

# Endodontic Spotlight

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## Introduction

Recently I had an unusual case where an elderly patient had a long standing apical lesion that was enlarging at two year recall but now shows possible healing at three year recall. While it is completely normal for a patient to keep healing over a number of years, it is surprising that the lesion was getting worse and then improved. The only explanation was that the patient stopped taking Fosamax (alendronate, a bisphosphate medication that can impair bone healing). Although it makes sense mechanistically, this type of observation has yet to be reported in the literature, so I'm not totally sure if I believe it myself! We are continuing to follow the patient to see if he continues to heal.

However, this reminded me again about the effect of medical health on endodontic care. So for this issue we're going to look at two classic studies that consider medical factors on endodontic treatment. The first analyzes diabetes, whereas the second considers smoking.

## **Fouad AF, Burleson J. The effect of diabetes mellitus on endodontic treatment outcome: Data from an electronic patient record. J Amer Dent Assoc 2003;134:43-51.**

This retrospective electronic chart review evaluated the effect of diabetes on numerous endodontic considerations. 5,494 endodontic cases were reviewed, of which 284 patients had diabetes. The most important findings include: Patients with diabetes had increased periodontal disease of their endodontically treated tooth compared to normal (non-diabetic) patients. Diabetic patients had a decreased success rate for teeth with preoperative periapical radiolucenies compared to normal patients. There was also a trend towards an increase in preoperative pain and an increase in postoperative flare ups. *SUMMARY: The diabetic status of patients should be considered during endodontic treatment.*

## **Krall EA, Sosa CA, Garcia C, Nunn ME, Caplan DJ, Garcia RI. Cigarette smoking increases the risk of root canal treatment. J Dent Res 2006;85:313-7.**

This prospective study followed patients to assess the effect of smoking on the risk of needing root canal therapy. 811 male patients in the VA Dental Longitudinal Study were followed for 2 to 28 years. The authors tracked whether the patients were smoking as well as if root canal therapy was performed. They found that cigarette smokers were 1.7 times more likely to have root canal therapy than patients who had never smoked. The risk for needing root canal therapy increased for patients who had smoked for longer periods of time, and decreased after the patient quit smoking. Patients who had quit more than 9 year previously had a similar risk as never smokers. Thus, smoking increases the risk of root canal therapy in a dose dependent manner. *SUMMARY: Smoking increases the risk of root canal therapy.*

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