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The normalisation of overweight and obesity in Australia



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Background: The majority of the Australian population (63%) are overweight or obese. Surprisingly, many of these people do not self-identify as being above a healthy weight range. This normalisation of overweight and obesity presents a challenge to public health professionals.

LiveLighter: examined the self-perceptions of weight status and the level of concern of those who are overweight or obese. Key findings will be discussed.

Methods: *LiveLighter*: commissioned the Heart Foundation to conduct an online survey on 2,012 Australian adults aged 25–49 years. Participants were categorised according to their weight: normal weight (BMI < 25); overweight (BMI 25.00–29.99) or obese (BMI > 30). Participants were asked if they thought they were: “average weight”; “overweight” or “very overweight or obese”. Additionally, participants who were obese (BMI > 30) were asked to rank their level of concern about body weight: “not at all concerned”; “a little concerned”; “somewhat concerned” and “extremely concerned”.

Results: Only one in four (25%) obese participants described themselves as being either “very overweight or obese”. One in eight (13%) of obese participants reported they thought they were “average weight”.

Only one in two (50%) participants who were overweight described themselves as being “overweight or very overweight or obese”.

Over one third (38%) of obese participants reported they were “not at all concerned or only a little concerned” about their weight. With one third (35%) of obese participants reporting they were “extremely concerned” about their weight.

Conclusion: Our findings demonstrate that a high proportion of overweight/obese individuals self-identify as being in a lower BMI category. Interestingly this trend was higher in obese respondents. A high proportion of obese individuals indicated little or no concern about their weight. This suggests the normalisation of being overweight or obese and presents a challenge for public health campaigns and health professionals.

Shape of Australia Report 2017, Prepared by the National Heart Foundation for LiveLighter.

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Physical activity, adiposity and functional vascular parameters in preschool aged children: a cross-sectional study



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Purpose: In adults and school-aged children, physical activity is inversely associated with adiposity and cardiovascular disease risk. However, in children ≤ 5 years, these relationships remain unclear. This study aimed to determine if objectively-assessed physical activity is associated with measures of adiposity and vascular function in 4 year-old children.

Method: A cross-sectional study of 467 children (mean age 4.0 ± 0.4 years) participating in the Barwon Infant birth cohort study (*n* = 1074 infants). Participants wore an accelerometer for seven days. Mean overall? duration and durations accumulated in bouts ≥ 1 min of light-intensity (LPA), moderate- to vigorous (MVPA) and light-vigorous-intensity (LMVPA) (hours/day) were computed. Adiposity was assessed by BMI z-score, waist circumference z-score, triceps z-score, subscapular skin fold z-score, and %body fat. Pulse wave velocity (m/sec) and systolic/diastolic blood pressure percentile were calculated for age, sex and percentile height. Linear regression between physical activity and vascular parameters were adjusted for accelerometer wear time and maternal education. Analyses with pulse wave velocity were adjusted for age and sex, and analysis with LPA were adjusted for time in MVPA.

Results: Overall duration and duration of bouts ≥ 1 min of MVPA were associated with less adiposity, whereas LPA accumulated in bouts was associated with higher adiposity. Overall duration and duration of bouts of LPA accumulated in ≥ 1 min were associated with lower systolic blood pressure (95%CI: –6.6 to –0.4 mmHg and 9.3 to –1.3 mmHg, respectively) and lower PWV (95%CI: –0.2 to –0.01 m/s and –0.3 to –0.004 m/s, respectively). MVPA was not associated with vascular outcomes; and LMVPA was not associated with any outcomes.

Conclusions: Findings from this study highlight the potential importance of LPA to cardiovascular function and MVPA to adiposity during early life. LPA was associated with more adiposity but lower blood pressure and slower pulse wave velocity. Future research should consider LPA and MVPA in addition to total physical activity.

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A systematic review of the extent and influence of price promotions on consumer purchasing in food and beverage retail settings



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Objective: Public health groups have recommended that government restrict price promotions on unhealthy foods and bev-

erages in an effort to improve population diets and reduce obesity. However, evidence is needed to inform such recommendations. We aimed to synthesise the current literature on the extent and influence of food and beverage price promotions on consumer purchasing behaviour.

Design: Eight scientific publication databases (covering health, business and marketing) as well as grey literature were systematically searched in May 2018 using search terms related to “food and beverages” and “price promotion” to identify studies published between 2000 and 2018. Articles were included if they looked at the availability or extent of price promotions on food and beverages. Article inclusion screening and data extraction were conducted by two independent authors. The quality of included studies was assessed using the Newcastle-Ottawa quality scale.

Results: Of the 11 included studies, six examined the availability of price promotions, four the extent of price promoted purchases, and one examined both availability of price promotions and the extent of price promoted purchases. All but one article concluded that price promotions were more prevalent on, or resulted in greater purchase quantity of food and beverages of low nutritional quality. Of the seven studies that reported on socioeconomic position in some way, five reported that there was no significant difference in price promotion purchasing and availability across socioeconomic groups. Two studies reported that those of a higher socioeconomic position were more likely to purchase food and beverages when price promoted.

Conclusions: Price promotions are used extensively as a marketing tool to increase consumer purchasing. This review supports recommendations calling on governments to restrict price promotions on unhealthy foods and beverages. Future empirical studies are required to evaluate the consumer response to such a policy.

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The impact of interventions including a dietary component in overweight and obese children and adolescents with chronic diseases: a systematic review and meta-analysis



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Children and adolescents with chronic diseases have high rates of overweight and obesity which often exceeds those observed in typically developing populations. Interventions including a dietary component play an important role in weight management. The aim of this systematic literature review is to therefore determine which interventions that include a dietary component are effective at treating overweight and obesity in children and adolescents with chronic diseases.

Six databases were searched and two independent reviewers assessed articles against the eligibility criteria. Key eligibility criteria included studies that included overweight or obese children or adolescents (≤ 18 years) with a chronic disease and that implemented a weight management intervention including a dietary component. Interventions could be diet-only or be multicomponent delivered alongside physical activity, behavioural therapy or drugs. Primary outcomes were body mass index (BMI) as absolute (kg/m^2) or z-score values and weight.

The literature search identified 9872 references from which 19 studies were included. Nine studies were randomised controlled trials (RCTs) and ten were before and after comparisons. A high risk of bias was detected across studies. Participant diagnosis included

polycystic ovarian syndrome (PCOS), asthma, survivors of cancers, intellectual and developmental disabilities, Prader-Willi syndrome and chronic migraine. A meta-analysis comparing pre- and post-intervention values demonstrated a small but significant impact of dietary (diet-only or multicomponent) interventions on BMI (SMD -0.39 [95% CI $-0.59, -0.18$]).

Interventions including a dietary component may have a small effect on BMI for overweight or obese children and adolescents with chronic diseases. However, more evidence is required to confirm this effect as this review was limited by the variability of study designs and a high risk of bias. It remains unclear which combination of diet and other lifestyle and drug components are most effective at treating overweight and obesity in youth with chronic diseases.

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Investigating business outcomes of healthy community food retail strategies: a systematic scoping review



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Purpose: To identify the types of business outcomes of healthy food and beverage retail strategies that have been reported on to date. The overarching aim of this work is to understand how business outcomes may affect the implementation and sustainability of healthy food retail strategies.

Methods: A systematic scoping review was undertaken to map this emerging research space. Peer-reviewed and grey literature were searched from medical, business and psychology databases. Titles were screened and cross-checked. Key inclusion criteria included qualitative or quantitative real-world food or beverage retail strategies designed to improve the healthiness of the non-alcoholic food and beverage environment within stores through changes to the consumer nutrition environment (e.g. changes to product, price, promotion or placement), and reporting store or chain-level outcomes on factors affecting commercial viability, retailer or customer perspectives, or societal outcomes. Exclusion criteria included hypothetical interventions and descriptive studies. We conducted a narrative synthesis to map the range of business outcomes reported for healthy food retail strategies.

Results: 11,682 titles were screened for inclusion with 107 included for review. We identified a number of significant themes: objective and subjective measures of commercial viability including overall item sales, revenue and patronage; and customer satisfaction with strategy were the most frequently examined business outcomes. Few studies examined retailer perspectives, such as