Bruxism and attrition not related to alveolar dehiscences. Dehiscences are labial or lingual vertical bony defects that extend apically from the alveolar crest. Dehiscences are the precursor of gingival recession. Without a bony dehiscence, gingival recession could not occur. So dehiscences must precede recession. But what causes dehiscences? Is it related to oral hygiene, bacteria, thickness of bone, path of eruption, or possibly parafunctional occlusal habits? Some believe that malocclusion or occlusal habits such as bruxism will cause labial bone loss resulting in dehiscences. But is this association true? This question was addressed in a study that was published in the Journal of Periodontology (72:722–729, 2001). The purpose of this retrospective study was to determine the prevalence of dehiscences in modern American skulls. The sample consisted of 140 modern American skulls that were collected between 1920 and 1950, a total of over 3,000 teeth in these skulls were evaluated. Based upon this evaluation, the authors found that either dehiscences or fenestrations occurred in about 15% of all teeth that were examined. Dehiscences were most common in the mandible and fenestrations were more commonly found in the maxilla. The authors found no association between wear or attrition of the teeth and the loss of buccal bone around the roots of the teeth. In fact, the only accurate predictor of dehiscences was the lack of attrition. In conclusion, bruxism cannot be blamed for creating dehiscences on the buccal and/or surfaces of the alveolar crest.

Occlusal adjustment has limited value in treating TMD. At one time, occlusal adjustment of the dentition was a routine first step in the treatment of temporomandibular disorders such as headache, neck ache, facial pain, and popping and/or crepitus of the TMJ. In more recent years, this mode of treatment has been discussed less and less as a viable therapy for TMD. Is this justified? Does occlusal adjustment play any role in resolving temporomandibular disorders? A study published in the Journal of Prosthetic Dentistry (86:57–66, 2001) provided an excellent overview of 10 excellent, published, research experiments that evaluated the effectiveness of occlusal adjustment on bruxism, temporomandibular disorders, headaches, and neck pain. All studies were randomized, clinical trials that compared occlusal adjustment and mock occlusal adjustment in groups of patients with and without temporomandibular disorders. Then the authors compared these studies to determine if occlusal adjustment can be relied upon as a treatment for temporomandibular disorders. These research projects involved over 400 subjects who were evaluated in comparison to controls. The data did not demonstrate that occlusal adjustment was an effective means of treating bruxism, headaches, neck pain, or temporomandibular disorders. The authors believe that occlusal adjustment is appropriate for relieving localized occlusal trauma of a single tooth, or a tooth with extreme mobility. However, the authors found no benefit to using occlusal adjustment to ameliorate temporomandibular disorders in general.

Five-year follow-up shows disectomy is effective in treating disk derangement. Disectomy has been used to treat painful temporomandibular joint internal derangement that doesn’t respond to nonsurgical treatment for nearly 100 years. This technique has been nearly abandoned in the United States because follow-up studies indicated significant morbidity to the patient with this surgery. However, a study performed in Europe and published in the Journal of Oral and Maxillofacial Surgery (59:750–758, 2001), presents a much more enthusiastic interpretation of this type of surgery. The sample for this prospective study consisted of 64 consecutive patients treated with unilateral disectomy. A total of 56 patients had disc displacement without reduction and eight patients had disc displacement with reduction. In all patients, the disc was removed unilaterally. No attempt was made to remove any of the synovial tissue. When these patients were re-evaluated after five years, only 5% of the 64 patients had been reoperated due to recurrent pain and severe limitation of opening. About 96% of the patients had no or only mild pain at rest five years after unilateral disectomy. On chewing, 90% of these patients were pain free or had only mild pain. Disectomy also had a positive effect on mandibular movements. Maximal mouth opening improved as well as increases in laterotrusion and protrusion. In conclusion, this study has shown an 85% success rate after unilateral disectomy for painful internal derangement, with a reoperation frequency of 5% over five years.

Stress highly correlated with TMD. Orthodontic patients often question whether or not their temporomandibular symptoms such as popping, clicking, headache, and neck pain, will be eliminated or alleviated with orthodontic therapy. Although it is tempting to believe that creating a normal Angle Class I occlusion will cure temporomandibular problems, what about other etiologies, eg, stress or...
depression? Do they play a major or minor role in temporomandibular disorders? A study published in the *Journal of Oral and Maxillofacial Surgery* (59:628–633, 2001), carefully analyzed this question. The purpose of the study was to determine what percent of patients who present with temporomandibular symptoms have underlying psychological disturbances as the basis for these problems. The authors evaluated 250 patients who presented at a university-based temporomandibular joint clinic for treatment. All patients were seeking treatment for TMD. Prior to any treatment the individuals were given a series of three tests. One evaluated depression, a second evaluated pain, and the third test evaluated stress. When the authors evaluated their results, they found a strong association between those patients who had muscle symptoms and their scores on the depression, pain, and stress examinations. That is, those patients whose primary symptom was muscle pain, not TMJ pain, had the highest scores on depression and pain indices. After treatment, the greatest decreases in pain occurred in those patients who had predominantly muscle pain, not intra-articular pain. These were the patients who had the highest levels of stress. In conclusion, the authors were able to use pain as a good predictor of success. If the patient had muscle pain, the chances of having successful relief of the pain was much greater than for patients who had intra-articular pain.

**Closed reduction shows high success after severe condylar fracture.** Previous studies have shown that the treatment of condylar fractures in children and adolescents should involve closed and not open (surgical) reduction of the fracture. But what if the condylar fragment is totally dislocated from the glenoid fossa? Should the patient have surgical repositioning of the displaced condylar fragment to insure the likelihood a successful outcome? A study published in the *Journal of Oral and Maxillofacial Surgery* (59: 768–773, 2001), evaluated the effectiveness of closed reduction in a consecutively treated sample of severely displaced condylar fractures. The overall sample consisted of 130 individuals who had experienced condylar fractures. Out of these, about 25% had a totally dislocated fracture. These individuals were treated with closed reduction, and reevaluated about nine years later. At the follow-up visit, the researchers evaluated the patients’ temporomandibular joint symptoms, took radiographs of the condyle to evaluate the anatomy, and determined the impact upon the patient. The researchers found frequent aberrations of the condylar neck and TMJ area on the radiographs. However, when the individual patient’s symptoms were assessed, about 75% of the time there were mild to no symptoms, and about 25% of the time, the patient had significant symptoms. The most common was joint sounds. The authors also found that intermaxillary fixation immediately after the trauma had no effect on the presence or absence of symptoms. In conclusion, this study has again emphasized the body’s high propensity for healing, even with severe dislocation of condylar fractures. So, the recommended method of dealing with nearly any condylar fracture is still closed reduction.