

Determination of the sodium content in vegetable soups served at public institutions' canteens to different age groups

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Cardiovascular diseases are a major cause of death and disability in developed countries, accounting for 39% of all deaths [1]. One of the most important factors associated with their onset is the high sodium intake, which leads to the development of high blood pressure [2]. High salt intakes are associated with the consumption of processed foods and meals prepared outside home [1].

Modern lifestyle takes, on an ongoing basis, the consumer to eat out and away from home, from one to all day meals, and this may be associated with an increased risk of higher energy intake and to obesity [3]. The inclusion of vegetable soup may be important as its consumption is negatively associated with obesity [4], but its high levels of sodium raised some concern recently [5].

This study aims to quantify the content of sodium present in vegetable soups served in Portuguese public institutions' canteens, including kindergartens, elementary schools and nursing homes.

Soups without salt and with added salt were collected from kindergartens (n=110), elementary schools (n=450) and nursing homes (n=28) and sodium contents were determined by flame photometry.

Sodium contents of soups without added salt ranged from 0.13 to 216.63 mg/100g, in nursing homes, and 0.93 to 284.02 mg/100g, in kindergartens. Sodium content in soups with added salt ranged from 124.71 mg/100g to 429.04 mg/100g, in nursing homes, from 36.58 mg/100g to 409.53 mg/100g, in elementary schools, and from 63.23 mg/100g to 438 mg/100g, in kindergartens.

Considering an average serving of 300g, the estimated average sodium intake from a soup alone may be up to 459-850mg, representing 31 to 54% of the sodium adequate daily intake, becoming a major contributor to the high sodium intakes reported in developed countries. As most of the sodium comes from added salt during cooking processes, intervention strategies should be directed to raise awareness among food handlers and chefs about limiting salt content in different foods, as well as educational strategies directed for the consumer, in order to maintain acceptability of foods with reduced sodium content.

References

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