

The Association between Masticatory Function and Health Conditions in the Elderly

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Purpose:

To evaluate masticatory ability in the elderly, to compare the masticatory ability of dentulous patients with that of denture wearers, and to study the association between their masticatory ability and health conditions.

Method:

There were 60 subjects between the ages 62 and 91. These subjects were divided into 2 groups. The evaluation methods of masticatory function were the chewing of an artificial test food, biting the Occlusal Force-meter and Dental Prescale, and answering a questionnaire regarding various foods. We evaluated mental health using the "Profile of Mood States" questionnaire and balance and stability using the Gravicorder.

Results:

The dentulous and denture groups respectively had a masticatory energy of 7.39×10^{-2} j and 1.26×10^{-2} j by artificial capsules, an occlusal force of 404 N and 60 N by the Occlusal Force-meter, an occlusal force of 244 N and 21 N by the Dental Prescale, an occlusal contact area of 41.8 mm² and 3.35 mm² by the Dental Prescale, and scores of 94.13 and 69.72 by the questionnaire about eating foods. In the dentulous group, 80% were energetic and 20% were fatigued. In the denture

group, 62% were energetic and 38 % were fatigued. The dentulous and denture groups had a total surface area of swaying of 5.57 and 7.78 respectively.

Conclusion:

The subjects who chew with their natural teeth have greater masticatory ability and better overall health conditions than those who chew with dentures.