

## Insufficient Fruit Intake in Elderly is Associated with Edentulism and Xerostomia

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**Introduction.** Poor oral health among old-age people is an important public health issue and a growing burden to countries worldwide. Most countries have information about the oral health status of old-age people whereas such data are insufficient in Latvia. Moreover, older adults are at heightened risk of chronic and geriatric conditions. Literature suggests that fruit intake in old age is associated with reduced likelihood of chronic diseases. However, old age is often accompanied by poor oral health, which could reduce intake of some food groups, including fruit. It is little known as oral and dental health status influence fruit intake in Latvian geriatric patients.

**Aim, Materials and Methods.** The aim of the study is to determine whether an association exists between oral health status and fruit intake in the Latvian “Bikernieki” gerontology center patients.

Current cross-sectional study includes face-to-face interviews using WHO manual validated “Oral Health Survey – Basic Methods” questionnaire. Questionnaire includes items on oral and teeth health status, information on frequency of fruit intake.

Statistical analysis was performed using SPSS version 22.0. Results expressed as mean, standard deviation. Comparisons between means were carried out using the two-tailed t-test. Significance was accepted at the 5% probability level.

Permission to carry out the study was issued by the Ethics Committee of the Faculty of Medicine at the University of Latvia.

**Results.** In total, 52 elderly were entered into the study, n = 33 (63%) of the patients were women, n = 19 (37%) were men. The mean of age was  $80 \pm 8$  years. Mean body mass index (BMI) of the patients was  $28 \pm 5$  kg/m<sup>2</sup>, n = 35 (68%) of the patients were overweight/obese, n = 13 (24%) of the patients have too low BMI, n = 4 (8%) of the patients have normal BMI. Dry mouth symptoms was reported in 76% of patients, 67% of the patients reported having chewing difficulties.

Loss of all teeth was found in 59% of the patients. Thirty-one percent reported to have 1–9 teeth, 6% – 10–19 teeth, 4% – 20 and more teeth. Ninety six percent of the patients use dentures. On average, gerontology patients reported their fruit intake of one cup several times a week. The statistical results support the association between lower fruit intake and dry mouth symptoms  $p < 0.05$ . A significant correlation was found between lower fruit intake and chewing difficulties ( $p < 0.01$ ). As well, between chewing difficulties and dry mouth symptoms ( $p < 0.01$ ), edentulism and fruit intake ( $p < 0.01$ ).

**Conclusions.** Edentulism and xerostomia reduce chewing performance and affect fruit intake in elderly. Although older adults tend to eat fruit several times a week, the intake does not reach recommended levels.