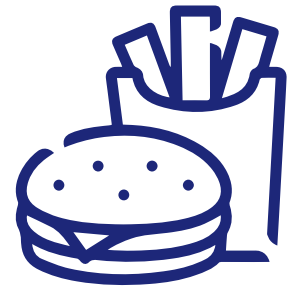


Is there a direct link between junk food advertising and childhood obesity?



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We are all familiar with those mouth-watering advertisements for smooth, rich, velvety chocolate or that flame-grilled burger with its latest meal deal.

When we start to notice the junk food advertising around us, we see that it is just about everywhere. Whether we are watching sport on TV, our favourite shows in the evenings with our kids, playing games online, on social media, at the petrol pump filling up our car or just waiting for a bus or train, a junk food advertisement isn't far away. Junk food advertising is like wallpaper in our lives and our children's lives too.

WHAT EFFECT DOES JUNK FOOD ADVERTISING HAVE ON OUR CHILDREN?

Decades of research tells us that exposure to junk food advertising is linked with unhealthy eating behaviours in children. This unquestionable evidence has led the World Health Organization to urge governments everywhere to regulate junk food marketing to protect children from future health problems associated with poor diet and weight gain. One in four Australian children are already overweight or obese putting them at risk of developing chronic diseases such as Type 2 diabetes, cardiovascular disease and 13 different cancers later in life. Despite this the Australian government has been slow to act, citing a lack of evidence showing a direct link between food advertising and childhood obesity as one of its reasons.

From international studies, we know that when children see junk food advertising on TV or when they play a game branded with junk food advertising (an 'advergame') they eat more snack food either during or after exposure. Until now, no such information was known about Australian children. This study assessed both children's responses to advertising at a snack and also at the next meal to establish whether advertising influenced how much children ate and if they compensated for that later in the day.

WHAT WE DID

Our research involved 160 children aged between 7 and 12 years. Children attended one of four, six-day school holiday camps (40 children per camp) that we ran in partnership with Early Start Research at the University of Wollongong.

Mid-morning at the camp all children watched a cartoon with ten TV advertisements and then half of the children also played an online branded advergame for five minutes. On three of the days children saw junk food advertising and on the other three days children saw non-food advertising.





Children then had a 15 minute snack break before returning to other camp activities. We measured how much food was eaten at the snack break. Lunch was served to children later in the day and we measured the amount of food eaten at lunch.

We used unfamiliar advertisements for international brands that had not been aired on commercial TV in Australia and were not available for sale in Australian supermarkets. We also selected advertisements that would not be deemed 'directed primarily to children' and would, therefore, be similar to advertising permitted for broadcast in Australia under the current self-regulatory system.



WHAT WE FOUND

Children who watched the cartoon and played the online advergame ate more at the snack break on the days they saw junk food advertising compared with days they didn't see food advertising. And children didn't compensate for this increased food intake by eating less at lunch on these days. Children left camp on the days they'd seen food advertising having eaten 194 kilojoules more than they ate on the days they didn't see food advertising.

We also found that children with heavier weight status were more susceptible to the effects of food advertising. Children with overweight or obesity left camp on the days they'd seen food advertising having eaten 398 kilojoules more than they had eaten on the days they hadn't seen food advertising.

When children watched junk food advertisements they ate on average 194 kilojoules more. Children did not compensate for the extra kilojoules they ate by eating less at their next meal.

WHAT THIS MEANS

Research suggests that eating an extra 200–300 kilojoules a day may be all that is needed to cause weight gain in children. On the days they had seen junk food advertising, children in our study left camp with an energy imbalance of a similar magnitude.

The findings from this study contribute to our understanding of the direct role that junk food advertising likely plays in the development of childhood obesity.

Protecting children from junk food advertising on television and online is an important obesity prevention measure.

Norman, J., Kelly B, McMahon, A.-T., Boyland, E. J., Baur L., Chapman K., King L., Hughes C., Bauman A. (2018). Sustained impact of energy-dense TV and online food advertising on children's dietary intake: a within-subject, randomised, crossover, counter-balanced trial. *International Journal of Behavioral Nutrition and Physical Activity*, 15(1), 37.

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