

Subjects and methods: In a one-year randomised parallel trial 332 overweight and obese adults, 18–72 years, who were randomised to 1 of 3 groups: CER (4200 kJ/day for women and 5040 kJ/day for men), week-on-week-off energy restriction (alternating between the same energy restriction as the continuous group for one week and one week of habitual diet), or 5:2 (2100 kJ/day on modified fast days each week for women and 2520 kJ/day for men, the 2 days of energy restriction could be consecutive or non-consecutive). Primary outcome was weight loss, and secondary outcomes were changes in body composition, blood lipids and glucose.

Results: 146 individuals completed the study (124 female, 22 male, mean BMI 33 kg/m²), weight loss, and body fat loss at 12 months was similar in the three intervention groups, –6.6 kg for CER, –5.1 kg for the week-on, week-off and –5.0 kg for 5:2 ($p=0.2$ time by diet). Attrition rates were not different ($p=0.4$). HDL-cholesterol rose (7%) and triglycerides decreased (13%) at 12 months with no differences between groups. No changes were seen for fasting glucose or LDL-cholesterol.

Conclusion: We conclude that the two forms of IER were not statistically different for weight loss, body composition and cardio-metabolic risk factors compared to CER.

<https://doi.org/10.1016/j.orcp.2018.11.095>

91

Improving healthy food purchases from online canteens: A cluster RCT



Tessa Delaney^{1,2,3,4,*}, Luke Wolfenden^{1,2,3,4}, Sze Lin Yoong^{1,2,3,4}, Rachel Sutherland^{1,2,3,4}, John Wiggers^{1,2,3,4}, Kylie Ball⁵, Karen Campbell⁵, Chris Rissel^{6,7}

¹ Hunter New England Local Health District, Wallsend, NSW, Australia

² School of Medicine and Public Health, University of Newcastle, Callaghan, NSW, Australia

³ Hunter Medical Research Institute (HMRI), Newcastle, NSW, Australia

⁴ Priority Research Centre for Health Behaviour, University of Newcastle, Callaghan, NSW, Australia

⁵ Institute for Physical Activity and Nutrition (IPAN), School of Exercise and Nutrition Sciences, Deakin University, Geelong, Victoria, Australia

⁶ School of Public Health, University of Sydney, Sydney, NSW, Australia

⁷ Office of Preventive health, NSW Health, Liverpool, NSW, Australia

Background: School canteens represent an ideal setting to deliver public health nutrition strategies given their wide reach, and frequent use by children. Online canteens, where students order and pay for their lunch online, provide an avenue to improve healthy canteen purchases through the application strategies that impact on purchasing decisions. The aim of this study was to assess the efficacy of a consumer behaviour intervention implemented in an online school canteen in reducing the kilojoule, saturated fat, sugar and sodium content of primary student lunch orders.

Methods: Ten NSW primary schools (2,714 students) currently using an online canteen were recruited to a cluster RCT conducted over a 2-month period. Intervention schools received a consumer behaviour intervention integrated into their online menu (targeting menu labelling, healthy food availability, item placement and prompting). Control schools received no change to their online

menu. Data were assessed using separate linear mixed models under an intention to treat framework with multiple imputation.

Results: Analysis of all available data ($n=2,714$ students) showed significant reductions in the average energy (–567 kJ; $p<0.001$), saturated fat (–2.37 g; $p<0.001$) and sodium (–228 mg; $p<0.001$) content of intervention students' lunch orders. No significant differences were observed for sugar (1.16 g; $p=0.17$).

Conclusions: The study provides strong evidence supporting the efficacy of a consumer behaviour intervention utilising existing online canteen infrastructure to encourage healthier purchasing from primary school canteens. Such an intervention may represent an appealing policy option as part of a broader government strategy to improve child public health nutrition.

<https://doi.org/10.1016/j.orcp.2018.11.096>

92

Using online data collection methods to estimate the price and affordability of healthy and less healthy diets under different pricing scenarios



Christina Zorbas^{1,*}, Amanda J. Lee², Anna Peeters¹, Tim Landrigan³, Kathryn Backholer¹

¹ School of Health and Social Development, Deakin University, Geelong, VIC, Australia

² The Australian Prevention Partnership Centre, Queensland University of Technology, Brisbane, QLD, Australia

³ School of Public Health, Curtin University, Perth, WA, Australia

Introduction: Routine monitoring of diet prices and affordability is critical to inform pricing policies that can improve population diets. Monitoring currently relies on laborious in-store data collection. Studies are yet to comprehensively examine how diet prices can be monitored through the growing availability of online information and how pricing strategies (price promotions and generic brands) affect diet prices/affordability. This study aimed to address these gaps.

Methods: A scraping tool was used to automatically collect online food and beverage prices from a major supermarket chain in June 2018. Pricing information was collected for over 12,000 products. This data was used to compare the price and affordability of two diets (healthy and unhealthy) using the Australian Standardised Affordability and Pricing (ASAP) methods. The price and affordability of a healthy and unhealthy diet was compared under different pricing scenarios, which considered price promotions and generic brands. Diet affordability was measured against the national poverty line and median income quintiles.

Findings: Using the standard in-store approach, the fortnightly price of a healthy diet (\$653) was estimated to be cheaper than an unhealthy diet (\$820) for a household of four. When accounting for price promotions, the healthy diet remained cheaper, but the price was reduced by 3% compared to 7% for an unhealthy diet. The greatest reduction in diet prices was observed when including generic brands (healthy diet; –19%, unhealthy diet; –17%). All diet prices remained largely unaffordable when measured against the poverty line and lowest income quintile, although generic brands notably improved affordability.

Conclusions: The systematic collection of online supermarket pricing data can facilitate flexible and timely diet price/affordability analyses. These methods should continue to be tested to improve validity against previous Australian studies (by examining sources