

of pricing discrepancies such as seasonal trends), to ultimately inform robust monitoring methods and pricing policies.

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### Trends in discretionary foods and beverage sales in Australian grocery and convenience stores between 2011 and 2017



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**Background:** Discretionary foods and beverages are regularly consumed by Australian adults and children, and contribute to dietary risk – a leading contributor to the burden of disease. Analysing sales data allows for objective analysis of trends in discretionary foods and beverages, and can help corroborate findings from diet recall surveys. We aimed to quantify trends in sales of key discretionary foods and beverages over five years across all retail settings in Australia, and examine the proportion sold in grocery and convenience stores.

**Methods:** We estimated annual volume sales per-capita over five years (2012–2017 for foods and 2011–2016 for beverages) for thirteen discretionary food categories and two discretionary beverage categories using the Euromonitor Global Market Information Database and estimates of the Australian resident population. Linear regression models were used to estimate annual changes over five years. Additionally, we compared information from the Euromonitor GMID and the Nielsen Market Information Digest (MID) for grocery stores and convenience stores to estimate the proportion of discretionary foods and beverages sold in grocery and convenience stores.

**Results:** We observed annual increases in the sales per capita of frozen pizza, frozen processed potatoes, potato chips, tortilla chips, ice-cream, sugar confectionary, chocolate confectionary, pastries, and sports and energy drinks, no significant change in sales of sweet biscuits, chocolate spreads, and cakes, and decreases in sales of savoury biscuits, processed meat and soft drinks. The majority of discretionary food and beverage sales occurred in grocery stores (>40%). Convenience stores accounted for a smaller share of sales (<10%), with the exception of sports and energy drinks (23%).

**Conclusions:** While discretionary food and beverage sales remain high, from a public health perspective we observed encouraging trends for select food and beverage categories. Grocery stores may be an important avenue for public health action to reduce discretionary food and beverage purchases.

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### Correlates of sugar-sweetened beverage consumption in Australian young adults



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Young adulthood represents an influential transitional period marked by poor dietary habits and excess weight gain. Sugar-sweetened beverages (SSBs) are a major source of excess caloric intake among young adults, yet little is known about the correlates of SSB consumption. This study examines the individual and situational correlates of SSB consumption, using real-time assessment of young adults' eating occasions (EO). Dietary, sociodemographic and health behaviour data were collected during the Measuring Eating in Everyday Life (MEALS) study ( $n=680$  adults, 18–30 y). Participants reported all foods and beverages consumed over 3–4 non-consecutive days using a Smartphone food diary app. For every EO, the situational characteristics such as eating location, purchase location, presence of others and activities while eating were recorded. Level of SSB consumption was determined using two approaches: frequency of SSBs per day, and amount (grams) of SSBs per day. Associations for individual level and EO level characteristics with level of SSB consumption (low/high) were analysed using multilevel logistic regression in Mplus. Overall, 238 (35%) participants consumed SSBs of whom 48% consumed  $\geq 98$  g/d and 56% consumed  $\geq 0.33$  frequency per day. High SSB consumers (intakes  $\geq 98$  g/d) had a lower odds of being female (OR [95% CI]: 0.48 [0.29, 0.90]) and a higher odds of being overweight/obese (1.87 [1.03, 3.40]), consuming SSBs at work/university, compared to at home (2.14 [1.03, 4.45]), and purchasing SSBs from a convenience outlet, compared to a supermarket/grocery store (3.60 [1.53, 8.46]). High SSB consumption, based on frequency per day, was associated with overweight/obesity. In conclusion, over a third of young adults in this study consumed SSBs and high SSB consumption was associated with both individual and situational factors. Future research should explore how EOs containing SSBs differ from other beverage EOs, in relation to their accompanying foods and situational characteristics.

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### Sex and menstrual cycle modulate cold- and meal-induced brown adipose tissue activity in humans



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Adaptive thermogenesis is the dissipation of energy via heat production and primarily occurs in brown adipose tissue (BAT). Earlier retrospective studies suggest that BAT activity is greater in women than men. Furthermore, sex and stress steroids regulate