Drug and Alcohol Abuse

(This article provided by the Academy is a summary from LITTLE AND FALACE'S DENTAL MANAGEMENT OF THE MEDICALLY COMPROMISED PATIENT, NINTH EDITION which is a reference textbook mentioned in the ADC Written Exam resources).

- Patients who have a history of injected drug use are at increased risk for infectious diseases such as hepatitis B or C, HIV/ AIDS, and infective endocarditis. Narcotic and sedative medications should be prescribed with caution, if at all, for these patients because of the risk of triggering a relapse. This caveat also applies to patients who are recovering alcoholics.

- Vasoconstrictors should be avoided in patients who are cocaine or methamphetamine users because the combination may precipitate arrhythmias, MI, or severe hypertension. Patients who abuse prescription narcotics or other controlled substances may engage in "doctor shopping" and drug-seeking activity.

DENTAL MANAGEMENT-

Medical Considerations

- The dentist should be on the alert for signs and symptoms that may indicate substance abuse. Telltale cutaneous lesions often indicate parenteral abuse of drugs. Findings may include subcutaneous abscesses, cellulitis, thrombophlebitis, skin "tracks" (chronic inflammation from multiple injections), and infected lesions. Skin tracks usually appear as linear or bifurcated erythematous lesions, which become indurated and hyperpigmented. An ill defined febrile illness also may indicate a possible problem with parenteral drug abuse.

- Drug abusers may try to obtain drugs from dentists by demanding pain medication for a dental problem (e.g., toothache) instead of problem-specific treatment. Likewise, pain medication may be requested (or demanded) after

minor, nonsurgical procedures that typically would not be a cause of significant postoperative pain (e.g., small restoration). The opioid abuser also may claim to be allergic to codeine or intolerant to nonsteroidal antiinflammatory drugs in an attempt to obtain a stronger drug such as hydrocodone or oxycodone. Prescription pads should not be left out in clear view, nor should they be kept where patients can easily find and take them. The practitioner also should avoid the use of pre-written or pre-signed prescription forms for controlled drugs. The patient with possible opioid overdose should be given a dose of Narcan (Naloxone) nasal spray to reverse the symptoms.

- Drug abuse is found more often in dentists and other dental office personnel than in the general population because of the ready access to opioid analgesics and sedative–hypnotic drugs. Abusive use of nitrous oxide inhalation is another form of drug abuse that is found among dentists.

Marijuana-

Chronic use of marijuana can lead to chronic bronchitis, airway obstruction, poor oral health due to neglect and xerostomia, and squamous metaplasia.
The autonomic effects of marijuana include tachycardia, reduced peripheral resistance, and, with large doses, orthostatic hypotension.Thus, marijuana use may be harmful to persons with ischemic heart disease or cardiac failure. Care should be taken in providing dental treatment to such patients, and if such an association is identified, dental treatment should be postponed until the patient is stable.

Cocaine-

Patients who are “high” on cocaine should not receive any local anesthetic containing epinephrine for at least 6 hours after the last administration of cocaine because cocaine potentiates the response of sympathomimetic amines.

- Use of epinephrine-impregnated retraction cord or local anesthetics containing epinephrine or levonordefrin should be avoided. The danger of significant myocardial ischemia and cardiac arrhythmia is the primary concern in patients with cocaine intoxication. Peak blood levels of cocaine occur within 30 minutes, and effects usually dissipate within 2 hours.

- Before treating a patient who is participating in a cocaine treatment program, the dentist should consult the patient's physician regarding medications that the patient may be taking and how best to manage procedure related pain. Patients with substance abuse should rarely be prescribed addictive substances and then only with great caution.

Methamphetamine-

Patients who are "high" on methamphetamine should not receive dental treatment for at least 8 hours after the last administration of the drug, and for maximum safety, dental treatment probably should not occur until at least 24 hours after the last administration. Peak blood levels occur within 30 to 60 minutes, and effects usually dissipate within 8 hours; however, depending on the compound, the serum half-life of the various amphetamines can last between 7 and 34 hours.

- Significant myocardial ischemia and cardiac arrhythmia are the primary concerns in patients with methamphetamine intoxication. Local anesthetics with epinephrine or levonordefrin must not be used during the 8-hour waiting period after methamphetamine administration because methamphetamine potentiates the response of sympathomimetic amines, which could result in a hypertensive crisis, stroke, or myocardial infarction.

Alcohol-

The dentist has an opportunity to assist patients who have, or may have, alcohol-abuse problems. It has been shown that even brief advice or discussions in a clinical setting by a health care provider can have positive effects. Research indicates that brief interventions for alcohol problems are more effective than no intervention and, in some cases, can be as effective as more extensive intervention.

- A patient with alcohol-related problems often can be recognized from examination of health problems and behaviors, such as medical signs and symptoms, noncompliance, exacerbated anxieties and fears, failure to fulfill obligations, and emotional fluctuations. Features suggestive of alcohol abuse

include missed appointment, enlargement of the parotid glands, and spider angiomas. A common scenario that should raise a red flag is that in which the patient presents for treatment with alcohol on the breath. Of note, problems with alcohol transcend age, gender, and socioeconomic spectrum, and many patients are skilled at masquerading their dependence.

- During the medical history, the dentist should obtain information from all adolescent and adult patients about the type, quantity, frequency, pattern of alcohol use, as well as consequences of its use, and family history of alcoholism.

Treatment Planning Considerations-

- The goals of dental treatment for patients with substance and alcohol abuse disorders are to maintain oral health, comfort, and function and to prevent and control oral disease. Without an aggressive approach to prevention, dental caries and periodontal disease will occur with increased frequency. Susceptibility to these problems stems from a reduced interest in performing or the inability to perform oral hygiene procedures. Also, in many of these patients, the diet typically relies heavily on foods and drinks that increase the risk for dental disease.

- The dental treatment plan should contain the following elements. Daily oral hygiene procedures must be identified. Complex dental procedures should be performed only when the patient is in a stable condition in the context of the substance abuse disorder. The dental team should communicate to the patient a positive, hopeful attitude toward maintenance of the patient's oral health.
The last aspect of the treatment plan deals with selection of pain or anxiolytic medications to be used in dental treatment procedures. It is critical that appropriate pain and anxiolytic medication be provided to the patient; however, certain agents may have to be avoided, and others may require a reduction in their usual dosage.

- Consultation with the physician who is overseeing the management of the substance or alcohol abuse problem is advisable to discuss drug selection and administration.

- In addition to the above considerations, three specific problems of major clinical importance in patients with alcoholic liver disease are recognized:
(1) bleeding tendencies,
(2) unpredictable metabolism of certain drugs, and
(3) risk of the spread of infection.
These conditions may require the dentist to change usual drug dosages.

Oral Complications and Manifestations-

- Patients with drug and alcohol abuse disorders tend to have more plaque, calculus, caries, and gingival inflammation than is typical for patients without such disorders.

- These problems are related primarily to oral neglect rather than to any inherent property of the abused substance.

- Depending on the degree of neglect, caries, and periodontal disease, the dentist should not provide extensive care until the patient demonstrates an interest in and ability to care for the dentition.

- With intraoral use of cocaine, gingival recession and erosion of the facial aspects of the maxillary teeth may result from persistent rubbing of the powder over these surfaces.

- Chronic methamphetamine use causes xerostomia and rampant caries with subjective reports of a bad taste in the mouth, bruxism (grinding of the teeth), and muscle trismus (jaw clenching). Xerostomia significantly increases the risks for dental caries, enamel erosion, and periodontal disease. Neglect of personal oral hygiene, high intake of refined carbohydrates and sucrose, and increased acidity from gastrointestinal regurgitation, bulimia, or vomiting also contribute to exaggerated caries and erosion problems in meth abusers. The combination of these effects is referred to as “meth mouth”. Meth users are “wired” and exhibit extremely high levels of energy and neuromuscular activity, often leading to parafunctional jaw activity and bruxism. Bruxism and muscle trismus can compound the effects of periodontal disease.

- Patients who use ecstasy demonstrate “bruxing” activity during use of the drug. To combat the tooth clenching, pacifiers have been used.
- A variety of oral abnormalities may be found in patients with alcohol abuse. Patients with cirrhosis have been reported to have impaired gustatory function and are malnourished. Nutritional deficiencies can result in glossitis and loss of tongue papillae along with angular or labial cheilitis, which is complicated by concomitant candidal infection. Vitamin K deficiency, disordered hemostasis, portal hypertension, and splenomegaly (causing thrombocytopenia) can result in spontaneous gingival bleeding, mucosal ecchymoses, and petechiae. In some instances, unexplained gingival bleeding has been the initial complaint of alcoholic patients. Also, a sweet, musty odor to the breath is associated with liver failure, as is jaundiced mucosal tissue. A bilateral, painless enlargement of the parotid glands (sialadenosis) is a frequent finding in patients with cirrhosis. Alcohol abuse and tobacco use are strong risk factors for the development of oral squamous cell carcinoma, and dentists must be diligent (as with all patients) in the detection of unexplained or suspicious soft tissue lesions (especially leukoplakia, erythroplakia, or ulceration) or a firm neck lymph node in patients with chronic alcoholism. High-risk sites for development of oral squamous cell carcinoma include the lateral border of the tongue and the floor of the mouth.

BOX 30.1 Dental Management Considerations in Patients With Drug or Alcohol Abuse or Dependence

P

Patient Evaluation and Risk Assessment (see Box 1.1)

- Evaluate to determine whether drug or alcohol abuse or dependence is present.
- Obtain medical consultation if clinical signs and symptoms point to an undiagnosed problem or if the diagnosis is uncertain.

Potential Issues and Factors of Concern

A

Antibiotics	No issues
Analgesics	Avoid prescribing narcotic analgesics, if possible. However, if needed, consult with patient's primary care physician who is managing the substance abuse program. Prescribe an adequate-strength medication and only a limited number of doses with specific instructions, with no refills. It may be appropriate to have a third party (such as a "12-step program" sponsor) monitor and dispense the medication.
Anesthesia	For cocaine and methamphetamine abusers, avoid the use of epinephrine for 24 hours after the last dose of drug.
Allergies	No issues
Anxiety	If the patient requires an anxiolytic for treatment, contact the patient's physician to discuss options. Consider using a short-acting benzodiazepine and prescribe only enough for one appointment. Also consider intraoperative use of nitrous oxide–oxygen.

B

Bleeding	For patients with alcohol abuse, excessive bleeding secondary to liver disease is possible. Laboratory tests may be needed for confirmation.
Breathing	No issues
Blood pressure	For cocaine and methamphetamine abusers, monitor blood pressure and pulse during appointment.

C

Chair position	No issues
Cardiovascular	Cocaine and methamphetamine abusers are at increased risk for cardiac arrhythmias, myocardial infarction, and stroke.

D

Drugs	Epinephrine can potentiate the adverse cardiovascular effects of cocaine and amphetamines.
Devices	No issues

E

Equipment	No issues
Emergencies	For cocaine and methamphetamine abusers, cardiovascular emergencies are possible, especially with the use of epinephrine within 24 hours of last drug use. Have naloxone (Narcan) available to reverse opioid overdose.

F

Follow-up	If narcotic analgesics are prescribed, the patient should be monitored to ensure proper drug use.