

EFFECTS OF CIGARETTE SMOKING IN GENERAL

It is well known that smoking cigarettes is not a healthful activity. In fact, the first sentence of the Centers for Disease Control 'Overview on the Health Effects of Cigarette Smoking' states that 'smoking harms nearly every organ in the body.' Some of the most important effects follow:

Besides the obvious high risk for oral and lung cancer, as well as respiratory diseases, smoking is also associated with increased risk for cardiovascular diseases such as coronary heart disease and stroke by up to four times. Coronary heart disease is the leading cause of death in the United States and has gained particular attention in dentistry because of its relationship to periodontitis. Both cardiovascular disease and periodontitis are inflammatory diseases which exacerbate each other.

For postmenopausal women, smoking is associated with lower bone density and increased risk for hip fracture.

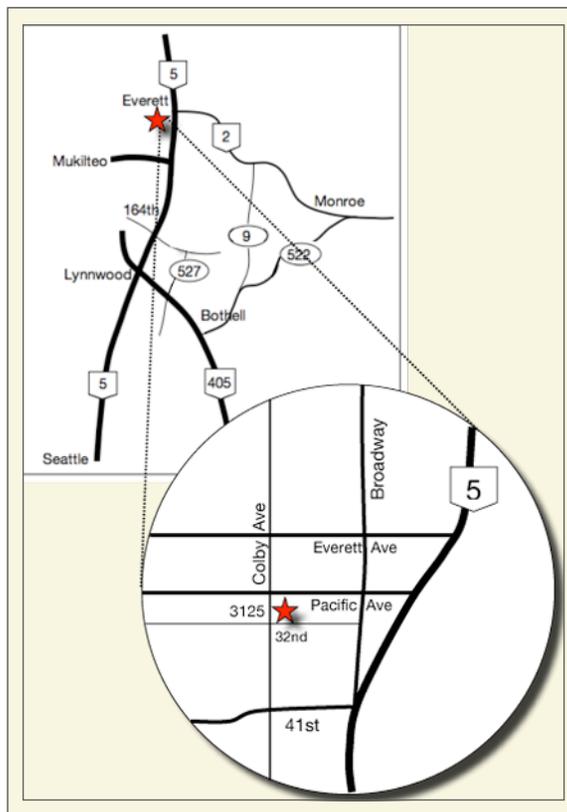
Smoking increases the risk for infertility, and causes damage to infants in terms of pre-term low birth weight, still birth, pre-term delivery and sudden infant death syndrome.

Smoking is a risk factor for 6 of the 8 leading causes of death world-wide. It causes 1 in 5 deaths in the US per year, greater than all deaths caused by HIV, illegal drug use, alcohol use, motor vehicle injuries, suicides and murders combined. It reduces adult life expectancy by about 14 years.

This issue of **ProbeTips** will highlight the relationship between cigarette smoking and its oral ill-effects, particularly with regard to periodontitis risk, and review smoking cessation options.

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PROBE TIPS

A QUARTERLY PERIODONTAL
NEWSLETTER

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Smoking and Periodontitis



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The Impact of Smoking on the Oral Cavity

GENERAL CONSIDERATIONS

It is well known that smoking increases the risk of bone loss, loss of connective tissue around teeth, tooth loss, and edentulism; all signs of periodontitis. Data from NHANES III (National Health and Nutrition Examination Survey 1988-1994) published in 2000 reported approximately 30% of the population as currently smoking. Another 30% were former smokers. The total incidence of periodontitis was reported at 9%. The study indicates that smoking increases the risk of developing periodontitis by up to 6 times, and that this risk is dose dependent: the more you smoke the greater your risk, while smoking cessation, and increasing number of smoke-free years, reduces your risk. Even 2nd hand smoke nearly doubles the risk of developing periodontitis. They conclude that 41% of all periodontitis cases in the United States was attributable to cigarette smoking, while 10% to former smoking. They make an astounding conclusion that **nearly half of all periodontitis cases in the US could be eliminated if people could quit smoking!**



RESPONSE TO PERIODONTAL THERAPY

Non-Surgical Therapy (Scaling and Root Planing):

Numerous studies, and systematic reviews of the literature, have shown 50-75% decreased pocket depth reduction and lesser gains in clinical attachment in smokers versus non-smokers.

Surgical Therapy and Implants:

Surgical Periodontal Therapy: Studies and reviews of the literature have shown decreased pocket depth reduction and increased deterioration of furcations post surgery in smokers.

Implants: A 2007 and 2009 review of the literature indicated a statistically significant reduction in survival and success rates of implants in smokers versus non-smokers, particularly in areas of less dense trabecular bone (posterior maxilla). There was 4-5 times increased risk for implant loss and peri-implantitis in smokers.

Adjunctive Antimicrobial or Host Modulation:

Local and systemic antibiotics, and/or the use of Periostat, in combination with regular periodontal maintenance, may bring the level of response of a smoker to periodontal therapy to similar levels as non-smokers.

SMOKING CESSATION

There is not one single best method for quitting smoking. Various approaches are available ranging from simply 'cold turkey' cessation, to hypnosis, and a few more common means detailed below. It is important to remember that none of the methods listed will 'make' someone quit smoking, but that each option is merely a crutch: quitting smoking has to be a conscious decision on the part of the smoker, with the options listed as an adjunct to cessation. It is also common to attempt to quit several times before one is successful. In fact, a review published this year notes that at one year, the success rate of smoking cessation for simply trying to stop is 3-5%, when adding behavioural modification it rises to 7-16%, and when combining behaviour modification with pharmacological treatment reaches up to 24%.

Behaviour Modification and Support:

Because smoking is a habit, it is important to alter other habits or activities in order to quit (i.e.: replace smoking with walking). This also includes support groups or having a source of accountability. Various help lines are available to assist your patients in achieving their goals:

www.SmokeEnders.com
www.SmokFree.gov
www.Smoking-Cessation.org
1-800-QUIT NOW

Pharmacological Therapy

Nicotine Replacement Therapy: Nicotine Gum, Patches, Inhalers, Lozenges, and Nasal Sprays generally work equally well. Smoking cessation should start on the day that replacement therapy is commenced, and are used for 8-14 weeks at a time. They can be effective as long as the patient does not become addicted to the replacement therapy. Smoking cessation success increases when NRT is combined with *Zyban*, but NRT should not be combined with *Chantix*.

Non-Nicotine Replacement Therapy: To be used for one week prior to the start of smoking cessation, and reserved for more heavily dependent smokers.

Zyban (bupropion): an anti-depressant.

Chantix (varenicline): a nicotine receptor agonist used to block the pleasurable effect of nicotine in the brain. More effective than *Zyban*. Side effects include aggressive or negative behaviour.



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