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**Behavioural science**

## Psychophysiological reactions in dental phobic patients during video stimulation

**Lundgren J, Berggren U et al.**  
**Eur J Oral Sci 2001; 109: 172-177**

There was a weaker autonomic response to threat in these phobics than in a normal control group.

This study explored the relationship between dental anxiety and physiological effects of fear. Heart rate (HR), skin electromyography of the forehead (EMG) and skin conductance (SC) of the hand (under sympathetic nervous control) were assessed in 126 self-reported dental phobics and in 25 controls who had a 5 year history of regular attendance and a low level of dental anxiety.

Subjects were presented with a 10-minute videotape sequence of 7 scenes: neutral (people in a car park); people in a dental waiting room; negative information (dentist saying a lot of treatment is needed); neutral; close-up of a dental injection; high-speed drilling close-up; neutral.

Phobics had around twice the level of anxiety of controls and a consistently higher HR than controls throughout, but drilling gave an added significant reaction. Phobic EMG activity increased markedly for injection and drilling. SC was also at a higher level in phobics, but with no increased effect of any stimulus. The authors suggest that dental phobias may result more from poor coping strategies than from responses to specific threats, such as are present in other phobias.

**Periodontics**

## Initial outcome and long-term effect of surgical and non-surgical treatment of advanced periodontal disease

**Serino G, Rosling B et al.**  
**J Clin Periodontol 2001; 28: 910-916**

Surgery was judged to have a better initial and 13 yr long-term outcome than non-surgical treatment.

This trial followed 64 subjects who were randomized to modified Widman flap surgical (SU) or non-surgical (SRP) treatment for advanced periodontitis. Both groups were given thorough oral hygiene education following baseline examination (BL). A total of 7 SU subjects and 12 SRP subjects dropped out during the study.

Mean number of teeth reduced from 17.6 at BL to 15.9 at 13 yrs for SRP subjects, and from 18.7 to 17.6 for SU. Mean plaque % reduced respectively from 38 to 10 and 37 to 13, and bleeding on probing from 68 to 30 and 65 to 31. Mean probing depth (PD) in SRP subjects reduced from 4.2mm to 3.1 at 1 yr, rising to 3.7 at 13 yrs; respective scores in SU subjects were 4.2mm, 2.6 and 3.2.

From yr 1 to yr 13, mean PD was significantly less in SU than SRP subjects. The authors comment that only 14% of SU subjects

showed signs of advanced disease progression, compared with 29% of SRP. The rate of attachment loss during the 12 years of maintenance therapy was 0.07mm/yr.

**Trauma**

## Periodontal healing after bonding treatment of vertical root fracture

**Sugaya T, Kawanami M et al.**  
**Dental Traumatol 2001; 17: 174-179**

Over nearly 3 years, 2 approaches to bonding had a high success rate.

In 22 patients with 23 vertical root fractures, 2 methods of treatment were applied. In 11 teeth, endodontic treatment was performed, followed by preparation of the root for a cast post. Following dentine etching, the post was cemented with a bonding resin, with fractured segments held in contact during setting. If there was suppuration or bleeding from the periodontium in the next 2 weeks, the root surface was debrided.

Another 12 teeth with fractures were extracted with forceps under LA, and the root canal was cleaned. The fracture surfaces were etched and bonded extra-orally with the bonding agent, any excess being carefully removed without ligament damage. The teeth were replanted and splinted. Five teeth of each group were restored with full crowns, 5 with fixed bridges and the rest with copings.

Both groups were followed for 6-48 months (mean 22). No ankylosis or root resorption was detected. Mean probing depth decreased about 2mm with both treatments, and hypermobility reduced. Two teeth treated intra-orally, and 3 replanted teeth, were extracted because of deep periodontal pockets or refracture. The authors considered both treatments effective.

**Behavioural science**

## Oral habits among adolescent girls and their association with symptoms of temporomandibular disorders

**Winocur E, Gavish A et al.**  
**J Oral Rehabil 2001; 28: 624-629**

Some parafunctions appear more likely to produce TMJ signs and symptoms.

Parafunctional habits may be causally related to temporomandibular disorders. A random sample of 323 girls (aged 15-16yrs) in an Israeli school completed a questionnaire on oral habits and TMJ symptoms. Gum chewing was reported by 62%, head leaning on arm by 55%, soft tissue biting by 41% and jaw play by 14%. The commonest symptoms were tiredness of the jaw whilst chewing (16%), joint noises (12%) and pain in function (10%).

Intensive gum chewing (> 4hrs/dy) was associated with pain and noises in the joint, biting nails and hard or soft objects with a tired jaw, and jaw play with all forms of symptom including locking of the joint. Bruxing and clenching related to joint noises and catching. The authors suggest that jaw play is a parafunction to which more attention is due because of the wide range of associated symptoms, and that it is not clear whether it is a cause or result of TMJ disturbances.