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The association between birth weight and current weight status in Australian children and adolescents

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Abstract
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The association between birth weight and current weight status in Australian children and adolescents

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Background
In 1980, a Tasmanian birth cohort study suggested birth weight was not an important factor in determining weight at 7 and 10 years. However, there has been a trend of increasing birth weight among the Australian population in the past decades which may have changed the association.

Objective
To examine the association between birth weight and current BMI and weight in a nationally representative sample of Australian children and adolescents.

Design
Data from the 2007 Australian National Children Nutrition and Physical Activity Survey (2007ANCNPAS) was used. We included only data from children and adolescents aged 9 years or above, who have a birth weight between 1.5 – 5.5 kg and provided 2 days of dietary data. Pearson’s partial correlation coefficient between birth weight and current BMI and weight was calculated. Multiple linear regression modelling was used to test for the association between birth weight (per 100g) and current BMI and weight. Covariates controlled for included age, sex, current total daily energy intake, percentage energy from fat, glycemic index, physical activity level, breast feeding and annual household income.

Outcomes
Birth weight was a significant predictor of current BMI and weight (multivariate adjusted \( r = 0.107 \) and 0.163 respectively; \( P < 0.001 \)). Each 100 g increase in birth weight corresponds to a 0.05 (SE 0.01) kg/m² and 0.23 (SE 0.03) kg increase in current BMI and weight respectively (both \( P < 0.001 \)). When split by age groups (9 – 13 y and 14 – 16 years), the associations remained significant, but the magnitude of association was higher in the older age group.

Conclusion
Birth weight significantly predicts current weight status of Australian children and adolescents. The association is stronger among adolescents than in children, suggesting such association may extend beyond the childhood.

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Not applicable.

Analysis of non-core food and beverage advertising to children on Australian television

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Background
The government in Australia is coming under increasing pressure to regulate the advertising of non-core food and beverage products to children, as it is suggested this will have an impact on reducing the prevalence of overweight and obesity. Central to this issue is monitoring rates of non-core food and beverage advertising to contribute to evidence-based decision making.

Objective
To measure the frequency of non-core food and beverage television advertising during children’s viewing periods in Australia, as well as the extent of non-core food and beverage advertising in children’s television programs.

Design
Two weeks of food and beverage television advertising data for 2010 were obtained (7-20 March). Advertised foods were classified as core, non-core or miscellaneous using the criteria from previous studies. Children’s viewing periods included: weekdays: 0700 h to 0900 h and 1530 h to 2230 h; weekends: 0730 h to 1030 h and 1530 h to 2230 h. Children’s programmes were identified through the programme rating, audience numbers and/or whether the content was directed to children. Advertising frequencies for non-core foods during children’s viewing periods were calculated across the three main free-to-air channels (Seven, Nine and Ten). Also calculated was the proportion of non-core food advertisements that were shown in children’s programmes.

Outcomes
Over the three channels, advertisements for non-core foods during children’s viewing periods were shown at the frequency of 1.5 per hour. Of all food and beverage advertisements shown, those for non-core foods during children’s programmes represented 2.4%.

Conclusion
This study has found that the frequency of non-core food and beverage advertising during children’s viewing periods is below that reported in previous Australian studies. In addition, the extent of non-core food and beverage advertising during children’s programmes is low. Ongoing monitoring is, however, essential, to help inform the debate in this area, which includes the performance of industry’s self-regulatory initiatives to moderate food and beverage advertising to children.

Source of Funding
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