

## Out-of-home fish and chip consumption in the UK population

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Out-of-home food, consisting of takeaway (TA) and eating out (EO) meal consumption has become an important and regular component of the Western diet<sup>(1)</sup>. Fish and chips constitute a high proportion of TA food (39 %) in the UK<sup>(2)</sup> and are energy dense. High intakes of energy-dense foods coupled with low energy expenditure can lead to excess body weight and increased risk of type 2 diabetes, heart disease and cancer<sup>(3,4)</sup>.

This study aimed to assess UK “out-of-home” fish and chip consumption using frequency of purchase and mean per capita consumption as measures. Household food purchase data from the UK Living Costs and Food survey for years 2012 and 2013 were analysed to estimate total chips (made up of EO chips from fast-food outlet, EO chips with meals from restaurants or chip shops and TA chips), and total fish (made up of EO processed fish, TA fish, TA fish products and EO fish in batter or breadcrumbs) consumption. Household purchasing frequencies were determined together with mean per capita consumption (g per 14 day recording period) of the consuming households of out-of-home fish and out-of-home chips by simplified household composition, and quintiles of Equivalised Income (EI) (using the McClement’s score)<sup>(5)</sup>. As the data is based on households a pragmatic decision was made to exclude children under 5 when calculating per capita consumption.

Year	2012 (n households 5569)						2013 (n households 5144)					
	Fish			Chips			Fish			Chips		
	%	Mean	SD	%	Mean	SD	%	Mean	SD	%	Mean	SD
Household composition:												
One Man	18.3	276	163	38.1	503	420	18.1	274	168	37.3	475	393
One Woman	16.6	257	159	30.7	375	267	14.2	251	122	30.5	353	286
2 Adults	26.3	169	108	51.0	287	226	25.6	176	102	49.9	287	224
3+ Adults	33.9	124	88.9	73.0	247	207	31.9	108	92.0	71.9	246	205
H/hold w children	26.1	105	84.2	72.4	245	200	27.4	101	75.3	72.4	255	213
Single parents	13.7	123	84.5	60.5	327	314	14.2	127	93.4	57.3	269	238
EI quintile:												
Lowest income	16.4	167	122	45.5	321	296	14.3	200	146	40.9	299	276
Highest income	29.0	162	129	57.9	290	256	28.1	153	105	58.2	299	257

Significant differences ( $P < 0.001$  using Chi-Square) were found for the proportion of households purchasing fish and chips based on the household composition, and by EI. In summary, it was found that a higher proportion of those in the highest income quintile purchased out-of-home fish and chips but they had a similar per capita consumption to those in the lowest income quintile (except in 2013 for fish). Single person households had a higher per capita consumption compared with those households with more than one adult but a lower proportion of households purchasing. Out-of-home fish and chips constitute a relatively small proportion of the diet in the UK (approximately 4 % of energy for average consumers) so interventions to improve their nutrient profile or decrease consumption in isolation are unlikely to have an impact on overall obesity rates.

Data provided by the UK Data Archive.

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