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## **TMJ/Orofacial Pain & Dental Sleep Medicine**

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### **Influence of Oral Stabilization Appliances in Intra-articular Pressure of the Temporomandibular Joint**

*Casares G, Thomas A, et al.  
Cranio 2014 Jul;32(3):219-23*

This study analyzed the intra-articular pressure in the upper compartment of the temporomandibular joint (TMJ) under different functional conditions. The influence of stabilization appliances on intraarticular pressure was studied. Seventy-four joints from 64 patients (55 women and 9 men; mean age: 43.2 years; range: 19-61 years) with TMJ disorders were examined. Only 50 joints passed the inclusion criteria. Intra-articular pressure was measured using a 21G needle inserted into the joint and connected to a pressure transducer. Pressure was measured with the jaw in the following positions: at rest, maximal mouth opening, clenching in maximal intercuspal position, and clenching with an oral interoclusal appliance.

Fifty joints were included in the study (without blood reflux), mean pressure at rest was negative (-6.06 mmHg); when the mouth was opened to its maximal position the pressure was lower (-26.09 mmHg). Mean intra-articular pressure was higher in the maximal intercuspal position (58.56 mmHg). When an interoclusal appliance device was fitted, mean intra-articular pressure reduced its value by 31.24%, which reached a mean value of 40.56 mmHg. There were no significant differences in sex. The group over 45 years old had higher pressure values in maximal open mouth position than the group of patients under 45 years old.

*The authors concluded that interoclusal appliances can reduce pressure in the upper compartment of the TMJ and improve functional status of the joint.*