What’s New in Dentistry

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Quick recovery after third molar extractions. Third molar extraction is common after orthodontic treatment of adolescent patients. However, a common concern is how long the recovery period will last after surgery. A study published in the Journal of Oral and Maxillofacial Surgery (2003;61:535–544) evaluated the length of the recovery period after third molar removal in a large population of patients treated at four different institutions. The sample consisted of 630 individuals, with an average age of 21 years, who had had four third molars extracted. Each subject was given a questionnaire to fill out daily for 14 days after surgery. The patients were asked to give their perception of their recovery in four main categories, including pain, lifestyle, oral function, and other symptoms related to the procedure. The majority of the respondents indicated that they had recovered after about five days. This recovery included resumption of normal oral function and typical lifestyle. However, many subjects reported that the last aspect to normalize was pain. In fact, on postoperative day 7, 15% of the subjects still reported their worst pain as severe. In addition, about 20% of the patients were treated for delayed healing after surgery. In conclusion, about 80% of young adults will heal uneventfully in about five days after third molar extraction.

Vital bleaching of tetracycline-stained teeth highly successful. Although tetracycline staining of teeth is not as prevalent today as in the past, there are a few orthodontic patients who have moderate to severe tetracycline staining of their maxillary and mandibular incisors. Even if orthodontic alignment improves tooth position, the patient’s smile could appear unattractive simply because of the tetracycline stain. However, a study published in the Journal of Esthetic and Restorative Dentistry (2003;15:142–153) reports that nightguard vital bleaching can be effective at reducing the amount of stain. The sample for this study consisted of 21 participants who had moderate to severe tetracycline staining of their teeth. Carbamide peroxide was applied using a bleach tray every night for six months. At that time, the shade of the teeth was evaluated to determine the amount of improvement. In all subjects, there was a significant reduction of the tetracycline stain. After eight years, 15 of the original participants were reevaluated to determine whether the color correction was stable. Only one of the individuals reported a slight darkening of the teeth. Four other individuals had reinitiated some bleaching for a short time. In the remainder of the subjects, the color change produced by the carbamide peroxide vital bleaching was stable and had improved the esthetic appearance of the maxillary and mandibular anterior teeth significantly.

Avulsion results in greater root resorption than luxation injuries. Young individuals will occasionally injure their maxillary central incisors. These injuries can luxate or avulse the tooth. When the tooth is repositioned, a common concern is the long-term prognosis, especially the occurrence of root resorption. A study published in Dental Traumatology (2003;19:262–265) documents the difference in the amount of root resorption between avulsed and luxated maxillary incisors. The sample consisted of 261 teeth, with 73 cases of dental avulsion and 188 cases of luxation. The age range of the population was 12–21 years. When these teeth were reevaluated after five years, 17% had developed root resorption. Of those affected cases, 80% of the resorption cases occurred as a result of avulsion and 20% had occurred as a result of luxation. Of those cases that displayed root resorption, 30 teeth had inflammatory root resorption and 15 cases had ankylosis and osseous replacement. Most of the ankylosed teeth had suffered avulsion injuries.

Occlusal splints highly effective for adolescent TMD. Young patients will occasionally exhibit temporomandibular symptoms during active orthodontic therapy. These situations can be uncomfortable for the patient and frustrating for the orthodontist. In most of these situations, myofacial pain is the common symptom. A study published in Acta Odontologica Scandinavica (2003;61:203–211) evaluated the effects of three treatments for temporomandibular disorders in an adolescent population. The sample consisted of 122 adolescent subjects, aged 12–18 years, with significant temporomandibular pain. They were randomly assigned to one of three treatment groups: brief information and occlusal appliance therapy, brief information and relaxation therapy, or brief information only. They were evaluated before and after treatment and at a six-month follow-up, using self-reports of the patients as well as clinical assessment. The results showed a significantly higher reduction in the frequency of pain and pain intensity for patients treated with brief information and occlusal splint therapy compared with those treated with the two other regimens. In the occlusal splint group, over 60% of the subjects showed significant improvement in the pain index. How--
ever, no significant differences were found between treatment groups in the amount of jaw opening or in muscle or TMJ tenderness. In conclusion, occlusal splints are highly effective for myofacial pain in adolescent subjects.

**Obesity associated with periodontal disease in young subjects.** In the United States today, obesity has become a significant problem in young individuals. Obviously, significant obesity is a risk factor in several systemic disorders, but does it affect the dentition? A study published in the *Journal of Periodontology* (2003;74:610–615) evaluated the impact of obesity on periodontal health. The sample for this study was derived from the third National Health and Nutrition Examination Survey (NHANES III), which evaluated subjects between 1988 and 1994. A periodontal examination was completed as a part of this extensive survey of 13,665 individuals. In addition, body mass index and waist circumference were used as measures of overall and abdominal fat content. The sample was divided into three groups by age: younger (18–34 years old), middle-aged (35–59 years old), and older (60–90 years old). When the relationship between obesity and periodontal health was assessed, a significant association was found between obesity and periodontal disease among younger adults, but not among middle-aged or older adults. Odds ratios were established and showed that young obese subjects had two times greater odds of having periodontal disease. In conclusion, obesity could be a potential risk factor for periodontal disease, especially among younger individuals.