

# **Degenerative changes in the human temporomandibular joints in relation to occlusal support**

Cecilia Magnusson, Mats Nilsson, Tomas Magnusson

## **Abstract**

Controversy exists concerning the etiological factors behind degenerative changes in the temporomandibular joints (TMJs). Tooth attrition, occlusal support, food consistency, ageing, gender and genetics are some possible causative factors that have been discussed in the literature.

The aim of the present study was to examine a contemporary human skull material for possible relations between degenerative form and surface changes in the temporomandibular joints in relation to occlusal support. The material consisted of 259 human skulls, 170 males and 89 females, with an age range of 18-100 years. The dental status was in general poor, and 22% were edentulous. Form and surface changes of both the condyles and the temporal components were more common in the present material compared to most previous studies.

In males, irrespective of age, only weak and clinically insignificant correlations could be found between degenerative TMJ changes and occlusal support. In women, however, the correlations between these variables were in general much stronger, especially in higher ages.

In conclusion: The present findings do not lend support to the hypothesis that loss of occlusal support is a causative factor for degenerative changes in the temporomandibular joints in male subjects. In women, such a correlation is obvious in the present sample, at least in higher ages. It can be speculated that hormonal factors play a role for the sex difference found.