

EFFECT OF DRUGS ON TEETH AND GUMS - A REVIEW

ZAINAB MAHMOOD ALJAMMALI

Assistant Lecturer, Department of Dentistry, College of Dentistry, Iraq

ABSTRACT

Dentistry has seen many cases of oral cancer in people who have never smoked. However, the chance of oral cancer increases if a person smokes, and more so if the individual is also a very heavy drinker of alcohol. It has been suggested that alcohol acts as a cleansing agent in the mouth and strips the oral tissues of protective layer that makes them more susceptible to the carcinogenic action of the smoke. Alcohol, consumed in sufficient quantities may itself be a carcinogenic. In fact, many researchers believe it is one of the major causes of oral cancer.

KEYWORDS: Fact, Damage, Mouth

INTRODUCTION

Some medications, including prescription drugs and over-the-counter preparations, can damage your teeth. Medications can cause gum problems such as inflammation, bleeding or ulceration. Diseased gums can lead to other dental problems including tooth loss.

Some of these medications include:

- **Antihistamines** – can cause dry mouth, and an increased risk of gum problems.
- **Anti hyper tensives** – can lead to an increased risk of gum problems.
- **Aspirin** – chewing aspirin can directly damage the tooth enamel, as aspirin is acidic. Always take aspirin strictly as directed. The tablets should be swallowed whole with water, not placed beside a tooth.
- **Asthma medications** – some asthma drugs are highly acidic and can dissolve tooth enamel if used regularly over a long period of time.
- **Chemotherapy drugs** – can cause a dry mouth and lead to an increased risk of gum problems.
- **Immunosuppressive drugs** – can lead to an increased risk of gum problems.
- **Oral contraceptives** – can lead to an increased risk of gum problems.
- **Syrups** – medicated syrups that contain sugar can increase the risk of tooth decay if teeth are not brushed after these syrups are taken.

Some medications can cause the gum tissue to thicken and grow over the teeth. This condition is called 'gingival hyperplasia'. Medications linked to an increased risk of gingival hyperplasia include epilepsy medications, cyclosporin (organ transplant rejection drug), some blood pressure medications and calcium channel blockers. Talk to your doctor, pharmacist or dentist about whether the medications you are taking could harm your teeth.

AFFECT OF ALCOHOL AND SMOKING ON TEETH AND GUMS

Regular intake of alcohol can cause a dry mouth and tooth damage, as most alcohols are acidic. Smoking is associated with an increased rate of gum problems as well as an increased risk of cancers, including oral cancer.



Figure 1

TYPES OF GUM DISEASES

There are a number of different types of gum disease including

- **Gingivitis** causes the gums to become red and swollen, and they will also bleed easily. This is the most common form of gum disease and it usually easily treated and doesn't leave any lasting problems (so long as it is treated in time)
- **Periodontitis** can occur as a result of untreated gingivitis or as a result of some other disease. It involves a serious inflammation that can damage surrounding tissue and the teeth – in some cases the teeth will have to be removed.

SYMPTOMS OF GUM DISEASE

The symptoms of gum disease can include

- The gums bleed when the individual brushes their teeth hard or when they eat food.
- Gums that appear to be red or swollen.
- Gums feel tender to the touch.
- Bad breath that doesn't seem to go away.
- Evidence of pus between the teeth and the gums.
- Dentures no longer appear to fit correctly.
- Gums appear to be pulling away from the teeth. This receding means that the teeth appear to be slightly bigger than they were previously.
- Teeth that feel a bit loose or that appear to be separating.

- The teeth appear to fit together in the mouth differently.
- Evidence of sores in the mouth.
- Development of deep pockets between the teeth and the gums.

CAUSES OF GUM DISEASE

There are a number of potential causes of gum disease including

- Any disease that interferes with the normal functioning of the immune system can increase the likelihood of developing gum disease.
- Alcohol abuse can cause gum disease.
- There are certain medications that decrease the flow of saliva in the mouth, and this can lead to problems with the gums.
- Hormonal changes can make the gums more sensitive and therefore more likely to develop an inflammation.
- Those individuals who have a history of gum disease in their family seem to be more prone to this type of condition.
- Smoking cigarettes can make it more difficult for the tissue in the gums to carry out repair work.
- Those people who have poor dental hygiene habits are more likely to develop this condition.

ALCOHOL AND GUM DISEASE

Alcohol abuse can lead to gum disease for a number of reasons including

- It causes irritation to the gum tissue.
- Those individuals who are involved in substance abuse tend to have poor dental hygiene habits. This makes them far more prone to such problems.
- Alcoholics tend to eat poorly, and this leads to nutritional deficiencies which opens the door for all types of disease to arise. These deficiencies in diet can also lower the effectiveness of the immune system and increase the likelihood of developing gum disease.
- Those who abuse alcohol will often ignore the early symptoms of gum disease. This means that an easily treatable case of gingivitis will progress to a more serious condition that involves permanent damage to the teeth and gums.

HOW TO PREVENT GUM DISEASE

There are things that people can do to reduce their risk of developing periodontal disease such as

- Not abusing alcohol.
- Practicing good oral hygiene on a daily basis. This includes brushing the gums – people usually find that this is more easily performed with an electric toothbrush.

- Eating a balanced diet. If people are suffering from any nutritional deficiencies they will need to get these rectified.
- If there is any sign of redness or tenderness observed in the gums then this should be treated right away. It is a bad idea to ignore signs of gum disease.
- It may be a good idea to gargle regularly with mouthwash. Those individuals who are recovering from an alcohol addiction will probably want to use a mouthwash that does not contain alcohol.
- It is a good idea to avoid too much sugary food as this can encourage bacterial growth in the mouth.
- Those individuals who smoke cigarettes should quit right away.
- Regular dental examinations will allow the dentist to check for signs of any problems. The dentist will also be able to get rid of any gum plague that might lead to problems in the future.

TREATMENT OF GUM DISEASE

The treatment required for gum disease will depend on the seriousness of the condition. Possible options include

- Gingivitis can usually be solved by a good clean by the dentist and improved dental hygiene at home.
- More serious gum disease problems may require deep cleaning, scaling, and root planing – this is usually done over a number of visits to the dentist.
- Sometimes soft tissue will need to be removed from the gums – this is referred to as gingival curettage.
- In some cases dental surgery may be required to fix the problem.

Share it:

DRUG ABUSE AND TOOTH DECAY

The use of prescription and illegal drugs causes tooth decay. You don't have to be a Meth addict to have rotten teeth. Those who use or abuse over-the-counter drugs such as aspirin, asthma meds or syrups can see effects such as tooth enamel damage, acid dissolving the teeth and tooth decay because of the high sugar content in some drugs. The more is the sugar content in the drug, bigger are the teeth problems. Apart from the sugary drugs some of the over-the-counter and prescription drugs which cause dry mouth also tend to tooth decay. Such drugs creates an imbalance in the bacteria in our mouth which in result allow acid producing bacteria to dominate our mouth, consequently causing tooth decay. Generally people who use illegal drugs persistently are more prone to tooth decay and the reason behind this is that such people yearn for sugar. With more severe drug abuse you will attain blackened teeth, teeth falling apart or rotting teeth. In most of the cases, the teeth could not be saved and have to be extracted.

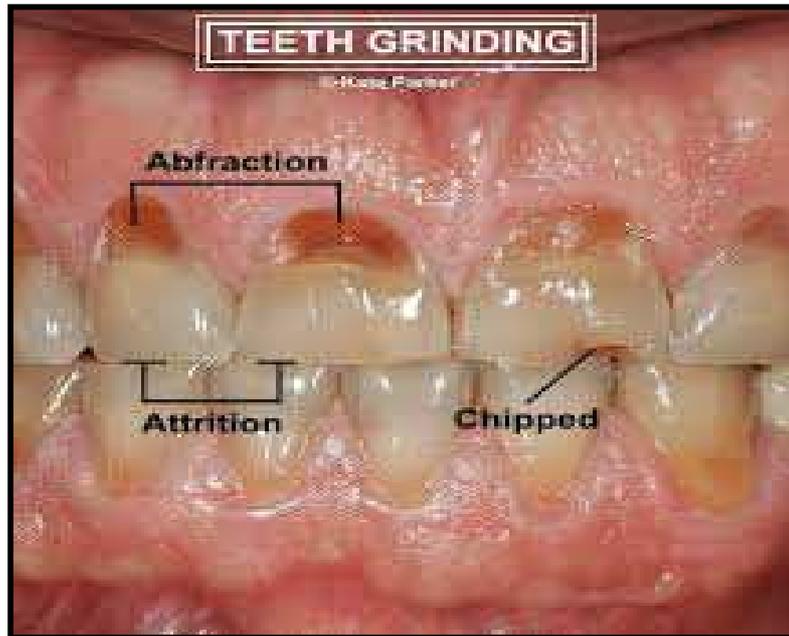


Figure 2

Drugs of all descriptions, both illegal and prescription, can cause imbalances in the oral environment that lead to dental problems. With a large number of Australians regularly taking some form of drugs, it is important to understand the potential damage they can cause and how to manage it.

PRESCRIPTION MEDICATIONS

Some prescribed medications can cause tooth erosion (the gradual wearing away of the outer enamel layer of your teeth) either because they are in themselves acidic or because they cause a dry mouth which means that your natural defence against acid attack (saliva) is compromised. These include:

- Chewable vitamin tablets
- Antacids
- Anti-allergy medications
- Frequent use of aspirin
- Liquid iron supplements
- Certain asthma and cough medications
- Cardiovascular medications (diuretics, calcium channel blockers)
- Some antidepressants and antipsychotics
- Sedatives
- Central analgesics
- Anti-Parkinson's disease medications

This list is not exhaustive so ask your dentist to advise you if a drug you are taking could cause dental problems and how to manage that.

REFERENCES

1. United Nations Office on Drugs and Crime. *World drug report 2007*. pp 63–94. Vienna: UNODC, 2007.
2. Engel J D. Cocaine: a historical and modern perspective. *Nebr Med J* 1991; **76**: 263–270.
3. Parry J, Porter S, Scully C, Flint S, Parry M G. Mucosal lesions due to oral cocaine use. *Br Dent J* 1996; **180**: 462–464.
4. Isaacs S O, Martin P, Willoughby J H. 'Crack' (an extra potent form of cocaine) abuse: a problem of the eighties. *Oral Surg Oral Med Oral Pathol* 1987; **63**: 12–16.
5. Goldstein F J. Toxicity of cocaine. *Compend Contin Educ Dent* 1990; **11**: 710–716.
6. Lee C Y, Mohammedi H, Dixons R A. Medical and dental implications of cocaine abuse. *J Oral Maxillofac Surg* 1991; **49**: 290–293.
7. Friedlander A H, Gorelick D A. Dental management of the cocaine addict. *Oral Surg Oral Med Oral Pathol* 1988; **65**: 45–48.
8. Cone-Wesson B. Prenatal alcohol and cocaine exposure: influences on cognition, speech, language and hearing. *J Commun Disord* 2005; **38**: 279–302.
9. Morris P, Binienda Z, Gillam M P *et al*. The effect of chronic cocaine exposure during pregnancy on maternal and infant outcomes in the rhesus monkey. *Neurotoxicol Teratol* 1997; **18**: 147–154.
10. Al-Motabagani M A, Mohamed A S. Congenital malformations in mice induced by addiction to alcohol and cocaine. *East Afr Med J* 2005; **82**: 433–438.
11. Markov D, Jacquemyn Y, Leroy Y. Bilateral cleft lip and palate associated with increased translucency and maternal cocaine abuse at 14 weeks of gestation. *Clin Exp Obstet Gynecol* 2003; **30**: 109–110.
12. Mattson-Gates G, Jabs A D, Hugo N E. Perforation of the hard palate associated with cocaine abuse. *Ann Plast Surg* 1991; **29**: 466–468.
13. Blanksma C J, Brand H S. Cocaine abuse: orofacial manifestations and implications for dental treatment. *Int Dent J* 2005; **55**: 365–369.
14. Lancaster J, Belloso A, Wilson C A, McCormick M. A rare case of naso-oral fistula with extensive osteocartilaginous necrosis secondary to cocaine abuse: review of otorhinolaryngological presentations in cocaine addicts. *J Laryngol Otol* 2000; **114**: 630–633.
15. Mari A, Arranz C, Gimeno X *et al*. Nasal cocaine abuse and centropalatal destructive process: report of three cases including treatment. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod* 2002; **93**: 435–439.

16. Deutsch H L, Millard D R. A new cocaine abuse complex. Involvement of nose, septum, palate, and pharynx. *Arch Otolaryngol Head Neck Surg* 1989; **115**: 235–237.
17. Villa P D. Midfacial complications of prolonged cocaine snorting. *J Can Dent Assoc* 1999; **65**: 218–223.
18. Brand H S, Blanksma C J, Gonggrijp S. A maxillary obturator for a cocaine-induced oronasal defect. *J Disabil Oral Health* 2007; **8**: 37–40.
19. Tsoukalas N, Johnson C D, Engelmeier R L, Delattre V F. The dental management of a patient with a cocaine-induced maxillofacial defect: a case report. *Spec Care Dentist* 2000; **20**: 139–142.
20. Smith J C, Kacker A, Anand V K. Midline nasal and hard palate destruction in cocaine abusers and cocaine's role in rhinologic practice. *Ear Nose Throat J* 2002; **81**: 172–177.
21. Simsek S, de Vries X H, Jol J A D *et al*. Sino-nasal bony and cartilaginous destruction associated with cocaine abuse, *S. aureus* and antineutrophil cytoplasmic antibodies. *Neth J Med* 2006; **64**: 248–251.
22. Kuriloff D B, Kimmelman C P. Osteocartilaginous necrosis of the sinonasal tract following cocaine abuse. *Laryngoscope* 1989; **99**: 918–924.
23. Kuriloff D B. Perforation of the hard palate associated with cocaine abuse. *Ann Plast Surg* 1992; **28**: 397.
24. Sousa O, Rowley S. Manifestaciones otorinolaringologicas por el abuso intranasal de cocaina. A proposito de un caso. *Rev Med Panama* 1994; **19**: 55–60.
25. Armstrong M, Shikani A H. Nasal septal necrosis mimicking Wegner's granulomatosis in a cocaine abuser. *Ear Nose Throat J* 1996; **75**: 623–626.
26. Helie F, Fournier J. Destructive lesions of the median line secondary to cocaine abuse. *J Otolaryngol* 1997; **26**: 67–69.
27. Sastry R C, Lee D, Har-El G. Palate perforation from cocaine abuse. *Otolaryngol Head Neck Surg* 1997; **116**: 565–566.
28. Gendeh B S, Ferguson B J, Johnson J T, Kapadia S. Progressive septal and palatal perforation secondary to intranasal cocaine abuse. *Med J Malaysia* 1998; **53**: 435–438
29. Sittel C, Eckel H E. Nasal cocaine abuse presenting as a central destructive granuloma. *Eur Arch Otorhinolaryngol* 1998; **255**: 446–447.
30. Braverman I, Raviv E, Fienkiel S. Severe avascular necrosis of the nasal chambers secondary to cocaine abuse. *J Otolaryngol* 1999; **28**: 351–353.

