

# Magazines for children and young people and the links to Internet food marketing: a review of the extent and type of food advertising

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## Abstract

*Objective:* To examine the nature of the link between food advertising in UK magazines aimed at children and young people and Internet food marketing, to establish whether consideration should be given to tightening existing controls.

*Design:* A review and descriptive analysis of food advertising found in a sample of the top five magazine titles aimed at a range of ages of children and young people between November 2004 and August 2005 and of the Internet food marketing sites to which readers were directed.

*Results:* Food advertising appeared as 'cover-mount' free gifts and as part of the main bound issue. Children aged 6–10 years were the most frequent recipients of food-based free gifts, all of which were confectionery. No food advertising was found in magazines aimed at pre-school children and it formed a small percentage of total advertising in the magazines aimed at children of school age and above. Most food advertisements were for 'less healthy' foods, although advertisements for 'healthier' food products did appear infrequently. Almost half of food advertisements directed readers towards Internet food marketing sites. We found evidence that these sites are using at least some of the 'marketing tricks' which have been identified as a cause for concern.

*Conclusions:* Proposed restrictions on broadcast media may lead to more food advertising via other non-broadcast means. We suggest monitoring the effect of such changes in print and online advertising and that consideration be given to restricting marketing techniques used on websites aimed at children and young people.

**Keywords**  
Children and young people  
Magazines  
Internet  
Food advertising  
Review

Concern about the diet of children and young people, partly fuelled by the rise in UK childhood obesity, has led to a growing interest in the nature and extent of food marketing and its impact on their eating behaviour. Food advertising in the UK is currently regulated by various statutory and voluntary codes that cover broadcast (for example, television and radio) and some non-broadcast marketing (such as advertising in print-based material like magazines and direct marketing) and offer some protection to children and young people<sup>1,2</sup>. Although some European countries have statutory and voluntary codes which apply to paid-for Internet food marketing (such as 'pop ups' and banner adverts), other Internet food marketing is unregulated or relies on voluntary codes and self-regulation<sup>3</sup>. Non-government organisations and consumer representatives have amplified their calls for a review of the regulations, given that the effects of food promotion to children, in terms of their preferences, purchase behaviour and consumption, have recently been established<sup>4,5</sup>. The UK government is currently

considering how to restrict the advertising and promotion of foods high in fat, salt and sugar to children<sup>6,7</sup>.

## *Children as consumers and users of the Internet*

Children are seen as important consumers in their own right, as influencers of parental spending and as future customers. UK children (aged between 7 and 15 years) spend an average of £13 a week, with 18% of this being spent on confectionery, snacks and drinks and 5% spent on magazines, newspapers, books and stationery<sup>8</sup>.

Children have more access to new technologies than ever before and thus greater potential exposure to Internet marketing. Ninety-two per cent of 9- to 19-year-olds have accessed the Internet at school. Although home Internet access is socially patterned (with children in areas of low deprivation having more access than children in areas of high deprivation), on average 75% of children have access to the Internet from a computer at home, with 19% having direct access from a computer in their bedroom. Increasingly, the Internet is also being accessed via mobile

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phones, digital televisions or games consoles. Forty-three per cent of children and young people in this age group use the Internet weekly. Forty-one per cent report using it daily and, of these, 48% spend between half an hour and an hour online per day<sup>9</sup>.

Food advertisers are developing the Internet as a medium to reach children. A US study recently found that 85% of foods which were advertised to children on television also had a website either aimed directly at children or featuring content that would be of interest to them<sup>10</sup>.

### **Existing regulations on Internet marketing**

A summary of the guidelines which exist to aid companies using Internet marketing as it relates to children is given in Table 1<sup>11–13</sup>.

Along with concern about young children not being able to comprehend fully the purpose of advertising in general, commentators have raised a series of concerns specifically regarding Internet marketing aimed at children. These include children accessing Internet marketing sites without direct parental supervision; the design of Internet marketing sites offering opportunities for children to be immersed in play (and brand information) for considerable time periods and which

**Table 1** Summary of Internet marketing guidelines for sites aimed at children and young people

- Marketers should not exploit children's credulity, loyalty, vulnerability or lack of experience.
- Marketers should not directly encourage minors to persuade their parents or others to purchase the goods or services being advertised.
- Any commercial communication aimed at children should take into account the age, knowledge and the level of maturity of the intended audience.
- Marketers should encourage parents to involve themselves in their children's online activities, and where possible should provide parents with information on how monitoring/supervising of these activities can be carried out.
- Care should be taken not to encourage children to enter sites suitable only for adults or sites that could be reasonably judged to be inappropriate, nor to encourage them to copy any practice that may be unsafe, nor to communicate with strangers.
- Awareness notices should be used to encourage children to obtain permission from their parents/guardians before entering personal data. Such notices should be displayed at the point where the information is requested, be clear, prominent and easily understandable by young children.
- Marketers should not make a child's access to a website contingent on the collection of detailed personal information. In particular, special incentives such as prize offers and games should not be used to entice children to divulge detailed personal information.
- Marketers should not collect from children data related to the financial situation or to the privacy of other members of the family.
- No commercial communication may invite children to purchase products by mail, telephone or Internet.
- Commercial communications for confectionery or snack foods must not suggest that such products may be substituted for balanced meals.

Source: references 11–13.

encourage return visits; children being encouraged to enter personal information without understanding the potential consequences of such disclosure; and children being exposed to unfair and deceptive advertising<sup>14–16</sup>. A recent study assessed whether food-based 'advergaming' aimed at children would break existing broadcast advertising codes, if they applied to online advertising. It found that, despite pledges of responsible marketing to children, online marketers were in breach of the spirit of current self-regulatory provisions<sup>17</sup>.

In the present study we examine the nature of the link between food advertising in popular magazines aimed at children and young people and Internet food marketing, to establish whether consideration should be given to tightening existing controls. Our results contribute to the growing debate on the unregulated nature of non-broadcast food marketing to children.

Our study aimed to establish:

- How often do food advertisements appear in magazines aimed at children and young people compared with non-food adverts?
- What types of food advertisements are present in such magazines?
- How frequently do food advertisements direct readers to Internet sites which feature food marketing aimed at children and young people and what is the nature of such sites?

### **Method**

We sampled magazines for children and young people (aged up to 19 years), searching for food and other advertising data. We used the top five titles across a range of ages, as listed by Youth Target Group Index (a measure of readership, taken from survey data from approximately 6000 interviews with 7–19-year-olds)<sup>18</sup> after cross-referencing these titles to confirm their high circulation as listed by the Audit Bureau of Circulation, which provides independent verification of circulation figures to facilitate advertising space purchase within national publications<sup>19</sup>. We categorised the target group for each magazine according to information provided by the publisher. This provided three distinct groups: the pre-school group (for titles aimed at the under-5s); the early school group (for titles aimed at children aged 6–10 years); and the pre-teen/teenage group (for titles aimed at young people aged 11–19 years). We selected all issues of chosen titles published during three winter months (November 2004, December 2004, January 2005) and three summer months (June, July, August 2005), in order to reflect any potential seasonal changes to advertising and to include key school holiday periods. We obtained full paper copies of the selected titles, either from library sources or directly from the publisher.

The magazine titles were divided and were hand-searched for food and other advertising data (by G.C. and A.B.). A.B. collected data from Internet sites. Advertisements were defined as the description or depiction of a product designed solely to encourage purchase of the product. We included advertorials but excluded product placement, defined as pictures of products used for prizes or within magazine features. After a pilot, two types of data extraction tool were developed – one for magazine data and the second for Internet sites. In the magazines, data were collected about the product name, category of product, size of advertisement, whether or not the advert directed the reader to a website and any website address. For the Internet sites, a range of data was collected about the different features of the site. We also collected data regarding the advertising policy of each publisher, by examining policies posted on websites or by contacting publishers by telephone.

Both numerical data and narrative data were analysed descriptively. Advertised foods were categorised as 'healthier' or 'less healthy' using a nutrient profile scoring system developed by the British Heart Foundation Health Promotion Research Group for the Food Standards Agency<sup>20</sup>. The model allocates points to foods or drinks on the basis of their nutrient content per 100 grams. Foods score 'A' points for 'negative' nutrients (energy, saturated

fat, total sugars and sodium) and 'C' points for 'positive' nutrients (protein, fibre and % fruit, vegetable and nut content). The final score is calculated by subtracting the food's 'C' points from its 'A' points.

## Results

We were able to obtain most of the selected sample of magazines issues within the early school group and the pre-teen/teenage group. We achieved a low retrieval rate in the pre-school category. This was because the publisher was unable to provide other issues retrospectively. Table 2 shows readership and circulation figures for the chosen magazine titles and the proportion of issues within the sample which were successfully retrieved for data collection.

Only one publisher had an explicit advertising sales policy. Other publishers either referred to the Advertising Standards Authority (ASA) CAP code for advertising to children<sup>2</sup> or considered each advertisement on a product-by-product basis. We found no evidence that any advertising in the sample titles contravened ASA guidelines.

We found two types of food advertisement. Advertising appeared as 'cover-mount' free gifts and also as part of the main bound issue. The presence of free gifts varied across

**Table 2** Publication, circulation, readership and retrieval figures for the chosen magazine titles

Title (publisher)	Publication frequency	ABC figures*	Youth TGI survey, autumn 2005†	Total published during study periods‡	Total retrieved (% in parentheses)
<b>Pre-school (under 5 years)</b>					
<i>Bob the Builder</i> (BBC Worldwide)	Monthly	145 431	–	7	1
<i>Fimbles</i> (BBC Worldwide)	Monthly	114 872	–	6	2
<i>Teletubbies</i> (BBC Worldwide)	Monthly	96 487	–	7	3
<i>Toybox</i> (BBC Worldwide)	Three-weekly	83 726	–	9	2
<i>Tweenies</i> (BBC Worldwide)	Fortnightly	81 678	–	13	1
				42	9 (21)
<b>Early school (6–10 years)</b>					
<i>Girl Talk</i> (BBC Worldwide)	Fortnightly	89,338	586 000 (07–10)	12	10
<i>Beano</i> (DC Thomson)	Weekly		528 000 (07–10)	26	24
<i>Smash Hits</i> (EMAP Performance Ltd)	Fortnightly	120 541	463 000 (07–10)	12	12
			319 000 (11–14)		
<i>Cartoon Network</i> (Panini UK Ltd)	Three-weekly	45 017	390 000 (07–10)	8	6
<i>Disney and Me</i> (Egmont Magazines)	Fortnightly	58 005	325 000 (07–10)	13	7
				71	59 (83)
<b>Pre-teen or teenage (11–19 years)</b>					
<i>What's on TV</i> (IPC Media)	Weekly	1 673 790	303 000 (07–10)	27	27
			388 000 (11–14)		
			579 000 (15–19)		
<i>PlayStation 2 Official Magazine</i> (Future Publishing Ltd)	Monthly	133 242	267 000 (07–10)	7	7
			437 000 (11–14)		
			410 000 (15–19)		
<i>Sugar</i> (Hachette Filipacci UK)	Monthly	285 082	375 000 (11–14)	6	5
			316 000 (15–19)		
<i>Bliss</i> (EMAP London Lifestyle Ltd)	Monthly	276 253	328 000 (11–14)	7	7
			350 000 (15–19)		
<i>Top of the Pops</i> (BBC Worldwide)	Fortnightly	140 192	336 000 (07–10)	13	9
			386 000 (11–14)		
				60	54 (90)

\* Figures from the Audit Bureau of Circulations (ABC) for issues from January to June 2005; figures approved by ABC August 2005.

† Youth TGI (Target Group Index) figures start at 7 years; Youth TGI © British Market Research Bureau 2005.

‡ Includes bonus issues.

titles, with younger age groups being offered free gifts more frequently than older children. For pre-school titles, each issue contained a free gift but none of these were food-related. In the early schools category, across all titles, 10% of free gifts were food-based and in all instances these gifts were confectionery. Only two of the five titles in the pre-teen/teenage category had free gifts (*Bliss*, *Top of the Pops*) and none were food-related.

We found no food advertising in magazines aimed at the under-5s. Food advertising formed a small percentage of total advertising in the magazines aimed at children of school age and above. In the early school titles, 48% of food advertisements were for either sugar-coated breakfast cereals or sugary breakfast alternatives like cereal bars/Pop Tarts. Confectionery represented 24% of food advertising. Sugar-containing soft drinks formed 15% of the total food advertising. Two advertisements (3%) were for fruit and vegetables, promoting the Department of Health's 5 A DAY campaign. Similarly, two advertisements promoted unbranded milk and yoghurt, part of a campaign funded by the European Union and Milk Development Council. Table 3 shows the proportion of food advertising found within the main magazines compared with advertising for non-food items.

There was a wider spread of types of food advertisement in titles aimed at pre-teen and teenage young people. Foods high in fat and sugar formed the largest group of food advertisements, representing 27% of the total, with most of this as confectionery and ice cream. Pre-prepared dishes and cooking ingredients formed 17% of the total food advertising. Fifteen food advertisements (12%) were for rice- or cereal-based foods, with most of these ( $n = 9$ ) representing healthier

products within this category. Milk/dairy foods and meat products each represented 11% of the total food advertisements. Most of the meat-based advertising was for processed meats.

Table 4 presents the analysis of advertised foods based on their scored nutrient profile. This confirmed that most food advertisements were for 'less healthy' foods. This was true for all of the titles, except those which targeted female readers (*Girl Talk*, *Sugar* and *Bliss*). In general, these titles contained less food advertising than others in the sample and the few foods that were advertised were mostly 'healthier'. Where magazines had substantial numbers of food adverts (*Beano*, *Smash Hits*, *What's on TV* and *Top of the Pops*) most were advertising 'less healthy' foods.

Table 4 also shows how frequently advertisements directed readers to Internet sites which featured food marketing aimed specifically at children and young people. In the early school category, about half of food advertising across all five titles referred readers to Internet sites. Most of the food advertising within this category was carried by two titles but there was no consistent relationship between the quantity of advertising, referral to a website and nutrient profile of the advertised product. *Beano* carried the highest number of food advertisements but less than one-third of these referred to Internet sites. Most advertisements were for 'healthier' products. In contrast, *Smash Hits* also had a high number of food advertisements and a high frequency of website referrals, but advertised 'less healthy' foods most often.

Thirty-seven per cent of food advertising in the titles aimed at pre-teens/teenagers directed readers towards Internet sites. Most of this advertising was carried in one

**Table 3** Food advertising versus non-food advertising in the retrieved issues

Title	Number of issues in sample	Total number of pages	Number of ads per 100 pages	Number of non-food ads per 100 pages*	Number of food ads per 100 pages*
<b>Pre-school</b>					
All titles	9	236	27.96	27.96 (100)	0
<b>Early school</b>					
<i>Girl Talk</i>	10	376	32.97	32.71	0.26 (0.79)
<i>Beano</i>	24	768	20.83	17.05	3.78 (18.15)
<i>Smash Hits</i>	12	768	40.49	37.50	2.99 (7.38)
<i>Cartoon Network</i>	6	319	22.57	21.00	1.56 (6.91)
<i>Disney and Me</i>	7	224	9.37	8.93	0.44 (1.87)
Subtotal		2455	27.98	25.62	2.40 (8.58)
<b>Pre-teen/teenage</b>					
<i>What's on TV</i>	27	2488	27.85	24.27	3.57 (12.82)
<i>Official PlayStation 2 Magazine</i>	7	1036	26.15	25.77	0.38 (1.45)
<i>Sugar</i>	5	694	28.67	28.09	0.57 (1.99)
<i>Bliss</i>	7	1180	22.45	22.11	0.33 (1.47)
<i>Top of the Pops</i>	9	544	42.64	39.15	3.49 (8.18)
Subtotal		5942	27.93	25.91	2.01 (7.20)
<b>Total</b>		8633	27.95	25.89	2.07 (7.41)

\* Bracketed figures show percentage of non-food or food adverts within total number of adverts.

**Table 4** Food adverts and frequency of referral to Internet sites by healthy or less healthy nutrient profile category

Title	Number of occasions of food ads*	Number of foods classified as healthier (% in parentheses)	Number of foods classified as less healthy (% in parentheses)	Number of occasions directed to food website* (% of occasions of food ads in parentheses)	Number of 'less healthy' foods from ads directing readers to websites (% of occasions directed to food website in parentheses)
<b>Early school</b>					
<i>Girl Talk</i>	1	1 (100)	0	1 (100)	0
<i>Beano</i>	29	6 (21)	23 (79)	9 (31)	3 (33)
<i>Smash Hits</i>	21	4 (19)	17 (81)	15 (71)	11 (73)
<i>Cartoon Network</i>	5	1 (20)	4 (80)	5 (100)	4 (80)
<i>Disney and Me</i>	1	0	1 (100)	1 (100)	1 (100)
Total	57	12 (21)	45 (79)	31 (54)	19 (61)
<b>Pre-teen/teenage</b>					
<i>What's on TV</i>	85	17 (20)	68 (80)	27 (32)	18 (67)
<i>Official PlayStation 2 Magazine</i>	4	0	4 (100)	3 (75)	3 (100)
<i>Sugar</i>	3	2 (67)	1 (33)	2 (67)	0
<i>Bliss</i>	4	2 (50)	2 (50)	3 (75)	1 (33)
<i>Top of the Pops</i>	16	3 (19)	13 (81)	6 (38)	4 (80)
Total	112	24 (21)	88 (79)	41 (3%)	26 (63)

\* Total number amended as restaurant websites were excluded – it is only possible to analyse individual foods using the nutrient profile model.

title (*What's on TV*), where two-thirds of advertisements were for 'less healthy' products.

#### ***Nature of websites provided in food advertisements***

Food advertisements directed readers to a total of 30 different websites as, commonly, advertisements in the magazines were for the same product and so directed readers to the same website.

Eighty-three per cent of the websites found in the sample were still active at the time of analysis (about 6 months after the publication of the latest magazines in the sample). Of these active websites, 44% were clearly aimed at children. A further 16% contained a section that was aimed at children. Of the websites from food advertising in early school magazines, 91% were aimed at children, compared with only 18% of those from pre-teen and teenage magazines.

Games, quizzes or tests featured in 64% of the active websites. Links to websites with games were much more commonly given in advertisements in early school magazines than those in pre-teen and teenage magazines (95% of occasions compared with 36%). Seventy-five per cent of games featured a cartoon mascot or character associated with a food product. Product placement – for example, where users increase their score by clicking on an image of the product – was used in 56% of the games. Competitions were featured in 40% of the active websites, most commonly in pre-teen and teenage titles. It was possible to view television advertising for food products on over one-third of the websites, although this was more common in magazines in the early school category.

A 'spokescharacter' (for example, Coco the Monkey for Coco Pops and Doug the Doughball for Sara Lee) with whom visitors could interact was present throughout 32% of the websites, again most often where the websites were from advertising in early school titles.

Nutrition information for food products was available from 44% of active websites, most frequently in pre-teen and teenage titles. Certain foods were promoted as being healthy on 28% of the websites. This was also far more common in the older titles (44% pre-teen and teenage vs. 23% early school).

For 36% of active websites, it was necessary to register in order to use the full features of the site. However, registration was not required at all for 55% of the websites. Where registration was possible, the details required most frequently were full name and email address. Some sites asked people's gender and date of birth but very few asked for full postal addresses or telephone numbers.

Thirty-two per cent of websites requested that children seek parental consent prior to use. This usually consisted of a note at the registration stage (after entering the date of birth) to ask permission from a parent or guardian to proceed. Other sites had age restrictions or notes about parental permission in the legal information (Terms and Conditions, Privacy Policy, etc.).

#### **Discussion**

Despite growing concerns about the impact of food advertising on children and young people, and an increasing political profile, we located only a few published studies about food advertising within magazines aimed at

these groups. One study (from the USA) examined food advertising aimed at children through print media and confirmed that patterns in print advertising were similar to those found in broadcast media<sup>21</sup>. Another US study explored the links between traditional print advertising and Internet marketing in the top 20 magazines (for adults) published in June 1997. It found that, after car manufacturers, website addresses were most commonly included in adverts for food products<sup>22</sup>.

Our study has been rigorous, systematic and pragmatic in its approach and we are confident that our analyses present an accurate picture of the food advertising present within our achieved sample. Our study has some limitations in relation to design and sampling. The study was undertaken retrospectively, and we found it difficult to obtain sufficient back issues across our chosen magazine titles from library or publishing sources. Because of this, our results are limited in particular as they relate to magazines aimed at pre-school children. We felt it was pragmatic to sample three winter and three summer month publications. There may be a risk that we missed a major campaign which appeared in the issues between our sampling points. Again, although 83% of the websites referred to in food advertisements were still active at the time of our analysis, we cannot be sure that the content of the website remained static in the months between the magazine being published and our visit, up to 6 months later. To improve this, future studies should be undertaken prospectively, with magazine titles purchased and websites visited in 'real time', and use a random sample of issues within key publications.

It has been argued that using a nutrient profiling model is inappropriate because there are no healthy or unhealthy foods, just healthy or unhealthy diets depending on the frequency of consumption and the amount consumed. However, it is important that individual products can be assessed in some way to determine their relative 'healthiness'. It is our view that the nutrient profile model remains one of the most objective ways to define 'healthy' and 'less healthy' foods<sup>23</sup>. Although the model is a useful way of assessing a food or drink's overall nutritional quality, it does have some limitations. It does not take into account the positive nutritional value of fortification (in breakfast cereals, for example) and does not consider ingredients (such as artificial colours, preservatives or sweeteners).

In addition, the model does not consider the amount of a food or drink that is consumed. Assessing foods on a per 100 g basis rather than per portion might be considered unhelpful as foods such as sweets are usually eaten in quantities of less than 100 g. However, in this context, we were concerned with the actual nutritional value of products rather than the quantity of nutrients found in one portion.

Our results suggest, perhaps rather surprisingly, that food advertising forms a small percentage of total advertising in magazines aimed at children of school age and above, although readers of some individual titles may

be exposed to food advertising more frequently. Less surprisingly, most food advertisements were for 'less healthy' foods, although advertising for 'healthier' food products did appear, albeit infrequently. Where food related 'cover-mounts' were used to encourage purchase of a title, all were free gifts of confectionery and were aimed at younger readers (between 6 and 10 years old).

Our results hint at a relationship between gender and food advertising. Magazine titles with a predominantly female target group seemed to carry less food advertising in general and the advertisements that we did find tended to be for 'healthier' foods. More detailed research is required to verify this finding and to untangle any relationship which exists, but it suggests that food advertisers may focus their efforts on younger readers (or adults, in the case of *What's on TV*) and on magazine titles with a mixed or more boy-oriented content, perhaps to avoid alienating the target market of pre-teen/teenage girls, where concerns related to food and body weight have been well documented<sup>24,25</sup>.

Our key study aim was to examine the extent that food advertisements in magazines direct readers towards a more unregulated food marketing environment via publication of Internet site addresses. We found that almost half of food advertising across all the titles directed readers towards such sites.

As expected, following a web link from a food advertisement in early school magazines most frequently led to a website aimed specifically at children. This was less common in pre-teen and teenage magazines although this might be because the majority of adverts were found in one title (*What's on TV*), which is generally intended for an adult audience even though readership figures suggest it is popular amongst children.

Our findings confirm the results of other studies on the content of food-related marketing websites aimed at children<sup>10,14,15</sup>. We found evidence of the use of competitions (particularly aimed at older visitors) and games (mostly, but not exclusively, for younger children) which were engagingly designed, encouraged players to stay onsite and to return for repeat visits, and blurred the boundaries between advertising and other entertainment. Many included product placement and interaction with cartoon characters associated with 'less healthy' foods. It was possible to obtain downloads featuring products or characters, to sign up for newsletters and to send e-cards to friends, ensuring the regular presence of an advertising message within the day-to-day environment of a child's life.

Just over one-third of the websites allowed users to view television advertising for their products through the site. Given the recent tightening of regulations on television advertising to children<sup>26</sup>, making it possible for children to view adverts online which will no longer be permitted on television is another way for marketers to continue to benefit from investment in such campaigns.

Alongside magazine producers, it appears that website designers are also familiar with the health and body weight concerns of pre-teen and teenage readers. Nutrition information for food products and the promotion of some foods as healthy occurred more frequently in pre-teen and teenage titles.

We found less to support claims that website users were encouraged to provide personal information, as most websites could be accessed without providing any registration information. However, it may be that advertisers are able to rely on more subtle forms of information disclosure; for example, through electronic details provided in order to obtain download material or through competitions.

We set out to examine the nature of food advertising in an attempt to understand more fully the type of advertising that children are exposed to through selected magazines and (via magazines) Internet marketing. However, the relationship between the presence of food advertising in magazines and on the Internet and its impact on the food purchase and eating choices of readers of the chosen titles also requires exploration.

None of the material on any of the websites appeared to directly contravene existing ASA guidelines for print media. However, we did find evidence that children are being directed to food marketing websites using at least some of the 'marketing tricks' which have been identified as a cause for concern by other commentators<sup>14,15</sup>. Of particular concern was that safeguards (like obtaining parental consent) could easily be circumvented.

## Conclusions

We suspect that the proposed package of measures to restrict food and drink advertising to children through broadcast media will lead to an increase in food advertising via other non-broadcast means, and recommend monitoring the effect of such changes in print and online advertising. If the predicted increase in non-broadcast food advertising does take place, then consideration should be given to restricting marketing techniques used on websites aimed at children. This could include, for example, preventing the use of cartoon characters to promote unhealthy foods and banning product placement in games. This would seem a necessary step towards providing a consistent and coherent regulatory approach across all types of food advertising aimed at children and young people.

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