

## Junk Food Marketing and Childhood Obesity: The Evidence

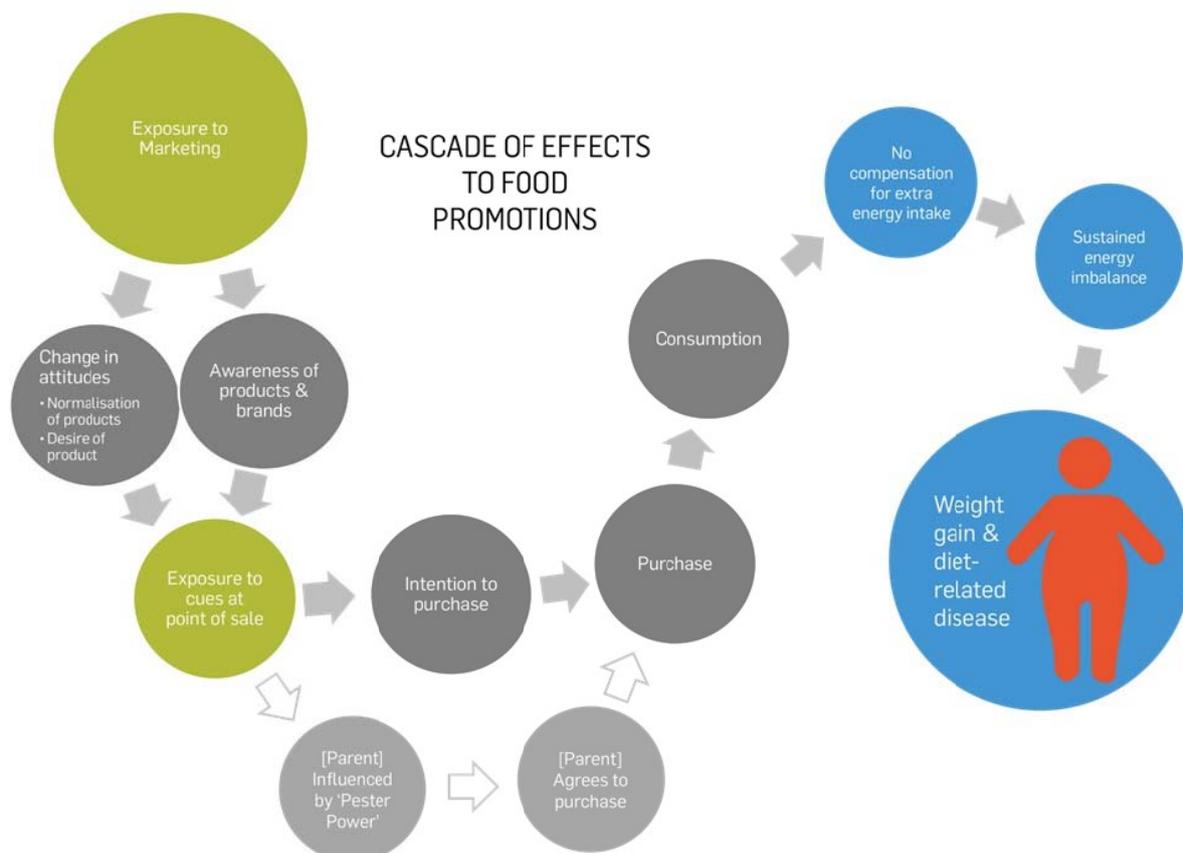
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One in three children have a weight classed as overweight or obese putting them at risk of preventable health conditions in the future. The Obesity Health Alliance, a coalition of 40 plus leading health organisations, are calling for stronger restrictions to protect children from junk food marketing to help reduce child obesity, including a 9pm watershed on junk food adverts on TV.

This document sets out a summary of the key evidence to date and discusses the extent to which the evidence supports a causal link between junk food marketing exposure and children's weight (i.e. that junk food marketing contributes to the development of obesity in children).

### How does junk food marketing affect children's health?

The pathway linking exposure to junk food marketing to children's weight and related health outcomes is complex, but is likely to involve a number of impacts (repeated and building cumulatively over time) as outlined in the diagram below<sup>1</sup>:



<sup>1</sup> Kelly B, King L, Chapman K, Boyland E, Bauman AE, Baur LA (2015). A hierarchy of unhealthy food promotion effects: identifying methodological approaches and knowledge gaps. *American Journal of Public Health*, 105: e86-e95.

## What is the evidence that junk food marketing is a problem?

There is a substantial body of evidence to demonstrate that junk food marketing negatively affects children's dietary health.

Research has shown, in children, junk food marketing is associated with:

- The 'normalisation' of junk food consumption<sup>2</sup>
- Increased preference for junk food<sup>3</sup>
- Greater taste preferences towards advertised products<sup>4,5,6</sup>
- Greater pestering of parents to buy junk food<sup>7</sup>
- Immediate snack food consumption<sup>8</sup>
- Greater intake of junk food and lower intake of healthy food<sup>12</sup> overall<sup>9</sup>
- Increased food intake that is *not* compensated for by eating less at later eating occasions<sup>10</sup>
- Greater body weight<sup>11</sup>

## Does junk food marketing contribute to childhood obesity?

Demonstrating a direct link between marketing exposure and obesity is challenging because:

- Obesity is driven by a number of factors
- Weight gain typically occurs gradually
- Long-term trials that alter children's exposure to food marketing are extremely challenging and expensive as all children in the UK and most Western cultures are exposed to a similarly large volume of marketing through a number of avenues

However, there is another way of determining whether there is a cause and effect relationship. The internationally-recognised and widely-used standard for such an approach is the Bradford Hill causality framework<sup>12</sup>.

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<sup>2</sup> Hoek J, Gendall P (2006). Advertising and obesity: A behavioural perspective. *Journal of Health Communication*, 11: 409–423.

<sup>3</sup> Boyland EJ, Harrold JA, Kirkham TC, Corker C, Cuddy J, Evans D, Dovey TM, Lawton CL, Blundell JE, Halford JCG (2011). Food commercials increase preference for energy-dense foods, particularly in children who watch more television. *Pediatrics*, 128(1): e93-e100.

<sup>4</sup> Robinson TN, Borzekowski DLG, Matheson DM, Kraemer HC (2007). Effects of fast food branding on young children's taste preferences. *Archives of Pediatrics & Adolescent Medicine*, 161: 792-797.

<sup>5</sup> Roberto CA, Baik J, Harris JL, Brownell KD (2010). Influence of licensed characters on children's taste and snack preferences. *Pediatrics*, 126: 88-93.

<sup>6</sup> McGale LS, Halford JCG, Harrold JA, Boyland EJ (2016). The influence of brand equity characters on children's taste preferences and food choices. *Journal of Pediatrics*, 177: 33-38.

<sup>7</sup> McDermott L, O'Sullivan T, Stead M, Hastings G (2015). International food advertising, pester power and its effects. *International Journal of Advertising*, 25(4): 513-539.

<sup>8</sup> Boyland EJ, Nolan S, Kelly B, Tudur-Smith C, Jones A, Halford JCG, Robinson E (2016). Advertising as a cue to consume: a systematic review and meta-analysis of the effects of acute exposure to unhealthy food or non-alcoholic beverage advertising on intake in children and adults. *American Journal of Clinical Nutrition*, 103: 519-533.

<sup>9</sup> Thomas C, Hooper L, Petty R, Thomas F, Rosenberg G, Vohra J (2018). 10 years on: New evidence on TV marketing and junk food consumption amongst 11-19 year olds 10 years after broadcast regulations. *Cancer Research UK*, available from: [http://www.cancerresearchuk.org/sites/default/files/10\\_years\\_on\\_full\\_report.pdf](http://www.cancerresearchuk.org/sites/default/files/10_years_on_full_report.pdf)

<sup>10</sup> Norman J, Kelly B, McMahon A, Boyland E, Baur L, Bauman A, Chapman K, King L, Hughes C (2017). Sustained impact of energy-dense food advertising on children's dietary intake: a within-subject, randomised, crossover, counter-balanced trial. *Manuscript submitted for publication*.

<sup>11</sup> Zimmerman FJ, Bell JF (2010). Associations of television content type and obesity in children. *American Journal of Public Health*, 100(2): 334-340.

<sup>12</sup> Bradford Hill A (1965). The environment and disease: association or causation? *Proceedings of the Royal Society of Medicine*, 58(5): 295.

A 2016 study by Norman et al<sup>13</sup> categorised the evidence for food marketing's relationship with childhood obesity against this framework. The results are as follows:

- **Strength of association ✓**
  - Evidence shows that junk food marketing exposure is strongly associated with poor dietary choices and overconsumption of junk food
- **Experimental evidence ✓**
  - Across various study designs using various media, experimental evidence shows that junk food marketing exposure strongly influences the food children prefer, the food they choose and the food they actually eat
- **Dose-response ✓**
  - Evidence demonstrates that as the level of junk food marketing exposure increases, so does the impact of that marketing
- **Consistency of evidence ✓**
  - Various study designs using various media, wide range of countries and ethnicities, evidence consistently shows negative impact on children's food behaviours
- **Temporality ✓**
  - Evidence demonstrates significant effects on children's food behaviours *after* exposure to junk food marketing
- **Plausibility and coherence ✓**
  - Psychosocial theory and biological underpinnings of children's food preference development supports the impact of junk food marketing on food behaviours

**Conclusion: the current evidence satisfies all the key criteria and provides compelling evidence that junk food marketing and obesity are causally related.**

Obesity Health Alliance full report, 'A Watershed Moment: Why it's Prime Time to Protect Children from Junk Food Adverts' is available here: <http://obesityhealthalliance.org.uk/resources/>

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<sup>13</sup> Norman J, Kelly B, Boyland E, McMahon AT (2016). Marketing and Advertising on Food Behaviours: Evaluating the Evidence for a Causal Relationship. *Current Nutrition Reports*, 5(3): 139-149.