

## Review Article

## Availability and marketing of food and beverages to children through sports settings: a systematic review

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**Abstract**

*Objective:* The current systematic review aimed to identify and critically appraise research on food environments in sports settings, including research into the types of food and beverages available, the extent and impact of food and beverage sponsorship and marketing, and views about food environments among key stakeholders.

*Design:* A systematic review. Fourteen English-language studies (two were papers describing different facets of the same study), published between 1985 and 2011, were identified from searches of electronic databases and bibliographies of primary studies.

*Setting:* Most studies originated from Australia (*n* 10), with the remaining studies originating in the UK (*n* 1), New Zealand (*n* 1), the USA (*n* 1) and Canada (*n* 1). Data were collected from observations in stadia, websites and televised sports events, through in-depth interviews, focus groups and surveys with sports club members, parents and quick serve restaurant managers.

*Results:* Literature exploring food environments in sports settings was limited and had some important methodological limitations. No studies comprehensively described foods available at clubs or stadia, and only one explored the association between food and beverage sponsorship and club incomes. Club policies focused on the impact of health promotion funding rather than the impact of sponsorship or food availability in sports settings.

*Conclusions:* Further research, including comprehensive studies of the food environment in sports settings, is required to document the availability, sponsorship and marketing of food and beverages at national, regional and club levels and to estimate how sports settings may influence children's diets.

**Keywords**  
Sport  
Sponsorship  
Marketing  
Food

There is clear evidence that food advertising and promotion affect children's food choices, with numerous studies demonstrating that food marketing influences children's food preferences and diet<sup>(1–5)</sup>. The US food industry is estimated to spend more than any other industry on advertising with a significant proportion of this targeted at children and youth, much of it promoting energy-dense, nutrient-poor foods<sup>(3)</sup>. Expenditure data collected by the US Federal Trade Commission (2008) from the forty-four food companies most frequently targeting children and adolescents (aged 2–17 years) revealed that approximately \$US 1.6 billion was spent on promoting food and beverages to children in the USA<sup>(6)</sup>. \$US 1.2 billion (64%) of this was spent on quick serve restaurant food, carbonated beverages and breakfast cereals<sup>(6)</sup>.

Energy-dense diets are associated with obesity, which imposes huge financial burdens on health-care systems and the community<sup>(7)</sup>. One in every three US children aged

2 to 19 years is obese<sup>(8)</sup>. The prevalence of overweight and obesity in Australian children doubled between 1985 and 1995 to reach 20%<sup>(9)</sup>. European data also suggest that childhood obesity has increased steadily over the last 20–30 years, with the highest prevalence observed in southern Europe. The large and growing numbers of overweight children are predicted to have severe consequences for health-care systems in future generations<sup>(10)</sup>.

Marketers reach children and young people through traditional mass media, but also through sports sponsorship, which influences children's attitudes and behaviour. For example, sports sponsorship by tobacco companies increased children's brand recognition<sup>(11,12)</sup> and children who watched sports sponsored by tobacco companies were more likely to experiment with cigarettes<sup>(13,14)</sup>. Similarly, alcohol marketing has been associated with increased drinking uptake<sup>(15)</sup>, and studies suggest a link

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between alcohol advertising and young people having more favourable attitudes towards alcohol, increased brand knowledge and stronger intentions to drink<sup>(16)</sup>. These studies illustrate how the development of brand associations and the use of vicarious learning promote, stimulate and reinforce behaviour. As yet the impact of sports sponsorship by food companies on children's food choices and preferences is less clear; however, logic suggests it will be similar to that of alcohol and tobacco. Given evidence of marketing's influence on obesity, sponsorship of children's sports could increase the salience and attractiveness of low-nutrient foods, and so merits careful scrutiny.

Although many young people participate in sport, surprisingly little is known about food environments in sports settings. To the authors' knowledge no systematic reviews of this topic have been undertaken. The present systematic review aimed to identify and critically appraise research on food environments in sports settings, including research into the types of food and beverages available, the extent and impact of food and beverage sponsorship and marketing and influence on children's food choices, and views about food environments among key stakeholders including club officials, parents and children.

## Methods

### *Inclusion criteria*

Our systematic review was restricted to studies and reviews published since 1985 in English, in peer-reviewed journals or research reports. Food was defined as any food or non-alcoholic beverage and excluded food supplements, vitamins or sports supplements. Studies were included if they reported the findings of original research and explored: (i) the nature of foods or beverages available in sports settings; (ii) sponsorship and marketing of foods and beverages in sports settings; (iii) the association between the marketing, sponsorship or availability of food and food choices in sports settings; and (iv) views about food environments in sports settings. Studies were excluded if they related to food and nutrition enhancing sporting performance or were located in schools or commercial gymnasiums. Broad inclusion criteria were applied to identify the range of studies on this topic. Because there were no previous reviews and few studies identified in the current review, we included all studies and subsequently excluded none because of quality.

### *Search strategy*

Academic databases provided the primary source of literature for the systematic review. Broad search terms were used to ensure all relevant articles were identified. The following databases were systematically searched: MEDLINE, Psyc INFO, CINAHL, Scopus, SPORT Discus, Cochrane Library, EMBASE, ProQuest, Nutrition and Food Sciences,

and Google Scholar. The reference lists of retrieved articles included in the review were also searched.

Titles likely to be relevant were identified from the search of databases and reference lists. Abstracts from these titles were assessed against inclusion and exclusion criteria by one author (M.-A.C). Once an abstract had been reviewed against the inclusion criteria and identified as suitable, a full text copy of the article was obtained.

The initial database search located 1237 titles. Thirty of these were determined to be relevant. The entire article or report was printed, reviewed and screened again using the inclusion and exclusion criteria. Searches of bibliographies of these titles identified a further three reports. Sixteen articles or reports were excluded because they did not meet inclusion criteria. The excluded articles or reports were reviewed by two additional authors who agreed in each case that the article or report did not meet the inclusion criteria. Of these sixteen articles, ten were excluded because they did not focus on nutrition or sponsorship by a food or beverage company, two editorials and one other article were excluded because they did not report findings of primary studies, and three reports were excluded because they provided few or no methodological details.

Fourteen documents met the inclusion criteria and were summarised and critically appraised. Data were extracted from these documents by one reviewer and listed in tables under the following headings: research design, aims, methods, main findings, strengths and weaknesses. Articles and reports were classified according to their aims or findings using the four elements of the ANGELO framework for identifying aspects of the food environment. These are: (i) the physical environment, which refers to what food is available and the extent and nature of marketing and sponsorship; (ii) the economic environment, which refers to the costs related to food; (iii) the political environment, which examines formal and informal rules or policies around food; and (iv) the socio-cultural environment, which refers to people's beliefs and attitudes about food<sup>(17)</sup>. Some studies explored factors contained within several aspects of the framework.

## Results

### *Characteristics of the included documents*

Twelve of the fourteen documents included in the review were published as peer-reviewed journal articles<sup>(18–22,24,26–31)</sup> and two were research reports<sup>(23,25)</sup>, one of which was peer-reviewed. Over half of the studies originated from Australia (*n* 10), with the remaining studies originating in the UK (*n* 1), New Zealand (*n* 1), the USA (*n* 1) and Canada (*n* 1). The characteristics of the documents are outlined in Table 1. The majority of studies were cross-sectional surveys (*n* 8). One was an observational study of televised sport. One was an analysis of website content.

**Table 1** Summary of the literature reviewed

Reference	Design	Population	Sample	Data collection	Article/Report
Maher <i>et al.</i> (2006) <sup>(18)</sup>	Website review	Sports played by New Zealand children	107 websites	Website analysis	Article
Sherriff <i>et al.</i> (2009) <sup>(19)</sup>	Observational study	Australian cricket spectators	3 cricket games	Content analysis of televised games	Article
Kelly <i>et al.</i> (2010) <sup>(20)</sup>	Cross-sectional survey	Junior community-level sports clubs in Australia	108 sports clubs	Telephone questionnaires	Article
Kelly <i>et al.</i> (2008) <sup>(21)</sup>	Cross-sectional survey	Parents in New South Wales, Australia	402 parents	Telephone interviews	Article
Kelly <i>et al.</i> (2010) <sup>(22)</sup>	Cross-sectional survey	Junior community-level sports clubs in Australia	108 sports clubs	Telephone questionnaires	Article
Victorian Health Promotion Foundation (2010) <sup>(23)</sup>	Cross-sectional survey	Population of Victoria, Australia	1500 adults aged 18–94 years	Telephone survey	Report
Corti <i>et al.</i> (1995) <sup>(24)</sup>	Cross-sectional survey	Sports clubs and arts organisations in Western Australia	296 health sponsorship-funded clubs and arts organisations	Mail survey	Article
Dobbinson and Hayman (2002) <sup>(25)</sup>	Cross-sectional survey	Sports clubs in Victoria, Australia	932 clubs	Telephone interviews	Report
Dobbinson <i>et al.</i> (2006) <sup>(26)</sup>	Cross-sectional survey	Sports clubs in Victoria, Australia	640 clubs	Telephone interviews	Article
Crisp and Swerissen (2003) <sup>(27)</sup>	Qualitative	Sporting organisations in Victoria, Australia	33 sports and funding organisations	Interviews	Article
Eime <i>et al.</i> (2008) <sup>(28)</sup>	Cross-sectional survey	Sporting organisations in Victoria, Australia	51 health promotion-funded sporting organisations	Web-based survey	Article
Cousens and Slack (1996) <sup>(29)</sup>	Qualitative	North American quick serve restaurants (QSR)	21 QSR employees	Interviews	Article
Ireland and Watkins (2009) <sup>(30)</sup>	Qualitative	Members of one football club	11 men and 13 women	Focus groups	Article
Danylchuk and MacIntosh (2009) <sup>(31)</sup>	Mixed methods	Not identified	253 students, fitness club members and seniors	Written survey followed by focus groups	Article

Four were qualitative or mixed methods investigations. Data collection methods included in-depth interviews ( $n\ 4$ ), telephone surveys ( $n\ 4$ ), a web-based survey ( $n\ 1$ ), postal questionnaire ( $n\ 1$ ), a website review ( $n\ 1$ ), analysis of televised sports broadcast ( $n\ 1$ ), focus groups ( $n\ 1$ ), and one study used a mixed-method sequential design with a written survey followed by focus groups. Two articles<sup>(20,22)</sup> reported different aspects of one study. The study populations included parents of children, members of sports clubs and quick serve restaurant managers. Seven studies included food and nutrition among a range of health topics investigated.

### ***The physical environment***

Seven studies covered aspects of the physical environment including food availability and the extent and nature of sponsorship and promotion related to food in sports settings. Three of the seven food availability studies used a telephone survey to identify the types of foods sold in sports clubs<sup>(21–23)</sup>, and one used a written questionnaire to identify changes in foods sold in sports clubs following the introduction of health sponsorship funding<sup>(24)</sup>.

The studies documenting the food and beverages sold at sports clubs relied on respondents' knowledge to identify frequently sold foods or practices used to sell healthy foods<sup>(21–23)</sup>. Findings from Kelly *et al.* (2008) and Kelly *et al.* (2010) were closely aligned. The top items reported as sold at clubs (sports drinks, confectionery, soft drinks, sausage sandwiches, pies and pastries)<sup>(22)</sup> were also the foods parents considered their children purchased at sports venues<sup>(21)</sup>.

Three studies aimed to identify the extent of food and beverage sponsorship in sport<sup>(18–20)</sup>. Maher *et al.* (2006) analysed websites to identify which food and beverage companies sponsored sport<sup>(18)</sup>, Sherriff *et al.* (2009) reviewed televised games of one sport to quantify presence of a sponsor's logo<sup>(19)</sup>, and Kelly *et al.* (2008) surveyed club officials to identify the nature and extent of food and beverage sponsorship of children's sports clubs<sup>(20)</sup>.

Kelly *et al.* (2010) also considered aspects of the physical environment not reported elsewhere and found that 39% of clubs recommended foods and beverages to players to eat prior to competition or training, 28% provided players with foods or beverages (most frequently water) and most engaged in fundraising that frequently involved food or beverages<sup>(22)</sup>.

Corti *et al.* (1995) used a mail survey to estimate changes in food provision in sports clubs following receipt of health sponsorship funding<sup>(24)</sup>. They reported this funding increased the healthy food choices available; however, the extent and nature of the changes were not reported and the impact on the wider food environment remains unknown.

Maher *et al.* (2006) reviewed websites of popular sports and found junior sport had significantly more unhealthy food sponsorship when compared with all

other sponsorships of junior sport<sup>(18)</sup>. Kelly *et al.* (2010) found that 17% of all children's sports club sponsors were food and beverage companies. The sponsoring companies were appraised on the healthiness of the range of foods they sold. Companies selling a higher proportion of healthy foods, in line with nutrition recommendations for children, were classified as healthy. Half of the sponsoring food and beverage companies did not meet criteria classifying them as healthy sponsors ( $n\ 28$ )<sup>(20)</sup>.

Sherriff *et al.* (2009) found, on average, that a viewer was potentially exposed to a food sponsor's logo for half the duration of a cricket game<sup>(19)</sup>. Their study, although based on a small sample, nevertheless demonstrates the exposure that sponsors of high-profile sports events may achieve.

Maher *et al.* (2006) and Sherriff *et al.* (2009) both used the presence of company logos as an indicator of sponsorship<sup>(18,19)</sup>. However, as neither identified the extent or type of sponsorship received, it was not clear whether sponsorship constituted product, financial contribution, uniforms or naming rights, and the full extent of the sponsorship could not be determined. Authors of both studies used a conservative system to identify unhealthy sponsorship and noted that this approach may have underestimated the actual presence of unhealthy sponsorship.

### ***The economic environment***

The sole study that addressed the economic environment examined the nature and extent of sponsorship of children's sports clubs and the contribution sponsorship makes to club revenues<sup>(20)</sup>. Most sponsorships were minor with few providing direct funding<sup>(20)</sup>. Sponsorship included provision of branded equipment, discounted or free food, product rebates, food vouchers and displaying club flyers in shop windows<sup>(20)</sup>. The most frequent benefits sponsors received were branding or signage on players' uniforms. Seventeen per cent of all sponsors were food and beverage companies. Their contribution to club revenues was not identified; however, sponsorship from all sources contributed less than a quarter of the revenue for most clubs<sup>(20)</sup>.

### ***The political environment***

Six studies explored the political food environment; of these five were cross-sectional studies that explored the process and impact of healthy food policy implementation in sports club environments<sup>(24–28)</sup> and one cross-sectional study identified processes quick serve restaurants use to make sponsorship decisions<sup>(29)</sup>.

The five studies investigating healthy food policy implementation all examined food policies and environments as part of a wider study. Healthy food policy implementation involved policies aiming to improve the food environment by reducing foods and beverages low in nutritional value and increasing availability of healthy options. All restricted their samples to clubs or sporting

organisations that had received health promotion funding from health agencies. One study described the extent of change that occurred in sports clubs following health sponsorship funding<sup>(24)</sup>, two quantified policy development in sports clubs<sup>(25,26)</sup>, one identified the processes required to implement structural changes in sporting settings<sup>(27)</sup>, and one examined whether key stakeholders believed creating healthy environments facilitated sports club membership<sup>(28)</sup>. Three studies also aimed to identify barriers and supports for club policy development<sup>(25–27)</sup>.

All of the studies reported that health-promoting food policies increased the availability of healthier food. However, there were some limitations. In particular, all studies relied on self-reported data. None identified the extent or nature of any changes, thus the actual impact of a healthy food policy remains unknown<sup>(24–28)</sup>. Critical success factors identified for successful policy implementation included external support to assist in making improvements to club catering and the presence of a supportive club member<sup>(25–27)</sup>. The authors of these studies suggested that changing the type of food provided was more difficult to implement than other health improvements, such as sun-smart or smoke-free policies, but did not provide data to support this claim<sup>(25–27)</sup> or explain the difficulty they foresaw. For example, it is unclear whether there is resistance to change from club members or caterers, or whether clubs find it difficult to prepare healthy foods in the available facilities. None of the studies identified how food was classified as healthy or unhealthy. All studies included only clubs or sporting organisations receiving health promotion funding; because of this attribute the results may not be generalisable.

The study which examined how quick serve restaurants make sponsorship decisions explored sports sponsorship benefits from a marketing perspective<sup>(29)</sup>. The findings suggested that quick serve restaurants used sponsorship to increase foot traffic in restaurants.

### **The socio-cultural food environment**

Four cross-sectional studies explored perceptions of the socio-cultural food environment in sports settings<sup>(21,23,30,31)</sup>. Two studies investigated consumers' attitudes to food and non-alcoholic beverage companies as sponsors and to government regulation of fast-food companies' sponsorship of sport<sup>(23,31)</sup>. One study focused on understanding perceptions among regular attendees of one stadium towards the food provided<sup>(30)</sup>, and another identified parents' perceptions of the healthfulness of foods and beverages sold to children at community sporting venues and their attitudes towards government regulation of food availability in sport<sup>(21)</sup>.

A study using focus groups separated by gender found consistent differences in attitudes between men and women regarding food provided at a stadium. Both genders considered the food available was of poor quality; yet while men viewed stadium food as a treat, women were concerned

about limited food choices and thought the stadium should provide healthier foods especially for children<sup>(30)</sup>. In another study half of the parent participants considered foods sold at sporting venues were unhealthy based on their assessments of which foods children purchased. Most agreed that government should restrict unhealthy food available in sports settings<sup>(21)</sup>.

Two studies explored attitudes to food availability and sponsorship in sports settings<sup>(23,31)</sup>. Respondents in one study (students and fitness club members) identified specific products (e.g. water companies, healthy snacks) as appropriate examples of potential food and beverage sponsors. The study found that respondents who regularly consumed fast foods viewed sponsorship by fast-food companies more favourably than those who consumed fast foods less frequently<sup>(31)</sup>, although it failed to define how fast-food consumption was measured. The other study explored perceptions among the general public of foods available in their local sports clubs<sup>(23)</sup>; 51% of respondents believed there was not enough healthy food sold. Eighty-two per cent believed local sports clubs should take responsibility for promoting healthy eating, but only 49% opposed community sports clubs relying on junk food sales to assist with club running costs. Eighty-one per cent of respondents supported the removal of junk food sponsorship if the lost revenue was replaced<sup>(23)</sup>.

The four papers investigating the socio-cultural environment were all affected by methodological problems. The majority of respondents in one study were mothers (78%) with post-school education (77%)<sup>(21)</sup> while most respondents to the second study were female, aged under 22 years and more active than the general population<sup>(31)</sup>. Neither sample can be generalised to their wider 'parent' populations. The other two studies had very low response rates, thus non-response error may also have affected the findings<sup>(21,30)</sup>.

### **Discussion**

The present systematic review of research conducted on food environments in sports settings found the physical environment received the greatest research attention, highlighting the energy-dense and nutrient-poor foods and beverages provided at venues and sports clubs<sup>(20–23)</sup>. Studies suggested health promotion initiatives such as funding and introduction of healthy food policies resulted in improvements to the quality of food and beverages available<sup>(24–28)</sup>. Further, sport provides sponsors with opportunities for extensive brand exposure through a range of media including the Internet and televised coverage<sup>(18,19)</sup>. Sponsorship of junior sport by food and beverage companies was found to be dominated by unhealthy foods<sup>(18,20)</sup> and one study suggested food and beverage companies achieve this at low cost, with few companies providing direct funding to sports clubs<sup>(20)</sup>.

The review found a limited number of studies, with most originating in one jurisdiction. The scope of the studies was limited with few sports settings assessed, no studies investigating all levels of sport and no comparison between adults' and children's sports settings. Many studies were related to health promotion initiatives and data from settings where such initiatives had not occurred were limited. The ability to generalise from these may be questioned.

Most studies reviewed had methodological limitations and used a limited number of measures. Most were unreplicated cross-sectional studies and many relied on self-reported data and so may have been subject to measurement error. No studies objectively observed foods and beverages available in either clubs or stadia, and therefore were unable to define the environment adequately or quantify their findings. Furthermore, few studies described using validity or reliability measures; only two studies described a method for classifying food as healthy or unhealthy, and neither of these provided sufficient detail to enable replication. Classification of sponsors used the proportion of food and beverage products sold across the product range classified as healthy or unhealthy. However, these papers did not consider the exact nature of product promotion (marketing and/or availability) in this setting, i.e. whether it was predominantly healthy or unhealthy. Few studies estimated the impact of interventions and those that did had methodological limitations and short time periods for follow-up.

The present systematic review highlighted significant gaps in the literature, including the type and quantity of sports sponsorship at national and regional levels. One study explored food and beverage company sponsorship at junior club level<sup>(20)</sup> but none explored the extent of sponsorship or types of marketing used across individual sports at club, regional and national levels. Thus, it is unclear whether marketing promotions within junior sport are reinforced by promotions at regional or national level. Nor did any studies determine which sports are sponsored, why or how sponsorship arrangements influence the types of foods and beverages sold at clubs and stadia. One study was able to demonstrate how sponsorship may be used to dominate broadcast sport<sup>(19)</sup>; however, the prevalence of this strategy and its wider effects are not known.

There were also gaps in the literature with regard to the political food environment in sports settings. No studies examined whether food and beverage policies included sponsorship of sport and links between sponsorship and the food supplied in sports settings. Some studies suggested that health funding initiatives linking funding provision to requirements for health improvement result in changes, such as the introduction of food policy and improved food choices<sup>(24–27)</sup>. Such targeted funding holds promise for improving food environments in sports settings; however, further research is required to identify 'how' policy influences the food environment in sports

settings at club, regional and national levels. No studies of the socio-cultural food environment explored attitudes to food and beverage sponsorship of clubs, regional or national teams, and the only study exploring perceptions of food available at stadia was limited to one stadium.

The economic impact of food and beverage sponsorship at national levels and its influence on regional and club level sponsorship agreements remain largely unknown. The only study exploring this aspect of the food environment found most food and beverage sponsors of junior clubs did not contribute direct funding, and suggested removal of food and beverage sponsors would have little impact on club revenues<sup>(20)</sup>. Further research is required to test this finding.

### **Strengths and limitations**

The current work is the first systematic review of the literature of food environments in sports settings. There are several limitations to the review. To the authors' knowledge all relevant articles have been included; however, the search methods and criteria may not have captured all of the relevant literature. Although a possible weakness is that data extraction was carried out by a single author, the use of agreed inclusion and exclusion criteria, a standard template to guide data extraction and the review of excluded papers should have limited problems due to this approach. The studies originated from very few countries which leaves open questions of wider generalisability. Studies were not assessed for quality and several reports had little or no methodological information, limiting our ability to assess the validity of the results. The diverse aims, samples and methodologies created few opportunities for comparison between studies, however where possible comparisons have been discussed.

### **Conclusions**

Childhood obesity presents a global health problem and food environments have been identified as a critical area that could be improved to reduce the growing obesity epidemic<sup>(32)</sup>. Research evaluating the effects of tobacco and alcohol marketing has demonstrated that sports settings provide many opportunities for marketing these products to children and young people. However, while much is known about the impact of marketing tobacco and alcohol to children in sports settings, the present systematic review demonstrates that little is known about how food marketing in sports settings affects children. More comprehensive studies (including observational studies) are required in sports settings to identify: (i) the types of food and beverages available and their influence on food choices of participants and spectators, particularly children; (ii) the nature, extent and impact of food sponsorship and marketing on participants and spectators, particularly children; (iii) the economic impact of food and beverage sponsorship; (iv) the impact of robustly designed health promotion initiatives in sports

settings on food intake and health; and (v) the views of children, parents, athletes, spectators and sports officials on food availability and food sponsorship and marketing in sports settings.

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## References

- Hastings G, Stead M, McDermott L *et al.* (2003) *Review of Research on the Effects of Food Promotion to Children*. Glasgow: Food Standards Agency.
- Story M & French S (2004) Food advertising and marketing directed at children and adolescents in the US. *Int J Behav Nutr Phys Act* **1**, 3.
- Schor J & Ford M (2007) From tastes great to cool: marketing and the rise of the symbolic. *J Law Med Ethics* **35**, 10–12.
- Hastings G, McDermott L, Angus K *et al.* (2006) *The Extent, Nature and Effects of Food Promotion to Children: A Review of the Evidence: Technical Paper Prepared for the WHO*. Geneva: WHO.
- Institute of Medicine, Committee on Food Marketing and the Diets of Children and Youth (2006) *Food Marketing to Children and Youth: Threat or Opportunity?* Washington, DC: National Academies Press.
- Federal Trade Commission (2008) Marketing Food to Children and Adolescents. A Review of Industry Expenditures, Activities, and Self-Regulation. <http://www.ftc.gov/os/2008/07/P064504foodmktngreport.pdf> (accessed February 2011).
- Whitehouse Task Force on Childhood Obesity (2010) *Solving the Problem of Childhood Obesity Within a Generation*. Washington, DC: Executive Office of the President of the United States.
- Ogden C, Carroll M, Curtin L *et al.* (2010) Prevalence of high body mass index in US children and adolescents 2007–2008. *JAMA* **303**, 242–249.
- Lobstein T, Baur L & Uauy R (2004) Obesity in children and young people: a crisis in public health. *Obes Rev* **5**, Suppl. 1, 4–85.
- Ministry of Health, Clinical Trials Research Unit (2008) *A Portrait of Health: Key Results of the 2006/07 New Zealand Health Survey*. Wellington: Ministry of Health.
- Ledwith F (1984) Does tobacco sponsorship on television act as advertising to children? *Health Educ J* **43**, 85–88.
- Compton J (1993) Sponsorship of sport by tobacco and alcohol companies: a review of the issues. *J Sport Soc Sci* **17**, 148–167.
- Valdya S, Nail U & Valdya J (1996) Effect of sports sponsorship by tobacco companies on children's experimentation with tobacco. *BMJ* **313**, 400–416.
- Charlton A, White D & Kelly S (1997) Boys' smoking and cigarette-brand-sponsored motor racing. *Lancet* **350**, 1474.
- Henriksen L, Feighery E, Schleicher N *et al.* (2008) Receptivity to alcohol marketing predicts initiation of alcohol use. *J Adolesc Health* **42**, 28–35.
- Hastings G, Anderson S, Cooke E *et al.* (2005) Alcohol marketing and young people's drinking: a review of the research. *J Public Health Policy* **26**, 296–311.
- Swinburn B, Egger G & Raza F (1999) Dissecting obesogenic environments: the development and application of a framework for identifying and prioritizing environmental interventions for obesity. *Prev Med* **29**, 563–570.
- Maher A, Wilson N, Signal L *et al.* (2006) Patterns of sports sponsorship by gambling, alcohol and food companies: an internet survey. *BMC Public Health* **6**, 95.
- Sherriff J, Griffiths D & Daube M (2009) Cricket: notching up runs for food and alcohol companies? *Aust N Z J Public Health* **34**, 19–23.
- Kelly B, Baur L, Bauman A *et al.* (2010) Food and drink sponsorship of children's sport: who pays? *Health Promot Int* **26**, 188–195.
- Kelly B, Chapman K, King L *et al.* (2008) Double standards for community sports: promoting active lifestyles but unhealthy diets. *Health Promot J Aust* **19**, 226–228.
- Kelly B, Baur L, Bauman A *et al.* (2010) Examining opportunities for promotion of healthy eating at children's sports clubs. *Aust N Z J Public Health* **34**, 583–588.
- Victorian Health Promotion Foundation (2010) Community Attitudes Survey: Healthy community sporting environments. <http://www.vichealth.vic.gov.au/en/Resource-Centre/Publications-and-Resources/VicHealth-General-Publication> (accessed July 2010).
- Corti B, D'Arcy C, Holman J *et al.* (1995) Using sponsorship to create healthy environments for sport, racing and arts venues in Western Australia. *Health Promot Int* **10**, 185–197.
- Dobbinson S & Hayman J (2002) *VicHealth Healthy Sports Clubs Study: A Survey of Structures, Policy and Practice*. Victoria: Centre for Behavioural Research in Cancer, Cancer Control Research Institute and The Cancer Council, Victoria.
- Dobbinson J, Hayman J & Livingston P (2006) Prevalence of health promotion policies in sports clubs in Victoria, Australia. *Health Promot Int* **21**, 121–129.
- Crisp B & Swerissen H (2003) Critical processes for creating health-promoting sporting environments in Australia. *Health Promot Int* **18**, 145–152.
- Eime R, Payne W & Harvey J (2008) Making sporting clubs healthy and welcoming environments: a strategy to increase participation. *J Sci Med Sport* **11**, 146–154.
- Cousens L & Slack T (1996) Using sport sponsorship to penetrate local markets: the case of the fast food industry. *J Sport Manage* **10**, 168–187.
- Ireland R & Watkins F (2009) Football fans and food: a case study of a football club in the English Premier League. *Public Health Nutr* **13**, 682–687.
- Danylchuk K & MacIntosh E (2009) Food and non-alcoholic beverage sponsorship of sporting events: the link to the obesity issue. *Sport Mark Q* **18**, 68–80.
- World Health Organization (2009) *Population-Based Prevention Strategies for Childhood Obesity: Report of a WHO Forum and Technical Meeting*. Geneva: WHO.