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Abstract

Salty Taste Perception in the Elderly Is an Important Determinant of Sodium Intake †

Irena Keser [1,*], Helena Tomić-Obrdalj [2], Jasmina Ranilović [2] and Davorka Gajari [2]

[1] Faculty of Food Technology and Biotechnology, University of Zagreb, 10 000 Zagreb, Croatia
[2] Podravka Food Industry Inc., 48 000 Koprivnica, Croatia; helena.tomic-obrdalj@podravka.hr (H.T.-O.); jasmina.ranilovic@podravka.hr (J.R.); davorka.gajari@podravka.hr (D.G.)
* Correspondence: ikeser@pbf.hr
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Abstract: Background and objectives: Chemosensory function declines with the progression of age and can potentially impact adherence to a healthy diet. A loss of taste perception could induce higher sodium intake and increase the risk of cardiovascular diseases. The aim of this study was to determine whether there is a decrease in olfactory and gustatory function and to analyze the possible association with nutritional status and dietary sodium intake in older nursing home residents. Methods: This study included 123 participants aged 65 years and older (average age of 80.7 ± 5.8 years, 76.5% females) and 70 adults aged 18–64 years (average age of 43.8 ± 8.1 years, 77.2% females) for a comparison of chemosensory function. Olfactory function was determined by the European Test of Olfactory Capabilities (ETOC) and salty taste perception by the rapid detection threshold method. Nutritional status was evaluated by the Mini Nutritional Assessment-Short Form (MNA-SF®). Sodium intake was determined by 24 h recall collected on two non-consecutive days. Results: The results show that olfactory function in the elderly participants (17.3 ± 8.8, 65% hyposmic) was significantly impaired compared to that in the younger population (29.3 ± 2.9, 15% hyposmic) ($p < 0.0001$). The salty taste recognition threshold in the elderly population (48.8 ± 30.1) was significantly higher compared to that in the younger population (13.7 ± 10.7) ($p < 0.001$). The MNA® result for elderly participants was, on average, 13.7 ± 10.7, which indicated normal nutritional status; 22.8% of participants were at risk of malnutrition; and 1.6% were malnourished. This study established significant association between a higher salty taste threshold and intake of sodium ($p < 0.02$), but there was no significant impact of the loss of olfactory perception on sodium intake. There was no significant association between the loss of gustatory or olfactory function and the nutritional status of elderly people. Discussion: This study showed that chemosensory function declines in older nursing home residents and nutritional status does not appear to be related to this, but it could have a potentially negative impact on health as it is associated with higher sodium intake.

Keywords: elderly people; chemosensory function; nutritional status; sodium intake

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