

# Dental precautions in treating drug addicts: A hidden problem among teens and preteens

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## Abstract

*Dentists who treat teen and pre-teen age patients probably have been in contact with drug addicts. Addicts may seek only crisis-oriented dental care and may attempt to gain a prescription from the dentist. The dentist should be aware of patients who have been or are presently on drugs and should not treat these patients while they are under the influence of an abused drug. Addicts injecting drugs are potential hepatitis carriers as a result of using unsterile needles. Subacute bacterial endocarditis has been found in addicts and has been attributed to the response of the heart valves to the cutting agents used to dilute the drugs. Categories of commonly abused drugs are narcotics, amphetamines, barbiturates, hallucinogens, non-barbiturate tranquilizers, solvents and inhalents.*

## Introduction

Because of the continued proliferation of drug abuse among the population today, dental health professionals find themselves knowingly or unknowingly treating patients who suffer from substance abuse. A number of drug abuse problems interface directly with dental care. Failure to recognize or to consider drug abuse can result in a wide range of repercussions, some life threatening. The purpose of this paper is to present specific instances where drug abuse can influence treatment planning and procedures. This will be done in the context of an abbreviated outline of drug classification and definitions of words associated with drug abuse.

### Drug Addicts' Outlook on Dental Care

Dental problems are a low priority item for most drug addicts. Obtaining drugs is the number one priority. It is common for drug addicts to eat unbalanced meals. Foods in general are considered to be consti-

pating. Therefore, addicts eat high carbohydrate snack foods (i.e., candy bars). Theft of small items high in carbohydrate is simple and prevents the addict from having to use money for food that could be used for drugs. Financial considerations may cause the addict to choose extraction rather than restoration of a tooth. A tooth that is a candidate for extraction may provide a source of prescribed narcotics from an unsuspecting dentist. Oral hygiene is not practiced and may not be known to the addict. The drug to which the patient is addicted may mask dental pain until the dental problem is treated by extraction.<sup>1</sup>

### Terms Relative to Drug Abuse

Health professionals should be familiar with the following terms and definitions:

- 1) *Addiction*—the effects of repeated actions of a drug until its use becomes necessary and cessation of which causes physical and/or mental disturbances.
- 2) *Tolerance*—the need for increasing amounts of a drug to obtain the same effect.
- 3) *Habituation*—the desire for a drug without any ill effect if its use is discontinued.
- 4) *Potentiation*—the combined effect of two drugs is greater than the sum of their individual actions.
- 5) *Physical dependence*—a regular use of a drug to allow normal physical functioning. Abstinence results in withdrawal symptoms.
- 6) *Psychic dependence*—pleasurable mental effects from a drug so that users find its repetition necessary to their well-being.
- 7) *Withdrawal*—characteristic reactions upon abrupt cessation of a drug which has produced a physical dependence.

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## Categories of Drugs and Effects

*Narcotics* act primarily on the central nervous system. Euphoria, relief of pain, tranquilization, sleep, and sedation are common effects of narcotics. Excessive doses can lead to coma and death, generally from respiratory failure. All narcotics are addicting. Tolerance and withdrawal symptoms are also generally found. Relapse results from the pressures of anxiety, depression or craving.

The most common trade and street names of narcotics are opium (blue velvet), morphine (M), codeine (schoolboy), heroin (smack, junk), demerol (demies), and methadone (meth). The chief active ingredient in opium is morphine. Heating morphine in the presence of acetic acid produces heroin.

*Amphetamines and related stimulants* directly stimulate the central nervous system and produce euphoria for extended periods. These "uppers" can be addicting and can produce psychotic behavior. The most commonly abused stimulants are cocaine (coke, snow), benzedrine (bennies), dexedrine (dex, speed), methedrine (meth), preludin and ritalin. Lack of appetite, prolonged increase in metabolism, and inability to sleep for extended periods are side effects. With the abuse of speed, risk increases in direct proportion to the amount used. "Speed does kill."<sup>2</sup>

Common stimulants are caffeine, and nicotine.

*Barbiturates and related sedatives* (depressants, downers) slow down the heart and lower the blood pressure. All downers can destroy brain cells. Withdrawal generally requires medical attention because seizures can occur. Grand mal convulsions are common during withdrawal. The most common categories of sedatives are alcohol (the most deadly killer in the Western world today), Amytal (blues, downers), Nembutal (yellows), phenobarbital (bennies), Seconal (reds), Tuinal (rainbows), and Quaaluds.

*Hallucinogens and cannabis* produce changes in mood and behavior. They are non-addicting but tolerance to these drugs builds rapidly, except apparently to marijuana. There are no withdrawal symptoms; the effects are primarily psychological with a wide range of manifestations. The effect seems to be related to the expectations of the user, the setting in which they are used, the unknown dosage level, and the presence of impurities. The most common drugs in this category are: hashish, marijuana (grass), LSD (acid), mescaline (cactus), peyote (buttons), and psilocybin (magic mushrooms). The most widely used drug of this category is marijuana.

PCP (angel dust) is an abused drug readily available in rural areas. It is an animal tranquilizer which causes pseudo-psychedellic reactions. PCP is dangerous because of the inconsistency of the action and the unusual side effects.

*The non-barbiturate tranquilizers* produce a sense of well being and inability to cope. The most common brands are Dalmane, Equianil, Librium, Valium, Mellaril, and Thorazine.

The potentiating effect of alcohol and the tranquilizers is great. In a one year period (1976-1977), there were approximately 57,000,000 prescriptions written for Valium in the United States, making it the number one prescription drug in this country.<sup>3</sup> With approximately 109 million alcohol users, this makes the combination usage very common.

*Solvents and inhalents* are generally regarded to cause a rapid heartbeat, relaxation, euphoria, dizziness and headaches. The most common items abused in this category are glue, paint, aerosols, amyl nitrite, butyl nitrite and nitrous oxide.

## Significance of Addiction

Three important questions for the dentist to ask are:

- (1) What drugs (if any) has the patient taken?
- (2) Is the patient on drugs at the time of the appointment?
- (3) Did the patient ever inject an addicting drug?

Injection of a drug presents two problems. First, patients who have "mainlined" drugs have a higher incidence of hepatitis, and could be carriers. Repeated use of unsterile needles increases the hepatitis risk for the addict. Health professionals who come in contact with known drug addicts should be gloved, masked, and/or wear either glasses or safety goggles. All instruments should be routinely sterilized using accepted procedures to kill the hepatitis viruses. Second, heart valve complications have been reported in narcotics addicts.<sup>4</sup> Agents used to dilute the drugs can contribute to sub-acute bacterial endocarditis. Cutting agents include talcum powder, quinine, sugar, baking soda, and powdered milk. These agents can also act as a source of septic or non-septic emboli for long periods of time after the treatment with resulting bacteremia. Patients with a history of injection of drugs need routine prophylactic antibiotic therapy as recommended by the American Heart Association for heart patients.

Some patients feel they need to be "high" to have the courage to go to the dentist. Do not treat patients while they are under the influence of a drug.

Technical procedures are no different for addicts and non-addicts. The dental materials used and the mechanical procedures utilized are the same as those used with non-addicted patients. Extended and extensive procedures should be limited to those patients showing the interest to take care of the treatment. Interim or temporary treatment could be considered if there is some question as to the patient's ability or

desire to complete the treatment. Prevention should be emphasized.

## Case Histories

C. J., a 16-year-old female, was referred to the author by the local drug abuse program. During an initial interview, it was determined that she was injecting heroin as well as being an alcoholic. No drug had been taken for 1 month. She had been experimenting with abusive drugs for 4 years. Because of the history of the injection of heroin, it was determined that appropriate antibiotics should be given to the patient before any bacteremia producing dental procedures. As the patient was not allowed to carry oral medication, bi-cillin 1,200,000 units was injected IM. A panorex, anterior occlusal and posterior bitewing radiographs were completed. An oral examination was done with carious lesions noted. All teeth had tobacco stains. Oral hygiene was poor. Marginal gingivitis was noted. A scaling, prophylaxis and stannous fluoride treatment were completed. Local anesthesia was administered and three permanent teeth were restored. The final appointment also required the administration of a prophylactic antibiotic. The three remaining carious lesions were restored under local anesthesia. The patient completed the drug abuse program and left the city.

D. W., a 17-year-old male, was referred to the author by the local drug addiction program. During the initial interview with the patient, it was determined that he was taking a broad range of drugs, abusing whatever drug was available at the time (referred to as "garbage"). Drugs were being injected resulting in the need for prophylactic antibiotic injections prior to dental treatment. The patient had not taken any drug for over one month. A panorex, anterior occlusal and posterior bitewing radiographs were completed. The results of the oral examination were noted. Oral hygiene was poor. Marginal gingivitis was present. Bi-cillin 1,200,000 units was injected IM. Oral hygiene instructions, scaling, prophylaxis, administrations of stannous fluoride and restoration of three posterior teeth were completed. At two subsequent appointments, prophylactic antibiotics were administered and restorative care was done. The patient left the program before all necessary work could be completed.

## Identification of the Drug-Addicted Patient

If the patient does not identify himself or herself as being on drugs, it is quite difficult for the dental health professional to be sure of the status of a particular patient. The following might be clues toward identification:

- 1) A tendency for the patient to look off into space.
- 2) Moodiness.
- 3) Sudden carelessness in appearance, especially if he or she has been well dressed in the past.
- 4) Drowsiness.
- 5) Laughing too much at things others do not think are funny.
- 6) The appearance of intoxication without the odor of any alcohol.
- 7) A "hopped-up" appearance—bright shiny eyes.
- 8) Changes in the size of the pupils of the eyes not accounted for by changes in light intensity.
- 9) Possession of pills, capsules, or injection equipment.
- 10) Hallucinations or convulsions are the signal for immediate medical attention.<sup>5</sup>

## Conclusion

Drug addiction among teens and preteens is increasingly common. Several attitudes of drug addicts are pertinent to dental care. Care of the dentition is probably a low priority. A number of drug categories can be abused with a wide range of effects. Addicts injecting drugs pose two significant problems. Hepatitis may result from use of unsterile needles by the addict. Sub-acute bacterial endocarditis has been found in addicts and is presumed to be associated with cutting agents (e.g., talcum powder) used to dilute the drug.

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## References

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