

Exer-size with PACE provokes controversy

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Raising public awareness of physical activity energy expenditure in the context of food labelling and consumer food choices is a topic that sparked a vociferous debate on social media platforms at the end of 2019. This was prompted by publication of a systematic review on physical activity calorie equivalent (PACE) food labelling (Daley *et al.*, 2019), which received significant media attention, spearheaded by the BBC headline: 'Four hours to walk off pizza calories' warning works, experts say (BBC News Website [1]). The underlying premise is that by raising awareness of the calorie content of common foods in relation to the amount of physical activity needed to expend those calories, PACE labelling would enable consumers to make more informed food choices - thereby helping to combat population obesity. For example, telling consumers it will take 16-times longer to walk off a pizza than a salad (4 hours versus 15 minutes) would help them to decide whether choosing the more calorific option is worth that amount of physical effort! Direct association with energy balance and physical activity distinguishes this approach from other food labelling strategies, which the authors believe could serve as a continual reminder of the importance of being regularly active.

The evidence in favour of PACE labelling is still fairly scant, although a meta-analysis of 12 studies included in this systematic review showed that its use on food items and menus in comparison to no food labelling resulted in approximately 100 fewer calories being selected. However, corresponding meta-analysis data for calories consumed (-109 kcal) were based on only two studies and PACE labelling was shown to be no more effective in reducing food calories selected or consumed than other food labelling strategies in current use (e.g. traffic light system, percent daily calories, nutritional labelling, etc.). Uncertain risk of study bias, variability of study designs (high heterogeneity) and lack of long-term food choice data were acknowledged as key limitations. In addition, most of the included studies involved hypothetical food selection/eating scenarios via on-line surveys or experimental designs that did not take into account the impact of food pricing or marketing at the point of purchase.

Nonetheless, on the basis of this evidence synthesis, the authors concluded that PACE labelling does have potential to reduce the number of calories consumed at the general population level, thereby helping to prevent obesity (Daley *et al.*, 2019). The Royal Society for Public Health (RSPH) moved swiftly to endorse the evidence presented in this review, while also calling for more research in real-life settings and stressing the importance of remaining sensitive to the potential negative impact that implementation of PACE labelling could have on vulnerable individuals (RSPH Website).

The ensuing social media cacophony however, was far less complaisant with its scepticism of the likely effectiveness of PACE labelling and depth of feeling about the potential damage that could be left in its wake. At its crescendo were worries about the impact such food labelling would have on individuals with eating disorders, whose feelings of guilt or shame about their food choices and/or body image could be triggered or magnified (BBC News Website [2]). Similar concerns have previously been levelled at other systems of food labelling, though there is limited research evidence to support this contention (Roberto *et al.*, 2013; Haynos & Roberto, 2017). Other dissenting voices condemned the trivialised portrayal of physical activity as a mere energy-burning *antidote to food* (disregarding its manifold health benefits); and in contrast to the views of the study authors, some expressed dismay that

healthy food choices would actually become driven by an exercise-avoidance mentality - or conversely, that being physically active would become the justification for unhealthy food choices.

Critics also wondered how the 2,000-2,500 daily calories needed to maintain normal physiological functioning and the nutritional value of energy consumed fits with the logic of PACE labelling. In this respect, encouraging overweight and obese individuals to replace the calories contained in ultra-processed sweets and snacks with more wholesome (nutrient-dense) food choices was seen as a more important message to promote than making them feel they have to earn their food by *burning-off* every calorie consumed. Finally, the point was made that PACE labelling fails to consider people who are unable to run or walk.

This feisty social media backlash eclipsed an abundance of good intent that was grounded in a robust systematic evaluation of the current evidence-base. The underpinning rationale of increasing energy balance awareness to make people think twice about unhealthy food choices (and consumption of excess calories) makes perfect sense. Furthermore, even small reductions in calorie consumption at the population level, which PACE labelling might help to promote, could positively impact the prevalence of obesity.

However, the intensity of emphasis on energy balance also creates a double-edged sword with potential to overshadow important messages about physical activity being much more than energy expenditure and healthy eating being much more than calories consumed. A key question is whether PACE labelling has the legs to get more people moving when there is an inherent risk of depicting physical activity as a consumption tax rather than an investment in health. The potential dangers of PACE labelling for vulnerable individuals with eating disorders are also unknown. More research and real-life road testing are clearly needed to address these issues and inform decisions about whether this food labelling approach could have a role to play in public health strategies for tackling population obesity. ■



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