

# Older adults with too much salt in diet and too little exercise at greater risk of cognitive decline

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Older adults who lead sedentary lifestyles and consume a lot of sodium in their diet may be putting themselves at risk for more than just heart disease.

A study led by researchers at Baycrest in Toronto – in collaboration with colleagues at the Institut Universitaire de Gériatrie de Montréal, McGill University and the Université de Sherbrooke – has found evidence that high-salt diets coupled with low physical activity can be detrimental to cognitive health in [older adults](#).

The finding, which appears online today in the journal *Neurobiology of Aging*, ahead of print publication, may have significant public health implications, emphasizing the importance of addressing multiple lifestyle factors that can impact [brain health](#).

The study followed the sodium consumption and physical activity levels of 1,262 healthy older men and women (ages 67 – 84) residing in Quebec, Canada, over three years. The adults were recruited from a large pool of participants in the Quebec Longitudinal Study on Nutrition and Successful Aging (NuAge).

While low [sodium intake](#) is associated with reduced blood pressure and risk of [heart disease](#), this is believed to be the first study to extend the benefits of a low sodium [diet](#) to brain health in healthy older adults.

"We have generated important evidence that sodium intake not only impacts heart health, but brain health as well," said Dr. Alexandra Fiocco, a scientist with Baycrest's Kunin-Lunenfeld Applied and Evaluative Research Unit (KLAERU) and the study's lead investigator.

Health Canada's sodium reduction strategy recommends that people 14 years of age and older consume no more than 2,300 mg of sodium per day in their diet. In the Baycrest study, senior participants were assessed as low, mid or high level sodium consumers based on a food frequency questionnaire they each completed. Low sodium intake was defined as not exceeding 2,263 mg/day; mid sodium intake 3,090 mg/day; and high sodium intake 3,091 and greater (this went as high as 8,098) mg/day.

Researchers used a modified Mini-Mental State Examination to measure cognitive function in participants at year one (baseline) and annually for three additional years. Physical activity levels were measured using the [Physical Activity](#) Scale for the Elderly.

"The results of our study showed that a diet high in sodium, combined with little exercise, was especially detrimental to the cognitive performance of older adults," said Dr. Fiocco.

"But the good news is that sedentary older adults showed no [cognitive decline](#) over the three years that we followed them if they had low [sodium](#) intake."

"These data are especially relevant as we know that munching on high-salt processed snacks when engaged in sedentary activities, such as watching TV or playing in front of the computer, is a frequent pastime for many adults," said Dr. Carol Greenwood, a senior author on the study and internationally-renowned scientist in the field of nutrition and cognitive function in late life.

"This study addresses an additional risk associated with lifestyles that are highly apparent in North American populations."

With brain failure rates expected to rise significantly as Canada's large boomer demographic ages, educating the public about lifestyle changes that can help delay or prevent normal, age-related cognitive decline – including adopting a healthier diet – is a way to give people some control over how their brain health will hold up in later years, said Dr. Greenwood, senior scientist with Baycrest's KLAERU and professor in the Department of Nutritional Sciences at the University of Toronto.

Provided by Baycrest Centre for Geriatric Care

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