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Salt trends in breakfast cereals from 2003 to 2015: An examination of the impact of reformulation by the food industry

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Abstract

Breakfast cereals are widely consumed in Ireland with over 80% of adults choosing ready-to-eat cereals or porridge. In terms of healthy eating, breakfast cereals are considered a nutritious choice and are not expected to contribute significantly to daily salt intakes. Since 2003, the Food Safety Authority of Ireland has coordinated a salt reduction programme to achieve voluntary reduction by the food industry in the salt content of processed foods available in Ireland. This study aims to examine whether salt levels of breakfast cereals are decreasing due to reformulation practices.

A random selection of breakfast cereals on the Irish market were sampled using the following categories: rice-based, bran-based, cornflake-type, biscuit-based, multigrain, muesli and no added salt/low salt varieties in 2003, 2007, 2011 and 2015 (muesli and no added salt/low salt varieties were not sampled again in 2015) (n687). Samples were analysed for sodium content using atomic emission spectrophotometry and converted to salt (g) per 100 g of the food product by multiplying by 2.54. Results were analysed using IBM SPSS (version 25). As data was not normally distributed, median values (minimum and maximum) were investigated across breakfast cereal categories at the different time-points. Differences between the time-points were assessed using Kruskal-Wallis test and Mann-Whitney U tests.

In 2003, salt levels were found to be highest in cornflake-type cereals and lowest in no added salt/low salt cereals (2.02 g (0.20–2.31) and 0.01 g (0.0–0.03) per 100 g respectively). The salt content of rice-based, bran-based, cornflake-type, biscuit-based and multigrain varieties significantly decreased (up to 65% in cornflake-type cereals) until 2011. No further reduction was achieved for rice-based, bran-based and cornflake-type varieties in 2015 and a significant increase in salt was observed for biscuit-based ($p = 0.001$) and multi-grain products ($p = 0.007$). Between 2003 and 2011, no reduction in salt levels was observed for muesli or no added salt/low salt products.

This study revealed there has been a significant reduction in the salt content of breakfast cereals since 2003 – an important finding considering breakfast cereals are recommended for healthy eating. However, this work also shows that continuous salt monitoring is necessary to ensure this reduction in breakfast cereals is maintained. Future FSAI reformulation work will examine a range of nutrients in food products as the food industry have committed to achieve a gradual reduction in fat, saturated fat and sugar, as well as salt, as part of the National Obesity Policy and Action Plan.

Conflict of Interest

There is no conflict of interest.