

Building Momentum evidence table: effects of implemented restrictions on food advertising and other forms of commercial promotion

Summary of what is known to date (last updated:10/12/2019)

Note to readers - this table is not a systematic review of the literature. The integrity, methodology or funding source of each study included in the table has not been examined by the authors.

Inclusion criteria: a study evaluating an implemented marketing restriction in a country, whether it be a mandatory government-led policy; a co-regulatory policy; or an industry self-regulatory system. Systematic reviews of all regulatory mechanisms are listed at the end of the table.

Type of measure	Country	Reference	Aim and Findings
Mandatory regulation of broadcast food advertising to children	Chile	Carpentier, F. R. D., Correa, T., Reyes, M., & Taillie, L. S. Evaluating the impact of Chile's marketing regulation of unhealthy foods and beverages: pre-school and adolescent children's changes in exposure to food advertising on television. <i>Public Health Nutrition</i> , 1-9.	OBJECTIVE: To evaluate the effects of Chile's 2016 regulation restricting child-directed marketing of products high in energy, saturated fats, sodium and sugars on reducing children's exposure to 'high-in' television food advertising. DESIGN: Television use by pre-schoolers and adolescents was assessed via surveys in the months prior to implementation and a year after implementation. Hours and channels of television use were linked with the amount of high-in food advertising observed in corresponding content analyses of food advertisements (ads) from popular broadcast and cable channels to estimate changes in exposure to food ads from these channels. RESULTS: Pre-schoolers' and adolescents' exposure to high-in food advertising in total decreased significantly by an average of 44 and 58 %, respectively. Exposure to high-in

			<p>food advertising with child-directed appeals, such as cartoon characters, decreased by 35 and 52 % for pre-schoolers and adolescents, respectively. Decreases were more pronounced for children who viewed more television. Products high in sugars were the most prevalent among the high-in ads seen by children after implementation.</p> <p>CONCLUSIONS: Following Chile's 2016 child-directed marketing regulation, children's exposure to high-in food advertising on popular broadcast and cable television decreased significantly but was not eliminated from their viewing. Later stages of the regulation are expected to eliminate the majority of children's exposure to high-in food advertising from television.</p>
	Chile	<p>Mediano Stoltze, F., Reyes, M., Smith, T. L., Correa, T., Corvalán, C., & Carpentier, F. R. D. (2019). Prevalence of Child-Directed Marketing on Breakfast Cereal Packages before and after Chile's Food Marketing Law: A Pre-and Post-Quantitative Content Analysis. <i>International journal of environmental research and public health</i>, 16(22), 4501.</p>	<p>Abstract: Food marketing has been identified as a contributing factor in childhood obesity, prompting global health organizations to recommend restrictions on unhealthy food marketing to children. Chile has responded to this recommendation with a restriction on child-directed marketing for products that exceed certain regulation-defined thresholds in sugars, saturated fats, sodium, or calories. Child-directed strategies are allowed for products that do not exceed these thresholds. To evaluate changes in marketing due to this restriction, differences were examined in the use of child-directed strategies on breakfast cereal packages that exceeded the defined thresholds vs. those that did not exceed the thresholds before (n = 168) and after (n = 153) the restriction was implemented. Photographs of cereal packages were taken from top supermarket chains in Santiago. Photographed cereals were classified as "high-in" if they exceeded any nutrient threshold described in the regulation. It was found that the percentage of all cereal packages using child-directed strategies before implementation (36%) was significantly lower after implementation (21%), $p < 0.05$. This overall decrease is due to the decrease found in the percentage of "high-in" cereals using child-directed strategies after implementation (43% before implementation, 15% after implementation), $p < 0.05$. In contrast, a greater percentage of packages that did not qualify as "high-in" used child-directed strategies after implementation (30%) compared with before implementation (8%), $p < 0.05$. The results suggest that the Chilean food marketing regulation can be effective at reducing the use of child-directed marketing for unhealthy food products.</p>
	Ireland	<p>Scully P et al. (2015) Food and beverage advertising during children's television</p>	<p>Aim: Following the Broadcasting Act 2009 limiting the advertising of foods during children's programming, this study sought to examine the advertising content in children-specific television broadcasts in Irish television by recording for 5 weekdays</p>

		<p>programming. <i>Irish Journal of Medical Science</i> 184(1), 207-212i https://link.springer.com/article/10.1007/s11845-014-1088-1</p>	<p>children-specific television broadcasting from 0700 to 1700 hours. Food and beverage advertisements were coded based on type of product, nutritional content, intended age group and outcome.</p> <p>Results: 322 advertisements were broadcast during the recording period. 31 % (n = 101) of advertisements related to food or beverage products with 66.3 % (n = 68) of food advertisements being for foods that should be eaten in moderation. The most frequently recorded food advertisement was for fast food products (27.3 %, n = 24), followed by sweets/candy (21.6 %, n = 19) and dairy products (17.0 %, n = 15). The most frequently recorded beverage advertisement was for natural orange juices (46.2 %, n = 6). 54.7 % (n = 176) of advertisements were adult specific with 27.3 % (n = 88) being children specific. All food and beverage advertisements were associated with a positive outcome (n = 322).</p> <p>Conclusions: These results demonstrate that food and beverages depicted in advertisements during children’s programming are predominantly unhealthy foods with high salt and sugar contents. The findings from this study again highlight the ongoing need for new rules regarding food advertising in children’s programming.</p>
	<p>Ireland</p>	<p>Tatlow-Golden M et al. (2015) Creating good feelings about unhealthy food: children’s televised ‘advertised diet’ on the island of Ireland, in a climate of regulation. <i>The Irish Journal of Psychology</i> 36(1-4), 83-100ii</p>	<p>Aim: To identify young children’s exposure to television food advertising on Ireland (IoI), both in the Republic of Ireland (RoI) and Northern Ireland (NI), having similar statutory rules (the latter in accordance to UK Broadcast Act), by systematically sampling an Irish audience in 2012. Food advertisements were nutrient profiled and content analyses were conducted of marketing techniques.</p> <p>Findings: The advertising viewed by young children primarily features dairy and fast foods, pizza, sweets and chocolate. Despite complying with statutory regulations, more than half of the food advertisements featured HFSS items; young children see over 1000 HFSS ads annually in the Republic of Ireland, and nearly 700 in Northern Ireland. The authors suggest to apply food advertising restrictions to times when higher proportions of young children watch television – not just child-directed programming, including digital</p>

			media, use a stricter nutrient profiling method; and explore ways to advertise healthy foods.
	South Korea	Lee Y et al. (2017) Effect of TV food advertising restriction on food environment for children in South Korea. <i>Health Promotion International</i> 32(1), 25-34.iv	<p>Aims: To determine the effects of restrictions on television (TV) food advertising on children's food environments in South Korea by examining changes that occurred in the marketing mix (product, price, place, and promotion) of food companies following the TV restrictions by applying an on-line survey with marketers or R&D managers of 108 food companies.</p> <p>Findings: From the responding 63 food companies (58.3%) results showed that among the four marketing mix components the restrictions exerted relatively stronger effects on Product. Effects were stronger on companies that produced foods within the product categories of Energy-Dense and Nutrient-Poor foods (EDNP companies) in comparison with companies that did not (non-EDNP companies). The restrictions exerted positive effects on EDNP companies with respect to compliance with labelling requirements and reinforcement of nutritional contents examination, as well as changes to products such as reducing unhealthy ingredients and fortifying nutrients. But also results show that some food companies attempted to bypass the regulations by changing marketing channels from TV to other mediums and by reducing packaging sizes.</p>
	South Korea	Kim S et al. (2013) Restriction of television food advertising in South Korea: impact on advertising of food companies. <i>Health Promotion International</i> 28(1), 17-25iii	<p>Aim: To determine the impact of the Special Act on Safety Management of Children's Dietary Life by examining changes in the TV advertising practices of South Korean food companies since the scheduled enforcement date of the regulation. The regulation restricts TV advertising of energy-dense and nutrient-poor (EDNP) foods targeting children. The study examined changes in TV advertising practices before and after the scheduled enforcement date of January 2010.</p> <p>Findings: After January 2010, the total advertising budget, number of advertisement placements and GRPs decreased during regulated hours. Even during non-regulated hours, a significant decline was noticed in the number of advertisement placements and GRPs. The total advertising budget for non-EDNP foods increased, whereas that for EDNP foods decreased at a higher rate in addition to a drop in its percentage share.</p>

	UK	<p>Whalen R et al. (2017) Children’s exposure to food advertising: the impact of statutory restrictions <i>Health Promotion International</i> https://doi.org/10.1093/heapro/dax044v</p>	<p>Aims: To systematically explore food advertising on UK television in 2010 (post-regulation) and compare this to 2008 (mid-regulation) to assess if food adverts improved in nutritional quality after implementation of regulations. Television was recorded between 6 a.m. and 10 p.m. for one weekday and one weekend day during 6 months of 2010 across 13 commercial television channels popular with children. These data were directly compared with previously published data for 2008.</p> <p>Findings: Despite statutory regulation, frequency and balance of food commercials, by type: core (necessary to consume in a daily basis, like fruits and vegetables), non-core food (provide excess of nutrients or energy fast food, snacks, energy dense foods) and miscellaneous (generic supermarket ads) remained relatively static over the 2 years. Children are still exposed to high amounts of unhealthy food advertising on television. Food and beverages were the third most frequently advertised product type (11.9% of all ads), a decrease of 0.9% from 2008 (12.8%). Non-core food’s commercials decreased (down 2.2–53.8%) and core food’s advertising increased (up 0.5–18.6%). Fast food items were the third most frequently advertised food product (15.4%, up 3.5% from 2008). During peak children’s viewing times, 17.0% of all commercials were for food, an increase of 4.7% from non-peak children’s viewing times and fewer core (0.9%) and more non-core (10.5%) foods were advertised at these times. Despite statutory regulation, frequency and balance of food commercials (core, non-core and miscellaneous) remained relatively static over the 2 years. Children are still exposed to high amounts of unhealthy food advertising on television. Continued monitoring of television food advertising remains crucial and policymakers should examine the comparative efficacy of other restrictions.</p>
	UK	<p>Silva, A et al. (2015). An Evaluation of the Effect of Child-Directed Television Food Advertising Regulation in the</p>	<p>Aims: The purpose of our paper is to quantify the impact of HFSS regulations on household expenditures in the three sequential “phases” that reflect the evolution of the U.K. regulatory regime: a period of no regulation, a period of voluntary self-regulation at company level, and the current coregulation implemented by the industry code of practice.</p>

		United Kingdom. <i>Canadian Journal of Agricultural Economics/Revue canadienne d'agroéconomie</i> , 63(4): 583-600vi	<p>Findings: Results suggest that coregulation is the only regulatory mechanism that leads to a significant reduction in advertising expenditures. The reduction in total advertising of £11.4 million is composed of an £15.2 million decrease in television (TV) HFSS advertising expenditures. This decline in TV advertising is partially compensated by other media, which translates to a change in household HFSS food and drink expenditures. However, self-regulation and coregulation lead to reduction on HFSS expenditure. As a result of regulation, households without children decrease HFSS drink expenditures by £5.2 per capita (per quarter), while households with children decrease per capita HFSS food expenditures by £14.9 and HFSS drink expenditures by £5.6 (per quarter).</p>
	UK	Adams, J., Tyrrell, R., Adamson, A. J., & White, M. (2012). Effect of restrictions on television food advertising to children on exposure to advertisements for 'less healthy' foods: repeat cross-sectional study. <i>PloS one</i> , 7(2), e31578.	<p>Background: In 2007, new scheduling restrictions on television food advertising to children in the UK were announced. The aim of the restrictions was to “reduce significantly the exposure of children under 16 to high fat, salt or sugar (HFSS) advertising”. We explored the impact of the restrictions on relative exposure to HFSS food advertising among all viewers and among child television viewers, as well as adherence to the restrictions.</p> <p>Result: 1,672,417 advertising PMV were included. 14.6% of advertising PMV were for food and 51.1% of these were for HFSS food. Relative exposure of all viewers to HFSS food advertising increased between study weeks 1 and 2 (odds ratio (99% confidence intervals) = 1.54 (1.51 to 1.57)). Exposure of children to HFSS food advertising did not change between study weeks 1 and 2 (odds ratio (99% confidence intervals) = 1.05 (0.99 to 1.12)). There was almost universal adherence to the restrictions.</p> <p>Conclusions: Despite good adherence to the restrictions, they did not change relative exposure of children to HFSS advertising and were associated with an increase in relative exposure of all viewers to HFSS advertising. Stronger restrictions targeting a wider range of advertisements are necessary to reduce exposure of children to marketing of less healthful foods.</p>
	UK	Boyland, E. J., Harrold, J. A., Kirkham, T. C., & Halford, J. C. (2011). The extent of food	<p>Objective: To provide the most comprehensive analysis to date of the extent of food advertising on UK television channels popular with young people following regulatory reform of this type of marketing activity.</p>

		<p>advertising to children on UK television in 2008. <i>International Journal of Pediatric Obesity</i>, 6(5-6), 455-461.</p>	<p>Results: Food and drinks were the third most heavily advertised product category, and there were a significantly greater proportion of advertisements for food/drinks during peak compared to non-peak children's viewing times. A significantly greater proportion of the advertisements broadcast around soap operas than around children's programmes were for food/drinks. Children's channels broadcast a significantly greater proportion of non-core food advertisements than the family channels. There were significant differences between recording months for the proportion of core/non-core/miscellaneous food advertisements.</p> <p>Conclusions: Despite regulation, children in the UK are exposed to more TV advertising for unhealthy than healthy food items, even at peak children's viewing times. There remains scope to strengthen the rules regarding advertising of HFSS foods around programming popular with children and adults alike, where current regulations do not apply. Ongoing, systematic monitoring is essential for evaluation of the effectiveness of regulations designed to reduce children's exposure to HFSS food advertising on television in the UK.</p>
	<p>UK</p>	<p>Ofcom (2010) HFSS advertising restrictions: final review. http://stakeholders.ofcom.org.uk/market-data-research/other/tv-research/hfss-final-review/</p>	<p>The report describes the outcome of Ofcom's final review into the effectiveness of restrictions on advertising for products that are high in fat, salt or sugar (HFSS). It compares the way in which the balance of television advertising of food and drink seen by children has changed, by looking at their exposure to advertisements for HFSS products in 2005 (before advertising restrictions were introduced) and in 2009 (after the restrictions had been fully implemented). These restrictions have: a) reduced children's exposure to HFSS advertising significantly (37% overall), particularly in the case of younger children (52%), who may be more susceptible to the influence of advertising. In the case of older children, the reduction is less marked (22%), and somewhat less than that observed in the interim review (28%). However, this reflects the greater proportion of their viewing in adult airtime, and a shift in their viewing towards channels carrying more HFSS advertising; b) led to a sharp drop in HFSS advertising featuring various advertising techniques considered attractive to children, such as popular cartoon characters. While advertisers continued to make use of celebrities, both in children's and adult airtime, most of these are likely to appeal principally to adults; and c) contributed to a significant shift in the balance of food and drink advertising on television towards non-HFSS products, which accounted for an estimated 33.1% all food and drink advertising spots in 2009 as</p>

			against 22.5% in 2005 and 41.1% of all food and drink child impacts in 2009, as against 19.3% in 2005.
	Canada (Quebec)	Potvin Kent, M., Dubois, L., & Wanless, A. (2011). Food marketing on children's television in two different policy environments. <i>International Journal of Pediatric Obesity</i> , 6(sup3), e433-441.	<p>Objective. To examine the differences in exposure to food marketing on television between English children in Ontario, and French and English children in Quebec as each group is influenced by different advertising policies (self-regulation vs regulation).</p> <p>Results. Twenty-six percent of advertisements, 18% of contests and 22% of sponsorships were food/beverage related. Similar rates of food marketing were seen across all three population groups. French Quebec subjects were exposed to significantly more beverage promotions and fewer grain products, candy and snack food promotions. French Quebec children were targeted less frequently, and media characters/celebrities were used less often than in the English groups. Conclusion. The Quebec advertising ban does not appear to be limiting the amount of food/beverage advertising seen by children aged 10–12. However, food categories and marketing techniques used differ in the preferred viewing of French Quebec children.</p>
	Canada (Quebec)	Dhar T, Baylis K (2011) Fast-Food Consumption and the Ban on Advertising Targeting Children: The Quebec Experience. <i>Journal of Marketing Research</i> 48(5), 799-813	<p>Aim: To study the effect a ban on advertising foods and beverages to children in the Canadian province of Quebec. Household expenditure survey data from 1984 to 1992 were used to analyse if expenditure on fast food is lower in those groups affected by the ban than in those that are not. A triple difference-indifference methodology by appropriately defining treatment and control groups was used.</p> <p>Findings: The ban reduced fast-food consumption by Us\$88 million per year. The study suggests that advertising bans can be effective provided media markets do not overlap.</p>

<p>Mandatory regulation of specific marketing techniques</p>	<p>US</p>	<p>Otten JJ et al. (2014) Impact of San Francisco's Toy Ordinance on Restaurants and Children's Food Purchases, 2011-2012. <i>Preventing Chronic Disease</i> 11:140026ix</p>	<p>Aim: To examine the impact of the Healthy Food Incentives Ordinance introduced in 2011 at ordinance-affected restaurants on restaurant response (eg, toy-distribution practices, change in children's menus), and the energy and nutrient content of all orders and children's-meal-only orders purchased for children aged 0 through 12 years in San Francisco. The responses of participating restaurants were examined from January 2010 through March 2012.</p> <p>Findings: Both restaurant chains responded to the ordinance by selling toys separately from children's meals, but neither changed their menus to meet ordinance-specified nutrition criteria. Among children for whom children's meals were purchased, significant decreases in kilocalories, sodium, and fat per order were likely due to changes in children's side dishes and beverages. The transition to a more healthful beverage and default side dish was consistent with the intent of the ordinance. The restaurants were able to comply in this way because of ordinance language which prohibited only the giving away of free toys or other incentives with foods, beverages, and meals not meeting nutritional criteria. This language allowed toys to be sold separately.</p>
	<p>US</p>	<p>Otten JJ et al. (2012) Food Marketing to Children Through Toys: Response of Restaurants to the First U.S. Toy Ordinance. <i>American Journal of Preventive Medicine</i> 42(1), 56-60x</p>	<p>Aims: To assess how ordinance-affected restaurants changed their child menus, marketing, and toy distribution practices relative to non-affected restaurants in Santa Clara County, CA after the ordinance that prohibits the distribution of toys and other incentives to children. Marketing practices were assessed at two points in time in 2010.</p> <p>Findings: Affected restaurants showed a 2.8- to 3.4-fold improvement in Children's Menu Assessment scores from pre- to post-ordinance with minimal changes at unaffected restaurants. Improvements were seen in on-site nutritional guidance; promotion of healthy meals, beverages, and side items; and toy marketing and distribution activities.</p>

			<p>Conclusions: The ordinance appears to have positively influenced marketing of healthful menu items and toys as well as toy distribution practices at ordinance-affected restaurants, but did not affect the number of healthful food items offered.</p>
<p>Self regulation</p>	<p>Australia</p>	<p>Smithers, L., Lynch, J. and Merlin, T. (2013). Industry self-regulation and TV advertising of foods to Australian children. <i>Journal of Paediatrics and Child Health</i>, 50(5), pp.386-392.</p>	<p>Aim: The aim of this study is to examine the amount of non-core (unhealthy) food advertising currently on Australian television (i) during children's programmes and viewing times; (ii) since the introduction of food industry self-regulatory initiatives in 2009; and (iii) whether advertising differs according to signatory status to industry initiatives.</p> <p>Results: The title and abstract of 316 articles were screened, yielding 25 articles considered potentially eligible, of which eight met the pre-defined selection criteria. Meta-analysis was not possible because of temporal and methodological differences across studies. The advertising of non-core foods was found to be negligible during programmes with a C-(children's) classification but ranged from 1.5 to 6.5/h during children's peak viewing times. From 2006 to 2011, non-core food advertising decreased by 0.18 advertisements per hour every year, whereas fast food advertising increased by 0.09/h; however, these analyses are based on one study with only five time points. During children's viewing times, signatories to industry initiatives advertise non-core foods at higher rates than non-signatories.</p> <p>Conclusions: Although it is not possible to determine whether advertising has changed since the industry initiatives were introduced, signatories to the initiatives continue to advertise non-core foods at times when many children watch television. Future efforts to reduce children's exposure to food advertising should be focused on advertising during children's peak viewing times rather than by programme classifications.</p>

	Australia	King, L., Hebden, L., Grunseit, A., Kelly, B., & Chapman, K. (2013). Building the case for independent monitoring of food advertising on Australian television. <i>Public Health Nutrition</i> , 16(12), 2249-2254.	<p>Objective: To provide an independent monitoring report examining the ongoing impact of Australian self-regulatory pledges on food and drink advertising to children on commercial television.</p> <p>Results: In 2011 the rate of non-core food advertisements was not significantly different from that in 2006 or 2010 (3.2/h v. 4.1/h and 3.1/h), although there were variations across the intervening years. The rate of fast-food advertising in 2010 was significantly higher than in 2006 (1.8/h v. 1.1/h, $P < 0.001$), but the same as that in 2011 (1.5/h).</p> <p>Conclusions: The frequency of non-core food advertising on Sydney television has remained essentially unchanged between 2006 and 2011, despite the implementation of two industry self-regulatory pledges. The current study illustrates the value of independent monitoring as a basic requirement of any responsive regulatory approach.</p>
	Australia	Roberts, M., Pettigrew, S., Chapman, K., Miller, C., & Quester, P. (2012). Compliance with children's television food advertising regulations in Australia. <i>BMC Public Health</i> , 12(1), 846.	<p>Objective: The objective of this study was to assess the effectiveness of the Australian co-regulatory system in limiting children's exposure to unhealthy television food advertising by measuring compliance with mandatory and voluntary regulations. An audit was conducted on food and beverage television advertisements broadcast in five major Australian cities during children's programming time from 1st September 2010 to 31st October 2010. The data were assessed against mandatory and voluntary advertising regulations, the information contained in an industry report of breaches, and the Australian Guide to Healthy Eating.</p> <p>Results: During the two months of data collection there were a total of 951 breaches of the combined regulations. This included 619 breaches of the mandatory regulations (CTS) and 332 breaches of the voluntary regulations (RCMI and QSRI). Almost 83% of all food and beverages advertised during children's programming times were for foods classified as 'Extras' in the Australian Guide to Healthy Eating. There were also breaches in relation to the amount of advertising repetition and the use of promotional appeals such as premium offers, competitions, and endorsements by popular children's characters. The self-regulatory systems were found to have flaws in their reporting and there were errors in the Australian Food and Grocery Council's compliance report.</p>

			<p>Conclusions: This audit suggests that current advertising regulations are inadequate. Regulations need to be closely monitored and more tightly enforced to protect children from advertisements for unhealthy foods.</p>
	<p>Australia</p>	<p>Hebden, L.A., King, L., Grunseit, A., Kelly, B. and Chapman, K., (2011). Advertising of fast food to children on Australian television: the impact of industry self-regulation. <i>Medical Journal of Australia</i>, 195(1), pp.20-24.</p>	<p>Objective: To assess the impact of the quick-service restaurant industry (QSRI) self-regulatory initiative on fast-food advertising to children on Australian commercial television.</p> <p>Results: From 2009 to 2010, the mean frequency of fast-food advertisements increased from 1.1 to 1.5 per hour. While non-core fast foods comprised a lesser share of fast-food advertising in 2010 than 2009, the mean frequency at which they were advertised during times when the largest numbers of children were watching television remained the same (1.3 per hour in both 2009 and 2010). Family meals advertised for children's consumption in 2010 provided energy far in excess of children's requirements.</p> <p>Conclusions: Children's exposure to unhealthy fast-food advertising has not changed following the introduction of self-regulation, and some fast foods advertised for children's consumption contain excessive energy. The limited impact of self-regulation suggests that governments should define the policy framework for regulating fast-food advertising to children.</p>

	Australia	King, L et.al.(2011) Industry self regulation of television food advertising: Responsible or responsive?, <i>International Journal of Pediatric Obesity</i> , 6:sup3, e390-398, DOI: 10.3109/17477166.2010.517313	<p>Introduction. This study evaluated the impact of the Australian Food and Grocery Council (AFGC) self-regulatory initiative on unhealthy food marketing to children, introduced in January 2009. The study compared patterns of food advertising by AFGC and non-AFGC signatory companies in 2009, 2007 and 2006 on three Sydney commercial free-to-air television channels.</p> <p>Results. Of 36 food companies that advertised during the 2009 sample period, 14 were AFGC signatories. The average number of food advertisements decreased significantly from 7.0 per hour in 2007 to 5.9 in 2009. There was a significant reduction in non-core food advertising from 2007 to 2009 by AFGC signatories compared with non-signatory companies overall and during peak times, when the largest numbers of children were viewing. There was no reduction in the rate of non-core food advertisements by all companies, and these advertisements continue to comprise the majority during peak viewing times.</p> <p>Discussion. While some companies have responded to pressures to reduce unhealthy food advertising on television, the impact of the self-regulatory code is limited by the extent of uptake by food companies. The continued advertising of unhealthy foods indicates that this self-regulatory code does not adequately protect children.</p>
	Canada	Vergeer, L., Vanderlee, L., Potvin Kent, M., Mulligan, C. and L'Abbé, M. (2019). The effectiveness of voluntary policies and commitments in restricting unhealthy food marketing to Canadian children on food company websites. <i>Applied Physiology, Nutrition, and Metabolism</i> , 44(1), pp.74-82.	<p>Aim: Marketing unhealthy foods and beverages to children (M2K) fosters poor dietary patterns, increasing obesity and noncommunicable disease risk. Federal restrictions on M2K have been under development in Canada since 2016; however, at present, M2K is mostly self-regulated by food companies. This study aimed to compare M2K on Canadian websites of food companies with and without voluntary policies or commitments in this area.</p> <p>Results: A systematic content analysis of company websites was conducted in spring/summer 2017 for major packaged food (n = 16), beverage (n = 12), and restaurant chain (n = 13) companies in Canada. M2K policies were sourced from company websites and published corporate documents. Sixteen companies (43%) reported national and/or global M2K policies, while 21 companies (57%) had no published policies. The websites of Canadian companies (n = 154) were scanned for child-directed products and marketing; type and frequency of marketing techniques were recorded. Child-directed marketing</p>

			<p>appeared on 19 websites of 12 companies (32%), including 9 companies with M2K policies. Websites featured products with unconventional flavours, colours, shapes, or child-oriented packaging, and used promotional characters, contests, games, activities, or lettering and graphics appealing to children. The nutritional quality of products marketed to children was evaluated using a nutrient profile model developed by Health Canada for proposed M2K regulations. Of the 217 products marketed to children, 97% exceeded Health Canada's proposed ~5% Daily Value threshold for saturated fat, sodium, and/or sugars, 73% of which were products from 9 companies with policies. These findings highlight the limitations of self-regulation in restricting M2K on food company websites, reinforcing the need for government regulations.</p>
	<p>Canada</p>	<p>Potvin Kent, M. and Pauzé, E. (2018). The effectiveness of self-regulation in limiting the advertising of unhealthy foods and beverages on children's preferred websites in Canada. <i>Public Health Nutrition</i>, 21(9), pp.1608-1617.</p>	<p>Objective: To assess the effectiveness of the self-regulatory Canadian Children's Food and Beverage Advertising Initiative (CAI) in limiting advertising of unhealthy foods and beverages on children's preferred websites in Canada.</p> <p>Results: About 54 million food/beverage ads were viewed on children's preferred websites from June 2015 to May 2016. Most (93.4 %) product ads were categorized as excessive in fat, Na or free sugars as per the PAHO NPM and 73.8 % were deemed less healthy according to the UK NPM. CAI-company ads were 2.2 times more likely (OR; 99 % CI) to be excessive in at least one nutrient (2.2; 2.1, 2.2, P<0.001) and 2.5 times more likely to be deemed less healthy (2.5; 2.5, 2.5, P<0.001) than non-CAI ads. On average, CAI-company product ads also contained (mean difference; 99 % CI) more energy (141; 141.1, 141.4 kcal, P<0.001, r=0.55), sugar (18.2; 18.2, 18.2 g, P<0.001, r=0.68) and Na (70.0; 69.7, 70.0 mg, P<0.001, r=0.23) per 100 g serving than non-CAI ads.</p> <p>Conclusions: The CAI is not limiting unhealthy food and beverage advertising on children's preferred websites in Canada. Mandatory regulations are needed.</p>

	Canada	Potvin Kent, M., Martin, C. and Kent, E. (2014). Changes in the volume, power and nutritional quality of foods marketed to children on television in Canada. <i>Obesity</i> , 22(9), pp.2053-2060.	<p>Objective: To evaluate the self-regulatory Children's Food and Beverage Advertising Initiative pre- and post-implementation in terms of volume of marketing, marketing techniques, and nutritional quality of foods marketed to children on television.</p> <p>Methods: Data for 11 food categories for May 2006 and 2011 were purchased from Nielsen Media Research for two children's specialty channels in Toronto. A content analysis of food advertisements examining the volume and marketing techniques was undertaken. Nutritional information on each advertisement was collected and comparisons were made between 2006 and 2011.</p> <p>Results: The volume of ads aired by Canadian Children's Food and Beverage Advertising Initiative (CAI) companies on children's specialty channels decreased by 24% between 2006 and 2011; however, children and teens were targeted significantly more, and spokes-characters and licensed characters were used more frequently in 2011 compared to 2006. The overall nutritional quality of CAI advertisements remains unchanged between 2006 and 2011.</p> <p>Conclusion: There are clear weaknesses in the self-regulatory system in Canada. Food advertising needs to be regulated to protect the health of Canadian children.</p>
	Canada	Potvin Kent M, Dubois L, Wanless A (2012) A Nutritional Comparison of Foods and Beverages Marketed to Children in Two Advertising Policy Environments. <i>Obesity</i> 20(9), 1829-1837vii	<p>Aims: To examine the nutritional content of food and beverage products in advertisements seen by children on all programming and children's programming ($\geq 35\%$ child-audience share). TV ratings data for children 2–5 and 6–11 years of age were used to examine the nutritional content of food and beverage products. Nutritional content was assessed based on the federal Interagency Working Group (IWG) recommended nutrients to limit (NTL), including saturated fat, trans fat, sugar, and sodium.</p> <p>Findings: Most food and beverage products in TV ads seen by children do not meet the IWG nutrition recommendations and less than one half of such ads are covered by self-regulation. Products advertised on children's versus general-audience programming and by CFBAI- versus non-CFBAI-member companies are particularly of low nutritional quality. A total of 46.2% of 2- to 5-year-olds' and 43.5% of 6- to 11-year-olds' total exposure to food and beverage TV advertising was for ads seen on children's programming. Among children 2–5 and 6–11 years, respectively, 84.1 and 84.4% of ads</p>

			<p>seen on all programming and 95.8 and 97.3% seen on children's programming were for products high in NTL, and 97.8 and 98.1% of Children's Food and Beverage Advertising Initiative (CFBAI) company-member ads seen on children's programming were for products high in NTL, compared to 80.5 and 89.9% of non-CFBAI product ads.</p>
	<p>Canada</p>	<p>Potvin Kent, M., Dubois, L., & Wanless, A. (2011). Self regulation by industry in food marketing is having little impact during children's preferred television viewing. <i>Canadian Journal of Diabetes</i>, 35(2), 151.</p>	<p>Aims: To examine the efficacy of self-regulation of food marketing to children by comparing, during children's preferred viewing on television, the differences in food/beverage marketing between two groups of corporations: 17 corporations participating in the Canadian Children's Food and Beverage Advertising Initiative (CAI) and 35 corporations not participating (non-CAI) in this initiative.</p> <p>Results. The CAI was responsible for significantly more food/beverage promotions, and used media characters and repetition more frequently in their food/beverage promotions than the non-CAI group. Nutritionally, the CAI food/beverage promotions were higher in fats, sugar, sodium and energy per 100 grams. A significantly greater proportion of the CAI food/beverage promotions were considered 'less healthy' compared to the non-CAI promotions. Conclusion. With the exception of the four corporations that did not market to children at all, the commitments that have been made in the CAI are not having a significant impact on the food and beverage marketing environment on television which is viewed by 10–12-year-olds.</p>

	EU	<p>Jensen, J.D. and Ronit, K., (2015) The EU pledge for responsible marketing of food and beverages to children: implementation in food companies. <i>European Journal of Clinical Nutrition</i>, 69(8), p.896.</p>	<p>Objective: The objective of the study is to evaluate the commitments made by companies in joining the pledge for the purpose of assessing its effectiveness in regulating signatory companies' marketing activities.</p> <p>Findings: Compared with a reference group of large food and beverage companies, EU Pledge signatory companies have a public image strongly based on products with appeal to children. The EU Pledge sets common standards for regulating signatory companies' marketing behaviour towards children. Further scrutiny of the companies' stated commitments revealed considerable variation in their actual content and in their de facto bindingness on the companies' marketing behaviour—for example, in the definition of target audience for advertising or in nutritional characteristics making products eligible for advertising to children. In order for voluntary self-regulation schemes such as the EU Pledge to be a credible alternative to public regulation of marketing behaviour, more transparency and stringency are needed.</p>
	Germany	<p>Landwehr SC, Hartmann M. Does self-regulation work? The case of television food advertisement to children in Germany. Paper prepared for presentation at the 2016 Agricultural and Applied Economics Association Annual Meeting, 31 July–2 August 2016, Boston, Massachusetts (No. 235881) (http://ageconsearch.umn.edu/bitstream/235881/2/Does%20self-regulation%20work_AAEA%202016.pdf, accessed 7 May 2018).</p>	<p>Conclusion: The commitments made by signatory companies of the EU Pledge had so far little impact on the nutritional value of food and beverages advertised to children. Nevertheless, the marketing of foods through television advertising targeting children during children's program declined considerably. Therefore, increased participation of food corporations in the EU Pledge, adoption of stricter criteria (nutritional content), extension to all advertisements designed in a child-appealing way (not just to media audiences of minimum 35 % children), and more effective controls are required to reduce the exposure of food advertising of EDNP products to children and thus to improve children's health.</p>

	<p>Germany</p>	<p>Effertz, T., & Wilcke, A. C. (2012). Do television food commercials target children in Germany?. <i>Public Health Nutrition</i>, 15(8), 1466-1473.</p>	<p>Objective: To examine whether the German food industry directs commercials for unhealthy products to children and whether self-administered voluntary restrictions on the promotion of less healthy foods (the EU Pledge) are effective to mitigate this exposure.</p> <p>Results: In 2007-2008 19.9 % of TV commercials were for food products, of which 73 % were for non-core foods, 21 % for core foods and 6 % not classified. In three specified channels widely viewed by children and youth, 14.5 % of commercials were for food products, of which 88.2 % were for non-core foods. Commercials for unhealthy foods were broadcast significantly more often during children's peak viewing and in children's programmes, with a higher use of promotional characters and premiums than found in commercials for non-food products. In 2010, analysis of the three specified channels found that 18.5 % of commercials were for food products, of which 98.2 % were for non-core foods. While the use of premiums decreased compared with other commercials, the use of promotional characters in non-core food commercials increased, especially during children's programmes.</p> <p>Conclusions: Children in Germany are exposed to large numbers of food commercials. The exposure to commercials for non-core foods and the use of techniques attractive to children are widespread and appear to have remained unaffected by the announcement of the EU Pledge in December 2007. We conclude that the industry's voluntary agreement has failed to fulfil its declared purpose.</p>
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	<p>New Zealand</p>	<p>Vandevijvere, S., Soupen, A., & Swinburn, B. (2017). Unhealthy food advertising directed to children on New Zealand television: extent, nature, impact and policy implications. <i>Public health nutrition</i>, 20(17), 3029-3040.</p>	<p>Objective: To comprehensively assess the extent, nature and impact of unhealthy food advertising targeted to children on New Zealand television.</p> <p>Design: Four weekdays and four weekend days were randomly selected over the period June–August 2015. Programming was recorded from 06.00 to 00.00 hours (midnight), for a total of 432 h. Audience ratings were used to identify children’s peak viewing times. Setting: New Zealand. Subjects: The three major free-to-air channels.</p> <p>Results: The majority of foods advertised (n 1807) were unhealthy; 68·5 % of food advertisements included at least one food not permitted to be marketed to children according to the WHO nutrient profiling model. The mean hourly rate of unhealthy food advertising was 9·1 (SD 5·2). One-third of unhealthy food advertisements included a promotional character and one-third a premium offer. About 88 % of unhealthy food advertisements were shown during children’s peak viewing times. If unhealthy food advertisements were to be restricted during times when at least 25 % of children are watching television, this would reduce the average unhealthy food advertising impact by 24 % during weekdays and 50 % during weekend days, and if the WHO instead of the current nutrient profiling model were used to restrict unhealthy food advertising to children, the average impact would be reduced by 24 % during weekdays and 29 % during weekend days.</p> <p>Conclusions: Current self-regulation is ineffective in protecting children from exposure to unhealthy food advertising on television. The WHO nutrient profiling model needs to be used to restrict unhealthy food advertising, especially during children’s peak viewing times.</p>
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	Spain	Leon-Flandez K et al. (2017). Evaluation of compliance with the Spanish Code of self-regulation of food and drinks advertising directed at children under the age of 12 years in Spain, 2012. <i>Public health</i> , 150, 121-129.xii	<p>Aims: To evaluate compliance levels with the Spanish Code of self-regulation of food and drinks advertising directed at children under the age of 12 years (Publicidad, Actividad, Obesidad, Salud [PAOS] Code) at two points in time: 2008 and 2012, by recording television advertisements of food and drinks over 7 days. Advertisements were classified as core (nutrient-rich/low-calorie products), non-core (nutrient-poor/rich-calorie products) or miscellaneous.</p> <p>Findings: Overall non-compliance with the Code was greater in 2012 than in 2008 (88.3% vs 49.3%). Non-compliance was highest for advertisements screened on children's/youth channels (92.3% vs. 81.5%; $P < 0.001$) and for those aired outside the enhanced protection time slot (89.3% vs. 86%; $P = 0.015$). Some of the standards that registered the highest levels of non-compliance were those regulating the suitability of the information presented (79.4%) and those prohibiting the use of characters popular with children (25%).</p>
	Spain	Royo-Bordonada, M., León-Flández, K., Damián, J., Bosqued-Estefanía, M., Moya-Geromini, M. and López-Jurado, L. (2016). The extent and nature of food advertising to children on Spanish television in 2012 using an international food-based coding system and the UK nutrient profiling model. <i>Public Health</i> , 137, pp.88-94.	<p>Objective: To examine the extent and nature of food television advertising directed at children in Spain using an international food-based system and the United Kingdom nutrient profile model (UKNPM).</p> <p>Results: The food industry accounted for 23.7% of the advertisements (4212 out of 17,722) with 7.5 advertisements per hour of broadcasting. The international food-based coding system classified 60.2% of adverts as non-core, and UKNPM classified 64.0% as HFSS. Up to 31.5% of core, 86.8% of non-core, and 8.3% of miscellaneous advertisements were for HFSS products. The percentage of advertisements for HFSS products was higher during reinforced protected viewing times (69.0%), on weekends (71.1%), on channels of particular appeal to children and teenagers (67.8%), and on broadcasts regulated by the Spanish Code of self-regulation of the advertising of food products directed at children (70.7%).</p> <p>Conclusions: Both schemes identified that a majority of foods advertised were unhealthy, although some classification differences between the two systems are important to consider. The food advertising Code is not limiting Spanish children's exposure to</p>

			advertisements for HFSS products, which were more frequent on Code-regulated broadcasts and during reinforced protected viewing time.
	Spain	Romero-Fernández, M. M., Royo-Bordonada, M. Á., & Rodríguez-Artalejo, F. (2010). Compliance with self-regulation of television food and beverage advertising aimed at children in Spain. <i>Public health nutrition</i> , 13(7), 1013-1021.	<p>Objective: To evaluate the level of compliance with the PAOS Code (Publicidad, Actividad, Obesidad y Salud), which establishes standards for the self-regulation of food marketing aimed at minors, in television advertising by food and beverage companies that have agreed to abide by the Code.</p> <p>Results: Of a total of 203 television advertisements from companies that agreed to the PAOS Code, the overall prevalence of non-compliance was 49.3 % (v. 50.8 % among those that did not agree to the code), with 20.7 % of advertisements considered of uncertain compliance. Non-compliance was more frequent on Saturdays, in longer advertisements, in advertisements containing promotions or dairy products, and for advertisements from companies of French or US origin.</p> <p>Conclusions: Non-compliance with the PAOS Code was very high and was similar for companies that did and did not agree to the Code, casting doubt on the Code's effectiveness and oversight system. It seems the time has come to commit to statutory regulations that reduce the negative impact of advertising on children's diets, as demanded by public health experts and consumer associations.</p>
	US	Harris, J. and Kalnova, S. (2018). Food and beverage TV advertising to young children: Measuring exposure and potential impact. <i>Appetite</i> , 123, pp.49-55.	<p>Aims: Children of all ages are vulnerable to influence from exposure to unhealthy food advertisements, but experts raise additional concerns about children under 6 due to their more limited cognitive abilities. Most companies in the U.S. Children's Food and Beverage Advertising Initiative (CFBAI) industry self-regulatory program pledge to not direct any advertising to children under 6. However, young children also watch programming primarily directed to older children and thus may view food-related advertising despite companies' pledges. Research is required to understand the amount and potential impact of this exposure on preschool-age children.</p> <p>Results: Study 1 uses Nielsen advertising exposure data to compare preschoolers' (2-5 years) and older children's (6-11 years) exposure to food advertising in 2015. Preschoolers</p>

			<p>viewed on average 3.2 food ads daily on children's programming, just 6% fewer compared to 6- to 11-year-olds; over 60% were placed by CFBAI-participating companies. Study 2 exposed young children (N = 49) in a child-care setting to child-directed food ads, measured their attitudes about the ads and advertised brands, and compared responses by 4- to 5-year-olds and 6- to 7-year olds. Most children indicated that they liked the child-directed ads, with media experience associated with greater liking for both age groups. Ad liking and previous consumption independently predicted brand liking for both age groups, although previous consumption was a stronger predictor for older children.</p> <p>Findings: Despite pledges by food companies to not direct advertising to children under age 6, preschoolers continue to view advertisements placed by these companies daily, including on children's programming. This advertising likely increases children's preferences for nutritionally poor advertised brands. Food companies and media companies airing children's programming should do more to protect young children from advertising that takes advantage of their vulnerabilities.</p>
	<p>US</p>	<p>Harris, J. L., Frazier, W., & Romo-Palafox, M. (2017). FACTS 2017: Food industry self-regulation after 10 years: Progress and opportunities to improve food advertising to children. University of Connecticut Rudd Center for Food Policy & Obesity.</p>	<p>The report measures the extent of food, beverage, and restaurant advertising and children's exposure to this advertising using syndicated market research data. It examines advertising by CFBAI companies and brands, Children's Confection Advertising Initiative (CCAI) companies (another industry voluntary initiative for candy manufacturers), and non-participating companies that do not belong to either self-regulatory initiative. It analyses advertising by 56 companies. These analyses confirm that CFBAI participating companies have largely complied with their pledges to only advertise products that meet CFBAI category-specific uniform nutrition criteria and are included on their lists of products that may be advertised in child-directed media. In total, CFBAI companies also reduced the number of food-related advertisements viewed by children for their brands, especially in child-directed media. In addition, candy companies in the CCAI complied with their pledges to not direct any advertising to children under 12. However, these analyses also highlight the continued need for improvements in areas identified by public health experts as substantial limitations of industry self-regulatory programs: 1) Strengthen nutrition standards; 2) Expand the ages of children covered; 3) Expand the</p>

			definition of “child-directed” advertising and the types of marketing covered; and 4) Expand participation in voluntary programs.
	US	Frazier WC & Harris JL (2016) Trends in television food advertising to young people: 2015 update. http://uconnruddcenter.org/files/TVAdTrends2016.pdf (accessed December 2016).	This report documents trends in food-related TV advertising viewed by children and adolescents from 2002 to 2015, specifically focusing on changes in 2015 compared to 2014. It also examines changes in categories of foods and beverages advertised since 2007, the year the Children’s Food and Beverage Advertising Initiative (CFBAI) food industry self-regulatory program was implemented. 2015 marked the first year since CFBAI implementation that children viewed fewer food-related TV ads than they viewed in 2007. However, this reduction was small (just 3%), and the change in the mix of foods advertised to children – as promised by the CFBAI when first implemented - has not occurred. Fast food restaurants remained the most advertised category, and youth exposure to ads for carbonated beverages and candy has increased by more than 50% compared to 2007. Although there have been substantial increases in advertising for healthier food and beverage categories since 2007, including yogurt, other dairy, and fruits and vegetables, these categories remained the least advertised to youth. These findings may partially reflect declines in TV viewing overall. Furthermore, youth are likely viewing additional ads on mobile platforms such as cell phones and tablets. Despite food industry promises, TV food advertising to youth continues to encourage the consumption of foods and beverages high in calories, fat, and sugar.
	US	Schermbeck RM, Powell LM (2015) Nutrition Recommendations and the Children’s Food and Beverage Advertising Initiative’s 2014 Approved Food and Beverage Product List. <i>Preventing Chronic Disease</i> 12:140472xiii	Objective: The Children's Food and Beverage Advertising Initiative's (CFBAI's) April 2014 list of food and beverage products approved to be advertised on children's television programs was compared with the federal Interagency Working Group's nutrition recommendations for such advertised products. Products were assessed by using the nutrients to limit (saturated fat, trans fat, sugar, and sodium) component of the Interagency Working Group's recommendations. Results: Fifty-three percent of the listed products did not meet the nutrition recommendations and, therefore, were ineligible to be advertised. The study recommends continued monitoring of food and beverage products marketed to children.

	US	<p>Harris, J.L., LoDolce, M., Dembek, C. and Schwartz, M.B., (2015). Sweet promises: Candy advertising to children and implications for industry self-regulation. <i>Appetite</i>, 95, pp.585-592.</p>	<p>Candy advertising illustrates limitations of the Children's Food and Beverage Advertising Initiative (CFBAI) self-regulatory program to improve food marketing to children. Participating companies pledge to not advertise candy in child-directed media. Yet independent analyses show that children viewed 65% more candy ads on U.S. television in 2011 than in 2007, before CFBAI implementation. The present research corroborates these findings, characterizes the increase, and examines how CFBAI-participating and non-participating companies use child-targeted techniques and media placement to advertise candy on U.S. television. Content analysis identified child-targeted messages and techniques in 2011 television candy ads, and Nielsen data (2008–2011) quantified candy advertising viewed on children's and other types of television programming. Differences between brands according to CFBAI status and use of child-targeted techniques in ads are evaluated. Data were obtained and analyzed in 2013. CFBAI-company non-approved brands represented 65% of candy ads viewed by children in 2011, up from 45% in 2008, and 77% of these ads contained child-targeted techniques. Although CFBAI companies only placed ads for approved brands on children's networks, 31% of ads viewed by children for CFBAI non-approved brands appeared on networks with higher-than-average youth audiences. CFBAI non-participating companies placed child-targeted candy ads primarily on children's networks. Despite CFBAI pledges, companies continue to advertise candy during programming with large youth audiences utilizing techniques that appeal to children. Both increased CFBAI participation and a more effective definition of “child-directed advertising” are required to reduce children's exposure to targeted advertising for foods that can harm their health.</p>
	US	<p>Kunkel, D. L., Castonguay, J. S., & Filer, C. R. (2015). Evaluating industry self-regulation of food marketing to children. <i>American Journal of Preventive Medicine</i>, 49(2), 181-187.</p>	<p>Objective: This study assesses the efficacy of industry self-regulation by comparing advertising content on children's TV programs before and after self-regulation was implemented.</p> <p>Results: All analyses were conducted in 2014. Findings indicated that no significant improvement in the overall nutritional quality of foods marketed to children has been achieved since industry self-regulation was adopted. In 2013, 80.5% of all foods advertised to children on TV were for products in the poorest nutritional category, and thus pose high risk for contributing to obesity.</p>

			<p>Conclusions: The lack of significant improvement in the nutritional quality of food marketed to children is likely a result of the weak nutritional standards for defining healthy foods employed by industry, and because a substantial proportion of child-oriented food marketers do not participate in self-regulation. The lack of success achieved by self-regulation indicates that other policy actions are needed to effectively reduce children's exposure to obesogenic food advertising.</p>
	US	<p>Bernhardt, A., Wilking, C., Gilbert-Diamond, D., Emond, J. and Sargent, J. (2015). Children's Recall of Fast Food Television Advertising—Testing the Adequacy of Food Marketing Regulation. <i>PLOS ONE</i>, 10(3), p.e0119300.</p>	<p>Aim: In the United States, the fast food companies McDonald's and Burger King participate in marketing self-regulation programs that aim to limit emphasis on premiums and promote emphasis of healthy food choices. We determine what children recall from fast food television advertisements aired by these companies.</p> <p>Results: Premiums/tie-ins were common in children's advertisements but rarely appeared in adult advertisements, and all children's advertisements contained images of healthy foods (apples and milk). Participants were significantly less likely to recall any food after viewing the children's vs. the adult ad (MDC 32% [95% confidence interval 23, 41] vs. MDA 68% [59, 77]) $p < 0.001$; BKC 46% [39, 56] vs. BKA 67% [58, 76] respectively, $p = 0.002$). For children's ads alone and for both restaurants, recall frequency for all food was not significantly different from premium/tie-ins, and participants were significantly more likely to recall other food items than apples or milk. Moreover, premiums/tie-ins were recalled much more frequently than healthy food (MDC 45% [35, 55] vs. 9% [3, 15] $p < 0.001$; BKC 54% [44, 64] vs. 2% [0, 5] respectively, $p < 0.001$).</p> <p>Conclusions: Children's net impressions of television fast food advertising indicate that industry self-regulation failed to achieve a de-emphasis on toy premiums and tie-ins and did not adequately communicate healthy menu choices. The methods devised for this study could be used to monitor and better regulate advertising patterns of practice.</p>
	US	<p>Powell, L. M., Schermbeck, R. M. & Chaloupka, F. (2013) Nutritional Content of Food and Beverage Products in Television Advertisements Seen on</p>	<p>Aims: To examine the nutritional content of food and beverage products in advertisements seen by children on all programming and children's programming television (TV) advertisements. ($\geq 35\%$ child-audience share). TV ratings data for children 2–5 and 6–11 years of age were used nutritional content based on the federal Interagency Working</p>

		<p>Children's Programming. <i>Childhood Obesity</i>, 9, 524-531.</p>	<p>Group (IWG) recommended nutrients to limit (NTL), including saturated fat, trans fat, sugar, and sodium.</p> <p>Findings: A total of 46.2% of 2- to 5-year-olds' and 43.5% of 6- to 11-year-olds' total exposure to food and beverage TV advertising was for ads seen on children's programming. Among children 2–5 and 6–11 years, respectively, 84.1 and 84.4% of ads seen on all programming and 95.8 and 97.3% seen on children's programming were for products high in NTL, and 97.8 and 98.1% of Children's Food and Beverage Advertising Initiative (CFBAI) company-member ads seen on children's programming were for products high in NTL, compared to 80.5 and 89.9% of non-CFBAI product ads. Most food and beverage products in TV ads seen by children do not meet the IWG nutrition recommendations and less than one half of such ads are covered by self-regulation. Products advertised on children's versus general-audience programming and by CFBAI-versus non-CFBAI-member companies are particularly of low nutritional quality, suggesting that self-regulation has not successfully protected children from exposure to advertising for unhealthy foods and that continued monitoring is required.</p>
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	US	Powell LM et al. (2011) Trends in the Nutritional Content of TV Food Advertisements Seen by Children in the US: Analyses by Age, Food Categories and Companies. <i>Archives of Pediatrics and Adolescent Medicine</i> 165(12), 1078-1086xiv	<p>Objectives: To examine trends in children's exposure to food-related advertising on television by age, product category, and company before and after the Council of Better Business Bureaus launched the Children's Food and Beverage Advertising initiative (CFBAI) in 2006, followed by 17 companies (Cadbury, the Coca-Cola Company, the Hershey Company, and Mars Inc.), pledging not to engage in any advertising of their products on programming directed to children younger than 12 years.</p> <p>Findings: Children aged 2 to 5 and 6 to 11 years saw, respectively, on average, 10.9 and 12.7 food-related television advertisements daily in 2009, down 17.8% and 6.9% from 2003. Exposure to food and beverage products high in saturated fat, sugar, or sodium fell 37.9% and 27.7% but fast-food advertising exposure increased by 21.1% and 30.8% among 2- to 5- and 6- to 11-year-olds, respectively, between 2003 and 2009. In 2009, 86% of ads seen by children were for products high in saturated fat, sugar, or sodium, down from 94% in 2003. Exposure to unhealthy food and beverage product advertisements has fallen, whereas exposure to fast-food ads increased from 2003 to 2009. By 2009, there was not a substantial improvement in the nutritional content of food and beverage advertisements that continued to be advertised and viewed on television by US children.</p>
Systematic reviews	Global	Chambers, S. A., Freeman, R., Anderson, A. S., & MacGillivray, S. (2015). Reducing the volume, exposure and negative impacts of	Aim: To identify and review evidence on 1) the effectiveness of statutory and self-regulatory actions to reduce the volume, exposure or wider impact of advertising for

		<p>advertising for foods high in fat, sugar and salt to children: A systematic review of the evidence from statutory and self-regulatory actions and educational measures. <i>Preventive Medicine</i>, 75, 32-43.</p>	<p>foods high in fat, sugar and salt (HFSS) to children, and 2) the role of educational measures.</p> <p>Findings: Forty-seven publications were included: 19 provided evidence for the results of statutory regulation, 25 for self-regulation, and six for educational approaches. Outcome measures varied in approach, quality and results. Findings suggested statutory regulation could reduce the volume of and children's exposure to advertising for foods HFSS, and had potential to impact more widely. Self-regulatory approaches showed varied results in reducing children's exposure. There was some limited support for educational measures.</p> <p>Discussion: Consistency in measures from evaluations over time would assist the development and interpretation of the evidence base on successful actions and measures to reduce the volume, exposure and impact of advertising for foods HFSS to children.</p>
	Global	<p>Ronit, K. and Jensen, J.D., (2014) Obesity and industry self-regulation of food and beverage marketing: a literature review. <i>European Journal of Clinical Nutrition</i>, 68(7), p.753.</p>	<p>Objective: To describe, analyse and evaluate research on industry self-regulation regarding food and beverage marketing and nutrition labelling.</p> <p>Results: Of the 4978 identified publications, 22 were included in the final review. The studies show that commitments in industry self-regulation schemes tend to be relatively vague and permissive, that the measurable effects of the self-regulations tend to be relatively small and that some extent of public regulation may catalyse the effectiveness of industry self-regulation. Although the reviewed studies vary in terms of analytic units and methods applied, they generally stress an ineffectiveness of existing self-regulation schemes. Food industry self-regulation in relation to obesity prevention is an emerging field of research, and further research is needed in such schemes' definitions of regulatory standards, their monitoring and sanctioning mechanisms, and their interactions with public regulation, if industry self-regulation of marketing behaviour is to become an effective and credible approach.</p>
	Global	<p>Galbraith-Emami, S. & Lobstein, T. (2013) The impact of initiatives to limit the advertising</p>	<p>Aims: To summarize evidence on the impact of regulation and industry self-regulation on curbing children's exposure to the advertising and commercial promotion of less healthy foods and beverages. It looked at the evidence for changes in exposure of children before</p>

		<p>of food and beverage products to children: a systematic review. <i>Obesity Reviews</i>, 14, 960-974</p>	<p>and after the regulation or self-regulatory pledges; and by looking at the absolute levels of exposure in the period after the introduction in countries where there were no data.</p> <p>Findings: Eight papers in peer-reviewed journals and six reports from other sources (of which two were industry sponsored), with information available for a total of 10 countries or regions. To assess the levels of exposure in countries in recent years, a total of 12 peer-reviewed papers and five reports were found, covering 21 countries or regions. The non-industry-sponsored reports show only low levels of improvement over the period, although there is stronger evidence for an improvement in the UK and South Korea. For example in the UK, after statutory regulation was introduced, HFSS advertising around children’s programming fell to nearly zero, but it more than doubled at non-restricted times when children viewed TV, from 1.4m HFSS advertisement spots in Q1 2005 to 3.2 m in 2009. In contrast, there is very strong evidence of improvement reported in industry-sponsored reports in many countries. In the countries with pre and post data, the pledges have had only a small or no impact, but industry sponsored reports argue the opposite. Potential causes of discrepancy between industry-sponsored reports and other reports may lie in the definitions, difference in what is being measured or incomplete coverage of the pledges across all food companies.</p>
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