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EFFECTS OF REHABILITATION WITH COMPLETE DENTURES ON STIMULUS PERCEPTION AND ELECTRIC ACTIVITY OF ORBICULARIS ORIS MUSCLE

CAXIAS, F. P. (UNESP - Universidade Estadual Paulista "Júlio de Mesquita Filho"); SANTOS, D. M. (UNESP - Universidade Estadual Paulista "Júlio de Mesquita Filho"); SILVA, E. V. F. (UNESP Universidade Estadual Paulista "Júlio de Mesquita Filho"); GOIATO, M. C. (UNESP - Universidade Estadual Paulista "Júlio de Mesquita Filho"); BITENCOURT, S. B. (UNESP - Universidade Estadual Paulista "Júlio de Mesquita Filho"); FARINA, L. A. (UNESP Universidade Estadual Paulista "Júlio de Mesquita Filho"); CARVALHO, K.H.T. (UNESP Universidade Estadual Paulista "Júlio de Mesquita Filho")

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Rehabilitation with removable complete dentures requires an initial adaptation period for both oral perception and the perioral muscles. This clinical study aimed to evaluate the effect of mouth rehabilitation with removable complete dentures on stimulus perception and the electric activity of the orbicularis oris muscle. After the approval from Human Research Ethics Committee of the Araçatuba Dental School (1.165.721/2015), fifteen participants who had worn their removable complete dentures for at least 5 years and needed rehabilitation with new prostheses were enrolled in the study. The participants answered to the Perception questionnaire and were submitted to surface electromyography (EMG) examinations of the orbicularis oris muscle during rest, suction of water with a straw, and pronunciation of the syllables /bah/, /mah/, /pah/, and the word - Mississippi' before (T0) and 30 (T1) and 100 (T2) days after insertion of the new prostheses. The data were analyzed with the Cochran Q test, McNemar test, 2-way repeated measures ANOVA, and honestly significant difference (HSD) Tukey test ($\alpha=0.05$). Significant improvement was reported in the perception questionnaire in terms of the oral discomfort. EMG activity decreased during rest and suction after insertion of the new prostheses. A statistical difference between the upper and lower fascicles of the orbicularis oris muscle was detected. Mouth rehabilitation with removable complete dentures decreased oral discomfort and, depending on the oral function, decreased or increased EMG activity of the orbicularis oris muscle. In addition, the lower fascicle was more active than the upper fascicle during rest and most functional activities.

Descritores: Mouth Rehabilitation; Electromyography; Perception.