

EASY CHEESY! SALT REFORMULATION PROGRESS OF PROCESSED CHEESE IN IRELAND FROM 2009 TO 2019

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INTRODUCTION

Reducing a population's salt intake is considered one of the most cost effective and beneficial measures for improving public health. In 2003, a voluntary Salt Reduction Programme (SRP) was established in Ireland to achieve gradual and sustained reductions in the salt content of processed foods. More recently, the Irish obesity policy and action plan commits to agreeing reformulation targets with the food industry. Independent monitoring data collected by the Food Safety Authority of Ireland (FSAI) on the sodium content of processed foods, such as processed cheeses, will provide useful information towards establishing salt reformulation targets. This study therefore aims to: (1) examine the sodium and potassium content of processed cheeses available in Ireland, (2) determine whether sodium levels have decreased since 2009, and (3) investigate whether potassium levels have changed due to the use of salt substitutes, such as potassium chloride, as a reformulation practice.

METHODOLOGY

Processed cheeses were collected from a range of supermarkets and convenience stores in 2009 (n36), 2014 (n173) and 2019 (n107). The products were subcategorised into the following groups: Blocks/strips/slices (n110); Reduced fat blocks/strips/slices (n32); Spreads (n109); Reduced fat cheese spreads (n54) and Snack packs (2019 only, n11). Samples were sent to the Public Analyst Laboratory in Galway, Ireland for sodium and potassium analysis per 100g food product, using flame photometry. Data was analysed using IBM SPSS (version 25) per subcategory and compared across time-points using Kruskal-Wallis and Mann-Whitney U tests. Results are presented as medians with minimum and maximum values.

RESULTS

In 2009, the sodium content of processed cheese subcategories were: Blocks/strips/slices (1120 mg (580, 1610)); Reduced fat blocks/strips/slices (1235 mg (1130, 1590)); Processed cheese spreads (490 mg (190, 1120)); and Reduced fat processed cheese spreads (485 mg

(260, 1080)) per 100g food product. In 2019, a reduction in sodium was observed for Blocks/strips/slices (39 %) ($p < 0.001$). For Reduced fat blocks/strips/slices, a statistically significant reduction in sodium was observed between 2009 and 2014 ($p < 0.001$), but this trend did not continue in 2019. No significant reductions in sodium were found for Spreads or Reduced fat cheese spreads. The cheese portion of Snack packs, a lunchbox option for children, had a median sodium content of 600 mg (240, 960) per 100g food product. With respect to potassium, no significant changes were observed for any of the subcategories except for Reduced fat spreads. In Reduced fat spreads, the potassium content significantly reduced between 2009 and 2014 ($p < 0.042$), but this was not observed in 2019.

DISCUSSION

This study shows there has been a reduction in the sodium content of the Blocks/strips/slices subcategory only. No significant reductions were observed for other subcategories of processed cheeses in 2019. As Snack packs were sampled for the first time in 2019, it is important to continue to monitor these products, often aimed at children, to ensure a sustained reduction in the sodium content. No significant changes were observed in potassium content of processed cheeses across the time-points except for Reduced fat cheese spreads. Although salt substitutes are recommended in product reformulation, tracking changes in potassium content is also necessary to protect those at risk of consuming too much of the mineral, including older adults and individuals with underlying kidney conditions. Sodium monitoring data collected by the FSAI is important for enabling policymakers to facilitate setting of reformulation targets in line with national policy. Future work will involve continued collection of trend data to ensure reductions in sodium content are ongoing as the food industry begins to examine ways to reduce other nutrients, beneficial for health, such as fat and sugar.