

Effects of Long-Term Consumption of Potassium Enriched Low-Sodium Salt on Mortality in Nursing Homes in Northern China—A Chinese Salt Trial

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Abstract

AIM: To explore the long-term effects of potassium-enriched low-sodium salts on stroke, cardiovascular disease and all-cause mortality. **Methods:** From 2012 to 2018, twenty-nine nursing homes in northern China were selected and randomized into potassium-enriched low-sodium salt group (intervention group, the weight ratio of sodium chloride to potassium chloride was 1:1) and regular salt group (control group). The cause of death was determined and recorded by clinicians in the collaborative centers, and the population changes in the entry and out of the nursing homes and the death were summarized and reported every 3 months, and the mortality risk was calculated by COX proportional hazards model. **Results:** A total of 3543 subjects entered the cohort, including 1887 in the intervention group and 1656 in the control group. The mean follow-up duration was 3.78 ± 1.90 years and 3.48 ± 1.83 years, respectively. During the follow-up period, there were 1065 all-cause deaths (all-cause mortality rate of 83.06/1000 person-years), including 588 all-cause deaths in the control group (all-cause mortality rate of 89.66/1000 person-years) and 477 all-cause deaths (mortality rate of 76.16/1000 person-years) in the intervention group. The HR risk for all-cause mortality, cardiovascular mortality (including stroke), and stroke mortality were 0.883 (95% CI 0.782-0.997), 0.849 (95% CI 0.708-1.018), and 0.877 (95% CI 0.704-1.093), respectively in the whole population. In the 40-70 years group, the all-cause mortality, cardiovascular death, stroke mortality in intervention group compared with control group were significantly reduced, the HRs were 0.780 (95%CI 0.633-0.964), 0.664 (95%CI 0.489-0.903), and 0.681 (95%CI 0.473-0.981), respectively. **Conclusion:** Long-term consumption of potassium enriched salts is safe and feasible, and can significantly reduce stroke, cardiovascular and all-cause mortality in people aged 40-70 years, and reduce premature death.

Keywords

Potassium Enriched and Low Sodium Salt, Nursing Home, Mortality