

# PORTION SIZE MARKINGS ON SNACK PACKAGING INFLUENCE HOW MUCH PEOPLE EAT

DEIRDRE ROBERTSON, CIARÁN LAVIN AND PETE LUNN



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Deirdre Robertson\*, Ciarán Lavin and Pete Lunn

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## BACKGROUND

Portion sizes have increased substantially over the last 20 years, contributing to rising rates of obesity. Consequently, policies and practices that reduce exposure to larger-sized portions and packages have been proposed. Many manufacturers display recommended portions on packs. However, findings from behavioural science show that written labels are rarely effective, either because they are too complex or because they do not draw attention. In research funded by the Department of Health and the ESRI's Research Programme in Healthcare Reform, the ESRI's Behavioural Research Unit designed a behaviourally-informed portion size prompt consisting of highly visible markings on the packet. Two experiments tested whether consumers noticed the information and whether it altered how much they ate.

## METHOD

The research involved two randomised controlled trials. In the first, a representative sample of 369 consumers arrived at a venue to take part in unrelated research. They were offered a drink and a snack 5-10 minutes before the study was due to start. The snack was a 40g can of crisps. Half of the cans had regular packaging, with portion size and nutritional information in a table. The other half were identical except for the addition of white stripes that marked where one portion ended, and the next one began, with a label reading '1 portion' between them. Consumers were not aware initially that the snack was part of the study. At the end of the experiment, the study aims were revealed and participants filled in a questionnaire. How much people ate was measured by weighing their cans before and after.

In the second trial, boxes of chocolate biscuits were sent to 800 households as part of a gift pack. Half of the boxes had portion size markings applied, half did not. Households were contacted a few days later and asked to take part in a survey. They were told that the chocolate biscuits were part of the study. The survey asked how many people were in the household, whether they had noticed the portion size information, and what they thought portion size recommendations mean. Households sent a photograph of the remaining chocolate biscuits in the box, allowing the researchers to count how many biscuits had been eaten.

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<sup>1</sup> This Bulletin summarises the findings from: Robertson D.A., Lavin C. and Lunn, P.D. (2020). Can Visual Cues to Portion Size Reduce the Number of Portions Consumed? Two Randomized Controlled Trials. *Annals of Behavioral Medicine*.

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\*deirdre.robertson@esri.ie

## **RESULTS**

The portion size markings had different effects on subgroups of consumers. In the first study, the portion size markings influenced how much men ate. Over 60% of men in the control group ate more than one portion of crisps, but only 40% of men who saw the portion size markings – a reduction of one-third. In the second study, we measured the number of biscuits eaten per person in the household per day. When women received the chocolate biscuits with the portion size markings on the outside, there was a 26% drop in the number of households eating more than the recommended portion. Households with children who received a box with portion size markings on it were also less likely to open it

In both studies, the portion size markings were more effective in the subgroups inclined to consume the most. Consumers were more likely to notice portion size information displayed as stripes rather than text. The studies also recorded confusion about what portion size information means. Only 15% of consumers correctly understood that manufacturers decide portion sizes. One in 3 thought it was a government health recommendation.

## **CONCLUSION AND IMPLICATIONS**

These findings provide evidence that the format of nutritional labelling information matters. Portion size markings increased attention to recommendations on packaging and reduced excessive consumption among subgroups of the population. The trials did not record consumers' opinions about the labels, but measured actual behaviour in both the home and outside the home.

These studies add to a body of evidence that demonstrates how the format, colour and placement of information alters how people respond to it. Hence, policies and regulations on food labelling need to consider the presentation of information alongside the content. The methods used in these studies also demonstrate advances made in behavioural science. Carefully controlled experiments can be used to test the influence of information format on consumer behaviour. Where there is uncertainty about the best way to portray information, experiments can pre-test options and inform policy.

Whitaker Square,  
Sir John Rogerson's Quay,  
Dublin 2  
Telephone **+353 1 863 2000**  
Email **admin@esri.ie**  
Web **www.esri.ie**  
Twitter **@ESRIDublin**