

2016

# Check Your Chips: An analysis of takeaways in Brent



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## Executive Summary

This report is an investigation into whether takeaways are contributing to the obesogenic environment in Brent through sampling and analysing chip portions sold throughout the borough. It specifically focuses on takeaway outlets in close proximity to secondary schools, as previous research has shown that proximity influences frequency of consumption.

### Key findings:

- Chips being sold in Brent are contributing to the obesogenic environment
- Portion sizes on average were significantly larger than Food Standards Agency recommendations
- Chip portions were energy dense and equated to as high as 86% of a 10-11 year old sedentary girls daily intake
- Chips served in a box were on average 3.3 times larger than a large portion served in a wedge shaped container
- Trans fats were present in samples from four outlets highlighting the potential use of partially hydrogenated oils
- Nearly all outlets sampled used a chip cut size smaller than the Healthier Catering Commitment for London recommendation of 13mm or greater
- Thinner chips on average absorbed more oil than thicker cut chips
- Businesses with the Healthier Catering Commitment award on average served smaller portions that contained significantly lower levels of saturated fat.

## Introduction

Obesity is a growing concern both globally and within the UK. Close to two thirds of adults in the UK are overweight or obese and rates are predicted to continue rising. Childhood obesity is of particular concern in Brent with 24% of year 6 students classified as obese, compared to 19% nationally.<sup>1</sup>

Access to fast food, portion sizes and foods that are energy dense and high in fat, are all contributors to the complex issue of obesity. Trans fats<sup>2</sup> are also a concern in the fast food industry, as they can be found in partially hydrogenated vegetable fats used for frying and are associated with Coronary Heart Disease and all-cause mortality.<sup>3</sup>

In today's society there is an increasing demand for convenience and fast foods, with one in every six meals now eaten out of the home in the UK.<sup>4</sup> A study of Brent secondary school students' takeaway habits showed that students who go to schools within 400m of takeaway outlets are more likely to eat takeaways at lunchtime, after school and with their families.<sup>5</sup> Takeaways accounted for 12% of lunches and on average 50% of students ate takeaways at least once a week on their way home from school (62% at schools within 400m of outlets). Chips were by far the most popular food purchased (79%) and fizzy drinks were regularly consumed with takeaways (66%).

Hot food takeaways are of particular concern as they tend to sell foods that are energy dense and nutrient poor.<sup>6</sup> Takeaway outlet concentration and obesity rates are both negatively correlated with deprivation,<sup>7, 8</sup> raising concern for inequalities in the food environment in which people live.

Evidence has shown that education alone is not effective in reducing takeaway consumption.<sup>9</sup> Local Authorities have a vital role to play in promoting access to healthy food through policy development, planning and working alongside local communities.<sup>10</sup> Planning policies restricting saturation of takeaway stores near schools have been a popular approach by many local authorities. Brent adopted a 400m exclusion zone in Wembley ward in 2013 and is working towards the extension of the policy borough wide.<sup>11</sup> While policies have the ability to address future saturation, initiatives to promote healthier catering practices of existing takeaways may be important in influencing the obesogenic environment that currently exists.

The Healthier Catering Commitment for London (HCC) is a voluntary scheme that awards food businesses who promote healthier cooking practices and is based on the principal that 'small changes can make a big difference'.<sup>12</sup> The scheme targets fast food outlets and is a joint initiative between both environmental and public health. It encourages businesses to adopt healthier practices including; using oils low in saturated

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<sup>1</sup> Lifestyles Statistics Team, Health and Social Care Information Centre. 2015. National Child Measurement Programme: England 2014/15 school year. <http://www.hscic.gov.uk/catalogue/PUB19109/nati-chil-meas-prog-eng-2014-2015-rep.pdf>

<sup>2</sup> NHS Choices. 2015. *What are Trans Fats?* Retrieved July 6, 2016, from NHS Choices Information: <http://www.nhs.uk/chg/Pages/2145.aspx?CategoryID=51>

<sup>3</sup> De Souza RJ, Mente A, Maroleanu A, Cozma AI, Ha V, Kishibe T, Uleryk E, Budylowski P, Schünemann H, Beyene J and Anand SS. 2015. 'Intake of saturated and trans unsaturated fatty acids and risk of all cause mortality, cardiovascular disease, and type 2 diabetes: systematic review and meta-analysis of observational studies', *BMJ*, 351.

<sup>4</sup> Food Standards Agency. 2010. Available at:

[www.food.gov.uk/healthiercatering/healthycatering/cateringbusiness/calorie](http://www.food.gov.uk/healthiercatering/healthycatering/cateringbusiness/calorie). Cited In Takeaway briefing paper Mersey health

<sup>5</sup> London Borough of Brent. 2014. Takeaway use among Brent's school students.

<sup>6</sup> London Food Board and Chartered Institute of Environmental Health. 2012. Takeaways toolkit. A London Food Board and Chartered Institute of Environmental Health publication based on a consultancy report by Food Matters.

<sup>7</sup> Public Health England. 2013. Obesity and the Environment: Fast Food Outlets.

<sup>8</sup> Lifestyles Statistics Team, Health and Social Care Information Centre. 2015. National Child Measurement Programme: England 2014/15 school year. <http://www.hscic.gov.uk/catalogue/PUB19109/nati-chil-meas-prog-eng-2014-2015-rep.pdf>

<sup>9</sup> Cohen DA and Babey SH. 2012. 'Contextual Influences on Eating Behaviors: Heuristic Processing and Dietary Choices', *Obesity reviews: an official journal of the International Association for the Study of Obesity*, 13(9), pp. 766-779.

<sup>10</sup> National Institute for Health and Care Excellence. 2006. Obesity Prevention: NICE Guideline CG43. Updated March 2015. <https://www.nice.org.uk/guidance/cg43/chapter/1-Guidance#public-health-recommendations>

<sup>11</sup> Brent Council. 2013. Wembley Area Action Plan Sustainability Appraisal Submission Report.

<sup>12</sup> <http://www.cieh.org/healthier-catering-commitment.html>

and trans fats, implementing best practice frying methods, having portion size options available, promoting water and low/zero calorie alternatives to sugary soft drinks, reducing salt in cooking and preparation, offering a portion of vegetables and providing alternatives to chips such as rice, wraps and jacket potatoes.<sup>13</sup>

A recent investigation into portion sizes and nutritional content of takeaway chips in Tower Hamlets concluded that chips being sold are greatly contributing to the obesogenic environment.<sup>14</sup> There are currently 229 takeaways in Brent<sup>15</sup>, many of which are fast food outlets selling chips and in close proximity to secondary schools. Evidence suggests that proximity of takeaway outlets to schools influences consumer behaviour. The intention of this study is to investigate whether chips in Brent are contributing to the obesogenic environment.

## Intervention

*Aim:* To provide evidence that portion size and nutritional content of chips impact on the health of secondary school students and therefore the obesogenic environment Brent.

*Method:* To collect samples of small and large chip portions from 23 takeaway stores located in close proximity to secondary schools in Brent. Each takeaway sampled included an investigation into oil type, chip cut, salt added, frying practices and packaging used (Appendix 3). Samples were all collected anonymously by a mystery shopper between 14:30 – 16:00 from Wednesday to Friday over a three week period. All samples were nutritionally analysed for energy, fat (incl. saturated and trans fats) and salt content.

Sample selection was based on a range of factors including; proximity to secondary schools, deprivation, popularity of outlets and invested interest from youth parliament members in their school food environment. *See Appendix 1 for a map of all takeaway outlets and secondary schools in Brent.*

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<sup>13</sup> <http://www.cieh.org/healthier-catering-commitment.html>

<sup>14</sup> Phelan A. (2015). The Problem with Chips: An investigation into portion sizes and nutritional content of takeaway chips along Whitechapel, Tower Hamlets. London Metropolitan University.

<sup>15</sup> Brent Council. Scores on Doors. Retrieved on 6 July 2015 from:

<http://bhh2nt44.env.brent.gov.uk/scripts/phase1/pr/acolnetcgi.exe?UNWRAP&RIPNAME=Root.Scoresondoors2>

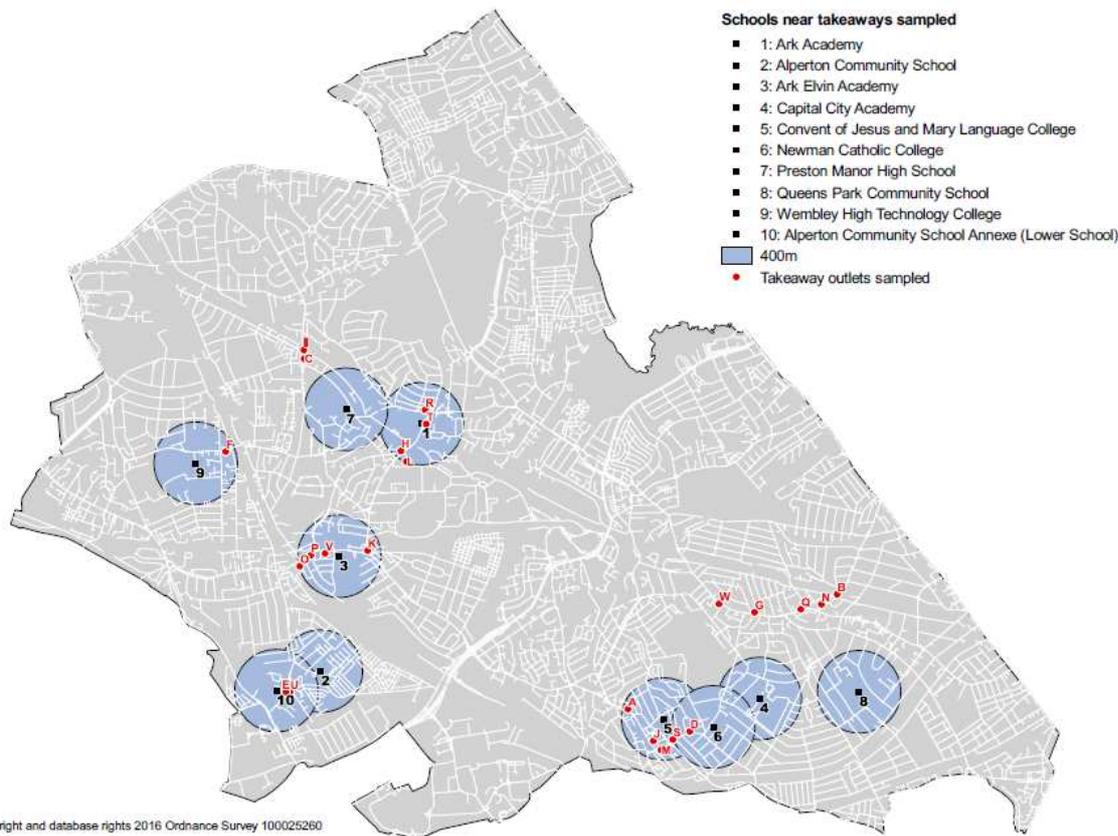


Figure 1: Brent borough map highlighting takeaway outlets sampled and their proximity to secondary schools.

## Results

A total of 44 samples from 23 takeaway outlets were collected and analysed. Of the 23 outlets, 21 outlets had two samples collected and the remaining two only had one sample collected due to the portion size options available for purchase.

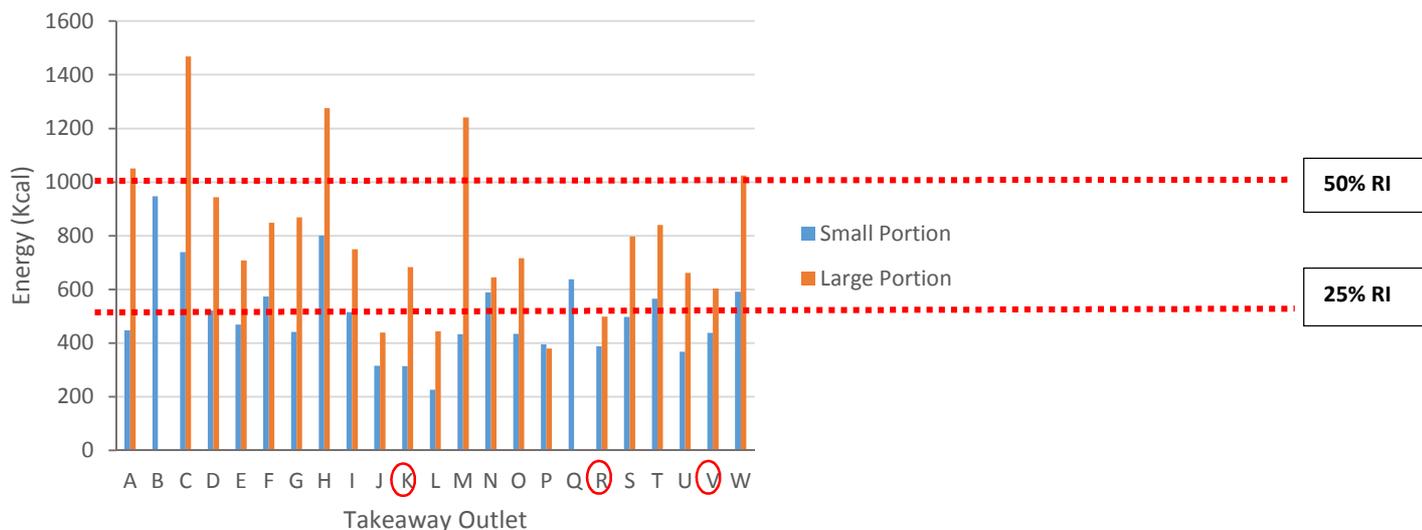


Figure 2: Total energy per portion of chips served from each takeaway outlet

A total of 19 out of 23 takeaways served a portion of chips greater than 25% of an adult’s recommended intake (RI), with five outlets serving portions greater than 50% of an adult’s RI. Ten takeaways did not offer a portion size option less than 500 calories (25% RI). Outlets K, R and V circled in *figure 2* represent HCC accredited takeaways.

The largest chip portion served by outlet C was 1468 calories, which is equivalent to 86% of a sedentary 10-11 year old girl’s Daily Energy Requirement.<sup>16</sup>

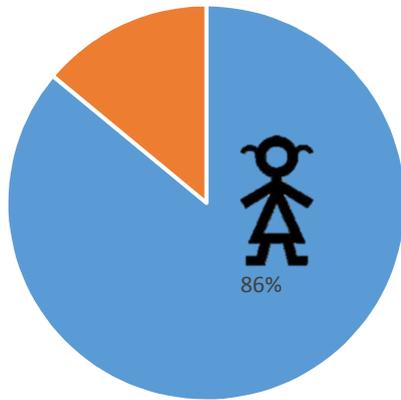


Figure 3: Percentage (%) Daily Energy Requirement for a 10-11 year old inactive girl consuming a large portion of chips from Outlet C.

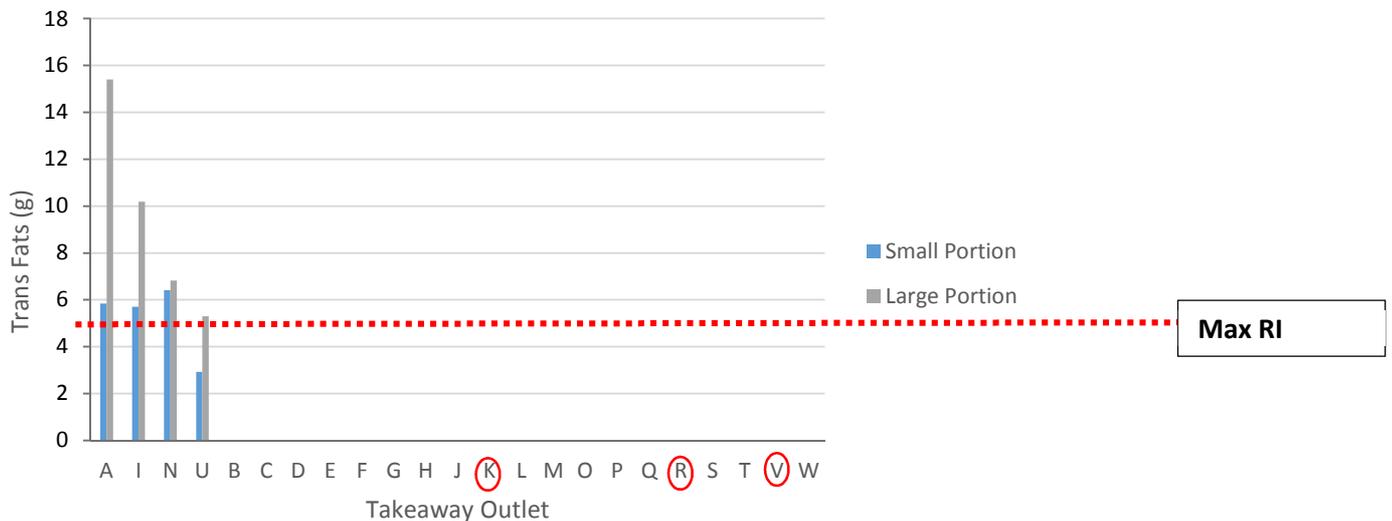


Figure 4: Takeaway Outlet Trans Fat Content per Portion

Four outlets showed levels of trans fats that may indicate use of partially hydrogenated vegetable oils. A small portion from three outlets contained levels of trans fats higher than the 5g maximum recommended daily intake.<sup>17</sup> A large portion from Outlet A contained over three times the maximum RI.

<sup>16</sup> FAO. 2001. Food and Nutrition Technical Support Series 1. Human energy requirements: Report of a Joint FAO/WHO/UNU Expert Consultation.

<sup>17</sup> <http://www.nhs.uk/Livewell/Goodfood/Pages/Fat.aspx>

Four outlets added salt to the chips without asking while majority added sachets to the bags for the customer to add their own salt. Half the takeaway outlets served the chips fresh (54%), while the remainder served either from the holder (26%) or a mixture of fresh and holder (17%).

Frying technique was only able to be observed in 10 outlets. Of the outlets observed, one effectively implemented the ‘shake, tap, hang’ technique, four partially implemented the technique and the remaining five outlets did not attempt to shake, tap or hang their chips before serving.

When asked what type of oil they used, five outlets were able to identify the oil they used, 11 said vegetable oil but were unable to identify the type of vegetable oil, and the remaining seven did not know.

Table 1: Comparison of packaging and portion sizes

Average Portion	Wedge	Paper bag	Polystyrene Container	Cardboard Box	Food Standards Agency (FSA) Recommended Portions <sup>18</sup>
Small	n/a	161g	261g	181g	100g
Large	147g	269g	484g	356g	240g
					

\* The average cost per portion was £0.97 for a small and £1.45 for a large

On average a large chip portion served in a polystyrene container was 3.3 times larger than a large portion served in a wedge. One in three large portions was served in a cardboard box which were on average 2.4 times larger than the wedge and 1.3 times larger than chips served in a paper bag. Majority of chips were served in paper bags (74% small, 52% large).

One outlet met Food Standards Agency size small recommendations and nine met size large recommendations.

<sup>18</sup> Food Standards Agency. 1994. *Food Portion Sizes*. 3rd ed., London: Maff Handbook.

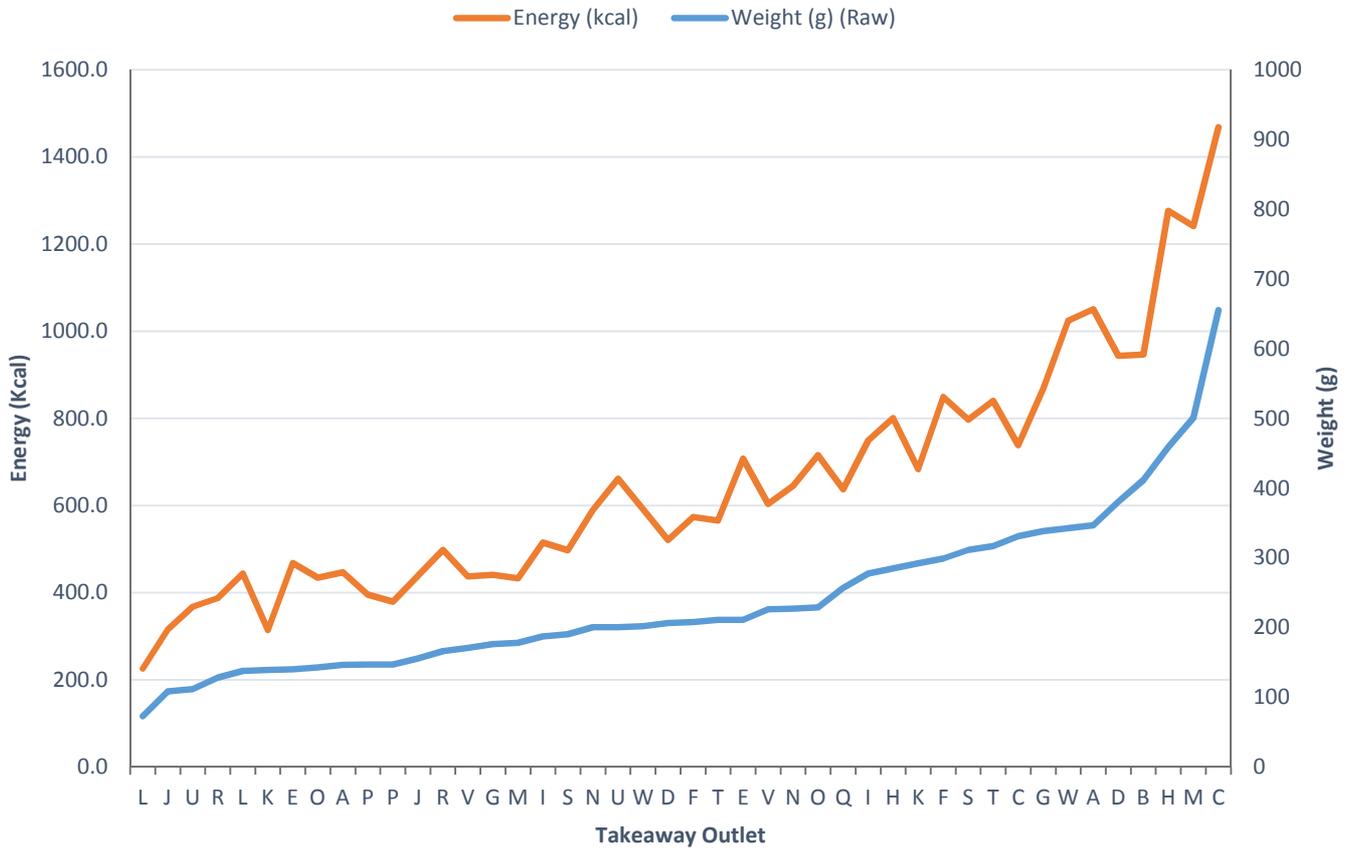


Figure 5: A comparison between the weight of chip portions and energy content.

If all outlets were using the cooking practices then the energy density of each portion should directly correlate with the weight. As shown in figure 5 above, there is some variation in energy density as portion size increases.

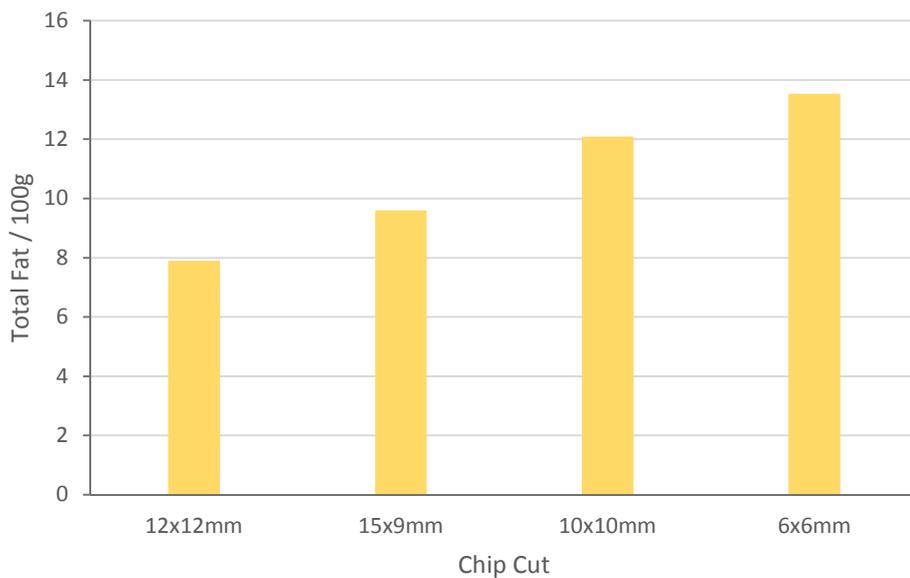


Figure 6: A comparison of chip cut and average fat absorption

The most popular chip cuts used by takeaways were the 6x6mm (48%) and 10x10mm (43%). The remaining two stores who used thicker cut chips were fish and chip shops. Results in *figure 5* show that as the chip cut gets thinner, the average amount of fat absorbed increases. The recommended chip size for the Healthier Catering Award is a thick cut chip 13mm or greater.

*Table 2: Contribution of chip portions to Adult Energy and Nutrient Reference Intakes (RI's)<sup>19</sup>*

	Energy (kcal)	% RI	Saturated Fat (g)	% RI	Trans Fat (g)	% RI	Salt (g)	% RI
<b>RI</b>	<b>2000</b>	<b>100%</b>	<b>20</b>	<b>100%</b>	<b>5</b>	<b>100%</b>	<b>6</b>	<b>100%</b>
<i>Small Portion</i>								
Average	491.4	24.6%	6.3	31.5%	1.0	20.0%	0.5	8.3%
Lowest	314.1	15.7%	1.0	5.0%	<0.01	0.0%	0.1	1.7%
Highest	800.9	40.0%	19.7	98.5%	6.4	128.0%	2.8	46.7%
<i>Large Portion (including 2 regular portions)</i>								
Average	820.8	41.0%	10.7	53.5%	1.6	32.0%	0.5	8.3%
Lowest	379.3	19.0%	1.5	7.5%	<0.01	0.0%	<0.03	<0.03%
Highest	1468.3	73.4%	31.5	157.5%	15.4	308.0%	3.3	55.0%

On average small and large portions were equivalent to 24.6% and 41% of an adults RI respectively. The largest portion served was equivalent to 73% of an adults RI. Saturated fat levels per portion ranged from 1g to 31.5g. Outlet H served the portion with the highest levels of saturated fat, equivalent to 157.5% of an adults RI of saturated fat. One small portion of chips contained 1.3 times the RI for trans fats, while a large portion contained greater than three times an adults RI. Majority of outlets served chip portions containing low levels of salt. Outlets A and N had the highest levels of salt, with a small and large portion from Outlet N equivalent to 46.7% and 55% of an adults RIs respectively.

### **Healthier Catering Commitment (HCC) Businesses**

Takeaway outlets K, V and R are the three businesses sampled that have the HCC award. Results confirm that these stores met essential HCC criteria.<sup>20</sup> These stores had no trace of trans fats in their chips, used rapeseed oil which is low in saturated fat, didn't add salt on behalf of the customer and had portion size options that were on average significantly less calories than the total averages shown in *Table 3* below.

Businesses with the HCC are currently not meeting the 13mm thick cut chip recommendation.

<sup>19</sup> RI's = Guidelines based on approximate amount of energy and nutrients required each day for a healthy, balanced diet.

<http://www.nhs.uk/Livewell/Goodfood/Pages/reference-intakes-RI-guideline-daily-amounts-GDA.aspx>

<sup>20</sup> <http://www.cieh.org/healthier-catering-commitment.html>

Table 3: A comparison of energy, fat and saturated fat levels between HCC and non HCC accredited businesses.

	Weight (g)	Energy (Kcal)	Fat (g)	Saturated Fat (g)
Average Small	175.5	479.1	21.6	6.3
<b>HCC Average Small</b>	<b>146.0</b>	<b>379.9</b>	<b>15.8</b>	<b>1.8</b>
Average Large	299.5	803.2	36.5	10.2
<b>HCC Average Large</b>	<b>228.0</b>	<b>594.9</b>	<b>24.7</b>	<b>3.1</b>

\* Food Standards Agency Portion Recommendations: Small = 100g, Large = 240g

## Discussion

Chips being sold by takeaway outlets in Brent are contributing to the obesogenic environment. A single large portion sampled in Brent contributed as high as 86% of a 10-11 year old sedentary girl's daily energy allowance, and more than a third of the outlets sampled served small portions greater than 25% of an adult's daily recommended intake. The results from the current investigation are supported by a similar investigation conducted in Tower Hamlets, which also found takeaways serving large, energy dense chip portions, alongside portions with high levels of trans fats.<sup>21</sup>

There was a large variation in portion sizes sold by outlets, however popularity of stores with students did not necessarily reflect this. Overall franchised outlets such as McDonald's, Sam's Chicken and Kentucky Fried Chicken served significantly smaller portions than independent outlets at similar price points but still remain popular choices with school students. This highlights the potential that factors other than 'value for money' influence consumer behaviour. Further investigation into what influences consumer choices is required.

Results from the current study and Tower Hamlets study also show the role that packaging can play in reducing portion sizes. Chips portions served in conical or wedge shaped packaging on average are considerably smaller than those served in polystyrene containers and cardboard boxes. Changing to a different shaped container is a good way for takeaways to reduce portion sizes without the reduction seeming so obvious to the customer.

The RI of saturated fat for adults is 20g. On average a large portion of chips sampled in Brent contained 11g and one sample contained 31.5g, 1.6 times an adult's RI. Saturated fat is widely known for its association with heart disease and obesity. Fats such as palm, coconut, ghee, butter and lard all contain high levels of saturated fat and are commonly used in the food industry, with palm oil and lard being popular choices for deep frying. The results highlight the need for takeaways to adopt healthier frying practices, use oils lower in saturated fat and to reduce portion sizes.

Alongside saturated fat, trans fats derived from hydrogenated vegetable oils are still being widely used throughout the takeaway industry. The health implications of consuming trans fats are well documented and the increased risk of heart attacks and strokes associated is alarming.<sup>22</sup> The US Food and Drug Administration have deemed hydrogenated oils to be no longer safe for human consumption due to their

<sup>21</sup> Phelan A. (2015). The Problem with Chips: An investigation into portion sizes and nutritional content of takeaway chips along Whitechapel, Tower Hamlets. London Metropolitan University.

<sup>22</sup> Renata M & Dariush M. 2009. Trans fatty acids: effects on metabolic syndrome, heart disease and diabetes. *Nature Reviews Endocrinology*, 335-344.

high levels of trans fats and have administered a ban in the US which takes effect from 2018.<sup>23</sup> There is no action against hydrogenated oils at present in the UK due to the Department of Health concluding that people in the UK are not consuming levels of trans fats greater than 2% in their diets.<sup>24</sup> This does not however take into account the risk to individuals frequently consuming fried foods and the National Institute of Health and Clinical Excellence have acknowledged that 'simply looking at average intakes will not suffice'.<sup>25</sup>

The current investigation found four outlets selling chips with high levels of trans fats. Local evidence has shown that a lot of takeaway businesses lack knowledge of oil types and their nutritional differences, but are open to change, once aware of the health implications. Greater efforts therefore need to be made to increase understanding and eliminate usage of hydrogenated oils in the takeaway industry in Brent (and throughout the UK).

Overall increased weight was associated with energy density. There was however some variation shown, indicating differences in absorption of fat, which could be associated with factors such as frying techniques and chip cut. Energy density of fried food can be improved by implementing the 'shake, tap and hang' technique to ensure excess fat is removed and not absorbed. This technique was not well documented in the study, but of those observed, was not well implemented with only one of the ten stores effectively applying the technique.

Alongside frying techniques, chip cut has been associated with fat absorption.<sup>26</sup> The current study supports previous studies which have shown that the thicker the chip cut and surface areas of the chip, the less oil it will absorb. No takeaway outlets sampled are currently meeting the Healthier Catering Commitment recommendation of 13mm or thicker. A number of takeaway outlets in the borough have tried to change to thicker cut chips but have reverted back due to customer complaints. Thin cut chips appear to be the most popular choice, particularly amongst young people. Further investigation in this area may be useful to determine what is driving consumer choices.

It was encouraging to find that majority of outlets are providing salt in sachets to allow the customer to add their own salt. Four outlets were observed adding salt without asking the mystery shopper and of these two served chips containing high levels of salt.

Takeaways that have achieved the Healthier Catering Commitment for London award on average sold smaller portions that contained low levels of saturated fat. This highlights the need for Local Authorities to continue providing education and support to local businesses on healthier practices, as small changes such as oil type and portion size, have the potential to make a big difference to the dietary intake of consumers.

It is however important to acknowledge that hot food takeaways are only one component of the current obesogenic environment. There are a number of other shops near school selling low cost, high calorie food and beverages such as sweets and soft drinks, which also are contributing to obesity, diabetes, dental carries and other diet related health conditions. The current study focused on highlighting the contribution takeaways can have on calorie consumption. Findings show that alongside planning policies, educating and supporting existing takeaway outlets could play a vital role in improving the quality of the food environment, particularly near schools and in areas of high deprivation.

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<sup>23</sup> US Food and Drug Administration. 2015. Final Determination Regarding Partially Hydrogenated Oils. The Federal Register.

<sup>24</sup> NHS Choices. 2015. What are Trans Fats? Retrieved July 6, 2016, from NHS Choices Information: <http://www.nhs.uk/chq/Pages/2145.aspx?CategoryID=51>

<sup>25</sup> National Institute of Health and Clinical Excellence. 2010. Public health Guidance 25: Prevention of Cardiovascular Disease. London: NICE.

<sup>26</sup> Food Standards Agency. Tips on chips: Helping businesses serve healthier food. Retrieved July 18, 2016, from: <https://www.cornwall.gov.uk/media/3627869/chipadvice-1-.pdf>

## Limitations

- Results are based on collecting one off samples from each outlet. Variations in portions sizes and frying practices may exist depending on staff, day and time of sampling.
- Information on how chip portions are consumed is currently unknown. In order to know the impact of chips on an individual's dietary intake, further research into whether portions are consumed as a main meal or snack and whether they are eaten individually or shared is required.

## Recommendations

**Increase chip cut size:** Takeaway outlets should aim to achieve a minimum of 13mm thickness in line with HCC recommendations. If customer satisfaction is a concern, outlets should consider increasing thickness incrementally.

**Reduce portion sizes:** Takeaway outlets should aim to meet Food Standards Agency recommendations for small and large portion sizes of 100g and 240g consecutively. To achieve this, packaging type and size should be considered e.g. from box to wedge shaped containers

**Healthier frying practices:** Takeaway outlets should ensure the 'shake, tap, hang' technique is implemented to reduce fat content and therefore energy density.

**Healthier oil type:** Takeaway outlets should refrain from using partially hydrogenated vegetable oils to minimise consumption trans fats. Alternatively outlets should consider oils low in trans and saturated fats such as liquid Rapeseed, Sunflower and Corn Oils.

It is recommended that Brent Council (and other Local Authorities):

- Increase public awareness of hydrogenated oils and their health implications
- Put systems in place to ensure businesses are aware of the implications of frying with such oil, for example:
  - EHO's inspections include checking oil type and providing basic information/recommendations on healthier oils (see appendix 4)
  - Public Health follow up stores using partially hydrogenated oils (identified by EHO's) to see if recommendations have been implemented.

Consideration should be made to adopt such systems at a pan London level, to reduce consumption of trans fats from takeaway outlets

Further investigation is also required to find out how:

- chip portions are consumed e.g. are portions shared with others and are they a snack or a meal
- students choose which outlet to purchase from
- takeaway outlets choose their oil type.

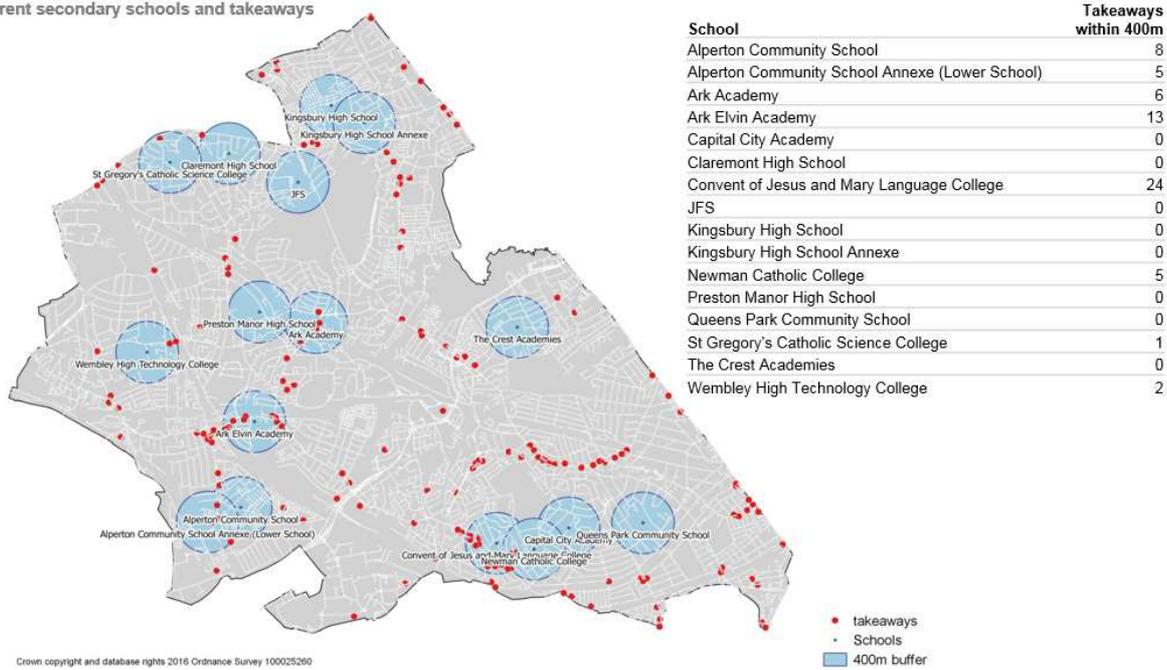
## Conclusion

Obesity and obesity related diseases are of grave concern in Brent. Childhood obesity rates are significantly higher than the national average and education alone is not going to solve the problem. There are a significant number of takeaway outlets within close proximity to schools, particularly in the most deprived areas of the borough. Secondary school students in Brent are also more likely to consume takeaways if their school is within 400m of outlets.

This investigation highlights that on average chip portions in the borough are large and energy dense. Supporting outlets to reduce portion sizes, improve oil types, increase chip cut size and use healthier frying practices, could therefore play a vital role in reducing energy consumption and have significant health implications.

## Appendix 1

Brent secondary schools and takeaways



Takeaways data from Food Standards Agency April 2016  
<http://ratings.food.gov.uk/authority-search-landing/en-GB/504>

Figure 7: Map of Brent secondary schools and their proximity to takeaway stores.

## Appendix 2

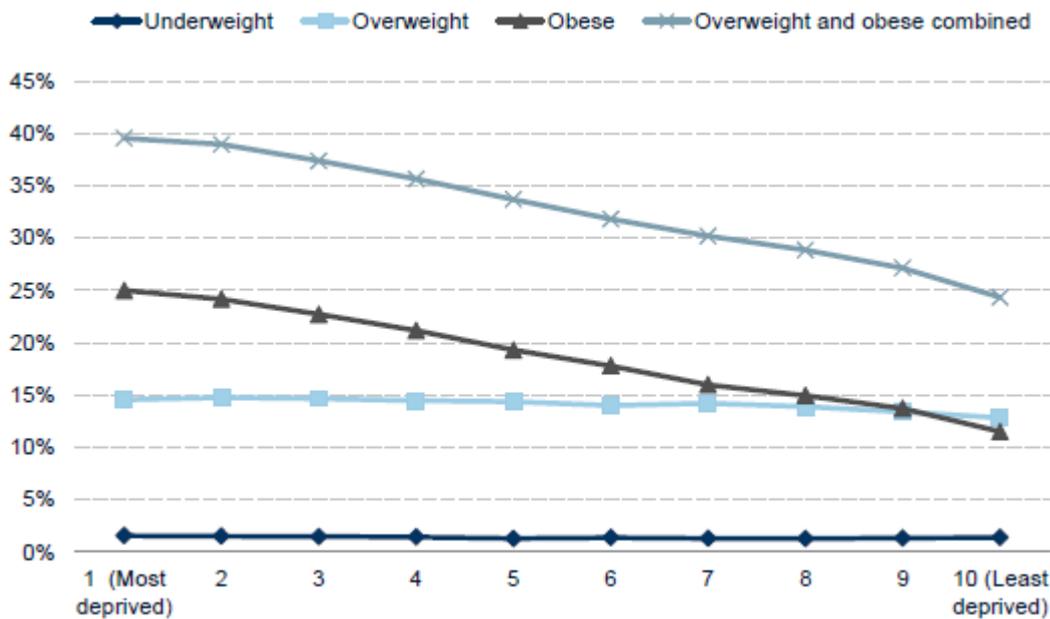


Figure 8: Prevalence of the BMI classifications, year 6, by child residence 2010 IMD decile, England, 2014/15<sup>27</sup>

<sup>27</sup> Lifestyles Statistics Team, Health and Social Care Information Centre. 2015. National Child Measurement Programme: England 2014/15 school year. <http://www.hscic.gov.uk/catalogue/PUB19109/nati-chil-meas-prog-eng-2014-2015-rep.pdf>

## Appendix 3

### Takeaway outlet information and observation

Business name and address: \_\_\_\_\_

Date/Day: \_\_\_\_\_

Time: \_\_\_\_\_

<b>Chip Portion 1</b>	Small	Medium	Large	
<b>Price</b>	£			
<b>Chip Portion 2</b>	Small	Medium	Large	
<b>Price</b>	£			
<b>Salt</b>	Added without asking	Offered	Not offered or added	
<b>Type of Oil</b>	Rapeseed ARV60	KTC Soya bean Sunflower	Ultra-Prep Unknown	Palm Other: _____
<b>Freshness of Chips</b>	<input type="checkbox"/> Chips freshly fried, <u>did not</u> shake, tap, hang <input type="checkbox"/> Chips freshly fried, shake, tap, hang used <input type="checkbox"/> Served from holder			

### Sample Analysis

Portion 1 Number: \_\_\_\_\_

Portion 2 Number: \_\_\_\_\_

<b>Type of Chip Cut</b>	7x7mm (Julienne)	10x10mm (3/8")	12x12mm (7/6")	14x14mm (9/6")	18x18mm (chunky)
<b>Packaging Type</b>	Paper bag	Box	Cone	Polystyrene box	
<b>Portion 1 Weight</b>	_____ g		_____ g (excl. packaging)		
<b>Portion 2 Weight</b>	_____ g		_____ g (excl. packaging)		

## Guidance for Choosing Oils for Deep Frying

Partially Hydrogenated Oils are oils that have been converted from a liquid to a solid state by a process known as hydrogenation. Partially hydrogenated oils are a major dietary source of trans fats which are known to be very harmful to health. Eating even small amounts greatly increases a person's risk of having a heart attack or a stroke.

- ➔ Avoid oils that say '**hydrogenated**' on the ingredients list
- ➔ Oils that say '**does not contain trans fats**' are better choices

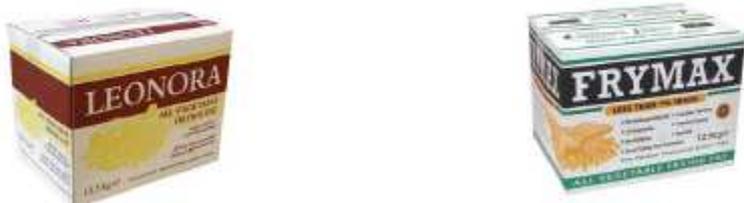
**X** These oils contain Trans Fats and should be avoided:



**V** The best oils to fry with are:



**V** If you have to use a solid oil then these ones are a better choice:



Saturated fat also affects heart health by increasing blood cholesterol levels. Oils high in saturated fat include ghee, lard, drippings, butter, palm and coconut oil. These fats should be avoided or used sparingly.

For more information or for help in choosing a better oil please contact: [healthyliving@brent.gov.uk](mailto:healthyliving@brent.gov.uk)

