THE OUT OF HOME SECTOR AND ITS IMPACT ON THE OBESOGENIC ENVIRONMENT

Eating out of the home has become a regular part of our modern lives. Across the UK 98% of us have eaten out in the last year.

In Scotland alone there were 948 million visits to out of home establishments in 2015. With a quarter of our calories coming from eating out of home this sector has a crucial role to play in providing healthier and nutritious food that can tackle the burden of diet related disease in Scotland.

Key points

- The current out of home food environment in Scotland encourages us to overeat: large portions, little price differentials between portion sizes, marketing strategies focused on less healthy products, and lack of calorie information in most of the out of home outlets
- Up to a quarter of our calories is consumed out of home in the UK
- Out of home, children consume more unhealthy food and drink often than adults
- Higher habitual consumption of meals out of home in the UK is associated with higher calorie consumption. This impact is amplified in children from less affluent households
- The availability of fast food outlets is higher in more deprived areas
- A majority of people in Scotland and the UK think that fast food is too easily available

Recommendations for Action

- Regulate to control portion sizes and introduce mandatory calorie caps. Provide more half-size portions
- Reduce calories, sugar and salt; and increase content of fruit, vegetables and wholegrain in recipes
- Regulate to restrict promotions on products high in fat, sugar and salt; and encourage businesses to promote healthy food and drink choices
- Introduce mandatory calorie information on menus
- Regulate or limit access to unhealthy food through improved planning and licensing arrangements for out of home sector
- Acknowledge young people's social needs and preferences by engaging them in making decisions on improving the food environment in schools



Definition:

Out of home food and drink – any food or drink purchased for immediate consumption outside the home, including takeaway or home-delivered food^{1,2} (this means food and drink from restaurants, quick service restaurants such as fast food chains or takeaways, pubs, coffee shops, petrol stations, bars, hotels, cinemas, vending machines, public transport, workplaces, colleges/ universities, and retail outlets (grocery, deli, convenience stores)². Exclusions: hospital patient only meals, schools, prisons, and hospitality e.g. catering services for events such as weddings)²

Takeaway – a restaurant or shop selling cooked food to be eaten elsewhere; or a meal or dish bought from a shop or restaurant to be eaten elsewhere (Oxford Dictionary)

Fast food – easily prepared processed food served in snack bars and restaurants as a quick meal or to be taken away (Oxford Dictionary)

Eating out of home in Scotland

There has been 53% increase in places to eat out of home (OOH) between 2005 and 2015 in the UK³. Such a development has likely contributed to the fact that we currently eat between 20-25% of our total calories OOH⁴ and spend around a third of money on food and drink OOH ^{3,5}.

New reports by Kantar Worldpanel^{6,7} revealed that in 2017 \$49 billion was spent on food and drink bought and consumed OOH in the UK; this means that an average adult in the UK spent almost £1000 a year in the OOH sector. While an average person in the UK visits OOH sector 199 times a year, 98% of the public made an OOH purchase over the course of the year. The reports highlighted convenience and getting food and drink quickly as crucial consumer needs.

Who is eating out of home? Research from Food Standards Scotland² showed that in 2015, 85.8% of total OOH meal occasions in Scotland included only adults; 14.2% occasions included adults with children (children up to 16 were only included, if accompanied by an adult who completed the survey on their behalf; unaccompanied children were not represented within this sample). The same research showed that the 25-49 year olds in Scotland visit OOH establishments more than other age groups. Looking only at fast foods and takeaways, however, Cancer Research UK Survey^{8,9} and the analysis of NDNS data⁸ showed that in the UK the 18-24 age group consumed more of those types of food than older age groups, both out of and at home. A survey in Scottish schools¹⁰ showed that more than three quarters (77.0%) of pupils said they bought food or drink beyond the school gate at least twice each week (see Box 1 for more details).

People from less affluent groups (C2DE) in the four years between 2012 and 2015 visited the OOH market slightly less often, contributing to almost 40% of all OOH visits, than people from more affluent groups (ABC1) who contributed just over 60% of all OOH visits².

How often are we visiting? The National Diet and Nutrition Survey (NDNS) data indicates that between 2008/9 and 2012/13, 26% of adults and 21% of children in the UK ate out one or more times per week, and that around 20% of British adults and children ate takeaway meals at home one or more times per week¹¹.

In 2015 alone, there were 948 million visits to OOH establishments in Scotland – up 3% on the previous year (compared to 1.3% increase in England)². This growth was mainly driven by an increase in visits to quick service restaurants (QSR). QSRs include fish and chips shops, burger shops, sandwich shops, bakeries, coffee shops, pizza/Italian takeaways, ethnic takeaways, retail cafes, and petrol stations.

Global information company (The NPD Group) predicted that in the UK visits in the OOH sector should grow by an additional 83 million visits in 2018 (up +0.7% on 2017), and that in 2019 by a further 93 million (up +0.8% on 2018)¹².



Where are we visiting? While in 2015 QSRs and coffee shops had grown strongly in Scotland, bringing us to nearly the same level as the UK, half of our visits were still to independent establishments². QSR meals were the most popular and McDonald's was the QSR with the biggest market share^{2,3}.

Delivery services (such as Just Eat, UberEATS and Deliveroo) have been rapidly expanding in the UK overall and are projected to grow an additional 101m visits by 2019 (+16% on 2017)¹². The NPD Group predicted that this could encourage more foodservice operators to adopt delivery as a route to market, and bring an additional spend of £656m (+17%) by consumers on delivery occasions by 2019¹².

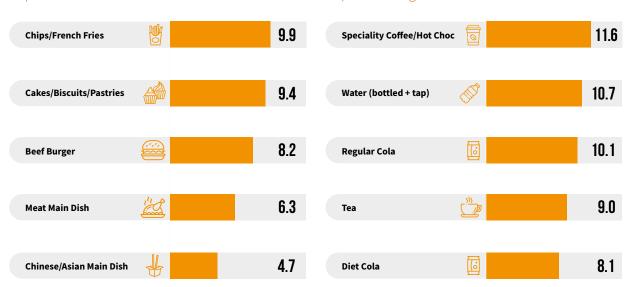
When are we visiting? Lunch is becoming increasingly important in Scotland; it represented 34.7% of all occasions in 2015 compared to 32% in 2013². This increase was driven mostly by increase in lunchtime visits in QSRs (55% in 2015 vs. 48.6% in 2012).

Why do we eat out of home? The main reason that we eat out in Scotland is being at work, with almost 22% of OOH visits motivated by being at work². Following that, almost 19% of OOH visits are motivated by wanting to satisfy hunger or thirst. The third strongest motivation to eat out in Scotland is wanting to treat ourselves². The number of visits to out of home establishments motivated by wanting to treat ourselves or others has increased from 12.8% in 2012 to 15.5% in 2015². Health has not been a significant factor when eating out of home Scotland over the last years^{2,13}.

What do we eat? Most of the top food and beverages consumed OOH in Scotland in 2015 were either discretionary or typically high in fat and/or sugar, and/ or salt² (Figure 1). Additionally, there was an increase in consumption of burgers and chips in Scotland between 2012 and 2015². However, at the same time OOH consumers started drinking more bottled and tap water and having less puddings, desserts, crisps, popcorn and salty snacks².

Children (up to 12 years old) consumed unhealthy options, such as beef burgers and chips, sugary drinks, fried/breaded chicken and ice cream, more often than all other age groups in 2015². Additionally, the number of occasions on which children in Scotland ate beef burgers and drunk regular cola increased from 2012 to 2015². This increase meant that Scottish children consumed these products more often than children in the rest of the UK in 2015².

Figure 1. Top foods and drinks consumed OOH in Scotland in 2015. The numbers represent percent of all visits during which a particular item was consumed. Source: NPD Crest data².



Top 5 Beverage Items

Top 5 Food Items



Box 1. Beyond the school gates – results of the study of OOH environment outside school gates in Scotland commissioned by Food Standards Scotland¹⁰

- More than three quarters (77.0%) of young people said they bought food or drink beyond the school gate at least twice each week; this rose to more than 90% of pupils at some of the most deprived schools studied.
- The most popular outlet categories where pupils bought food or drink were takeaway, chip shop or fast food outlets (25.8%), newsagent or sweet shops (25.1%); supermarkets (23.0%) and grocery or corner shops (20.1%).
- The most important factors when selecting where to eat outside school were (1) going to the places where friends go to and (2) proximity to school. Good rapport between students and retailers, no queues, time with friends, and access to preferred food and drink from specific food outlets were very important as well.
- Pupils rated taste and price as important factors when deciding what to purchase beyond the school gate.
- School pupils most commonly reported purchasing chips (purchased by 26.1%), hot or cold sandwiches, filled rolls or baguettes (23.9%), sweets (21.4%), chocolate (20.2%) and crisps or similar snacks (19.3%). Few pupils said they purchased fruit (4.2%) or salad (1.7%)¹⁰.
- The median reported spend on food and drink beyond the school gate was £1.98¹⁰.

Based on the above findings, it was suggested that national intervention controlling the food environment beyond the school gate is likely to have a limited impact on diet or rates of obesity among young people¹⁰. The Food Research Collaboration similarly concluded that there was moderate evidence for the link between the food and drink environment and young people's food choices¹⁴. It was recommended to acknowledge young people's social and hedonic needs by engaging them in making decisions on improving the food, service, the physical and social environment, and achieve a long term shift in food culture in schools^{10,14}.

Box 2. Problem with Scottish diet

Scotland has been consistently missing its dietary goals for the last 17 years¹⁵. This means that we eat too much of total fat, saturated fat, sugar and salt and not enough fruit and vegetables, fibre and oily fish. Moreover, a quarter (24%) of the food Scots purchase is of low nutritional value and not required for health (i.e. confectionery, cakes, biscuits, pastries, crisps, savoury snacks, sugary drinks)¹⁶.

Scottish children tend to consume foods and drinks high in fat and/or sugar more often than adults¹⁷; for example in 2016, 51% of children ate sweets/chocolate at least once a day compared to 28% adults. Children also more often than adults ate crisps/savoury snacks, chips, processed meat, ice-cream and drunk non-diet soft drinks¹⁷.

While diet in Scotland is poor in general, it is worse in deprived areas. Households within the 20% most deprived areas, consumed more calories from processed products such as confectionery, biscuits, sugary drinks and plain bread¹⁶.



The impact of eating out of home

The Scottish diet overall is poor (see Box 2) and when we eat out we are more likely to choose even less healthy food (incl. chips, cakes, biscuits, pastries and sugary drinks)¹⁸ as illustrated on Figure 1. An analysis of data from the NDNS study showed that eating at food outlets, leisure places and 'on the go' was associated with less healthy food choices in adults¹⁹.

In the UK higher habitual consumption of OOH meals was associated with higher calorie consumption: adults who ate meals out at least weekly ate 75-104 kcal per day more than those who ate these meals rarely; similarly, those who consumed takeaway meals at home at least weekly consumed 63 to 87 kcal more per day¹¹. It was also demonstrated that children who had takeaway food at least once a week consumed 55-168 kcal more per day¹¹. This impact was amplified in children from less affluent households¹¹.

Confirming the above finding on international level, a systematic review showed that eating OOH was positively associated with the risk of becoming overweight or obese²⁰ and an increase in fast-food sales predicted an increase in body mass in high income European, North American, and other countries of the Organisation for Economic Cooperation and Development (OECD)^{21,22}.

Frequent eating from fast-food outlets seems to be associated with more health risks than eating from other OOH outlets. A systematic review showed that that eating at fast-food outlets was associated with a greater increase in body weight and waist circumference over time than eating at restaurants²⁰. The same review showed that takeaway foods positively predicted BMI change in women²⁰.

Location and Planning

A Cross-sectional study using data from the UK NDNS (2008-2014) explored consumption patterns by eating location. It was discovered that people eating in leisure places, food outlets and "on the go" combined consumed more energy from unhealthy foods and drinks (foods and drinks that do not belong to the principal food groups and are not considered important/acceptable within a healthy diet) than from foods and drinks acceptable within a healthy diet. The study found that apart from location, factors such as sex, income, frequency of eating out and frequency of drinking were also significantly affecting consumption patterns¹⁹.

Availability of fast food outlets (including small independent outlets as well as the major franchises) is liked with increasing level of area deprivation²³. There is evidence showing that takeaway outlets specifically have proliferated in more deprived areas^{3,24}. Public Health England highlighted clear link between deprivation and number of takeaways, by revealing fast food outlet density in local authorities in England^{25,26}.

A recent Scottish study showed very similar trend, and not only for takeaways. Outlets selling potentially health damaging products/services, such as fast food, alcohol, tobacco and gambling in Glasgow, were usually clustered in the same geographical areas²⁷. Importantly, the more deprived area of Glasgow was, the more clusters of fast food, alcohol, tobacco, and gambling outlets it had.²⁷

The Department of Health and Public Health England have acknowledged the importance of public health in local planning policy^{28,29} and published "Strategies for Encouraging Healthier 'Out of Home' Food Provision – a toolkit for local councils working with small food businesses" in 2017³⁰. They advised local authorities to use the legal system and planning laws to limit the growth of hot food takeaways³⁰. While some local councils have sought to limit the opening of new outlets, this had mixed results³.



The House of Commons Health and Social Care Committee held a series of hearings in May 2018 and published a report highlighting that changes to the planning legislation to make it easier for local authorities to limit the proliferation of unhealthy food outlets are a matter of urgency ³¹. In addition to this, the committee concluded that local authorities need further powers to tackle the proliferation of existing takeaways, and that health should be made a licensing objective for local authorities.

In Scotland, The Civic Government (Scotland) Act 1982 regulates licensing (section 39) for mobile street vendors, covering food safety/standards, nuisance, public order, and congestion. A local authority could place a condition/ restriction on trader's licences to restrict their operation in the vicinity of schools. Up to 2014, 14 out of 32 local authorities had placed a condition/restriction on trader's licences to restrict their operation in the vicinity of schools³². The Beyond the School Gates guidance presents an overview of the process which can be used to introduce a condition on a street trader's licence³². However, such a condition could be legally challenged, as it was in 2015 in Lanarkshire³³.

Information when eating out (labelling)

There is a need to improve availability, consistency and quality of nutritional information for consumers when eating out¹⁸. Calorie and nutrition information is often not available. Recent research by Food Standards Scotland investigated online nutrition information in branded OOH businesses, and found that online calorie labelling was unavailable in 40% of the investigated outlets³⁴. The businesses that offered nutrition information usually provided calories, fat, saturated fat, sugar and salt contents. However, where this information was provided, there was significant variation in what and how it was presented – potentially making it difficult for consumers to understand¹⁸. A Cochrane review suggested that nutritional labelling comprising energy information on menus may reduce energy purchased in restaurants³⁵. The authors suggested that, in the absence of observed harms, nutritional labelling on menus in restaurants could be used as part of a wider set of measures to tackle obesity³⁵. Additionally, a recent pilot study of calorie labelling in workplace cafeterias showed that such an intervention can be acceptable for both cafeteria operators and customers³⁶. The pilot found that calorie labelling reduced energy purchased only in one out of 6 study sites and concluded that labelling interventions need to be optimised³⁶.

To help small and medium size out of home establishments, Food Standards Scotland provides MenuCal, free software to calculate calories and flag allergens in recipes³⁶. A pilot of MenuCal was run on a small sample of businesses and showed that the service supported businesses to calculate calories, identify allergens, and resulted in some businesses reducing calorie content of their menu items³⁶.

Portion size out of home

Portion sizes in the UK have been increasing³⁸. This has had a role in fuelling the UK obesity epidemic because larger portion size result in more calories consumed³⁹. Currently, there is no consistency in communicating portion size to the public; and the reference data used to estimate portion sizes in the UK is twenty years old and out of date^{40,41}. There is evidence that food bought OOH may come in larger portions⁴² and there is substantial variation in portion sizes offered in both OOH and retail³⁸. Public Health England (PHE) as part of their sugar reduction programme, published guidelines for all sectors of food industry (including OOH sector) on how to achieve a 20% sugar reduction across the top nine categories of products popular with children. The guidelines include information on average and maximum calorie or portion size for products likely to be consumed by an individual at one time^{4,43}. PHE has been monitoring the progress for manufacturers and retailers. Unfortunately, progress



information is not available for the OOH sector due to change of data supplier. However, the recently published first monitoring report, showed that while sugar levels across the nine investigated food and drink categories were in the OOH sector roughly the same as in retail and manufacturing, serving portions were twice as big⁴⁴. Action on Sugar researched portion size and sugar content of popular cakes⁴⁵. They also reported up to five-fold differences in cake portion sizes. Supermarkets offered much smaller portion sizes (and therefore lower calories and sugar per serving) than cafes⁴⁵.

The majority of OOH businesses do not provide information on portion size in grams. Recent research showed that less than 10% of branded OOH businesses in Scotland provided this information online¹⁸. Moreover, where calorie information was available online, over half of the main meals contained over 600kcal, and a quarter contained over 1000kcal¹⁸.

Little price differentials between portion sizes can make large portions more attractive. There is evidence that businesses can profit by pricing regular portion sizes sufficiently high and large portions relatively low, to nudge price-conscious consumers towards purchasing larger portions.

Reducing size, availability and appeal of larger-sized portions, packages and tableware has potential to reduce the quantities of food that people select and consume by meaningful amounts⁴⁷.

Marketing strategies used out-of-home

A recent report published by Food Standards Scotland showed that most of the common marketing strategies used by OOH sector in Scotland were on less healthy products³⁴ (this research included only a limited sample of brands). The most frequently used marketing strategies were price promotions (82% of outlets used this technique), the prominent placement of items near the tills (68% of outlets), and meal deals (64% of outlets)³³. Of all price promotions used by OOH businesses, 36% were multibuys, 29% were prominent low price promotions, and 13% were reduced price. Products most commonly sold using price promotions were cakes, biscuits, desserts, sweet pastries, chocolate, confectionery and soft drinks. The products most commonly promoted by being placed prominently near the tills were cakes, biscuits, confectionery or other sweet products. Finally, meal deals were most frequently found in QSR burger or chicken outlets and in retail outlets. At least one healthier option, such as water, milk, fruit, vegetables, salad, dried fruit/nuts, was available for 74% of standard meal deals and for 85% of children meal deals³⁴.

Upselling, which is encouraging consumers to purchase additional items, is common in Scotland and takes the form of multi-buy promotions or meal deals³⁴. A poll commissioned by RSPH and Slimming World showed that upselling and upsizing in the OOH sector resulted in 34% of people buying a larger coffee than intended, 33% upgrading to a larger meal in a fast food restaurant and 35% adding chips or onion rings to the side of their pub or restaurant meal⁴⁸. The same poll showed that people aged 18-24 were even more likely to be exposed to upselling and upsizing.

What drives our choices?

Food choices are heavily influenced by habits, food cues and opportunities in the surrounding environment: what is available / appealing at the moment of choice⁴⁹. This is why most food choices are made 'in the moment' with little conscious awareness or deliberation⁴⁹.

⁶Choice architecture' interventions or 'nudges' are intervention strategies that change choice by changing the placement or properties of objects/stimuli in the environment⁴⁸. They are designed to make intended behaviours easier at moments when little conscious attention is paid. They could be used to promote both healthy and unhealthy choices.



The current OOH food environment encourages us to overeat (i.e. large portion sizes, marketing strategies designed to sell more, lack of nutrition information at the point of sale, or density of OOH outlets). Making healthy (or less unhealthy) options, more common, visible and convenient may increase the chances that they are selected⁴⁹. For example: (1) moving healthy options closer to customers in shops, (2) increasing the relative availability of healthy options, (3) making healthy foods easier to identify within a product array, (4) altering plates and packaging, (5) reducing portion sizes, etc.⁴⁹

What do the public think?

A large majority of people feel that fast food is too easily available. Surveys both in Scotland⁵⁰ and the UK as a whole²⁹ showed that 91% of respondents felt this way. Food Standards Scotland investigated what changes could be made to influence eating healthily OOH in Scotland⁵¹. Support was strongest for more healthy options being provided (47%) and lower prices of healthy options (46%), followed by better promotion of healthy options (37%), being able to spot healthy options easily (34%), showing calories on menus (32%), and smaller portion sizes (22%). The Scottish Attitudes Survey showed that 57% of respondents supported reducing portion size of unhealthy snacks and drinks, however, this survey covered both out of home and retail sectors⁵⁰.

In Scotland, there is growing concern over the nutritional value of children's menus, as there has been significant increase in proportion of people who would prefer children were offered smaller portions from adult menus instead of different menus⁵¹.

Scottish Government position

In 'A Healthier Future' consultation¹ the Scottish Government committed to working with Food Standards Scotland, NHS Health Scotland and stakeholders, to produce Scotland's first sector specific strategy for out of home providers; relevant for large and small businesses across the public, private and voluntary sectors.

The results of the consultation were published⁵¹ and, in general, indicated support for the development of the out of home strategy.

The responses focused on the following six actions:

- creation of a 'level playing field' between retail and out of home, by for example a requirement to provide calorie labelling on menus for every out of home outlet
- increase in availability of healthier options, especially in deprived areas
- provision of better product information (calorie and portion information)
- reduction in portion sizes
- public sector leadership: provision of good quality food and drink in public sector eating establishments
- control of junk food outlets operation around schools
- use of planning and licensing system to minimise overprovision of outlets offering unhealthy foods



The subsequently published 'A Healthier Future – Scotland's Diet and Healthy Weight Delivery Plan' revealed that Food Standard Scotland will consult on the new OOH strategy in autumn 2018⁵². The consultation will focus on how to encourage calorie reduction, calorie information on menus, and the role of public sector as exemplar in healthier food provision. The OOH strategy is to include actions on:

- calorie labelling
- portion size and calorie cap options
- promotions and marketing
- advice on healthier processes e.g. cooking methods and reformulation; and
- nutritional standards for public sector procurement¹

UK Government position

In the recently published Chapter 2 of 'Childhood obesity: a plan for action'⁵³ The UK Government announced that before the end of 2018 they will consult on:

- ban on price promotions, such as buy one get one free and multi-buy offers or unlimited refills of unhealthy foods and drinks in the retail and OOH sector through legislation
- ban on the promotion of unhealthy food and drink by location (at checkouts, the end of aisles and store entrances) in the retail and OOH sector through legislation



Box 3. Current out of home initiatives

The Healthy Living Award⁵³ **(HLA)** is a national award for the foodservice sector in Scotland. The award recognises businesses that make healthy eating easier for their customers. HLA is voluntary and open to most catering businesses; free help and support is provided for those who want to obtain it. Scottish Government and the NHS Health Scotland support the award.

The Healthcare Retail Standard⁵⁴ **(HRS)** is a mandatory requirement for all stores and trolley services in NHS Scotland since 31st March 2017. It was introduced by Scotland's chief medical officer to change the provision and promotion of food and drink to increase healthier choices.

Public Health England's sugar reduction programme⁴ suggested guidelines for the food industry to achieve the 20% sugar reduction across the top nine categories of food that provide the majority of sugar in the diets of children up to the age of 18 years.

Public Health England's calorie reduction programme⁵⁵ announced in March 2018 challenged the food industry to achieve a 20% reduction in calories by 2024 in product categories that contribute significantly to children's calorie intakes and where there is a scope for substantial reformulation and/or portion size reduction. This requires work to be undertaken by retailers and manufacturers as well as the OOH sector: restaurants, pubs, cafes, takeaways, delivery services and others. The products covered by the programme include ready meals, pizzas, meat products, savoury snacks products, sauces and dressings, prepared sandwiches, composite salads and other "on the go" foods including meal deals.

Peas Please is an initiative that promotes eating more vegetables; it is run jointly by a number of organisations. The initiative aims to secure commitments from industry and government to improve the availability, acceptability (including convenience), affordability and quality of the vegetable offer in shops, schools, fast food restaurants, and beyond. The Pease Please commitment framework⁵⁶ listed the following actions for eating out:

- Quick service, Food-On-The-Go businesses and casual dining restaurants commit to increase the number of portions of veg they sell while maintaining commitments to reduce waste
- Businesses and public sector bodies providing food commit to support people to eat two portions of veg at lunchtime at no extra charge
- Manufacturers' recipes for food service customers commit to follow standards which include at least two portions of veg in all main meals

In line with the **Peas Please commitments framework**⁵⁶, a number of organisations pledged that in the main dishes they provide, they will include two portions of vegetables by 2020^{57.}

***Out to Lunch' campaign run by the Soil Association**⁵⁸ has been ranking children's food in the UK's most popular restaurant chains since 2013. In response to the 2017 campaign, TGI Fridays and Pizza Hut committed to stop serving refillable sugary drinks throughout all their restaurants, to both children and adults. Also, 13 chains now serve a portion of vegetables or salad with every meal, up from 6 chains in 2013.

The Mayor of London in his new consultation⁵⁹ is proposing a ban on advertising of unhealthy food and drink across transport means in London, including 'brand only' advertising. Transport for London estate makes up 40% of London's OOH advertising by revenue⁵⁹.



References

- 1. Scottish Government. A Healthier Future action and ambitions in diet, activity and healthy weight. Consultation document. 2017.
- 2. NPD Group. An overview of out of home market in Scotland. NPD crest data to year ending December 2015. Commissioned by Food Standards Scotland. 2015.
- 3. The Food Foundation. Force-fed. Does the food system constrict healthy choices for typical British family? 2016.
- 4. Public Health England. Sugar reduction: Achieving the 20%. A technical report outlining progress to date, guidelines for industry, 2015 baseline levels in key foods and next steps. 2017.
- 5. Department for Environment, Food and Rural Affairs. Family food 2015. 2017.
- 6. Quirk S. Out of home in the UK: Ingredients for sustained growth. 2018.
- 7. Martinez MJ, Sanchez J. Out-of-home, out of mind? 2018.
- 8. Cancer Research UK. A weighty issue. A study of UK adults' consumption behaviours, knowledge of calorie and added sugar guidelines and physical activity levels. 2017.
- 9. Adams J, Goffe L, Brown T, et al. Frequency and socio-demographic correlates of eating meals out and take-away meals at home: Cross-sectional analysis of the UK national diet and nutrition survey, waves 1-4 (2008-12). *International Journal of Behavioral Nutrition and Physical Activity*. 2015;12(51).
- 10. Wills WJ, Kapetanaki A, Rennie K, et al. The influence of deprivation and food environment on food and drink purchased by secondary school pupils beyond the school gate. Report produced by the University of Hertfordshire under a contract placed by Food Standards Agency. 2015;FS411002.
- 11. Goffe L, Rushton S, White M, Adamson A, Adams J. Relationship between mean daily energy intake and frequency of consumption of out-of-home meals in the UK national diet and nutrition survey. *The International Journal of Behavioural Nutrition and Physical Activity*. 2017;14(1):131.
- 12. NPD Group. Continuing strength of delivery to bring home the bacon in Britain's foodservice industry over next two years. https://www. npdgroup.co.uk/wps/portal/npd/uk/news/press-releases/continuing-strength-of-delivery-to-bring-home-the-bacon-in-britains-foodserviceindustry-over-next-two-years/. Updated 2017. Accessed 06/12, 2018.
- 13. Food Standards Scotland. Food in Scotland consumer tracking survey. Wave 5. 2017.
- 14. Moorhouse J, Kapetanaki A, Wills WJ. *Within arm's reach: School neighbourhoods and young people's food choices*. Food Research Collaboration. 2016.
- 15. Food Standards Scotland. Situation report: The Scottish diet: It needs to change. 2018 update. 2018.
- 16. McDonald A, Milne A, et al. Monitoring retail purchase and price promotions in Scotland (2010 2016). 2018.
- 17. McLean J, Christie S, Gray L, et al. The Scottish Health Survey. 2016 edition. Volume 1. Main report. A national statistics publication for Scotland. 2017.
- 18. Ormston R, McAteer G, Hope S. Informed decisions? Availability of nutritional information for a sample of out-of-home food outlets in Scotland. Ipsos MORI Scotland for Food Standard Scotland. 2018.
- Ziauddeen N, Almiron-Roig E, Penney TL, Nicholson S, Kirk SFL, Page P. Eating at food outlets and "on the go" is associated with less healthy food choices in adults: Cross-sectional data from the UK national diet and nutrition survey rolling programme (2008-2014). *Nutrients*. 2017;9(12):E1315.
- 20. Nago ES, Lachat CH, Dossa RA, Kolsteren PW. Association of out-of-home eating with anthropometric changes: A systematic review of prospective studies. *Critical Reviews in Food Science and Nutrition*. 2014;54(9):1103-1116.
- 21. The World Bank. An overview of links between obesity and food systems. Implications for the food and agriculture global practice agenda. 2017.
- 22. De Vogli R, Kauvonen A, Gimeno D. The influence of market deregulation on fast-food consumption and body mass index: A cross-national time series analysis. *Bulletin of World Health Organization*. 2014;92(2):99-107.
- 23. Fraser LK, Edwards KL, Cade J, Clarke GP. The geography of fast food outlets: A review. *International Journal of Environmental Research and Public Health*. 2010;7:2290-2308.
- 24. Maguire ER, Burgoine T, Monsivais P. Area deprivation and the food environment over time: A repeated cross-sectional study on takeaway outlet density and supermarket presence in Norfolk, UK, 1990-2008 *Health and Place*. 2015;33:142-147.
- 25. Public Health England. Obesity and the environment. Density of fast food outlets. 2016.



- 26. Public Health England. Obesity and the environment. Density of fast food outlets 31/12/2017. 2018;2018064.
- 27. Macdonald L, Olsen JR, Shortt NK, Ellaway A. Do 'environmental bads' such as alcohol, fast food, tobacco, and gambling outlets cluster and colocate in more deprived areas of Glasgow City, Scotland? *Health and Place*. 2018;51:224-231.
- 28. Public Health England, Chartered Institute of environmental Health and Local Government Association. Healthy people, healthy places briefing: Obesity and the environment: Regulating the growth of fast food outlets. 2015.
- 29. Curtice J. Attitudes to obesity. Findings from the 2015 British Social Attitudes survey. 2016.
- 30. Public Health England Diet and Obesity Team. Strategies for encouraging healthier 'out of home' food provision: Toolkit for local councils working with small food businesses. 2017.
- 31. Health and Social Care Committee. Childhood obesity: Time for action. Eighth report of session 2017-19. 2018.
- 32. The Scottish Government. Beyond the school gate. 2014.
- 33. Blair S. Burger vans win fight against council to trade near schools. Scottish Legal News. 2015.
- 34. Setterfield L, Eunson J, Murray L. Marketing strategies used within premises by out of home businesses. Ipsos MORI Scotland for Food Standards Scotland. 2018.
- 35. Crockett RA, King SE, Marteau TM, et al. Nutritional labelling for healthier food or non-alcoholic drink purchasing and consumption. *Cochrane Database of Systematic Reviews*. 2018(2):CD009315.
- 36. Vasilievic M, Cartwright E, Pilling M, et al. Impact of calorie labelling in worksite cafeterias: A stepped wedge randomised controlled pilot trial. International Journal of Behavioral Nutrition and Physical Activity. 2018;15(41).
- 37. West C, Howie F. An evaluation of a pilot on the use of MenuCal within small and medium scottish food businesses. Main report. 2018.
- 38. Clift J. Portion distortion. How much are we really eating? 2013.
- 39. Marteau TM, Hollands GJ, Shemilt I, Jebb SA. Downsizing: Policy options to reduce portion sizes to help tackle obesity. *British Medical Journal*. 2015;351:h5863.
- 40. Food Standards Agency. Food portion sizes. Third edition. Norwich: Food Standards Agency; 2002.
- 41. Harper H, Hallsworth M. Counting calories. How under-reporting can explain the apparent fall in calorie intake. 2016.
- 42. Saunders P, Saunders A, Middleton J. Living in a 'fat swamp': Exposure to multiple sources of accessible, cheap, energy-dense fast foods in a deprived community. *British Journal of Nutrition*. 2015;113(11):1828-1834.
- 43. Ritchie J. Barriers to healthy food. Post note. 2016;522.
- 44. Tedstone A, Coulton V, Targett V, Bennett A, Sweeney K, Morgan K. Sugar reduction and wider reformulation programme: Report on progress towards the first 5% reduction and next steps. 2018.
- 45. Action on Sugar. A slice of sugar reduction required. Coffee shop cake with more sugar than 6 Krispy Kremes new study reveals. http://www. actiononsugar.org/news-centre/surveys/2016/a-slice-of-sugar-reduction-required-coffee-shop-cake-with-more-sugar-than-6-krispy-kremes-new-study-reveals.html. Updated 2016. Accessed 05/15, 2018.
- 46. Hollands G, Marteau T, Jebb S, et al. Portion, package or tableware size for changing selection and consumption of food, alcohol and tobacco (review). 2015.
- 47. Royal Society for Public Health and Slimming World. Size matters. The impact of upselling on weight gain. 2017.
- 48. Allan J. Behavioural science. Paper for Food Standards Scotland board meeting 14 December 2016. 2016.
- 49. NHS Health Scotland. Public attitudes to reducing levels of overweight and obesity in Scotland. 2018.
- 50. Food Standards Scotland. Food in Scotland. Consumer tracking survey. Wave 4. 2017.
- 51. The Scottish Government. A healthier future action and ambitions on diet, activity and healthy weight. Analysis of consultation responses. 2018.
- 52. Scottish Government. A Healthier Future Scotland's Diet & Healthy Weight Delivery Plan. 2018.
- 53. Department of Health and Social Care: Global Public Health Directorate: Obesity, Food and Nutrition. Childhood obesity: A plan for action, Chapter 2. 2018;10800.
- 54. Scottish Government and NHS Health Scotland. Healthy living award. The sign of healthier food. http://www.healthylivingaward.co.uk. Updated 2018. Accessed 05/04, 2018.
- 55. Scottish Government. Criteria for Healthcare Retail Standard. 2016.
- 56. Public Health England. Calorie reduction: The scope and ambition for action. 2018;2017818.



- 57. The Food Foundation, Nourish Scotland, World Wide Fund, Food Cardiff. Peas Please commitments framework. 2017.
- 58. The Food Foundation. Veg pledges. These organisations have pledged to play their part to help everyone in Britain eat an extra portion of veg a day. https://foodfoundation.org.uk/veg-pledges/. Updated 2017. Accessed 05/03, 2018.
- 59. Soil Association. Out to lunch campaign impact summary. 2018.
- 60. Mayor of London. The draft London food strategy. Healthy and sustainable food for London. Draft for consultation. 2018.

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