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Letter to the editor on "Potential use of salt substitutes to reduce blood pressure"

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Letter to the editor on "Potential use of salt substitutes to reduce blood pressure"

Abstract

letter to the editor

Keywords

editor, "potential, letter, salt, pressure", substitutes, reduce, blood

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1 Title page

2 Title: Letter to the editor on “Potential use of salt substitutes to reduce blood pressure”

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20

21 Keywords: hypertension, sodium restricted diet, DASH diet, public health, salt substitutes

22

23 Conflicts of interest: all authors have nil to declare

1 Letter to the editor on “Potential use of salt substitutes to reduce blood pressure”

2 Dear Editor,

3 Farrand et al ¹ have provided a convincing argument about the potential opportunities for
4 inclusion of salt substitutes in staple foods to increase potassium intake and reduce blood
5 pressure. We wish to offer an alternative viewpoint on this topic as specialist dietitians who
6 work with adults with end stage kidney disease.

7

8 First, we believe the number of people who may be at risk of adverse events from increased
9 potassium consumption has been understated and the magnitude of the effect of including
10 potassium salts overstated. In the Chronic Kidney Disease (CKD) population, prevalence of
11 hyperkalemia is estimated to be as high as 14% to 20% ². In the general practice setting the
12 incidence of clinically significant hyperkalaemia among Australian adults with CKD who
13 were prescribed a renin-angiotensin-aldosterone system inhibitor has been estimated at 9.9%
14 ³. Data from the United Kingdom was strikingly similar ⁴. These numbers are not
15 insignificant and the widespread inclusion of salt substitutes in staple foods could increase
16 the incidence of hyperkalaemia in the population. Furthermore, evidence from the cluster
17 RCT in rural China where potassium salts were provided to 60 villages produced statistically
18 but not *clinically* significant reductions in sodium intake (mean reduction of sodium intake
19 was 14 mmol per day)⁵. There is also emerging evidence that salt reduction strategies are
20 most effective when targeted to those in the highest quartile of intake and not the general
21 population ⁶.

22

23 Second, the statement by the authors that ‘use of salt substitutes as a public health
24 intervention warrants consideration as part of policy recommendations’ is of great concern to

1 us. Salt substitutes are *one* potential public health intervention to reduce sodium intake and
2 increase potassium intake. Improving overall diet quality could be a more cost effective
3 strategy. Dietary patterns high in fruit, vegetables, wholegrain cereals, legumes, nuts, seeds
4 and fish reduce systolic BP by 4.26 mm Hg and diastolic BP by 2.38 mm Hg ⁷. This exceeds
5 the benefits of the salt substitutes quoted.

6

7 We strongly suggest that it is premature to include salt substitutes in the food supply at a
8 population level until adequate changes in food labelling and education campaigns are in
9 place. Potassium is already a voluntary inclusion on food labels in the United States, but in
10 places such as Australia, New Zealand and the UK it is not. The importance of this inclusion
11 cannot be underestimated. Recommendations to follow a low potassium diet become
12 infinitely more difficult for these at risk populations when salt substitutes are included in
13 staple foods such as breads and cereals (which are not traditionally high in potassium).
14 Furthermore, there are concerns that similar to phosphate additives potassium additives are
15 more bioavailable than naturally occurring potassium in foods. Potassium bioavailability from
16 food additives may be as high as 90-100% compared to that of 50-60% of potassium found in
17 fruit and vegetables ⁸. We recommend that inclusion of salt substitutes into the food supply
18 should be accompanied by monitoring of hospital admissions for hyperkalaemia especially in
19 ‘susceptible’ groups. Furthermore, warning labels for salt substitutes should be strengthened
20 and care taken to ensure clinicians and consumers are aware of the high bioavailability and how to
21 identify potassium additives to avoid causing hyperkalemia. Inappropriate use of salt substitutes at
22 the table to vulnerable groups can prove fatal. For example, 1/8th of a teaspoon of a salt
23 substitute will typically provide around 350mg or 10 mmol of potassium. This far exceeds the
24 allowable amount of potassium in medications of 100 mg by the US FDA and is required to
25 be accompanied by a warning ⁹.

1 In the present era of patient centred medicine, consideration should be given to also including
2 the patient perspective regarding discussions about the inclusion of potentially fatal salt
3 substitutes into the food supply.

4

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