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## ORTHODONTICS; ORAL SURGERY

### Third molar angulation during and after treatment of adolescent orthodontic patients

Sadeghianrizi A, Forsberg C-M *et al. Eur J Orthod* 2005; **27**: 590–596

**Extraction of premolars was followed by uprighting of third molars in the maxilla, but not in the mandible.**

In early development, mandibular third molars (L8s) are mesially angulated, and maxillary ones (U8s), distally. In subjects with no orthodontic experience third molar uprighting usually but not always occurs, in early adolescence. This study in a US clinic assessed the effect of 4 premolar extractions on L8 and U8 angulation in 106 subjects (E group) compared with a control group (C) of 51 treated without extractions, with a minimum of 10 yrs follow-up.

Regression models showed that during the treatment phase, U8s uprighted significantly more in E than C, but there was no such effect on L8s. By the time of long-term follow-up, in about ¾ of cases, normal eruption had occurred, while other teeth were impacted in various ways. Further analysis of results suggested that the amount of uprighting during treatment was not a good predictor of impaction. The authors discuss studies with comparable or conflicting findings, and suggest that U8s with distal tipping during treatment, >30° distal angulation, or mesial angulation to the occlusal plane, and L8s with >40° mesial angulation, are at increased risk of impaction.

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## PERIODONTICS; METABOLIC MEDICINE

### Effect of non-surgical periodontal treatment with or without doxycycline on the periodontium of type 1 diabetic patients

Llambés F, Silvestre F-J *et al. J Clin Periodontol* 2005; **32**: 915–920

**Adjunctive doxycycline had minimal effects on treatment outcome.**

Diabetics have more periodontal disease than non-diabetics, and if good metabolic control is not established, periodontal treatment is also compromised. However, in well-controlled diabetics, periodontal treatment is usually quite effective. Doxycycline is used as an adjunct in periodontal treatment partly for its effects on the host. In this study in a Spanish hospital, 60 type 1 diabetics (mean age 35 yrs; 30 female) with moderate or severe periodontitis were randomised to non-surgical treatment with or without a 2 week course of doxycycline. Resulting groups were similar in demographic, periodontal and smoking factors.

In both groups there were statistically significant improvements in plaque and bleeding scores, probing depths (PD) and attachment levels (PAL). There were numerically small but significantly greater improvements in the doxycycline group in bleeding scores and pockets of 6+mm. However there were no between-group differences in plaque scores and mean PD or PAL, and the trend in the latter scores did not favour the doxycycline group, although the authors suggest that a larger study might show a significant effect.

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## BEHAVIOURAL SCIENCES; DENTAL HEALTH

### Dental fear, regularity of dental attendance and subjective evaluation of dental erosion in women with eating disorders

Willumsen T, Graugaard PK *Eur J Oral Sci* 2005; **113**: 297–302

**Eating disorders (EDs) may lead to behavioural complications in dental treatment.**

Anorexia, bulimia and binge eating are the commonest EDs in Western societies, and subjects often engage in denial of their condition. Dental erosion may be increased, but subjects are at higher risk of dental fear, which impedes dental attendance. In this study, 53% of 371 women identified from the main Norwegian ED self-help organization returned completed questionnaires. Half the group reported mixed EDs, 14% had anorexia, 10% had bulimia, and 27%, binge eating.

High dental fear was found in about 1/3 of the subjects, irrespective of ED, and very high dental fear in an additional 1/6. About ¾ had regular dental check-ups, and 88% had seen a dentist within the past 2 yrs. Self-induced vomiting was commonest in the bulimia and mixed ED groups (over 80%), compared with 39% for anorexia and 28% for binge eating. About 39% had told their dentist about their ED, with binge eaters least likely to do so. Dental fear had no effect on whether patients told their dentists. A large minority of patients reported negative experiences with the dentist, and the authors comment that dentists need to learn better communication with ED patients.

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## PERIODONTOLOGY; DIETETICS

### Magnesium deficiency is associated with periodontal disease

Meisel P, Schwahn C *et al. J Dent Res* 2005; **84**: 937–941

**Serum Mg and Mg/Ca ratio were associated with periodontal health in a cross-sectional study.**

Mg is common throughout the body, is a physiological Ca antagonist, and may regulate certain cell functions. In health, serum concentrations are constant. This study reports data from 4290 subjects in a stratified random sample from NE Germany (response rate 69%). Half-mouth periodontal examinations were carried out.

In subjects aged below 40 yrs, Mg/Ca ratio was unrelated to periodontal parameters, but in older subjects a higher ratio was associated with less periodontitis and more teeth. The same applied to a higher Mg concentration and to lower Ca concentration, but Mg levels were not significantly correlated with Ca levels. In addition, 60 subjects taking additional Mg in drugs were compared with 120 matched controls, and the latter were found to have 15% deeper probing depths, 20% fewer teeth and 25% more attachment loss. There was no difference in serum Ca and Mg in these two groups. The authors interpret their findings as showing a possible intracellular effect of Mg.

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