

## Supermarkets could trick you into buying fewer calories

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Credit: Johnny Dod/public domain

Supermarkets could help their customers consume fewer calories by making small changes to the recipes of own-brand food products to reduce the calories contained in the product, without notifying consumers explicitly, according to a study published in the open access *International Journal of Behavioral Nutrition and Physical Activity*. So-



called 'silent' product reformulation may be a promising strategy by which food retailers could contribute to lower calorie intake in the population, researchers at the University of Copenhagen suggest.

Professor Jørgen Dejgaard Jensen, lead author of the study said: "Silent product reformulation may not achieve dramatic reductions in the population's <u>calorie intake</u>, but there seems to be little doubt that it can reduce calorie intake, and that it can do so at a relatively low cost."

The researchers analyzed data from a silent reformulation of eight products, conducted by a Danish retail chain between March 2013 and 2014. The retailer made changes to the recipes of its own-brand mayonnaise, fruit yoghurt, pumpkin seed rye bread, toasting buns, yoghurt bread, carrot buns, whole-grain rolls, and chocolate muesli. Nutrition fact labels were updated to reflect the changes which were not announced to customers.

The researchers found that for six products, calorie sales in the overall product category - for example 'buns' or 'yoghurts' - dropped between 0 and 7 per cent after the changes had been made. Some costumers swapped reformulated rye bread and chocolate cereal for higher-calorie alternatives, which undermined the calorie-reducing effect of the reformulation for the product categories 'chocolate muesli' and 'bread'. However, for the majority of products such indirect substitution effects were outweighed by the positive effect of the reformulation.

Previous studies that assessed similar interventions did not take into account if consumers swapped reformulated products for other products from the same category, for example one type of cereal for another. However, when evaluating the effectiveness of product reformulations, possible changes in consumer behavior need to be taken into account to avoid overstating the public health effects of such interventions, according to the researchers.



Professor Jensen said: "The product reformulations investigated in the study can be considered as 'marginal' changes in the recipes, focused on maintaining the original taste and appearance of the individual products. Larger recipe changes might induce more significant behavioural adjustments. Previous research has indicated that through a sequence of such marginal product reformulations, it may be possible to undertake more substantial changes in food products' nutritional characteristics, and still maintain consumers' acceptance of the products."

The researchers also investigated whether behavioral responses would affect the retailer's sales turnover. They found that the impact of the product reformulations on the retailer's sales turnover was very small, which indicates that such reformulations can be done at relatively low cost for the retailers

Professor Jensen added: "Food product reformulation is considered to be one among several measures to combat the rising prevalence of overweight and obesity. Food manufacturers are continuously developing and marketing new 'low-calorie', 'low-fat' or 'low-sugar' varieties of processed food products. However, the health promotion potential of more 'silent' product reformulation has been largely ignored in research. Our findings suggest that silent reformulation of own-brand products can be effective in reducing calorie consumption by consumers."

**More information:** Jørgen Dejgård Jensen et al, Reducing calorie sales from supermarkets – 'silent' reformulation of retailer-brand food products, *International Journal of Behavioral Nutrition and Physical Activity* (2017). DOI: 10.1186/s12966-017-0559-y

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