Effect of advancing age on dietary salt intakes: a 10-year follow-up study

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Background/Introduction: The National Nutrition Survey in Japan indicated that dietary salt intake of the Japanese is gradually decreasing for the last several decades, while salt intakes are higher in elderly than young people. There is no survey on the alteration of salt intakes with advancing age in individuals.

Purpose: The present study investigated effects of aging on salt intakes in individuals.

Methods: A total of 2600 subjects (men; 1787, age; 30 to 79 years-old at 2008) who participated in our physical check-up program both in 2008 and 2018 were enrolled. Individual dietary salt intakes in 2008 and 2018, which were estimated using a spot urine by a previously reported method, were compared.

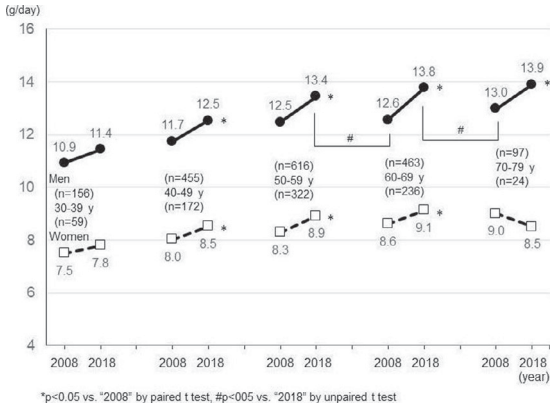
Results: The mean age and salt intakes at 2008 were 53.9±10.0 years and 12.2±3.2 g/day in men and 54.4±9.2 years and 8.3±2.1 g/day in women, respectively. Salt intake increased to 13.2±3.3 g/day in men and 8.8±2.2 g/day in women during the 10 years. Salt intakes were higher in hypertensive than normotensive subjects both at 2008 and 2018, but changes of blood pressure category were not associated with those of salt intakes during the 10 years (table). Changes in salt intakes in each decade are shown in Figure. Salt intakes in each decade increased with advancing age both in men and women until their 70s. Salt intakes in people in their 60s and 70s at 2018 were higher than those at 2008. Similar results were obtained in subjects without any anti-hypertensive medications (n=1667) (data not shown).

Conclusions: The observational follow-up study revealed that salt intakes in each individual increased after the interval of 10 years in both men and women. The results suggest that the sense of taste changes with advancing age in young adults as well as elderly persons, which may be related with alterations of lifestyle.

Changes in dietary salt intake

	Women			Men		
	n	2008	2018	n	2008	2018
Normotension at 2008	629	8.1±2.1	8.6±2.1$	1252	12.0±3.1	12.9±3.2*
Hypertension at 2008	184	8.8±2.2	9.4±2.6*	535	12.7±3.2	13.7±3.6*
Category change; 2008 to 2018						
Normotension to Normotension	492	8.0±2.1	8.5±2.0*	880	11.9±3.6	12.6±3.1*
Normotension to Hypertension	137	8.6±2.1	9.2±2.3#	372	12.3±3.2	13.5±3.4*
Hypertension to Normotension	27	8.6±1.9	9.4±2.5	66	12.1±2.8	12.9±2.7
Hypertension to Hypertension	157	8.8±2.3	9.4±2.6$	469	12.7±3.3	13.8±3.7*

*p<0.001, $p<0.01, #p<0.05 vs. "2008" by paired t test.



*p<0.05 vs. "2008" by paired t test, #p<005 vs. "2018" by unpaired t test

Age difference in changes of salt intake