

# ADVERTISING FOOD TO CHILDREN

## BACKGROUND PAPER

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### INTRODUCTION

It has been postulated that this generation of children may be the first to be outlived by their parents.<sup>2</sup> Creating a less obesogenic and healthier food environment for children is therefore a key focus of population health interventions. One aspect of the obesogenic environment which is of primary concern is the undue influence on children from marketing of unhealthy foods. Controlling the extent and type of food advertising to children is key to support healthier food choices. This background paper therefore looks at the problem of advertising unhealthy food to children and possible solutions to address it.

*In 2005, children in NZ who watched television for two hours each day would see 7,134 advertisements for food over the year.<sup>1</sup>*

### THE PROBLEM

Marketing of unhealthy food to children has been associated with adverse health outcomes, and is considered part of the childhood obesity problem.<sup>3</sup> Children are developing their food preferences,<sup>4</sup> and marketing of unhealthy food adversely influences both preferences and consumption. Unhealthy childhood eating patterns are associated with risk factors for cardiovascular disease, such as type 2 diabetes, high blood pressure, and dyslipidaemia.<sup>5</sup> Longitudinal studies demonstrate that these risk factors, including overweight and obesity, can persist into adulthood and increase adult risk of cardiovascular disease.<sup>6 7 8</sup> Thus, childhood eating patterns can have both immediate and long-term health effects.

In economists' terms, children are not 'rational consumers'. That is, they cannot be expected to critically assess information and weigh up the future consequences of their decisions.<sup>9</sup> Generally, children under four years of age see advertisements as entertainment and cannot consistently differentiate between television advertising and programming.<sup>10 11</sup> Children under eight years of age do not understand the persuasive intent of marketing and cannot distinguish between information and persuasive material. Once a child reaches 10 to 12 years of age, the persuasive intent is understood, but sales techniques are not. Thus, children under the age of 12 years cannot be expected to have developed the cognitive skills to be fully media literate.<sup>12</sup> They therefore need protection from advertising messages that encourage behaviours detrimental to health.

Marketers, however, see children as an important consumer group because forming a bond with their product from an early age can create an important source of new customers in future.<sup>13</sup> Furthermore, children influence parents purchasing through 'pester power',<sup>3</sup> as well as having spending power of their own. A survey of high-school students in South Auckland found four out of five students spent money on food the previous day, with one in five spending more than \$10 on food.<sup>14</sup>

### Causes

Advertising and marketing of food is big business. It has been estimated that for every dollar the World Health Organization (WHO) spends on non-communicable disease prevention, the food industry spends US\$500

promoting processed foods.<sup>15 16</sup> In New Zealand in 2005, total advertising expenditure for fast food chains, restaurants and cafes was \$67 million. Total advertising expenditure on chocolate, confectionary and aerated drinks was over \$57 million.<sup>17</sup> A substantial amount of advertising money is being spent, and children are a significant focus of this spend. For example, in 2006, 44 food companies in the United States spent US\$1.6 billion advertising their products to children.<sup>18</sup> The amount of money invested in advertising of unhealthy foods, along with their price and availability, undermine public health messages to avoid or limit such foods.

Children see a substantial amount of television advertising. Virtually all homes in New Zealand with children have at least one television, and 27 percent of children have a television in their bedroom.<sup>19</sup> New Zealand children watch on average almost two hours of television each day.<sup>20</sup> During this time, they are exposed to a large number of advertisements for food and beverages. In fact, it has been calculated they would see 7,134 food advertisements over one year.<sup>1</sup> A comparison with 13 countries in 1999 showed that New Zealand had the third-highest rate of food advertising, the highest rate of confectionery and drinks advertising, and the second-highest rate of restaurant advertising (including fast food restaurants).<sup>21</sup>

It is well-recognised that many of the foods advertised to children are not healthy. In a landmark report, the Institute of Medicine (IOM) in the United States determined that food and beverage marketing is out of balance with dietary guidelines and contributed to an environment that puts the health of children and youth at risk.<sup>10</sup> From the evidence there appears to be a gross misalignment between what children may need nutritionally to maintain good health and what is being promoted. In 2005, 70% of advertising on New Zealand television during children's viewing time was for foods counter to improved nutrition.<sup>22</sup> Research indicates that children's food promotion is dominated by television advertising and that the majority of this is for pre-sugared breakfast cereals, confectionery, savoury snacks, soft drinks, and fast-food outlets.<sup>21 23 15 24 25</sup>

There is no doubt that children have been subjected to a high level of marketing for unhealthy foods. This leads to the important question of whether marketing of food to children influences behaviors. Intuitively, it seems logical that it must, or food companies would not invest so heavily in it (although there are debates around whether advertising expands the category or just encourages brand switching<sup>13</sup>). A comprehensive review of the literature for WHO identified that better designed studies were more likely to find exposure to food promotion impacted on, or was associated with, statistically significant changes in children's food preferences.<sup>3</sup> Seeing food advertisements led to an increased preference for unhealthy foods,<sup>26</sup> and greater levels of consumption of not just the branded foods but the food category.<sup>27</sup> In a study with pre-schoolers, children who had viewed television commercials for a food product were twice as likely to choose it over a similar non-advertised product, compared with the control group.<sup>28</sup> Children who had seen the advertisement twice had a greater preference for the product than children who had only seen it once, indicating a dose-effect response. Their food preferences reflected the advertisements they had seen.

Parents themselves report that their children are influenced by food advertising. In a nationwide survey of New Zealand parents and grandparents in 2007, just over half felt that their children's requests for particular food or drink products were 'moderately' or 'very' influenced by advertising, and most thought it influenced liking for particular products.<sup>29</sup> In food-insecure households, this has been noted as a particular issue, as it creates demand for higher-priced products.<sup>30</sup>

This influence of food advertising is supported by a World Cancer Research Fund and American Institute for Cancer Research review which found advertising of unhealthy foods and beverages to children shapes the choices of both children and their parents. They found a "... compelling justification for policies and actions that restrict or prohibit such advertising and marketing."<sup>31</sup>

Advertising not only influences preferences and choices, but may also influence amounts of food eaten. Five- to seven-year old children ate significantly more after watching food advertisements, even though the food

was presented without packages.<sup>32</sup> Within low-income households in the United States, the extent of children's exposure to food advertising was related to their total food consumption.<sup>27</sup> Similarly, food advertisements seen during a movie intermission led to greater consumption of snack foods compared to exposure to non-food advertisements in boys (but not girls).<sup>33</sup> The longer-term effect on consumption was quantified in a study at a holiday camp in Quebec. Five to eight year-old children who were not exposed to commercials chose sweet foods 13% less often and KoolAid 20% less often than children who were exposed to commercials for those foods and drinks.<sup>34</sup>

The long-term health effects of advertising unhealthy food to children are more difficult to prove. However, the IOM review found statistically strong evidence that television advertising is associated with overweight or obesity in children, although it is possible there could be additional confounding which has not been accounted for.<sup>10</sup>

### Impact on heart health

A cardio-protective dietary pattern is associated with lower cardiovascular morbidity and mortality.<sup>35</sup> However, current advertising is more reflective of a dietary pattern associated with an increased risk of obesity and dental caries in childhood; and cardiovascular diseases, type 2 diabetes and cancers in adulthood.<sup>36</sup>

Research shows that the process of cardiovascular disease can begin in childhood and progress throughout the lifespan.<sup>37 38</sup> This evidence is available from studies such as the Bogalusa Heart Study, in which one-quarter of children aged 5 to 10 years had high blood pressure, elevated cholesterol, or other early warning signs for heart disease.<sup>39 40</sup> This puts children at increased risk of developing cardiovascular disease in adulthood.<sup>6</sup> The Cardiovascular Risk in Young Finns Study found a relationship between risk factors in adolescence and measures of atherosclerosis in adulthood.<sup>37 41</sup> This effect was independent of risk factors for cardiovascular disease present in adulthood. Thus, childhood is a key time to intervene to prevent heart disease.

There is increasing evidence that marketing of unhealthy food contributes to obesity and chronic disease such as heart disease. Protecting children from this influence is a high priority if we are to reduce the future burden of obesity and chronic disease.<sup>42</sup> Twenty-nine percent of children in New Zealand aged 2-14 years carry excess body weight.<sup>43</sup> For 40-80 percent of these children, their excess weight will continue into adulthood.<sup>44</sup> This excess body weight promotes an adverse cardiovascular and metabolic profile from early in life.<sup>45</sup> Cardiovascular disease remains the leading cause of death in New Zealand, responsible for more than 40 per cent of all deaths. Progress has been made, however, and mortality from cardiovascular disease has been steadily decreasing since the late 1960s. However, as the effects of increasing rates of overweight and obesity manifest in long-term health outcomes, it is predicted that rates of cardiovascular disease will once again begin to rise.

### Public health significance of the issue

A fundamental public health principle is to create environments that support healthy choices, a principle enshrined in the Ottawa Charter.<sup>46</sup> As advertising encourages preference for and consumption of less healthy foods, it is helping create an environment that supports unhealthy choices, making it a significant public health issue.

Restriction of advertising of unhealthy food to children is supported by the United Nations Convention on the Rights of the Child. The Convention stipulates the conditions essential for children's health and wellbeing, and for protection from harm. Whilst it is important to consider all the Articles in the Convention as a whole due to their interconnectedness, there are some that are particularly pertinent. Article 3 gives primary consideration to the best interests of the child. Therefore, the priority in this issue must be what is in a child's best interests. In relation to advertising, Article 17 affords protection to children from information and material injurious to wellbeing. Where unhealthy foods are promoted, this can be considered detrimental to

health. Article 24 states children's right to "the highest attainable standard of health". Advertising of unhealthy food to children is contrary to the intention of this Article.

Article 13 of the Convention addresses children's rights to receive information, and is frequently used to support continued advertising to children. However, the second part of this Article allows this right to be restricted in order to protect public health, which is the purpose of restricting advertising of unhealthy food to children.<sup>47</sup>

## POSSIBLE SOLUTIONS

Internationally, consideration has been given to principles for protecting children from advertising of unhealthy foods. In 2008, the Sydney Principles were published by the International Obesity Taskforce.<sup>48</sup> These principles took a rights-based approach to protecting children from the marketing of obesogenic foods and drinks. They state that any actions to reduce advertising to children should support the rights of children, afford substantial protection, be statutory in nature, take a wide definition of commercial promotions, guarantee commercial-free childhood settings such as schools, include cross-border media, and be evaluated, monitored and enforced.

The WHO has also developed and endorsed a set of recommendations on the marketing of food to children, through the World Health Assembly. WHO Member States are encouraged to adopt the recommendations<sup>5</sup>, and the Heart Foundation endorses their full implementation within New Zealand. Their intention is to reduce the impact of marketing of foods high in saturated fat, trans fat, sugar, and salt on children, and to reduce the exposure of children to marketing, as well as its power. Amongst the WHO recommendations are that clear definitions be set on the foods and aspects of marketing covered; settings where children gather should be free from all forms of advertising of unhealthy foods; and that government should take ownership of the issue and be responsible for setting standards, monitoring compliance and evaluation.

There are two main approaches to placing controls on advertising to children: regulation by government, or self-regulation by industry. An alternative approach is co-regulation, which involves a self-regulatory approach within a legislative framework.<sup>49</sup> Government-approved self-regulation is the most common approach globally, but statutory measures are increasingly common.<sup>50</sup> Well-functioning self-regulatory systems have a specific code for advertisers to follow, and effective monitoring and compliance.<sup>51</sup> Eight standards have been proposed that are necessary for self-regulatory approaches to be effective.<sup>52</sup> These include transparency, meaningful objectives and benchmarks, accountability and objective evaluation, and oversight. These standards should be a feature of any self-regulatory approach.

### The New Zealand approach

The approach taken in New Zealand has been for industry self-regulation. The main self-regulatory code is the Advertising Standards Authority (ASA) Children's Code for Advertising Food (Children's Food Code) introduced in 2010. Free-to-air television broadcasters have additional voluntary rules to supplement this through the ThinkTV 'Advertising on television: getting it right for children', with a revised version introduced in 2011.

The Children's Food Code provides comprehensive guidelines for advertising of food and drinks to children aged up to 14 years, and a duty of care to those aged 14-17 years. It requires advertisers to demonstrate a high degree of social responsibility in their advertising to children, and compliance must be with the spirit and intent of the Code, not just its specific principles. As the impact of the Code has not been evaluated, it is difficult to make judgments on its effectiveness. The impression of the ASA is that it has created an awareness amongst industry that a responsible approach has to be taken outside of targeted children's programming as well as in other mediums children may be exposed to, and has led to more moderate claims, fewer over the top claims, and a shift of advertising out of children's programming time (due to the ThinkTV code).<sup>53</sup>

Prior to the introduction of the Children's Food Code, concerns were expressed about the consistency of the ASA's decisions on complaints relating to advertisements for unhealthy foods aimed at children, the screening out of complaints by the Chair (whereby the complaint is rejected prior to it being heard by the Board), and the reactive nature of the process whereby advertisements can screen for some time before a decision is made and the advertisement withdrawn.<sup>47</sup>

The ThinkTV Code places restrictions around advertising during children's programming time. No advertising is allowed during pre-school children's programming times, and restricted levels of advertising are allowed during school-age children's programming time. Furthermore, food can only be advertised if it is classified as healthy using the Food & Beverage Classification System or FSANZ nutrient profiling system. This has the benefit of capturing all food advertisements, and not just those that have significant appeal to children. It seems obvious that advertisements that are not specifically aimed at children still have potential to influence them. The impact of the first version of the Code was assessed by the Commercial Approvals Bureau. They state that in its first year, the proportion of food and beverage advertisements able to be screened during children's programming times decreased from 90% to 12%.<sup>54</sup>

All advertisements to be screened on television require pre-approval by the Commercial Approvals Bureau. They are scrutinised to ensure they comply with the Advertising Codes of Practice, including the Children's Food Code, and where applicable the ThinkTV Code. However, it is unclear how rigorous this pre-vetting process is. This stage is particularly important because the system past this point relies on a complaint being made to the ASA. Review of the complaints made to the ASA in 2010 reveal that none were in relation to the advertising of unhealthy food to children.

### Effectiveness

There have been various estimates of the predicted effect on childhood obesity of restricting advertising of unhealthy foods. An analysis in the United States estimated that banning advertising of unhealthy food on television would reduce the number of children who are overweight by 10%.<sup>13</sup> An even greater effect was estimated from longitudinal youth survey data in the US, where an 18% reduction in overweight children was predicted if television advertising of fastfood restaurants were banned.<sup>55</sup> Other analyses by the Global Alliance for the Prevention of Obesity reported that halving advertising of unhealthy foods to children would reduce obesity by 3.2% in this age group.<sup>reported in 56</sup> Contrary to this, an Australian Government report concluded it is unlikely that restricting advertising to children would significantly address prevalence of childhood obesity, although the level of effect was not quantified.<sup>57</sup> However, the report rates the likelihood of success for any of the assessed policy interventions to prevent childhood overweight as low or unknown. They state this may be due to the inherent challenges of reducing childhood overweight, ineffective interventions, and/or lack of robust evaluation.

### *Self-regulation versus regulation*

Of key interest is whether a self-regulatory (voluntary) or regulatory approach is more effective at controlling marketing of unhealthy food to children. Preference for self-regulation may be more related to economic and legal considerations than to evidence for the most effective approach.<sup>13</sup> Currently, we do not know the effectiveness of self-regulation in New Zealand, and there is urgent need for research to assess this, and for ongoing monitoring.

Over the Tasman, the Australian Food and Grocery Council introduced the Responsible Children's Marketing Initiative in January 2009, to which it has 17 signatories.<sup>58</sup> The self-regulatory code has been associated with a reduction in advertisements of non-core foods from 3.4 per hour in 2007 to 3.2 in 2009. This reduction was due to less non-core food advertising by signatory companies. The use of persuasive techniques to advertise non-core foods also reduced in signatory companies (from 1.0 to 0.6 per hour), but were still used more often

than by non-signatory companies (0.4 per hour). While there is scope to improve for signatory companies, the main limiting factor of this particular code appears to be the limited number of companies who have signed up to it.

Spain has a voluntary, self-regulatory code for food advertising that targets children, launched in 2005. Independent assessment of compliance with the code found that half of advertisements did not comply.<sup>59</sup> Levels of non-compliance were similar between companies that were signatories to the code and those that were not (one-quarter of advertisers were not signatories). Given their findings, the paper's authors question the usefulness of the code and propose that statutory regulation is needed.

Two examples of countries or regions who have taken a regulatory approach are the United Kingdom and Quebec in Canada. The United Kingdom banned advertising of unhealthy food on children's television channels. It has been estimated this has resulted in a shift from 22% to 33% of all food and drink advertising being for healthier foods, and children seeing 37% fewer advertisements for unhealthy foods.<sup>60</sup>

Quebec has perhaps the strongest restrictions on advertising, as it covers all forms of marketing and considers the nature, purpose, manner, time and place of advertising.<sup>61</sup> An evaluation after the ban was introduced in the 1980s found that households exposed to less advertising had purchased less sugary breakfast cereals, although family size and cereal box size were not considered.<sup>62</sup> A recent comparison between children in Quebec and Ontario, where different policy environments exist, found children in Quebec saw a similar level of food and beverage advertising on television, albeit not directed at children, during their preferred viewing times.<sup>63</sup> However, the advertising ban had influenced the types of food categories advertised, and the advertising and promotional techniques used. In Quebec, there were significantly fewer advertisements for candy and snacks, and children were less likely to be targeted in advertisements. Despite the ban, up to 30% of advertisements in Quebec were still judged to be targeted at children. This demonstrates the need for a robust monitoring system to ensure compliance in both regulatory and self-regulatory approaches.

Hawkes notes that while self-regulatory systems can control advertisements that are blatantly misleading, deceptive, or exploitative; they cannot control the "onslaught of food promotions aimed at children".<sup>51</sup> That is, they cannot control the amount and location of promotions targeting children. Further, they cannot control advertisements that employ creative or emotional techniques and build brand power over cumulative viewings. In other words, Hawkes says, "self-regulation cannot prevent marketing that works".<sup>51</sup> However, she suggests that any self-regulatory approach should focus on the cumulative effect of all marketing and promotional activities across all locations which advertise food to children. The WHO has also recommended that both exposure and power of marketing should be addressed, either simultaneously or in a stepwise approach.<sup>5</sup> Exposure covers when, where, to whom and for what marketing will/will not be permitted. Power relates to restriction of marketing techniques that are particularly powerful. It is apparent that any solution to restricting advertising of unhealthy food to children must include mechanisms to address the 'barrage' of advertising through various mediums and locations.

Other than a regulatory or self-regulatory approach, effectiveness of restrictions on advertising to children also depends on factors such as the forms of advertising covered, how children are defined, when the restrictions apply, and how foods are defined as healthy or not healthy. These aspects are discussed in turn.

### *Forms of advertising*

Restricting advertising of unhealthy food to children is likely to reduce the number of food advertisements that children see for unhealthy foods which are aimed at them. However, they will still be exposed to other aspects of the marketing mix such as branding, point-of-sale, and packaging.<sup>64</sup> The scope of advertising and promotions that restrictions apply to therefore needs to be considered, as discussed above.

Restricting one avenue of advertising, without consideration of other means of promotion, may only serve to shift where and how unhealthy foods are promoted. This has been demonstrated with restrictions on alcohol and tobacco advertising where viral, guerilla and stealth advertising have been used to circumvent advertising restrictions.<sup>61</sup> Other mediums for advertising of food to children include product placement in movies or television shows, radio, in-store promotions, packaging promotions, magazines, sports sponsorship, school promotions, print and billboard advertisements, branded clothing or toys, viral marketing, use of mobile phones for advertising and downloads, brand mascots, social media, websites, advergames, webisodes, and buzz marketing (targeting the 'cool kids' who influence others).<sup>3 65 66</sup> These avenues are likely to become increasingly influential as children's media habits change. Whilst the ASA Code covers a wide range of advertising, it does not include advertising through media such as websites or food packaging. The ThinkTV Code was specifically developed for free-to-air television and therefore does not cover other media.

Other than paid advertising on television, food and beverages are also often used within television programmes. An assessment of the eight highest rating programmes for children over a three-week period in 2008 revealed an average of 12.4 food and beverage episodes every 15 minutes of viewing time.<sup>67</sup> Two-thirds of the food and beverages shown were classified as less healthy. Viewing nutrition content within television programmes has been shown to significantly affect girls' knowledge, behavioural intention, and attitudes towards food.<sup>68</sup> Whilst difficult to control, some countries such as the United Kingdom do have restrictions on product placement.

#### *Definition of children*

The age of children and youth covered by restrictions is another area of debate that will impact on effectiveness. According to the IOM review, there is strong evidence that television advertising influences short-term consumption of children under 12 years of age, and moderate evidence that it influences usual dietary intake of 2-5 year olds. There was insufficient or weak levels of evidence for the effect in other age groups, and weak evidence that usual dietary intake of adolescents was not influenced.<sup>10</sup> Therefore, there is less evidence to support restricting advertising to youth over 12 years of age.

The ASA define children as under 14 years of age in the Children's Food Code. However, the United Nations Convention on the Rights of the Child defines children as 18 years of age and under. Thus, ethically, children and youth up to 18 years of age should be included in the definition, but the scientific evidence to support that approach is not currently available.

Regardless of the age of children to which restrictions apply, they will still see advertisements that are not specifically aimed at them, and which may be equally influential. It is worth noting that experience in other countries has shown that advertising bans can easily be side-stepped by aiming advertising at people other than children.<sup>57</sup> Thus, the intention of the advertisement must also be a consideration.

#### *Timing of restrictions*

A strength of the ASA Code is that it applies at all times and does not specify restrictions only in relation to children's programming times, as is often done internationally. However, the ThinkTV code does only apply during children's programming times. Children's programming times and viewing times can be quite different. Children's viewing peaks at 7.30pm, when one-quarter of children are watching television,<sup>20</sup> but this is well outside of children's programming times. One-fifth of children are still watching television at 8.30pm. A representative survey of 604 children by the Broadcasting Standards Authority in 2007 found even higher figures: 31% of 6-13 year olds were still watching television at 8.30pm on a school night, and 51% were still watching at 8.30pm on a Friday night.<sup>19</sup> In 2008, of the eight highest rating programmes for children, only three were specifically children's programmes.<sup>67</sup> Thus, if restrictions on advertising apply only during children's programming it is not likely to be an effective approach, and would be better if also applied to

children's peak viewing times. The effect of this would be that the ASA Code would continue to apply at all times, but alongside this, the ThinkTV code would not allow advertising of unhealthy food at all during children's programming and peak viewing times, and would restrict the number of advertisements able to be shown while children are watching (in the case of peak viewing times, this restriction could apply only in relation to food advertisements rather than all advertisements).

### *Classification of healthy foods*

If restrictions are placed on advertising unhealthy foods to children, there needs to be clear definition of what healthy food is. This relies on a nutrient classification or profiling system. The ASA code does not specify how healthy/unhealthy foods are defined, other than that they are unhealthy if high in fat, sugar, or salt. This introduces a level of subjectivity. The ThinkTV Code uses a two-tiered classification system utilising both the Food & Beverage Classification System and FSANZ nutrient profiling system. If foods are classified as an occasional food under the Food & Beverage Classification System, they are then run through the FSANZ nutrient profiling system to check if they are still classified as unhealthy.

Similarly to the ASA code, the Australian Food and Grocery Council self-regulatory initiative does not define healthy foods. They stipulate that signatory food companies must not advertise foods to children that do not "... represent healthy dietary choices, consistent with established scientific or Australian government standards".<sup>69 70</sup> Signatories to the initiative have used existing classification systems such as the Australian version of the Food & Beverage Classification System for schools, the Heart Foundation Tick criteria, or have developed their own classification systems. An analysis of food company's own classification systems revealed that they vary widely between companies and were generally more lenient than the Food & Beverage Classification System, Tick criteria, and Food Standards Australia New Zealand nutrient profiling tool.<sup>69</sup>

For New Zealand, it is recommended that a single, robust nutrient profiling system, such as the FSANZ tool, is used to determine if a food can be advertised to children. The system used should be on advice from the MOH. Having a consistent classification would enhance effectiveness of the system, provide greater clarity for the food industry, and could be used for monitoring purposes.

### **Cost-effectiveness**

The ACE-Obesity cost effectiveness analysis conducted in Australia was a large project comparing the cost-effectiveness of various public health interventions to reduce obesity. It found that reducing advertising of junk food to children on television was an extremely cost-effective way to reduce excess body weight.<sup>62</sup> Of the 13 interventions assessed, it was the most cost-effective intervention to reduce childhood obesity. The BMI change calculated per child was small (0.17 BMI), but on a population level, the intervention would have wide reach, and small changes can make a large difference. The gross cost per BMI unit saved was AU\$0.33, and \$3.70 per disability adjusted life year saved. The potential savings in healthcare costs were AU\$300 million, making it a highly cost-effective intervention.

### **Suitability for New Zealand**

Parents and grandparents in New Zealand expect the appropriate authorities to protect children.<sup>42</sup> As part of the Chronic Disease Prevention Peak Group, the Heart Foundation commissioned research in 2007 which showed that a large majority of New Zealand parents and grandparents would like to ban television advertising which promotes unhealthy food and beverages to children.<sup>29</sup> Eighty-two percent of the 401 survey respondents agreed or strongly agreed that advertising unhealthy products "using ads appealing to children" should be stopped. This demonstrates the strong consumer demand for protection of children from advertising, and that New Zealanders are very much in favour of regulation in this instance.

To ensure that sufficient protection is being afforded by the current self-regulatory system, independent and ongoing monitoring and evaluation of marketing to children is a priority. This monitoring should examine at a minimum the volume of marketing of food to children, the amount of advertising which is for food classified as unhealthy, and when and where it is shown. Furthermore, any relevant independent research should be fed in to strengthen the system.

There are also amendments to the system that are likely to increase effectiveness. These include a stronger system of pre-vetting; immediate withdrawal of advertisements until the complaint is heard if a *prima facie* case is made; stronger compliance incentives and penalties; use of one robust nutrient profiling system in both Codes; coverage of all advertising mediums including websites and food packaging; and expanding restrictions in the ThinkTV code to cover children's peak viewing times (rather than just children's programming times). The Codes should also be reviewed to ensure consistency with the WHO recommendations on advertising of unhealthy food to children.

Current situation	Suggested improvements
Any food advertisements with significant appeal to children must comply with the ASA Children's Food Code (in essence, if the food is unhealthy it must be responsibly marketed)	<ul style="list-style-type: none"> <li>Extend to complete coverage of all forms of advertising including websites and food packaging</li> <li>Immediate withdrawal of advertisements if a complaint with a <i>prima facie</i> case is made</li> <li>Stronger sanctions and incentives for compliance</li> <li>Use a robust nutrition profiling system to determine if a food is healthy or not</li> </ul>
Unhealthy food cannot be advertised on TV2, TVNZ7, and TV4 during children's programming times	<ul style="list-style-type: none"> <li>Extend to cover children's peak viewing times</li> <li>Use one nutrient profiling system for pre-vetting (consistent with the one implemented for the ASA code)</li> </ul>
All advertisements on television are pre-vetted by the Commercial Approvals Bureau	<ul style="list-style-type: none"> <li>Strengthen the pre-vetting process and provide greater clarity around it</li> <li>Pre-vet marketing campaigns as a whole, not just television advertisements</li> </ul>
No evaluation or monitoring of advertisements aired for compliance with the Codes	<ul style="list-style-type: none"> <li>Government to implement independent and ongoing evaluation and monitoring of marketing of food and beverages to children. This should include the volume of advertising, timing, repetition, compliance with the codes, media used (placement), and use of persuasive techniques.</li> </ul>
Self-regulatory approach	<ul style="list-style-type: none"> <li>A co-regulatory approach – that is, self-regulation within a legislative framework.</li> <li>Self-regulation would continue to control individual advertisements (provided that evaluation shows it is being effective), and government regulation would curtail the overall big picture</li> </ul>

## CONCLUSION

Food advertising can and does influence children's eating habits – their food preferences, food requests, choices, and consumption. Restricting advertising and promotion of unhealthy foods to children is an important step to improve the food environment for children. Children are at a vulnerable life-stage where they are developing food preferences. Their food preferences and choices impact on both current and future health. Furthermore, depending on their age children may not be able to discern advertisements from fact, nor the persuasive nature of advertising. Children watch a substantial amount of television and are exposed to high volumes of advertising, both from television and other advertising media. Restricting advertising of unhealthy food to children has been assessed as a highly cost-effective intervention to help reduce childhood obesity. It is an important part of a multi-faceted approach that is necessary to provide children with a food environment that supports health. The current self-regulatory codes in New Zealand have not been independently evaluated for their effectiveness in restricting advertising of unhealthy food to children, and this is a priority and the role of government. If monitoring and evaluation identifies the Codes are not being

effective, an additional layer of government regulation will be required alongside self-regulation in order to achieve the end goal of protecting children from advertising of unhealthy food aimed at them.

## REFERENCES

1. Wilson N, Signal L, Nicholls S, Thomson G. Marketing fat and sugar to children on New Zealand television. *Preventive Medicine* 2006;42(2):96-101.
2. Olshansky SJ, Passaro DJ, Hershov RC, Layden J, Carnes BA, Brody J, et al. A potential decline in life expectancy in the United States in the 21st century. *New England Journal of Medicine* 2005;352(11):1138-1145.
3. Cairns G, Angus K, Hastings G. The extent, nature and effects of food promotion to children: a review of the evidence to December 2008. Geneva: World Health Organization, 2009.
4. Birch LL, Fisher JO. Development of eating behaviors among children and adolescents. *Pediatrics* 1998;101:539-549.
5. World Health Organization. Prevention and control of noncommunicable diseases: implementation of the global strategy: Executive Board, 126th Session, Provisional agenda item 4.9; World Health Organization, 26 November 2009.
6. Jolliffe CJ, Janssen I. Vascular risks and management of obesity in children and adolescents. *Vascular Health and Risk Management* 2006;2(2):171-187.
7. American Heart Association, Gidding SS, Dennison BA, Birch LL, Daniels SR, Gilman MW, et al. Dietary recommendations for children and adolescents: a guide for practitioners. *American Academy of Pediatrics* 2005;117(2):544-559.
8. Tirosh A, Shai I, Afek A, Dubnov-Raz G, Ayalon N, Gordon B, et al. Adolescent BMI trajectory and risk of diabetes versus coronary disease. *The New England Journal of Medicine* 2011;364(14):1315-25.
9. Cawley J. Markets and childhood obesity policy. *The Future of Children* 2006;16(1):69-88.
10. Institute of Medicine (U.S.) Committee on Food Marketing and the Diets of Children and Youth. In: McGinnis J, Appleton Gootman J, Kraak V, editors. *Food marketing to children and youth: threat or opportunity?* Washington DC: National Academy of Sciences, 2006.
11. Kunkel D, Wilcox B, Cantor J, Palmer E, Linn S, Dowrick P. Report of the APA taskforce on advertising and children. Washington DC: American Psychological Association, 2004.
12. Obesity Action Coalition. Would you like lies with that? Food, kids and tv advertising. Wellington: Obesity Action Coalition, 2007.
13. Wilde P. Self-regulation and the response to concerns about food and beverage marketing to children in the United States. *Nutrition reviews* 2009;67(3):155-166.
14. Utter J, Faeamani G, Malakellis M, Vanualailai N, Kremer P, Scragg R, et al. Lifestyle and obesity in South Pacific youth: baseline results from the Pacific Obesity Prevention in Communities (OPIC) Project in New Zealand, Fiji, Tonga and Australia. Auckland: School of Population Health, The University of Auckland, 2008.
15. Dalmeny K, Hanna E, Lobstein T. Broadcasting bad health: why food marketing to children needs to be controlled. London: The International Association of Consumer Food Organisations, 2003.
16. Gorton D, Bowers S, Signal L, Ni Mhurchu C. The potential role of the food industry. In: Bowers S, Carter K, Gorton D, Heta C, Lanumata T, Maddison R, et al., editors. *Enhancing food security and physical activity for Maori, Pacific and low-income peoples*. Wellington: Clinical Trials Research Unit, GeoHealth Laboratory, Health Promotion and Policy Research Unit, Te Hotu Manawa Maori, 2009.
17. Ministry of Health. Food and nutrition monitoring report 2006. *Public Health Intelligence Monitoring Report 9*. Wellington: Ministry of Health, 2006.
18. Federal Trade Commission. Marketing food to children and adolescents: a review of industry expenditures, activities, and self-regulation. Washington DC: Federal Trade Commission, July 2008.
19. The Broadcasting Standards Authority. Seen and Heard: Children's Media Use, Exposure, and Response. Wellington: Broadcasting Standards Authority, May 2008.
20. AGB Nielsen. NZ on Air: children's media forum: Available from: <http://www.nzonair.govt.nz/media/16380/children's%20media%20forum%20jun%202008.pdf>. Accessed 24 September 2010, June 2008.
21. Hammond K, Wyllie A, Casswell S. The extent and nature of televised food advertising to New Zealand children and adolescents. *Australia and New Zealand Journal of Public Health* 1999;23(1):49-55.
22. Wilson N, Signal L, Nicholls S, Thomson G. Hazardous and beneficial nutritional messages in 858 televised food advertisements during children's viewing hours. *New Zealand Medical Journal* 2006;119(1233).
23. Wilson N, Quigley R, Mansoor O. Food ads on TV: a health hazard for children? *Australia and New Zealand Journal of Public Health* 1999;23(6):647-50.

24. Hastings G, Forsyth A, Godfrey C. Review of research on the effects of food promotion to children: final report. Glasgow: Centre for Social Marketing, The University of Strathclyde, 2003.
25. Ashton B, Morton H, Mithen J. Children's health or corporate wealth? Melbourne: The Coalition on Food Advertising to Children, 2003.
26. Dixon HG, Scully ML, Wakefield MA, White VM, Crawford DA. The effects of television advertisements for junk food versus nutritious food on children's food attitudes and preferences. *Social Science and Medicine* 2007;65(7):1311-1323.
27. Buijzen M, Schuurman J, Bomhof E. Associations between children's television advertising exposure and their food consumption patterns: A household diary-survey study. *Appetite* 2008;50(2-3):231-239.
28. Borzekowski DLG, Robinson TN. The 30-second effect: an experiment revealing the impact of television commercials on food preferences of preschoolers. *Journal of the American Dietetic Association* 2001;101(1):42-46.
29. Phoenix Research. Survey of public opinions about advertising food to children: understanding attitudes in New Zealand. Auckland: Peak Group, November 2007.
30. Anonymous. Hidden Hunger - Food and Low Income in New Zealand 1999. Wellington: New Zealand Network Against Food Poverty, 1999.
31. World Cancer Research Fund, American Institute for Cancer Research. Policy and Action for Cancer Prevention. Food, Nutrition, and Physical Activity: a Global Perspective. Washington DC: American Institute for Cancer Research, 2009.
32. Halford JCG, Boyland EJ, Cooper GD, Dovey TM, Smith CJ, Williams N, et al. Children's food preferences: Effects of weight status, food type, branding and television food advertisements (commercials). *International Journal of Pediatric Obesity* 2008;3(1):31-38.
33. Anschutz DJ, Engels RCME, Van Strien T. Side effects of television food commercials on concurrent nonadvertised sweet snack food intakes in young children. *American Journal of Clinical Nutrition* 2009;89(5):1328-1333.
34. Gorn C, Goldberg M. Behavioural evidence of the effects of televised food messages to children. *Journal of Consumer Research* 1982;9:200-205.
35. New Zealand Guidelines Group. The assessment and management of cardiovascular risk. Wellington: New Zealand Guidelines Group, 2003.
36. World Health Organization. Diet, nutrition and the prevention of chronic diseases: report of a joint FAO/WHO Expert Committee. *Technical Report Series 916*. Geneva: World Health Organization, 2003.
37. Daniels SR, Greer FR, the Committee on Nutrition. Lipid screening and cardiovascular health in childhood. *Pediatrics* 2008;122(1):198-208.
38. Wissler RW, Cornhill LF, McGill Jr HC, McMahan CA, Robertson Jr AL, Strong JP, et al. Natural history of aortic and coronary atherosclerotic lesions in youth: Findings from the PDAY study. *Arteriosclerosis and Thrombosis* 1993;13(9):1291-1298.
39. Freedman DS, Dietz WH, Srinivasan SR, Berenson GS. The relation of overweight to cardiovascular risk factors among children and adolescents: The Bogalusa Heart Study. *Pediatrics* 1999;103(6 I):1175-1182.
40. Berenson GS, Srinivasan SR, Bao W, Newman WP III, Tracy RE, Wattigney WA. Association between multiple cardiovascular risk factors and the early development of atherosclerosis. Bogalusa Heart Study. *New England Journal of Medicine* 1998;338(23):1650-1656.
41. Raitakari OT, Juonala M, Kahonen M, et al. Cardiovascular risk factors in childhood and carotid intima-media thickness in adulthood: the Cardiovascular Risk in Young Finns Study. *JAMA* 2003;290(17):2277-2283.
42. McGregor M. Heart Foundation submission to Advertising Standards Association Revision of the Codes for Advertising to Children and for Advertising Food. Auckland: Heart Foundation, 2009.
43. Ministry of Health. A Portrait of Health. Key results of the 2006/07 New Zealand Health Survey. Wellington: Ministry of Health, 2008.
44. Strong K, Mathers C, Leeder S, Beaglehole R. Preventing chronic diseases: how many lives can we save? *Lancet* 2005;366:1578-82.
45. Falaschetti E, Hingorani AD, Jones A, Charakida M, Finer N, Whincup P, et al. Adiposity and cardiovascular risk factors in a large contemporary population of pre-pubertal children. *European Heart Journal* 2010;31(24):3063-72.
46. World Health Organization. Ottawa Charter for Health Promotion. Geneva: World Health Organization, 1986.

47. Thornley L, Signal L, Thomson G. Does industry regulation of food advertising protect child rights? *Critical Public Health*;20(1):25-33.
48. Swinburn B, Sacks G, Lobstein T, Rigby N, Baur LA, Brownell KD, et al. The Sydney Principles' for reducing the commercial promotion of foods and beverages to children. *Public Health Nutrition* 2008;11(9):881-886.
49. Hughes S. Improving food quality in the Pacific: best practice for working with industry: World Health Organization, December 2009.
50. Hawkes C, Lobstein T, for the Polmark Consortium. Regulating the commercial promotion of food to children: a survey of actions worldwide. *International Journal of Pediatric Obesity* 2010;Early online:1-12.
51. Hawkes C. Self-regulation of food advertising: what it can, could and cannot do to discourage unhealthy eating habits among children. *Nutrition Bulletin* 2005(30):374-382.
52. Sharma LL, Teret SP, Brownell KD. The food industry and self-regulation: standards to promote success and to avoid public health failures. *American Journal of Public Health* 2010;100:240-6.
53. Souter H. Personal communication to D Gorton, 9 March 2011.
54. Commercial Approvals Bureau. Review of the Children's Food (CF) Classification Decisions. Auckland: Available from: [http://www.commercialapprovals.co.nz/documents/CF\\_Review\\_0909.pdf](http://www.commercialapprovals.co.nz/documents/CF_Review_0909.pdf), 2009.
55. Chou SY, Rashad I, Grossman M. Fast-food restaurant advertising on television and its influence on childhood obesity. *Journal of Law and Economics* 2008;51(4):599-618.
56. Scragg R, Quigley R, Taylor R. Does watching tv contribute to increased body weight and obesity in children? Wellington: Agencies for Nutrition Action, 2006.
57. Croule J, Turner E. Childhood obesity: an economic perspective. Melbourne: Productivity Commission Staff Working Paper, 2010.
58. King L, Hebden L, Grunseit A, Kelly B, Chapman K, Venugopal K. Industry self regulation of television food advertising: responsible or responsive? *International Journal of Pediatric Obesity* 2010;Early online:1-9.
59. Romero-Fernandez MM, Royo-Bordonada MA, Rodriguez-Artalejo F. Compliance with self-regulation of television food and beverage advertising aimed at children in Spain. *Public health nutrition* 2009;13(7):1013-1021.
60. Ofcom. HFSS advertising restrictions: final review. London: Ofcom, July 2010.
61. Worsley T. *Nutrition Promotion: theories and methods, systems and settings*. Crows Nest: Allen & Unwin, 2008.
62. Magnus A, Haby MM, Carter R, Swinburn B. The cost-effectiveness of removing television advertising of high-fat and/or high-sugar food and beverages to Australian children. *International Journal of Obesity* 2009;33(10):1094-1102.
63. Kent M, Dubois L, Wanless A. Food marketing on children's television in two different policy environments. *International Journal of Pediatric Obesity* 2010;Early online:1-9.
64. Eagle L, de Bruin A. Advertising restrictions: protection of the young and vulnerable? *Working paper series No. 00.06*. Auckland: Massey University.
65. Centre for Science in the Public Interest. Pestering parents: how food companies market obesity to children. Washington DC: Centre for Science in the Public Interest, November 2003.
66. Hoek J, Gendall P. Food marketing and children: a review of 'below the line' promotions and digital media: Massey University, 2008.
67. Hines N. Food and beverage placement in television programmes most viewed by children in New Zealand: Available from: [http://nutrition.otago.ac.nz/data/assets/file/0003/4764/DTP\\_NHine\\_SoF.pdf](http://nutrition.otago.ac.nz/data/assets/file/0003/4764/DTP_NHine_SoF.pdf). Accessed 23 September 2010., 2008.
68. Byrd-Bredbenner C, Greci A, Quick V. Effect of a television programme on nutrition cognitions and intended behaviours. *Nutrition and Dietetics*;67(3):143-149.
69. Hebden L, King L, Kelly B, Chapman K, Innes-Hughes C, Gunatillaka N. Regulating the types of foods and beverages marketed to Australian children: how useful are food industry commitments? *Nutrition & Dietetics* 2010;67:258-266.
70. Australian Food and Grocery Council. The responsible children's marketing initiative - core principles. Barton, ACT: Available from <http://www.afgc.org.au/industry-codes/advertising-kids/core-principles.html>, 2009.