e - HANDI
Making non-drug interventions easier to find and use

Salt substitution for cardiovascular disease

Summery

Excess sodium intake contributes to elevated blood pressure and consequently cardiovascular disease. The recommended amount of salt is <5 g (less than a teaspoon) per day in adults.
Replacing regular salt (sodium chloride) with a potassium-enriched, reduced-sodium alternative.

Indication & Benefits

To reduce mortality and cardiovascular events in people with hypertension compared with the use of regular salt.

Contraindication and Adverce Effects

Precautions / Adverse effects

Potassium-enriched salt substitutes may be unsuitable for people at risk of hyperkalaemia such as those with chronic kidney disease.

Availability

Potassium-enriched salt substitutes, sometimes called ‘lite salt’ are available at major supermarkets.

Practical Description

A systematic review and meta-analysis showed salt substitution reduced systolic blood pressure by 4.61 mm Hg and diastolic blood pressure by 1.61 mm Hg. Salt substitution reduced the risk of all-cause mortality by 11% and of cardiovascular mortality by 13%.[1]
The benefits are likely to be both from the reduction in sodium intake as well as the increased potassium intake.

The proportion of sodium chloride in the salt substitutes varied from 33% to 75%, and the proportion of potassium chloride varied from 25% to 65%. Each 10% lower proportion of sodium chloride in the salt substitute was associated with a 1.53 mmHg greater fall in systolic blood pressure and a 0.95 mmHg greater fall in diastolic blood pressure.[1]

No serious adverse effects associated with salt substitution were reported.[1]
While most of the trials were in people with hypertension, a subgroup analysis found no significant differences in outcomes based on hypertension status.[2]

Availbility

Potassium-enriched salt substitutes, sometimes called ‘lite salt’ are available at major supermarkets.

Resources

Tips and Challenges

- Even incomplete replacement (~75%) of regular salt with potassium-enriched salt can lead to the reductions in mortality and cardiovascular events.[3]
- There is no or only a slight difference in taste between regular salt and potassium-enriched salt substitutes.
- Salt substitution can be an easier way of reducing dietary salt intake compared with making the behavioural change of salt abstinence. However, for many people, most of their salt intake comes from consuming processed or packaged foods.

Evidence

Grading

Moderate (We are moderately confident in this research evidence, ie further research could have an important impact, which may change the estimates).

1. Yin X, Rodgers A, Perkovic A, et al. Effects of salt substitutes on clinical outcomes: a systematic review and meta-analysis. Heart 2022;108(20):1608-1615.
2. Greenwood H, Barnes K, Clark J, Ball L, and Albarqouni L. Long-term effect of salt substitution for cardiovascular outcomes: A systematic review and meta-analysis. Annals o Internal Medicine 2024;10.7326/M23-2626.
3. Yin X, Paige E, Tian M et al. The proportion of dietary salt replaced with potassium-enriched salt in

the SSaSS: Implications for scale-up. Hypertension 2023;80(5):956-965.