used at each school. Children and parents should sign a pledge to participate in the campaigns against drug use. The project cost could be pulled from the money spent to fight drugs on the street because that fight is futile. The United States has spent billions of dollars in the recent years to remove drugs from the streets and yet our drug problem is much bigger today than ten years ago. Committees can be established to implement these programs and to follow-up on what works and what does not.

If children, see their parents become involved in the efforts of the school system they are more likely to avoid substance use. You may have a parent struggling with addiction that get helps because of the information a child brings home about substance abuse or addiction. Parents that are active and present in their kid's everyday life can keep their kid away from using these substances. Parents need to be asking questions about what their kids are doing and their friends. Insisting on meeting the parents of their friends can also be a good source of information about what they are doing away from home.

This thesis is written about the types of drugs and how they are processed. I have laid out the difference between abuse and addiction. I have explained how abuse turns into addiction. This information can play a big role in identifying if someone that you care about is on drugs. This can help people be aware of the consequences and of the effects caused by the drug they are using. Laying the foundation for education and understanding can be crucial in the fight against drugs.

Conclusion

Based on my research most anything can be considered a drug. When people first start taking a substance, they may think they can control how much they use. Overtime people may feel the need for more of the drug to get the same feeling. This can lead beyond abuse to addiction. The following are warning signs to look for in people that may have a problem with substance abuse: lack interest in things they used to enjoy, a change of friends, stop taking care of oneself, spending more time alone, a change in eating habits, a change in sleep patterns or behavior, trouble at work or with family, and mood swings.

Most people never experience substance abuse or addiction. Therefore, it can be very hard to understand and grasp the why people suffer from drug abuse or addiction. Substance

abuse affects every aspect of the user's life. They can hurt themselves and the people around them. It ruins relationships and financial well-being. Substance abuse can also lead to addiction. It can cause serious health problems and even death. There is help available to those who want help. Options for help can include counseling, medicine, or both. If you have a substance abuse problem and want to quit seek help from a medical doctor or trained therapist for substance abuse. They can help figure out the best treatment options for you. If you are unfortunate enough to land in court due to drugs hopefully, drug court will be an option to help you get treatment.

References

- Abadi, M., & Bakhti, M., et. al., (2014). The relationship between personality traits and drug type among substance abuse. *Journal of Research & Health*, 8 (6), 531-540. doi: 10.29252/jrh.8.6.531
- American Psychiatric Association. (2020). *What is Addiction?* <https://www.psychiatry.org/patients-families/addiction/what-is-addiction>
- Australian Government Department of Health. (n.d.). *What are drugs?* <https://www.health.gov.au/health-topics/drugs/about-drugs/what-are-drugs>
- Chandler, R., Fletcher, B., Volkow, N., (2009). Treating drug abuse and addiction in the criminal justice system: Improving public health and safety. *The Journal of the American Medical Association*, 301(2), 183-190. Doi:10.1001/jama.2008.976
- Drugs. Com. (n.d.) *Find drugs & Conditions.* <https://drugs.com>
- Grisel, J., (2019). *Never enough: The neuroscience and experience of addiction* (1st ed.). Double Day
- Hall, B. W., Bacon, T. P., & Ferron, J. M. (2013). Randomized controlled evaluation of the too good for drugs prevention program: Impact on adolescents at different risk levels for drug Use. *Journal of Drug Education*, 43(3), 277–300. <https://doi-org.ezproxy.waterfield.murraystate.edu/10.2190/DE.43.3.e>
- Hart, C. L., & Ksir, C. (2013). *Drugs, society & human behavior* (15th ed.). New York, NY: McGraw-Hill.
- Keegan, K., & Moss, H.B. (2008). *Chasing the high* (1st ed.) Oxford University Press
- Kentucky Court of Justice (2020). *Kentucky Drug Court: Paving the Road to Recovery.* <https://kycourts.gov/courtprograms/kyspecialitycourts/Pages/>

- Kumar, R., O'Malley, P.M., Johnston, L.D. & Laetz, V.B. (2013). Alcohol, tobacco, and other drug use prevention programs in U.S. schools: A descriptive summary. *Journal of the Society of Prevention Research*, *14*, 581–592 <https://doi-org.ezproxy.waterfield.murraystate.edu/10.1007/s11121-012-0340-z>
- Mendez Foundation (2020). *Too good for drugs*. <https://toogoodprograms.org/collections/too-good-for-drugs>
- National Institute on Drug Abuse. (n.d.) *Treatment approaches for drug addiction drugFacts*. <https://www.drugabuse.gov/publications/drugfacts/treatment-approaches-drug-addiction>
- National Institute on Drug Abuse (n.d.). *Principles of substance abuse prevention for early childhood*. <https://www.drugabuse.gov/publications/principles-substance-abuse-prevention-early-childhood>
- National Institute on Drug Abuse (2020) *Can addiction be treated successfully?* <https://www.drugabuse.gov>
- National Institute on Drug Abuse. (2019). *Criminal Justice*. <https://www.drugabuse.gov/publications/drugfacts/criminal-justice>
- Shatterproof. (n.d.). *Science of Addiction*. <https://www.shatterproof.org/about-addiction/science-of-addiction>
- Substance Abuse and Mental Health Services Association. (n.d.) *Center for Substance Abuse Prevent*. <https://www.samhsa.gov/about-us/who-we-are/offices-centers/csap>
- United States Drug Enforcement Agency (2020). *Drugs of abuse a DEA resource guide*. <https://www.getsmartaboutdrugs.gov/sites/getsmartaboutdrugs.com/files/publications/Drugs%20of%20Abuse%202>
- WebMd. (n.d.). *What is Substance Abuse?* <https://www.webmd.com/mentalhealth/addiction/substance-abuse#2>

Wilson, R.W., & Kolander, C. A. (2011). Drug abuse prevention (3rd ed.) Jones and Bartlett
Publishers