Narcotic Educational Foundation of America

Drug Abuse Education Provider of the:

California Narcotic Officers' Association

VALIUM & OTHER DEPRESSANTS

***QUICK FACTS*:**

Drugs that slow down mental and physical functions of the body are known generally as central nervous system (CNS) Depressants. Because these chemical agents tend to produce a calming effect, relax muscles, and relieve feelings of tension, anxiety, and irritability, they are described as having a sedative or sedating effect. There are newer drugs in this classification that are less sedating, much safer, slower to induce tolerance, and demonstrate a greater anti-anxiety effect. However, the newer drugs, over time, are equally prone to result in dependence. Abuse of prescription drugs to get high has become increasingly prevalent among teens and young adults. Abuse of prescription drugs now ranks second only behind marijuana as the Nation's most prevalent illegal drug problem.

DEVELOPMENT OF CNS DEPRESSANTS

HISTORY OF DRUG

Depressant drugs have been used since the beginning of mankind. Herbs and alcohol were used to produce stupor and sleep. Supposedly synthesized by Adolph von Baeyer on December 4, 1862 (Saint Barbara's Day). Thus, the name "barbiturates" was derived from the popular local saint's name. In the early 1900's, barbiturates officially entered the field of medicine under the name of barbital.

Unlike barbituric acid from which it was derived, barbital not only sedated, but also induced sleep. Since the introduction of barbital more than 2500 barbiturates have been synthesized. Of these, about 50 have ever been prescribed medications. The barbiturates proved so successful as a sedative-hypnotic, they remained the number one depressant-type medication until the 1960's. Still prescribed today, barbiturates have been replaced in large measure by the newer minor tranquilizers (meprobamate), and its successors the benzodiazepines (Valium and etc.).

These new anti-anxiety drugs are generally less sedating, safer, slower to induce tolerance, and demonstrate greater anti-anxiety effects, with less sedation, than the barbititurates. However, they are dependence - producing drugs.

CHARACTERIZATION OF CNS DEPRESSANTS

1. Increasing dosages produce signs of progressive central nervous system depression ranging from sedation to sleep.

2. Overdose will cause mental clouding, loss of muscular coordination, and eventually respiratory arrest.

3. Chronic use of high doses leads to the development of tolerance, but a level of intoxication can always be reached if the dose is high enough.

4. There is cross-tolerance between the groups. For instance, an alcoholic may be somewhat tolerant to the effects of sleeping pills or tranquilizers.

5. Chronic use of large doses leads to physical dependence and withdrawal if usage is abruptly stopped. Withdrawal symptoms can be lessened to a certain extent if a drug from another class of sedatives is substituted.

6. When drugs from this class are taken together, one sees a far greater CNS depressant effect than otherwise would be expected. This is called synergism.

VALIUM "MOTHER'S LITTLE YELLOW HELPER"

"What a drag it is to get old!" This classic line from the Rolling Stones rock group was the herald for the abuse of the world's most available drug: **Valium**. A supposed panacea for anxiety, nervous tension and depression, Valium and its many derivatives has become one of the most abused drugs in modern pharmacopiae. Though this drug has helped millions of sick people, Valium, Xanax and related compounds have been transformed into one of the most common drugs of abuse.

Manufactured by Roche Pharmaceuticals in the early 60's, Valium was an immediate market hit. The drug was loosely regulated and was prescribed for conditions that did not require the type of chemical intervention that occurs with Valium. The rather capricious use of the drug led to addicted patients throughout the world. The addiction to Valium bore very close resemblance to alcoholism. In fact, the drug is pharmacologically active at receptor sites that are sensitive to alcohol use. Ironically, Valium is sometimes used as a drug to help alcoholics wean themselves away from behaviors of their addiction. In essence, one addictive substance has been substituted for another in cases of addiction treatment.

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Valium is widely marketed under its generic name, "diazepam." In countries such as Mexico and Canada, the drug is available in stronger doses in over- the- counter form.

Pharmacologists worked hard on developing newer medications that built upon Valium's strong points, while eliminating some of the unwanted side effects. This work yielded nearly a dozen compounds that bore a chemical likeness to Valium. This line of chemical "cousins" has now flooded the healthcare market. These second generation drugs are used for a variety of ailments. From the treatment of anxiety, to the management of severe muscular skeletal spasm, these drugs have proliferated. With the increased use of these drugs for legitimate medical purposes, there has been a collateral increase in the number of people who are either addicted, or who have become habitual users. Many dependent people obtained their drugs from sources that illegally diverted them from the stores of health care professionals and pharmacists.

Two of the more famous "cousin" drugs to Valium are Xanax and Dalmane. Though Valium is a much sought after drug, Xanax and Dalmane have developed their own cult following with illegal drug users.

For many experienced drug users and addicts, this particular family of chemical compounds acts as a buffer during the agonizing process of chemical withdrawal. For heroin users, drugs like Xanax and Valium are very helpful in management of withdrawals. When heroin sources dry up and other alternatives cannot be found, Xanax and Valium, in proper doses, can help mediate the severely uncomfortable experience of drug withdrawals. These drugs can also be mixed with prescriptive pain relievers to form a combination that can in some aspects come close to emulating a regular heroin "high."

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TYPES OF CNS DEPRESSANTS

- **BARBITURATES**
  - Derivatives of barbituric acid
  - High potential for abuse
- **NON-BARBITURATES**
  - Similar in action as Barbiturates
  - High potential for abuse
- **ANTIDEPRESSANTS**
  - Psychic energizers
  - Mood elevators
  - "Anti" is related to psychological
  - Not commonly abused
- **ANTIANXIETY TRANQUILIZERS**
  - Also called minor tranquilizers
  - Widely abused
- **ANTIPSYCHOTIC TRANQUILIZERS**
  - Also called major tranquilizers
  - Not widely abused

CENTRAL NERVOUS SYSTEM DEPRESSANTS COME IN PILL AND CAPSULE FORM

WARNINGS OF ABUSIVE USE

Manufacturers' warnings to doctors (who normally prescribe limited doses) include: "This drug may impair the mental and /or physical abilities required for the performance of potentially hazardous tasks such as driving a vehicle or operating machinery. The concomitant use of alcohol or other central nervous system depressants may have a synergistic effect. Patients should be warned accordingly." Their warning continues... "prolonged use of barbiturates, even in therapeutic dosages, may result in psychological dependence (a craving). Withdrawal symptoms (from physical dependence) may occur after chronic use — resulting in delirium, convulsions, or death."

TOLERANCE - DEPENDENCY WITHDRAWAL

In addition to the physical demand and mental hold depressants develop when abusively used, there is another phenomenon - tolerance. The initial doses a user is taking regularly soon loses effectiveness. The amounts being taken must be increased to regain the original sedation feeling. However, the larger doses will also gradually become ineffective, and the user will have to increase the size of the dose again and again - until unbelievably large amounts have been consumed. With this tolerance there develops the almost uncontrollable craving termed "psychological dependence," and a physical demand termed "physiological dependence." When these needs are not satisfied, the results are "withdrawal symptoms" - a torturous physical upheaval. These are the "dependencies" manufacturers warn doctors about. These conditions are commonly referred to as drug addiction.

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For others, Xanax and other diazapenes represent the preferred social drug of abuse, much like some who may choose to use alcohol or marijuana. Unlike alcohol or marijuana, the diazapenes have no representative odor associated with their use. They frequently cause a hangover effect and they are fairly reliable depressants for those who desire such an effect. The most significant problem with this phenomenon is that Xanax and Valium users often mix these drugs with alcohol. When this occurs, a toxic cocktail takes form. For reasons that are not completely understood, when diazapenes and alcohol are mixed they become overly potent.

Beyond Xanax and Valium, there are other diazapenes that illegally find their way to the street. The sleeping pills Dalmane and Restoril appear periodically in drug using circles. Dalmane, being the more potent of the two, is a much sought after drug of abuse. Dalmane abusers have been known to break open the capsules and smoke the contents in much the same way that rock cocaine is consumed. This drug is a compound drug abusers find matches the sedative action of the banned compound, methaqualone (Quaalude).

Though considered safe drugs because of the rather high therapeutic / lethal ratio, there are adverse effects that confront the drug abuser when he or she uses these drugs to get "high".

MEDICAL USES FOR CNS DEPRESSANTS

- DAYTIME SEDATION
- INSOMNIA
- SEDATION PRIOR TO SURGERY
- MILD ANESTHESIA
- CONTROL OF CONVULSIVE DISORDERS
- CONTROL OF EPILEPTIC SEIZURES

WITHDRAWAL SYMPTOMS

- HANGOVER - (headaches, nausea, vomiting)
- ANXIOUSNESS
- WEAKNESS
- SLEEPLESSNESS
- HAND AND FINGER TREMORS
- FEVER
- WEIGHT LOSS
- ABDOMINAL CRAMPS
- HALLUCINATIONS

ADVERSE EFFECTS OF VALIUM, XANAX AND OTHER DIAZAPENES:

- Sedation.
- Fits of laughter or hilarity.
- Droopy eyelids.
- Slurred and thick speech.
- Dizziness and loss of coordination.
- Decreased inhibitions and loss of judgment.
- Stupor and loss of mental acuity.
- Development of tolerance.
- Addiction.

For the chronic user, tolerance to these drugs can develop rapidly. This means that the user must routinely increase the dosage of the drug in order to achieve the same effect.

Since these drugs are eliminated from the blood slowly over time, drug tests can record positive findings long after an abuser has stopped consumption of the drug. This extended "plasma life" can be problematic for the chronic abuser. Failing to understand that the diazapenes leave the body slowly, they frequently resume use of other depressants such as alcohol and marijuana. In doing so they tempt an uncertain fate caused by the "synergy" that develops these drugs and alcohol.

The profile of a benzodiazepene abuser is quite varied. For many abusers of other drugs, Valium and its close relatives become a "crutch" to wean them away from their primary addiction. These are individuals who have probably experienced an array of drug problems during the course of their life. For others, the drugs may be an alternative way to get high. Instead of drinking alcohol, a Valium user can achieve a remarkably similar euphoria, without the tell-tale odor that might alarm the police or others.

BENZODIAZEPINES

A benzodiazepine (sometimes called "benzo") is a psychoactive drug. The first benzodiazepine, chlordiazepoxide (Librium), was discovered accidentally by Leo Sternbach in 1955, and made available in 1960 by Hoffmann–La Roche, which has also marketed diazepam (Valium) since 1963.

Benzodiazepines enhance the effect of the neurotransmitter gamma-aminobutyric acid (GABA), which results in sedative, hypnotic (sleep-inducing), anxiolytic (anti-anxiety), anticonvulsant, muscle relaxant and amnesic action. These properties make benzodiazepines useful in treating anxiety, insomnia, agitation, seizures, muscle spasms, alcohol withdrawal and as a premedication for medical or dental procedures. Benzodiazepines are categorized as either short-, intermediate- or long-acting. Short- and intermediate-acting benzodiazepines are preferred for the treatment of insomnia; longer-acting benzodiazepines are recommended for the treatment of anxiety.

In general, benzodiazepines are safe and effective in the short term, although cognitive impairments such as aggressive behavior occasionally occur. Long-term use is controversial due to concerns about adverse psychological and physical effects, increased questioning of effectiveness and because benzodiazepines are prone to cause tolerance, physical dependence, and, upon cessation of use, a withdrawal syndrome. Due to adverse effects associated with the long-term use of benzodiazepines, withdrawal from benzodiazepines, in general, leads to improved physical and mental health. The elderly are at an increased risk of suffering from both short- and long-term adverse effects.

There is controversy concerning the safety of benzodiazepines in pregnancy. They are known to cause withdrawal symptoms in the newborn. Benzodiazepines can be taken in overdoses and can cause dangerous deep unconsciousness. However, they are much less toxic than their predecessors, the barbiturates, and death rarely results when a benzodiazepine is the only drug taken. When combined with other central nervous system depressants such as alcohol and opiates, the potential for toxicity increases. Benzodiazepines are commonly misused and taken in combination with other drugs of abuse.

SOMA / CARISOPRODOL

Soma/Carisoprodol is a centrally-acting skeletal muscle relaxant. Carisoprodol is slightly soluble in water and freely soluble in alcohol, chloroform and acetone. Carisoprodol is manufactured and marketed in the United States by Meda Pharmaceuticals Inc. under the brand name Soma. The drug is available by itself or mixed with aspirin and in one preparation (Soma Compound With Codeine) along with codeine and caffeine as well. Carisoprodol was developed on the basis of meprobamate, in the hope that it would have better muscle relaxing properties, less potential for abuse, and less risk of overdose than meprobamate.

On March 26, 2010 the DEA issued a Notice of Hearing on proposed rule making in respect to the placement of carisoprodol in schedule IV of the Controlled Substances Act. Because carisoprodol is not a controlled substance, many people assume that it has no potential for abuse. As with most psychoactive substances, tolerance can form very rapidly. This causes the abuser to continually increase dosage to obtain desired effects. As with any drug, this can be dangerous for a multitude of reasons. For this reason, those with a background of addiction should not be prescribed carisoprodol. Because carisoprodol is not a controlled substance, people sometimes think that it will be easier to get a prescription for carisoprodol, compared to other potentially addicting medications (such as narcotics). However, most healthcare providers are quite familiar with the problems associated with carisoprodol. Most healthcare providers react to a request for carisoprodol just as they would react for a request for a controlled substance (usually with caution and sometimes suspicion).

Abusers of carisoprodol usually seek its potentially heavy sedating, relaxant, and anxiolytic effects. Also, because of its potentiating effects on narcotics, it is often abused in conjunction with many opioid drugs.

AMBIEN / ZOLPIDEM

Zolpidem (Ambien, Stilnox) is a prescription medication used for the short-term treatment of insomnia, as well as some brain disorders. It is a short-acting nonbenzodiazepine hypnotic that potentiates gamma-aminobutyric acid (GABA). It works quickly (usually within 15 minutes) and has a short half-life (2–3 hours). Zolpidem has not adequately demonstrated effectiveness in maintaining sleep; however, it is effective in initiating sleep. Its hypnotic effects are similar to those of the benzodiazepine class of drugs. Increased doses are more inclined to induce one or more negative side-effects, including hallucinations and amnesia.

Some users have reported unexplained sleepwalking while using zolpidem, and a few have reported driving, binge eating, sleep talking, and performing other daily tasks while sleeping. The sleepwalker can sometimes perform these tasks as normally as they might if they were awake. They can sometimes carry on complex conversations and respond appropriately to questions or statements so much so that the observer may believe the sleepwalker to be awake. This is similar to, but unlike, typical sleep talking, which can usually be identified easily and is characterised by incoherent speech that often has no relevance to the situation or that is so disorganised as to be completely unintelligible. Those under the influence of this medication may seem fully aware of their environment even though they are still asleep. This can bring about concerns for the safety of the sleepwalker and others. It is possible some users believe they were asleep during events they interacted in because they do not remember the events, due to the short-term memory loss and amnesia side-effects.

Use of zolpidem may impair driving skills with a resultant increased risk of road traffic accidents. This adverse effect is not unique to zolpidem but also occurs with other hypnotic drugs. Caution should be exercised by motor vehicle drivers.