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ESTIMATION OF FOOD AND NUTRIENT INTAKES FROM FOOD SURVEY DATA IN SCOTLAND

2001-2009

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This is a revised version of the 2001-2009 report (January 2012) of the estimation of food and nutrient intakes from food survey data in Scotland. This revised version contains only minor changes to values in the tables, graphs and text.

The revision was carried out because an error was identified in the formula used to adjust the raw data for waste, in that all values were calculated for single adult households rather than either single or multiple adult households as intended.

The revision has caused negligible changes to most values with the greatest change being seen for fruit and vegetable and bread intake. The errors found in the methodology and subsequent results do not alter the interpretation of any of the findings.

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This work was carried out using data from the UK Data Archive, University of Essex http://www.data-archive.ac.uk/, additional variables on sampling and income were provided by ONS, SIMD data were obtained from Scottish Neighbourhood Statistics and URC data were obtained from the Scottish Government.

This work was funded by the Food Standards Agency in Scotland and the Scottish Government.

EXECUTIVE SUMMARY

Introduction

Scotland has one of the worst obesity records of developed countries (Bromley *et al*., 2011) and it has been predicted that by 2030 over 40% of adults living in Scotland will be obese (Scottish Government, 2010). Obesity increases the risk of chronic conditions such as certain cancers, type 2 diabetes, hypertension, cardiovascular disease and osteoarthritis. The Obesity Route Map (Scottish Government, 2010) has documented preventive actions which aim to reduce the rising obesity levels in order to avoid the massive burden of health and social care costs. Progress towards these actions is being monitored through a set of 16 indicators and associated desired outcomes (Scottish Government, 2011). The secondary analysis of the Living Costs and Food Survey (LCF), described below, is being used to monitor the indicators of fat, saturated fat and added sugars (NMES) intake. People are eating more fat, saturated fat and NMES, on average in Scotland than is recommended (Barton *et al*., 2010), which along with low intakes of fruit and vegetables, increases the energy density of the diet (Wrieden *et al*., 2011). Rising levels of obesity indicate that energy intakes are exceeding energy requirements.

Trends in population food and nutrient intakes towards the evidence based Scottish Dietary Targets (SDTs) have been monitored from 2001-2006 using secondary analysis of the LCF (before 2008 known as the Expenditure and Food Survey (EFS)) (Barton *et al*., 2010). The SDTs were originally proposed in *Eating for Health: A Diet Action Plan for Scotland* (The Scottish Office, 1996) and last set for achievement by 2010. Monitoring using the LCF followed the endorsement of the Working Group Report on Monitoring SDTs who concluded that it was the most appropriate method for Scotland (FSA, 2004). Estimated food consumption and nutrient intakes are calculated from household food and eating out purchases following secondary analysis to convert purchase data from the LCF to mean per capita food consumption and nutrient intakes to allow meaningful comparisons to be made between years.

Both the Scottish Health Survey (SHeS) and the UK National Diet and Nutrition Survey (NDNS) monitor dietary intake but neither provides annual data in sufficient detail (in the case of the SHeS) or in sufficient numbers (in the case of the NDNS) for monitoring change in food and nutrient intake over time (Wrieden *et al*., 2006). In recent years, there has been increased interest in less traditional commercial sources of data on consumer purchase. Market research companies collect purchasing data from household consumer panels that scan foods at home. Such panels collect data on a continuous basis, and provide estimates of national product sales. One company, Kantar Worldpanel UK, also collects and updates nutrient data from food labels to match to purchasing data. The combination of food purchasing data with nutrient data offer new opportunities to assess nutrient and food purchases at a household level, however there are limitations to the methodology, for example data are provided as sales units rather than being completely weight based. This confirms that currently the LCF is the preferred and only method of monitoring the diet of the population in Scotland.

In 2010, Barton *et al*., published a revision of the Wrieden *et al.*, 2006 report which included revised, updated and improved estimates of food consumption and nutrient intake for the Scottish population for 2001-2003 and new data for 2004-2006. This monitoring work has informed policy to date by reporting population trends in diet and nutrient intakes. It showed that little improvement had been made in the Scottish Diet over the period 1996 to 2006 and that clear inequalities were apparent in food consumption when assessed by deprivation and urban rural classification.

The Scottish Government have reaffirmed the importance of continuing to have population level dietary targets/goals for Scotland (National Food and Drink Policy, Scottish Government, 2009). These new evidence-based dietary goals will set the direction of travel for the changes needed to improve the Scottish diet and so reduce our burden of common diet related diseases, including obesity. The goals are nutrient and food-based targets which are embedded into key policy documents including the Obesity Route Map (Scottish Government, 2010) and its action plan (Scottish Government, 2011b), which aim to underpin the achievement of diet-related health improvement.

Objective

The purpose of this work was to update the report by Barton *et al*., (2010) with data for 2007 to 2009 and to continue to monitor the impact of policy initiatives and secular trends in food and nutrient intake in Scotland. Secondary analysis of Scottish household food and eating out data in the LCF was used to compare food consumption and nutrient intake with the SDTs and other foods and drinks indicative of diet quality. Differences by socioeconomic group over time, and area of residence (using 9 years of pooled data) were explored.

Methods

The LCF is an annual household budget survey designed to collect information about household food and expenditure. It collects household food purchase and eating out data from every person over seven years of age in each household over a 14 day period. Although it is not designed to measure intakes of specific individuals, valuable data on average population intakes appropriate for population level goals for specific food groups and nutrients can be produced using appropriate methodology.

LCF data for each year, in its raw form, was obtained from the UK Data Archive. Data on sampling methodology, Scottish Index of Multiple Deprivation (SIMD), domains of SIMD, Urban Rural Classification (URC) and Gross Normal Weekly Income (GNWI) were obtained from the UK Office of National Statistics (ONS). Data on SIMD and domains of SIMD were provided as quintiles, and data on URC in three categories (urban, accessible small towns/ rural, and remote).

Using this data, food consumption and nutrient intake in Scotland calculated in the previous report (Barton *et al*., 2010) was updated by the addition of the years 2007, 2008 and 2009. Analysis was also carried out by SIMD for the period of 2007 to 2009, and the URC for 2001 to 2009. Adjustments were made to allocate the correct proportion of each food to the appropriate food group and for waste. Data were analysed weighting to the Scottish population and taking account of sampling methods.

Results are presented as population means (i.e. including consumers and non-consumers) for household and eating out foods combined.

In addition, the population means analysed according to URC group have been adjusted to account for possible confounders such as SIMD, equivalised income, household size, household composition, % GNWI spent on food, food energy and the age of the household reference person. Unlike previous analyses, pooled data for years 2001-2009 was used for URC analysis to increase the sample size of the remote category.

Key Findings

- There continues to be some evidence of progress towards achieving the SDTs for fruit and vegetables and brown/wholemeal bread. The most recent analysis also suggest improvement in breakfast cereal intake (particularly wholegrain), however, the incremental increases continue to be very small.
- There were small but significant decreases in saturated fat and non-milk extrinsic sugars (NMES) between 2001 and 2009, which were not found in the analysis for 2001-2006. However no change in total fat was observed and population means for saturated fat, total fat and NMES remained considerably higher than the SDTs.
- Analysis by deprivation for 2007 to 2009 continued to suggest that the most deprived consume significantly less fruit and vegetables than the least deprived. Consumption of brown/wholemeal bread, breakfast cereals (all types and wholegrain/high fibre only), white fish and oil-rich fish also remain significantly higher in the least deprived compared to the most deprived.
- Energy from NMES continued to be significantly lower in the least deprived compared with the most deprived. There continued to be no difference in the consumption of total complex carbohydrates, fat and saturated fat by deprivation.
- Where a difference existed between the least and most deprived, there was no evidence to suggest that the gap in intake had decreased compared to previous years.
- Analysis by the URC provided more consistent data than previously obtained that suggested consumption of fruit and vegetables, brown/wholemeal bread and fresh potatoes was significantly higher in more remote areas.

Food/nutrient changes in relation to the Scottish Dietary Targets from 2001 to 2009

Target Food / Nutrient	Scottish Dietary Target	2001	2006	2009	Change Between 2001 and 2006	Change Between 2001 and 2009	Highest Consumption by SIMD[1]	Highest Consumption by URC[2]
Fruit and Vegetables	More than 400g per day	259g	276g	279g	↑	↑	Least Deprived	Remote
Bread (all types)	154g per day	111g	102g	94.7g	↓	↓	Most Deprived[†]	No Difference
Brown/Wholemeal Bread	More than 77g per day	18.2g	23.6g	21.4g	↑	↑	Least Deprived	Remote
Breakfast Cereals (all types)	34g per day	19.6g	19.3g	23.2g	No Change	↑	Least Deprived	No Difference
Oil Rich Fish	88g per week	29.2g	38.2g	30.5g	↑	No Change	Least Deprived	No Difference
White Fish	No decrease (figures per week)	96.4g	96.5g	92.8g	No Change	No Change	Least Deprived	No Difference
Fat	≤35% food energy	38.8%	38.7%	39.0%	No Change	No Change	No Difference	Accessible
Saturated Fat	≤11% of food energy	15.5%	15.7%	15.1%	No Change	↓	No Difference	No Difference
NMES	Adults - No ↑[3] Children - <10%	15.5%	15.0%	14.8%	No Change	↓	Most Deprived	No Difference
Total Complex Carbohydrates	155g per day	146g	141g	145g	No Change	No Change	No Difference	No Difference

[1]SIMD = Social Index of Multiple Deprivation, for combined years 2001-2003, 2004-2006 or 2007-2009, [†]No Difference 2004-2006; [2]URC = Urban Rural Classification after multivariable adjustment for combined years 2001-2009 (Categories: Urban; Accessible small towns/ rural; Remote); [3]DRV for Adults 11% Food Energy (Department of Health, 1991)

Conclusion

The results of this report for 2007 to 2009 provide evidence that if trends continue with data for 2010 the SDTs will not have been met by 2010. The results reported here suggest very small improvements in fruit and vegetable consumption, brown/wholemeal bread and breakfast cereal consumption since 2001, with increase in the consumption of breakfast cereal only being found since 2006. It is of particular concern that foods targeted for increased consumption are significantly lower in the most deprived groups of the population. However, there is no evidence to suggest that the gap between the most and least deprived is increasing with the same very small improvements being seen across all quintiles of SIMD. A slight decrease in the percentage of saturated fat and non-milk extrinsic sugars was also apparent, another finding that was not seen from 2001-2006. There were differences in food consumption between urban and remote areas, and a higher intake of energy from fat in the accessible small towns and accessible rural areas compared with urban areas which needs further investigation.

A robust standardised methodology has been used to calculate food and nutrient intakes on a population basis. As in the previous report, clear inequalities continue to be apparent in food consumption for the period 2007 - 2009 between the least and most deprived. This monitoring work will continue to be of great importance for monitoring dietary goals and informing policy to target diet and social inequalities.

References

Barton KL, Wrieden WL, Gregor A, Armstrong J, Sherriff A (2010) Final report for the Food Standards Agency in Scotland. Project No S14035 Part A: Estimation of food and nutrient intakes from Expenditure and Food Survey data in Scotland 2001-2006. http://www.foodbase.org.uk//admintools/reportdocuments/418-1-1027_S14035_Final.pdf

Bromley C, *et al*. (2011) The Scottish Health Survey 2010. Volume 1 :Main Report. The Scottish Government. http://scotland.gov.uk/Resource/Doc/358842/0121284.pdf

Department of Health (1991), Dietary Reference Values for Food Energy and Nutrients for the United Kingdom. Report of the Panel on Dietary Reference Values of the Committee on Medical Aspects of Food Policy (COMA) Department of Health report on Health and Social Subjects 41. London: HMSO.

Food Standards Agency in Scotland (2004) Report of the Working Group on Monitoring Scottish Dietary Targets. Aberdeen: FSAS.

Scottish Government (2009) Recipe for Success: Scotland's National Food and Drink Policy. http://www.scotland.gov.uk/Resource/Doc/277346/0083283.pdf

Scottish Government (2010) Preventing Overweight and Obesity in Scotland: A Route Map Towards Healthy Weight. http://www.scotland.gov.uk/Resource/Doc/302783/0094795.pdf

Scottish Government (2011) Indicators to Monitor Progress of the Obesity Route Map. http://www.scotland.gov.uk/Resource/Doc/346011/0115167.pdf

Scottish Government (2011b) Obesity Route Map – Action Plan.
http://www.scotland.gov.uk/Resource/Doc/346007/0115166.pdf

The Scottish Office (1996) Scotland's health a challenge to us all. Eating for Health. A diet action plan for Scotland. Edinburgh: HMSO.

Wrieden WL, Barton KL, Armstrong J and McNeil G (2006) A review of food consumption and nutrient intakes from national surveys in Scotland: comparison to the Scottish Dietary Targets. Aberdeen: Food Standards Agency in Scotland. http://www.food.gov.uk/multimedia/pdfs/scotdietrytarg.pdf

Wrieden WL, Barton KL (2011) The Scottish Diet: estimations of energy density and expenditure. Aberdeen: Food Standards Agency in Scotland.
http://www.foodbase.org.uk//admintools/reportdocuments/418-1-1108_S14035_Energy_Density_Final_Report.pdf

CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS USED

CHO	Carbohydrate
COMA	Committee on Medical Aspects of Food Policy
Defra	Department of the Environment, Food and Rural Affairs
DRV	Dietary Reference Value
EFS	Expenditure and Food Survey
FSA	Food Standards Agency
g	gram
GNWI	Gross Normal Weekly Income
HH	Household
HRP	Household Reference Person
kcal	kilocalorie
LCF	Living Costs and Food Survey
LIDNS	Low Income Diet and Nutrition Survey
MJ	Megajoule = 1000 kilojoules
n	number
NDNS	National Diet and Nutrition Survey
NFS	National Food Survey
NMES	Non-Milk Extrinsic Sugar
NSP	Non Starch Polysaccharides
ONS	Office for National Statistics
P	People
PP	Per Person
PW	People Weighted
RII	Relative Index of Inequality
SACN	Scientific Advisory Committee on Nutrition
SDAP	Scottish Diet Action Plan
SDT	Scottish Dietary Target
SHeS	Scottish Health Survey
SES	Socio-economic Status
SII	Slope Index of Inequality
SIMD	Scottish Index of Multiple Deprivation
UK	United Kingdom
URC	Urban Rural Classification
WRAP	Waste and Resource Action Programme
95% CI	95% Confidence Interval
>	greater than
<	less than
%	percent / percentage

EXPLANATORY NOTE ON SOME TERMS USED IN THE REPORT

Complex Carbohydrates	Non sugar carbohydrates – starch and non-starch polysacharides
Confidence Interval (CI) and 95% Confidence Interval (95% CI) of the Mean	A range of values that, it is estimated includes a population statistic at a specific level of confidence. The 95% confidence interval (95% CI) of the mean refers to the range of values 2 standard errors above and 2 standard errors below the mean. There is only a 5% chance that this range excludes the true mean of the population. The 95% confidence interval (CI) calculates the region around the mean where the true figure is likely to be. The narrower the confidence interval about the observed mean the more reliable it is.
Gross Normal Weekly Income (GNWI)	Gross normal weekly income current before the deduction of income tax, national insurance contributions and other deductions at source.
Household Reference Person (HRP)	The HRP is the person who owns the household accommodation, or is legally responsible for the rent of the accommodation, or has the household accommodation by virtue of their employment or personal relationship to the owner who is not a member of the household. If more than one person meets these criteria the HRP will be the one with the higher income. If the incomes are the same then the eldest is chosen.
Equivalised Income	Adjusts actual income by household size and composition. It was calculated by dividing the gross normal weekly household income by the McClements score for the household.
Food Energy	The energy obtained from food and drink (excluding alcohol).
McClements Score	The McClements scoring system was used to allocate each household member with a score depending on their position in the household and their age. These scores were added together to produce an overall household McClements score. This was then used in the derivation of the equivalised income variable for the household. Household members were allocated scores as follows: First adult (HRP) 0.61 Spouse/partner of HRP 0.39 Other second adult 0.46 Third adult 0.42 Subsequent adults 0.36 Dependent aged 0-1 0.09 Dependent aged 2-4 0.18 Dependent aged 5-7 0.21 Dependent aged 8-10 0.23 Dependent aged 11-12 0.25 Dependent aged 13-15 0.27 Dependent aged 16+ 0.36 (Corbett *et al.,* 2009)
Mean	The mean intake is calculated by summing all intakes and dividing by the total number of people in the sample. Therefore it is moderated by the high and/or low consumers. When there are non-consumers in the sample (i.e. those with an intake = 0) the population average must take these into account. The 95% CI calculates the region around the mean where the true figure is likely to be. The narrower the 95% CI of the observed mean the more reliable it is.
Median	The median is the middle value of a set of figures, i.e. for an odd number of cases the median is the middle score. For an even number of cases the median is the average of the two middle scores. For normally distributed data the mean should equal the median. The interquartile range represents 25% of values either side of the median. Data on food consumption and nutrient intake in a population is not usually normally distributed, some intakes will be very high or very low e.g. vitamin C or oil rich fish. For this reason it is more meaningful to give median food consumption and nutrient intake and to show interquartile ranges. This allows the proportion of low (e.g. for fruit and vegetables) or high consumers (e.g. for NMES) to be placed relative to the target. Due to the nature of the LCF data it is not possible to produce reliable medians.
Non-Milk Extrinsic Sugars	Sugars, excluding those in milk and milk products that are not incorporated into

(NMES)	the cellular structure of foods, e.g. sugar released from fruit when it is blended or juiced, table sugar, honey and added sugar in cakes, sweets and soft drinks.
Percentage Food Energy (% Food Energy)	The percentage of food energy (the energy obtained from food and drink (excluding alcohol)) intake derived from a macronutrient i.e. fat, carbohydrate or protein.
Percent gross normal weekly income spent on food (%GNWI spent on food)	The percentage of GNWI which is spent on food.
Quintile	The portion of a frequency distribution containing one fifth of the total sample. For example the first quintile is the point with 1/5 of the data below it and 4/5 above it.
Scottish Index of Multiple Deprivation (SIMD)	The Scottish Index of Multiple Deprivation (SIMD) 2004, 2006 and 2009 identifies the most deprived areas across Scotland. It is based on indicators within seven individual domains of Current Income, Employment, Housing, Health, Education, Skills & Training, Geographic Access to Services & Telecommunications and Crime (which was added in 2006). SIMD is presented at data zone level, enabling small pockets of deprivation to be identified. The data zones are ranked from most deprived (1) to least deprived (6505) on the overall SIMD 2004 and on each of the individual domains. The 6505 data areas are ranked according to level of deprivation; these are then usually split into deciles with 1 being most deprived and 10 being most affluent. In this report the deciles have been combined to give quintiles. Thus Quintile 1 combines the most deprived deciles 1 and 2. SIMD 2004 was used for the analysis of data from 2001-2006 and SIMD 2009 was used for the analysis of data from 2007-2009.
Sodium	Sodium chloride is the chemical name for salt. 100mmol of sodium is equivalent to the SDAP and FSA target of 6g of salt based on SACN advice.
Takeaway Foods	Any food bought for consumption within the home is classed as household purchases. This includes for example, fish and chips; drive through brought home; home deliveries of: pizza, Chinese and Indian meals (Defra, 2009).
UK Data Archive	The UK Data Archive is a centre of expertise in data acquisition, preservation, dissemination and promotion and is curator of the largest collection of digital data in the social sciences and humanities in the UK.
Urban Rural Classification	This Scottish Government classification distinguishes between urban, rural and remote areas within Scotland and includes the categories given in the table below. For the purposes of this report the 8 fold classification has been collapsed to give three groups: 1 = Urban (1&2) 2 = Accessible small towns and accessible rural (accessible small towns/ rural)(3&6) 3 = Remote small towns, remote rural and very remote rural (remote) (4,5,7&8)
Years	For the purposes of this report, for ease of understanding, dates have been presented in the text as single years: 2001 = 2001/2002, which refers to April 2001 to March 2002 2002 = 2002/2003, which refers to April 2002 to March 2003 2003 = 2003/2004, which refers to April 2003 to March 2004 2004 = 2004/2005, which refers to April 2004 to March 2005 2005 = 2005/2006, which refers to April 2005 to March 2006 2006 onwards = refers to Jan to Dec of the year in question From 2006 the EFS moved from a financial year to a calendar year basis. As a consequence of this the January to March 2006 data are duplicated in the 2005/2006 and the 2006 results
Periods	2001 - 2003 or 1st period = 2001/2002 - 2003/2004, which refers to April 2001 to March 2004 2004 - 2006 or 2nd period = 2004/2005 - 2006, which refers to refers to April 2004 to December 2006 2007 – 2009 or 3rd period refers to January 2007 to December 2009

Scottish Executive Urban Rural Classification 2003-2004	
1 Large Urban Areas	Settlements of over 125,000 people.
2 Other Urban Areas	Settlements of 10,000 to 125,000 people.
3 Accessible Small Towns	Settlements of between 3,000 and 10,000 people and within 30 minutes drive of a settlement of 10,000 or more.
4 Remote Small Towns	Settlements of between 3,000 and 10,000 people and with a drive time of between 30 and 60 minutes to a settlement of 10,000 or more.
5 Very Remote Small Towns	Settlements of between 3,000 and 10,000 people and with a drive time of over 60 minutes to a settlement of 10,000 or more.
6 Accessible Rural	Settlements of less than 3,000 people and within 30 minutes drive of a settlement of 10,000 or more.
7 Remote Rural	Settlements of less than 3,000 people and with a drive time of between 30 and 60 minutes to a settlement of 10,000 or more.
8 Very Remote Rural	Settlements of less than 3,000 people and with a drive time of over 60 minutes to a settlement of 10,000 or more.

Source: Scottish Government, 2009 http://www.scotland.gov.uk/library5/rural/seurc-02.asp

1. BACKGROUND

1.1 Introduction

The latest Scottish Health Survey (SHeS) has confirmed that Scotland has one of the worst obesity records of developed countries (Bromley *et al*., 2011a). It is predicted that by 2030 the proportion of obese adults in Scotland will be over 40% (Scottish Government, 2010). It is well established that being obese increases the risk of chronic conditions such as certain cancers, type 2 diabetes, hypertension, cardiovascular disease and osteoarthritis. For example, obesity has been described as the most important avoidable cause of cancer in non-smokers, with predictions that it will eventually become the main risk factor (House of Commons Select Committee on Health, 2004). A very recent report has confirmed this and notes that after smoking overweight and obesity is the next most important risk factor for cancer for women and a deficient intake of fruits and vegetables (less than 400g/day) for men (Parkin *et al.* 2011). The urgent need to halt the rise in obesity levels in order to avoid the massive burden of health and social care costs has culminated in the publication of The Obesity Route Map (Scottish Government, 2010). This document includes preventative actions covering energy consumption, food product reformulation, portion sizes, stocking policies, pricing, packaging, and advertising. A set of 16 indicators and associated desired outcomes published in 2011 (Scottish Government, 2011a) will help monitor the progress of the Obesity Route Map's actions. A range of different surveys is being used to monitor these indicators including the secondary analysis of the Living Costs and Food Survey (LCF) (which monitors the indicators of fat, saturated fat and NMES intake). This work will be described in the following report.

In 2005, the Food Standards Agency in Scotland commissioned work to establish methods to monitor progress towards the Scottish Dietary Targets (SDTs) (The Scottish Office, 1996) and examine differences in food and nutrient intake by socioeconomic group and area of residence. Trends in population food and nutrient intakes have been monitored from 2001-2006 using the secondary analysis of the LCF (before 2008 known as the Expenditure and Food Survey (EFS)) (Barton *et al*., 2010) following the endorsement of the Working Group Report on Monitoring SDTs who concluded that it was the most appropriate method for Scotland (FSA, 2004). Other surveys monitor dietary intake in particular the SHeS and the UK National Diet and Nutrition Survey (NDNS) but neither provides annual data in sufficient detail to monitor dietary targets / goals (Wrieden *et al*., 2006). For example the new rolling programme of the SHeS (Bromley *et al*., 2011a) only monitors reported fruit and vegetable intake and there are insufficient participants each year in Scotland in the NDNS rolling programme (Department of Health and Food Standards Agency, 2011) to provide trend data for Scotland. In recent years, there has been increased interest in less traditional commercial sources of data on consumer purchase. Market research companies collect purchasing data from household consumer panels that scan foods at home. Such panels collect data on a continuous basis, and provide estimates of national product sales. One company, Kantar Worldpanel UK, also collects and updates nutrient data from food labels to match to purchasing data. The combination of food purchasing data with nutrient data offer new opportunities to assess nutrient and food purchases at a household level, however there are limitations to the methodology for example data are provided as

sales units rather than being completely weight based. This further confirms that the LCF is the preferred and only method of monitoring diet in Scotland.

In 2010, Barton *et al*., published a revision of the Wrieden *et al*, 2006 report which included revised, updated and improved estimates of food consumption and nutrient intake for the Scottish population for 2001-2003 and new data for 2004-2006. This monitoring work has informed policy to date by reporting population trends in diet and nutrient intakes in relation to evidence based Scottish Dietary Targets (SDTs) and differences in diet in relation to deprivation and urban rural classification in Scotland.

SDTs were originally proposed in *Eating for Health: A Diet Action Plan for Scotland* (The Scottish Office,1996) (Table 1) and were last set for achievement by 2010. The National Food and Drink Policy (Scottish Government 2009a) reaffirmed the importance of continuing to have population level dietary goals for Scotland. These new evidenced-based dietary goals will set the direction of travel for the changes needed to improve the Scottish diet and so reduce our burden of common diet related diseases, including obesity. The goals are population level, nutrient and food-based targets which are embedded into key policy documents including the Obesity Route Map (Scottish Government, 2010) and its action plan (Scottish Government, 2011b) which aim to underpin the achievement of diet-related health improvement.

Table 1: Scottish Diet Action Plan - Dietary Targets

Food Targets	
Fruit & Vegetables	Average intake to double to more than 400g per day
Bread	Intake to increase by 45% from present daily intake of 106g, mainly using wholemeal and brown breads
Breakfast Cereals	Average intake to double from the present intake of 17g per day
Fish	White fish consumption to be maintained at current levels Oil rich fish consumption to double from 44g to 88g per week
Total Complex Carbohydrates[1]	Increase average non-sugar carbohydrates intake by 25% from 124g per day, through increased consumption of fruits and vegetables, bread, breakfast cereals, rice and pasta and through an increase of 25% in potato consumption
Nutrient Targets	
Fat	Average intake of total fat to reduce from 40.7% to no more than 35% of food energy Average intake of saturated fatty acids to reduce from 16.6% to no more than 11% of food energy
Salt	Average intake to reduce from 163mmol per day to 100mmol (2.3g sodium, 6g sodium chloride) per day
Sugar	Average intake of NMES in adults not to increase Average intake of NMES in children to reduce by half i.e. to less than 10% of total energy
Total Complex Carbohydrates[1]	Increase average non-sugar carbohydrates intake by 25% from 124g per day, through increased consumption of fruits and vegetables, bread, breakfast cereals, rice and pasta and through an increase of 25% in potato consumption

Source: The Scottish Office, 1996; [1]See explanatory notes section for definition

1.2 Purpose

The purpose of this work was to update the report by Barton *et al*., (2010) with data for 2007 to 2009 and to continue to monitor the impact of policy initiatives and secular trends in food and nutrient intake in Scotland. Secondary analysis of Scottish household food and eating out data in the LCF was used to compare food consumption and nutrient intake with the SDTs and other foods and drinks indicative of diet quality. Differences by socioeconomic group over time, and area of residence (using 9 years of pooled data) were explored.

2. METHODOLOGY USED TO DERIVE FOOD CONSUMPTION AND NUTRIENT INTAKES RELATIVE TO THE SCOTTISH DIETARY TARGETS

2.1 Overview

The methodology reported by Barton *et al.* (2010), summarised below, to calculate mean food consumption and nutrient intakes from LCF data was used for data from 2007 to 2009 in order that comparisons could be made with results from previous years. LCF data for each year, in its raw form, was obtained from the UK Data Archive, University of Essex. Population average intakes of foods and nutrients relating to the SDTs and other foods and drinks indicative of diet quality, have been calculated taking into account accepted definitions of foods (see Appendix 1 for more information). Further details on methodology, to those provided here, can be found in Appendix 2.

2.2 Living Costs and Food Survey

The Living Costs and Food Survey (LCF) (before 2008 known as the Expenditure and Food Survey (EFS)) is a continuous survey of households in the United Kingdom commissioned jointly by the Office for National Statistics (ONS) and the Department for Environment and Rural Affairs (Defra). However, the LCF data requires considerable secondary analysis to group the foods relevant to the SDTs and calculate statistically meaningful figures. Due to the nature of household food purchase data, the LCF cannot be used to give information on median intakes or classify consumption by age or gender (further advantages and disadvantages of the LCF are discussed in Appendix 3). The calculation of mean per capita consumption and nutrient intakes, with 95% confidence intervals is not straightforward and requires a series of factors to be applied to the data. This process is essential if any meaningful comparisons are to be made between years and groups classified by socio-economic factors such as deprivation (using the Scottish Index of Multiple Deprivation (SIMD)) (Scottish Government, 2009b) or socio-demographic factors such as urban or rural residence (using the Urban Rural Classification (URC)) (Scottish Executive, 2004).

2.3 Coding Frame

The detailed coding frame (Appendix 4) reported by Barton *et al.* (2010) compiled for both household and eaten out food purchases was used for the analysis. It is based on a list of 522 food codes allocated by Defra to household or eaten out food purchases. The coding frame lists groupings of foods (and codes) which form part of each dietary target (or food group of interest) and gives details of conversion factors applied to the food weights. For details see Appendix 2.

2.3.1 Categorisation of Foods

The Defra EFS coding frames for household and eaten out food purchases were examined and foods forming part of each dietary target (or other foods and drinks indicative of diet quality) were selected and categorised accordingly.

2.3.2 Conversion Factor

The conversion factors were applied to food purchases to estimate the actual amount of each food that was consumed. A conversion factor was calculated (for each food code, for household and eating out purchases) for the proportion of fruit, vegetable, bread, meat etc. in a composite food; for the proportion of food in a food grouping (where it bridges more than one food grouping); raw to cooked weight (where appropriate); proportion of inedible waste; and estimate of edible waste. Data for these conversion factors were taken from the 1st, 2nd, 5th and 6th supplements of the 5th edition of McCance and Widdowson's composition of foods (Holland *et al.,* 1992a; Holland *et al.,* 1992b; Chan *et al.,* 1995; Chan *et al.,* 1996). Where this data was not available from the above sources, information was sought from manufacturers' label data or market share data supplied by the Food Standards Agency. For details see Appendices 2 and 4.

2.3.3 Edible Waste

Estimates of waste for the UK population published by WRAP (2008) have been mapped by Defra to each of the food codes used in the LCF. This information was obtained from Defra and used to assign a waste factor to each food code. The waste figures were provided for single and multiple adult households and were linked to the appropriate type of household prior to analysis. The figures published by WRAP only account for edible waste. Inedible waste (i.e. bone) was taken into account when calculating the conversion factor for each food code. For details see Appendix 4. WRAP waste figures for Scotland were published in 2009 (WRAP Scotland, 2009), however these could not be used in the current analysis as data was not available as a percentage of individual foods/food groups and therefore no mapping to Defra food codes could be carried out on this regional data. Likewise the UK 2009 update (WRAP, 2009) did not provide waste as a percentage of individual foods/food groups.

2.4 Data Handling

Appendix 5 provides a flowchart which illustrates the data handling process for data from each year, which were then merged in SPSS to obtain one working data file. Data on sampling strata and clusters, SIMD, domains of SIMD, URC and raw Gross Normal Weekly Income (GNWI) were obtained from the UK ONS. Data on SIMD and domains of SIMD were provided as quintiles and URC in 3 categories. Data on SIMD and URC by postcode were initially obtained from Scottish Neighbourhood Statistics and the Scottish Government respectively and sent to ONS to link to anonymised case IDs.

In brief, the raw LCF data was linked to a table constructed from the coding frame, which listed each food grouping, each food within these groupings and the appropriate conversion and waste factors to be applied to the calculations. Household consumption minus waste (based on purchases) for each food code was multiplied by the appropriate conversion factor and summed by food grouping. This was then divided by the number of individuals in the household and divided by 14 to obtain the mean daily consumption per person.

For nutrients: household consumption data minus waste (based on purchases) for each food code was multiplied by the appropriate nutrient content per gram (provided by Defra) to provide the nutrient

intake per food. Household, eaten out and combined nutrient intakes for foods were then summed for each household. These were then divided by the number of individuals in the household and divided by 14 to obtain the mean daily intake per person for each nutrient.

2.5 Analysis of Data

The food consumption and nutrient intake data were exported to SPSS and merged with the additional variables file as described in Appendix 2. Due to the multi-staged stratified sampling procedure of the LCF, data were analysed using Descriptive Statistics and General Linear Models within the Complex Samples module of SPSS, version 18 (SPSS Inc., Chicago, IL, USA) and weighted according to the Scottish population. The data were weighted so that estimates obtained for mean food consumption and nutrient intake more accurately reflected that of the Scottish population and household composition. The weights were provided by Defra.

Linear associations between food consumption/nutrient intake and year or SIMD quintile were assessed by linear regression. Overall associations between food consumption/nutrient intake and URC group were assessed by an adjusted Wald test which assesses whether the value for all URC categories are equal in a single test and produces a single P-value.

Analysis by URC was carried out firstly unadjusted, secondly adjusted by SIMD quintile and thirdly adjusted by multivariables. The multivariable model used in the URC analysis further adjusted for SIMD quintile, equivalised income, household (HH) composition, HH size, %GNWI spent on food, energy intake (kcal) and the age of the household reference person (HRP) as these variables were all found to have an impact on food and nutrient intake. In the multivariable analysis for energy intake and nutrients expressed as a percentage of food energy, the variable for energy intake (kcal) was excluded. The decision as to which variables to include in the model was taken after analysis was carried out by each variable independently. This work also included the analysis by quintiles of individual domains of SIMD (namely education, employment, health and housing) but it was felt that as these are given different weightings in the overall SIMD score that it was better to use the overall SIMD score in the multivariable model rather than include all the individual domains.

In addition, for SIMD, the Slope Index of Inequality (SII) was calculated as a measure of inequality of food consumption and nutrient intake. The Slope Index of Inequality (SII) is a measure of absolute inequality (ScotPHO, 2007) used to assess the absolute difference between the least and most deprived individuals. The SII was derived by ranking each household by SIMD (within the 3 year group SIMD was investigated within i.e. 2001-2003, 2004-2006 and 2007-2009). The rank scores obtained were divided by the sample size (for the appropriate 3 year group) to obtain a value between 0 and 1, weighted to the relative distribution across SIMD quintiles. Linear regression analysis (weighted least squares) of the mean intake within each SIMD quintile was used to calculate the SIIs for each food / nutrient. The regression (or slope) coefficient from the regression analysis is the SII. For interpretation purposes the SII is the mean difference in intake between the hypothetically most deprived relative to the hypothetically least deprived person in the population (Shaw *et al*., 2007).

In order to compare a measure of inequality across populations or years, the relative index of inequality (RII) was calculated, which is the SII divided by the overall population mean food consumption or nutrient intake. This helps when making comparisons of the magnitude of the association between the same socio-economic position measures over time.
For both SII and RII, the underlying assumption is that there is a linear gradient across the deprivation variable.

2.6 Presentation of Results

Until 2006, the EFS was conducted on a financial year basis i.e. from April of one year to March of the next. From 2006 the EFS moved from a financial year to a calendar year basis. As a consequence of this, the January to March 2006 data are duplicated in the 2005/2006 and the 2006 results. For ease of understanding, dates have been presented in the text as single years e.g. 2001/2002 has been presented as 2001 which refers to the period of April 2001 to March 2002 - see explanatory notes for further information.

Food consumption and nutrient intakes (means) relating to the SDTs (Table 1) and other foods, drinks and nutrients indicative of diet quality are presented from 2001 through to 2009. Food consumption and nutrient intakes for Scotland are also presented for combined year's data from the LCF for SIMD and URC. For SIMD LCF data from 2006 to 2009 are combined and presented by quintiles of the SIMD distribution (with data from Barton *et al.* (2010) from 2001 to 2003 and 2004 to 2006 provided in appendix 7 for comparison purposes). For URC LCF data from 2001 to 2009 are combined and results are presented in 3 groups (1.Urban; 2.Accessible small towns/ rural and 3.Remote) (with data from Barton *et al.* (2010) from 2001 to 2003, 2004 to 2006 and 2007 to 2009 provided in appendix 7 for comparison purposes).

Results tables by SIMD also provide SII and RII figures with 95% confidence intervals (95% CI) in grams per day for foods and drinks with the exception of fish in grams per week. Appendix 8 presents these figures for 2001-2003, 2004-2006 and 2007-2009 together to allow for a comparison to be made over time of absolute and relative differences. The SII figures provide the absolute difference between the hypothetically most deprived and the hypothetically least deprived person for each of the foods / nutrients. A positive figure indicating that consumption / intake is higher in the least deprived and a negative figure indicating that consumption / intake is greatest in the most deprived.

Results of URC analysis are also presented with parameter estimates (with confidence intervals of the parameter estimates) which show the difference in food consumption per day (e.g. daily fruit intake in grams per day) between the reference category (in this instance the urban group) and the other two groups. If the parameter estimate is negative, it means that the food consumed by that group is less than the reference category, and if positive, it means that the food consumed is more than the reference category.

3. RESULTS

3.1 Food Consumption Relating to the Scottish Dietary Targets

There was little change in consumption of the foods targeted by the Scottish Diet Action Plan and none of the SDTs were met by 2009.

3.1.1 Food Consumption Relating to the Scottish Dietary Targets by Year

Fruit and Vegetables

Table 2 and Figure 1a shows that there was a small but significant increase in mean consumption of fruit and vegetables in the population from 2001 to 2009 (P-value of linear association = 0.012). Mean daily consumption for all fruit and vegetables (including fruit and vegetable juices and baked beans) was 259g in 2001 and 279g in 2009, which equates to almost three and a half 80g portions per day and is considerably lower than the target of 400g or five portions per day. The small increase in total fruit and vegetables is due to an increase in fruit consumption with no significant change to vegetable consumption over the period (Figure 1a) although there does appear to have been a slight fall in fruit consumption and a slight increase in vegetable consumption over the last 2 years.

Inclusion of fruit juice increases fruit and vegetable consumption figures by the equivalent of half a portion per day; however the proportion of fruit to fruit juice remained similar over the time period.

There was a small but significant increase in fruit and vegetable consumption and breakfast cereal over the 9 years to 2009

Mean fruit and vegetable consumption remains about a portion and a half short of the 5 a day population goal

Bread

Total daily bread consumption gradually decreased over the period 2001 to 2009 (from 111g to 95g), such that the mean consumption in 2009 was significantly lower than that of 2001 (P-value of linear association = <0.001), (Table 2, Figure 2a). This was accounted for by a steady decrease in white bread which was only partially counteracted by an increase in brown/wholemeal bread consumption from 18g/day in 2001 to 21g/day in 2009 (P-value of linear association = <0.001), the increase being equivalent to just over one tenth of an average slice.

Bread consumption decreased but a slight increase in brown and wholemeal bread was seen

Breakfast Cereals

Total breakfast cereal consumption has increased from around 20g/day in 2001 to around 23g/day in 2009 (P-value of linear association = 0.012) (Table 2, Figure 3a), this was brought about by an increase in high fibre breakfast cereal which accounts for over half of breakfast cereal consumption (10g/day in 2001 and 14g/day in 2009) (P-value of linear association = <0.001).

Fish

Oil rich fish and white fish consumption has not changed significantly over the period, despite the fact that oil rich fish consumption appeared to increase to 2006 (Table 2, Figure 4a). In 2009 oil rich fish consumption was 30g/week and still considerably less than the SDT.

The increase in oil rich fish consumption seen from 2001-2006 has not continued and no significant change was seen from 2001-2009

Total Complex Carbohydrates (Potatoes)

An increase in potato consumption by 25% was specified as one of the suggested methods of increasing total complex carbohydrate consumption (Table 1). Fresh potato consumption has decreased over the period of 2001 to 2009 with intakes in 2009 16g/day less than in 2001 at around 50g/day (P-value of linear association = 0.007) (Table 2).

3.1.2 Food Consumption Relating to the Scottish Dietary Targets by SIMD Quintile

Table 3 and Figure 1b show a clear gradient in fruit and vegetable consumption by SIMD quintile. In the most deprived quintile (Quintile 1), mean daily consumption was 200g compared with 348g in the least deprived quintile (Quintile 5) for 2007 to 2009. This positive linear trend was highly significant, $P<0.001$.

Just over 2 portions of fruit and vegetables were consumed in the most deprived fifth of the population and 4 portions in the least deprived fifth

Consumption of brown/wholemeal bread, breakfast cereals (all types and wholegrain/high fibre) oil-rich fish and white fish were highest in the least deprived quintile (Quintile 5), (Table 3, Figures 2b, 3b and 4b). Total bread consumption was highest in the most deprived quintile (Quintile 1) (Table 3, Figure 2b) and there was no difference in fresh potato consumption by deprivation quintiles for this period. Analysis by SII and RII confirm the above differences by SIMD in absolute and relative terms. With the exception of white fish consumption in the least deprived quintile of SIMD none of the SDTs were met by 2009 by any quintile of SIMD.

Results tables for 2001-2003 and 2004-2006 from Barton *et al*., (2010) are provided in Appendix 7 for comparison.

Figures 1b, 2b, 3b and 4b illustrate food consumption over time with regards to deprivation and Appendix 8 provides the results of the SII and RII analysis showing that there has been no significant change in inequalities from 2001 to 2009.

The inequalities in the consumption of target foods have not decreased over the period 2001-2009

Table 2: Consumption of Scottish Diet Action Plan 1996 Target Foods by Year, 2001 to 2009

LCF data (g/person/day with the exception of fish g/person/week)

Food	Scottish Dietary Target	2001 Mean 95% CI	2002 Mean 95% CI	2003 Mean 95% CI	2004 Mean 95% CI	2005 Mean 95% CI	2006[1] Mean 95% CI	2007 Mean 95% CI	2008 Mean 95% CI	2009 Mean 95% CI	*P-value for Linear Association*
Fruit and Vegetables[2, 3]	400g per day	259	262	247	267	284	276	291	285	279	***0.012***
		241, 278	242, 282	227, 267	244, 290	264, 304	257, 296	267, 315	265, 304	258, 299	
Fruit[2]		133	136	129	140	153	148	165	154	145	***0.010***
		119, 146	121, 152	115, 143	126, 154	139, 167	136, 160	148, 183	139, 169	131, 158	
Vegetables[3]		126	126	118	127	131	128	125	131	134	*0.121*
		118, 135	118, 134	109, 127	116, 137	122, 140	117, 139	115, 136	121, 141	122, 146	
Total Bread	154g per day	111	109	102	100	100	102	97.9	92.9	94.7	***<0.001***
		106, 117	104, 113	95.7, 109	95.1, 105	94.6, 106	96.1, 108	93.0, 103	89.0, 96.9	90.0, 100	
Brown/Wholemeal Bread		18.2	18.9	17.0	22.4	22.2	23.6	23.5	23.6	21.4	***<0.001***
		16.3, 20.1	16.5, 21.4	14.9, 19.0	19.9, 24.8	19.5, 24.9	20.9, 26.3	20.5, 26.4	20.8, 26.4	19.7, 23.2	
Total Breakfast Cereal	34g per day	19.6	19.6	19.2	20.8	19.3	19.3	22.3	21.6	23.2	***0.012***
		17.4, 21.8	17.2, 22.0	16.4, 21.9	18.5, 23.0	17.1, 21.5	17.1, 21.4	19.5, 25.2	18.5, 24.6	20.7, 25.8	
High Fibre Breakfast Cereal		10.0	10.5	10.3	11.1	11.1	11.1	13.5	12.8	13.8	***<0.001***
		8.4, 11.7	8.7, 12.2	8.5, 12.1	9.2, 13.0	9.6, 12.7	9.3, 12.9	11.6, 15.3	10.3, 15.4	11.9, 15.8	
Oil Rich Fish	88g per week	29.2	31.6	33.1	34.6	42.8	38.2	32.7	32.9	30.5	*0.641*
		24.6, 33.8	24.6, 38.6	26.5, 39.7	27.6, 41.5	25.2, 60.5	29.9, 46.6	26.6, 38.9	25.9, 39.9	25.3, 35.7	
White Fish	No decrease[4]	96.4	92.7	92.4	86.4	85.8	96.5	98.2	93.0	92.8	*0.849*
		86.7, 106	83.2, 102	81.8, 103	77.1, 95.7	74.6, 97.1	85.9, 107	84.4, 112	80.3, 106	82.9, 103	
Fresh Potatoes[5]		65.8	58.1	56.1	53.7	57.3	59.8	53.4	54.0	50.1	***0.007***
		57.7, 73.9	51.9, 64.3	50.5, 61.6	47.8, 59.7	52.1, 62.5	52.0, 67.5	47.1, 59.8	46.6, 61.4	44.2, 56.0	
n Households		*619*	*585*	*546*	*590*	*566*	*577*	*500*	*494*	*543*	
n People		*1414*	*1342*	*1266*	*1329*	*1285*	*1365*	*1093*	*1058*	*1222*	
n People Weighted[6]		*5015*	*4967*	*4952*	*4948*	*4939*	*4906*	*5040*	*5143*	*5181*	

Household and eating out consumption combined

[1]From 2006 the EFS moved from a financial year to a calendar year basis. As a consequence of this the January to March 2006 data are duplicated in the 2005/2006 and the 2006 results
[2]Fruit includes fruit and vegetable juice; [3]Vegetables include baked beans; [4]NFS figure reported by Wrieden *et al.* (2006) for 1996 was 107g per week; [5]Part of complex carbohydrate target
[6]The results are weighted to the Scottish population, the number provided is approximately 1000th of the Scottish population

Table 3: Consumption of Scottish Diet Action Plan 1996 Target Foods by SIMD Quintile, 2007 to 2009 Combined

LCF data (g/person/day with the exception of fish g/person/week)

Food	Scottish Dietary Target	SIMD Quintile 1* Mean 95% CI	SIMD Quintile 2 Mean 95% CI	SIMD Quintile 3 Mean 95% CI	SIMD Quintile 4 Mean 95% CI	SIMD Quintile 5* Mean 95% CI	*P-value for Linear Association*	SII 95% CI	RII 95%CI
Fruit and Vegetables[1, 2]	400g per day	200	260	284	298	348	***<0.001***	166	0.58
		177, 223	231, 288	261, 306	264, 332	326, 369		128, 204	0.45, 0.72
Fruit[1]		103	133	154	159	200	***<0.001***	112	0.72
		86.3, 120	116, 149	134, 174	133, 185	186, 215		85.3, 138	0.55, 0.90
Vegetables[2]		97.0	127	129	139	148	***<0.001***	54.3	0.42
		85.3, 109	112, 142	115, 144	125, 153	137, 159		35.2, 73.3	0.27, 0.56
Total Bread	154g per day	105	97.5	91.1	93.7	91.5	***0.004***	-14.1	-0.15
		96.9, 113	90.6, 104	85.6, 96.6	87.4, 100	87.0, 95.9		-23.5, -4.7	-0.25, -0.05
Brown/Wholemeal Bread		17.2	23.0	22.3	23.1	26.5	***0.001***	9.1	0.40
		14.3, 20.2	19.3, 26.8	18.7, 25.8	19.8, 26.3	24.0, 29.0		4.0, 14.2	0.18, 0.62
Total Breakfast Cereal	34g per day	15.7	19.7	22.7	24.3	27.0	***<0.001***	13.4	0.60
		12.3, 19.0	17.4, 22.1	20.2, 25.3	20.0, 28.6	24.4, 29.6		8.3, 18.4	0.37, 0.82
High Fibre Breakfast Cereal		7.5	10.9	14.0	15.1	17.2	***<0.001***	11.5	0.86
		5.2, 9.8	9.3, 12.6	11.9, 16.2	11.9, 18.4	15.3, 19.1		8.3, 14.8	0.62, 1.10
Oil Rich Fish	88g per week	20.8	25.2	32.0	37.9	39.9	***<0.001***	25.1	0.78
		13.0, 28.6	21.8, 28.6	24.4, 39.5	28.4, 47.5	31.2, 48.7		13.7, 36.5	0.43, 1.14
White Fish	No decrease[3]	77.2	90.7	87.7	97.3	112	***0.008***	39.1	0.41
		60.4, 94.0	77.5, 104	73.3, 102	81.3, 113	95.8, 128		10.9, 67.3	0.12, 0.71
Fresh Potatoes[4]		48.9	51.3	49.8	61.2	51.0	*0.283*	5.8	0.11
		40.0, 57.7	44.8, 57.9	41.5, 58.0	49.3, 73.1	47.0, 55.1		-5.3, 16.8	-0.10, 0.32
n Households		*270*	*309*	*303*	*301*	*354*		*1537*	*1537*
n People		*540*	*658*	*656*	*665*	*852*		*3371*	*3371*
n People Weighted[5]		*2495*	*2974*	*2948*	*3057*	*3882*		*15356*	*15356*

Household and eating out consumption combined

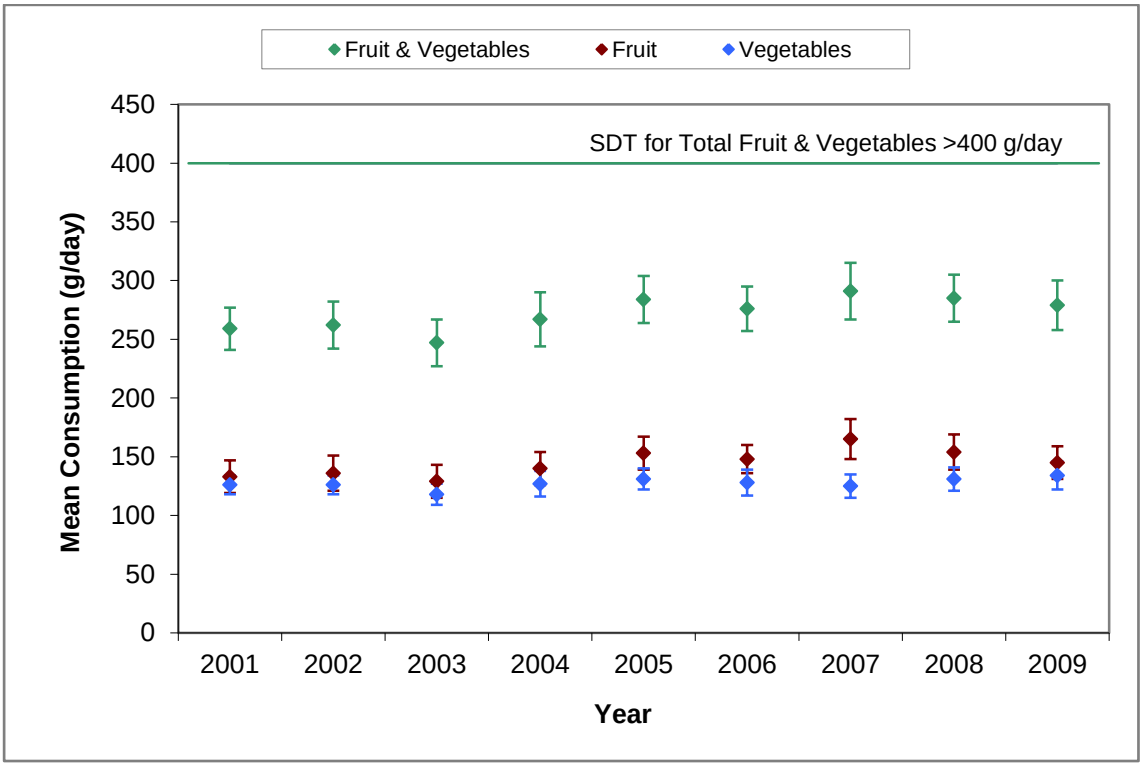
***Scottish Index of Multiple Deprivation (SIMD) Quintiles: 1=Most Deprived; 5=Least Deprived; ** SII=Slope Index of Inequality; ***RII=Relative Index of Inequality**

[1]Fruit includes fruit and vegetable juice; [2]Vegetables include baked beans; [3]NFS figure reported by Wrieden *et al.* (2006) for 1996 was 107g per week; [4]Part of complex carbohydrate target

[5]The results are weighted to the Scottish population, the number provided is approximately 1000th of the Scottish population

Figure 1: Mean (with 95% CI) fruit and vegetable consumption

Figure 1a: Total consumption and comparison of fruit and vegetables by year 2001 - 2009 compared with SDT (>400g/day)



Fruit = Fruit including fruit (and vegetable) juice; Vegetables = Vegetables including baked beans

Figure 1b: Total fruit and vegetable consumption by SIMD quintile compared with SDT (>400g/day)

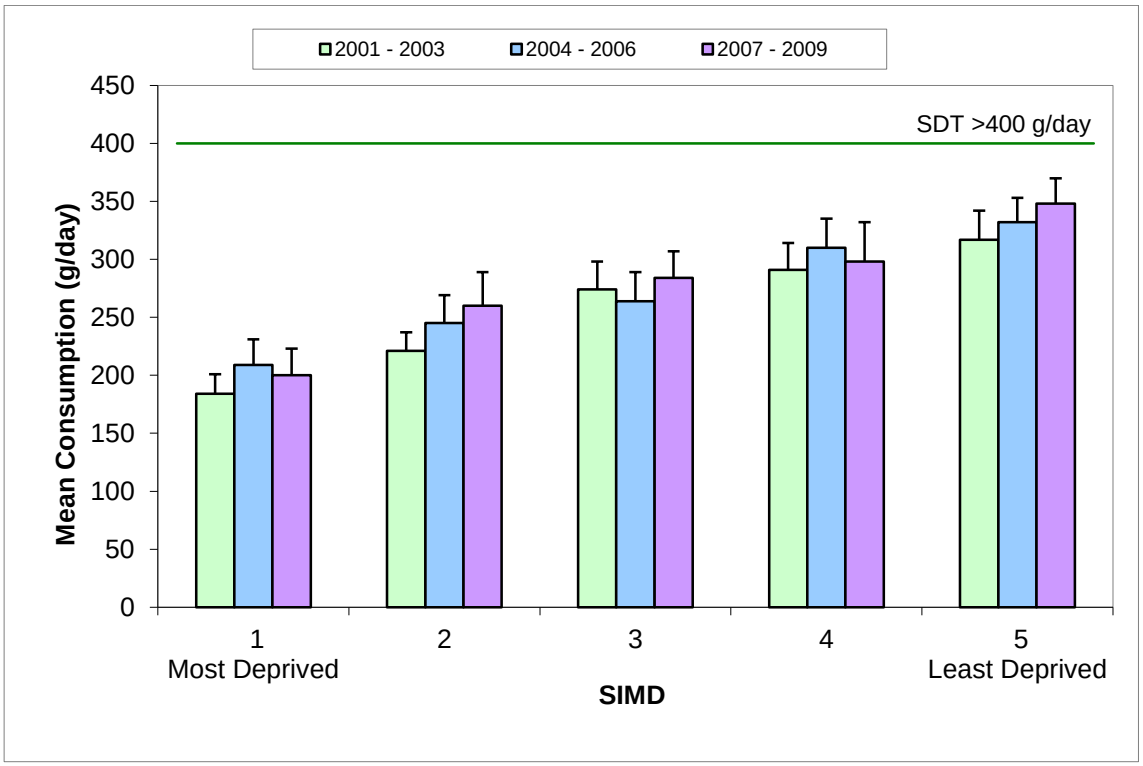


Figure 2: Mean (with 95% CI) bread consumption compared with SDT (154g/day)

Figure 2a: By Year 2001 - 2009

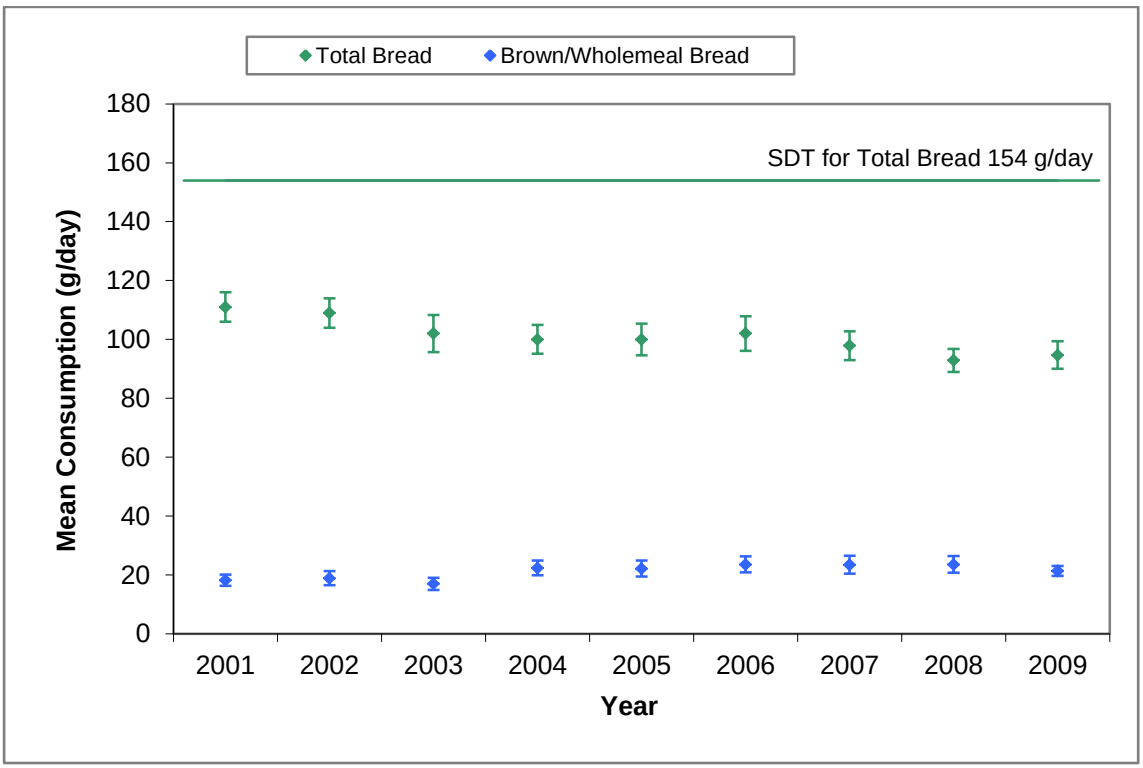


Figure 2b: By SIMD Quintile

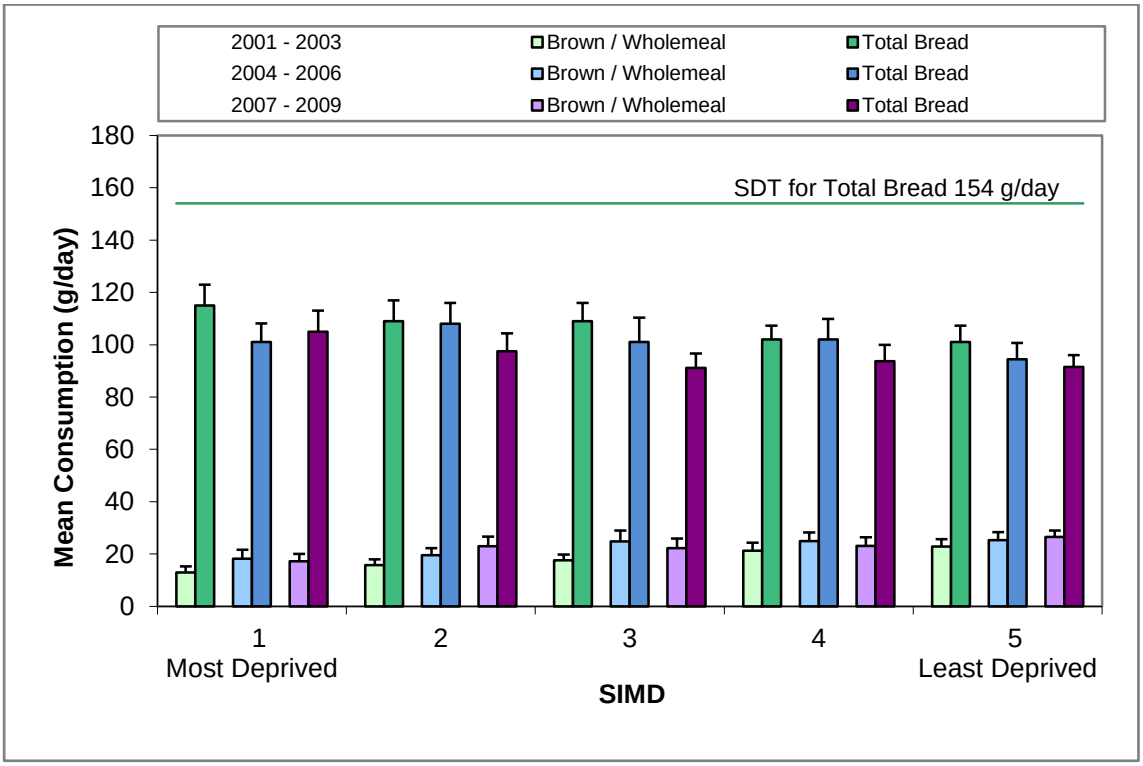


Figure 3: Mean (with 95% CI) breakfast cereal consumption compared with SDT (34g/day)

Figure 3a: By Year 2001 - 2009

Figure 3b: By SIMD Quintile

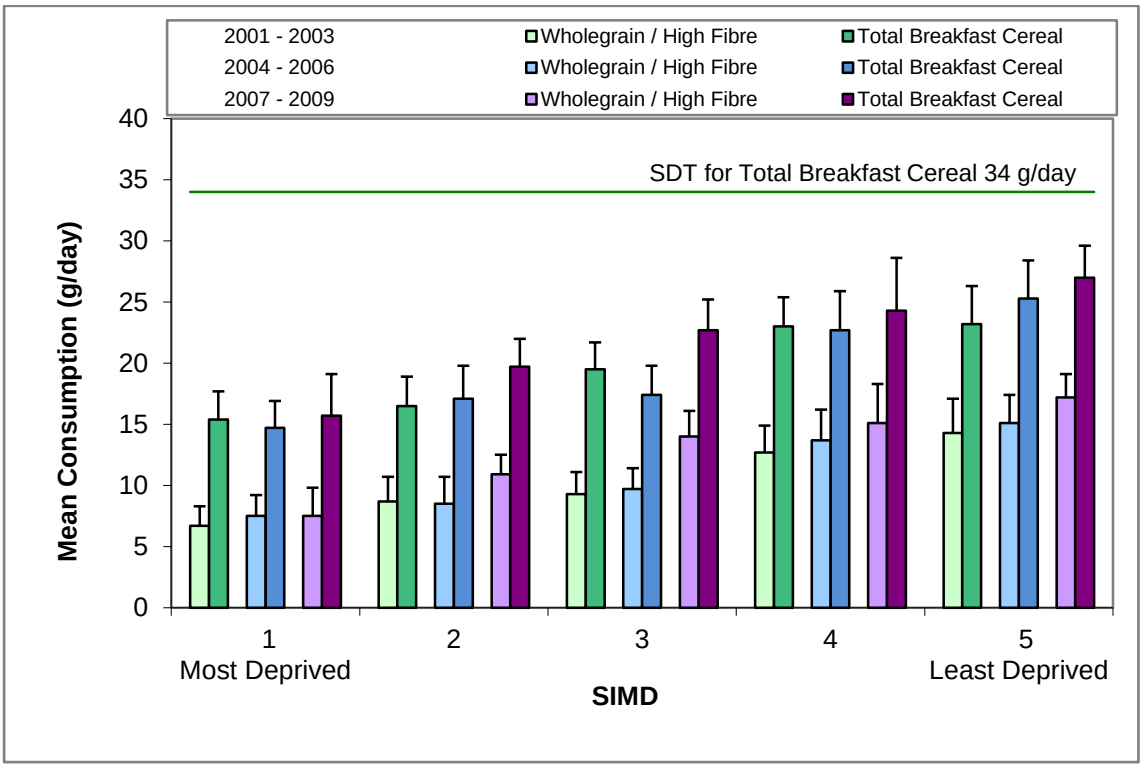


Figure 4: Mean (with 95% CI) oil rich fish consumption compared with SDT (88g/week)

Figure 4a: By Year 2001 - 2009

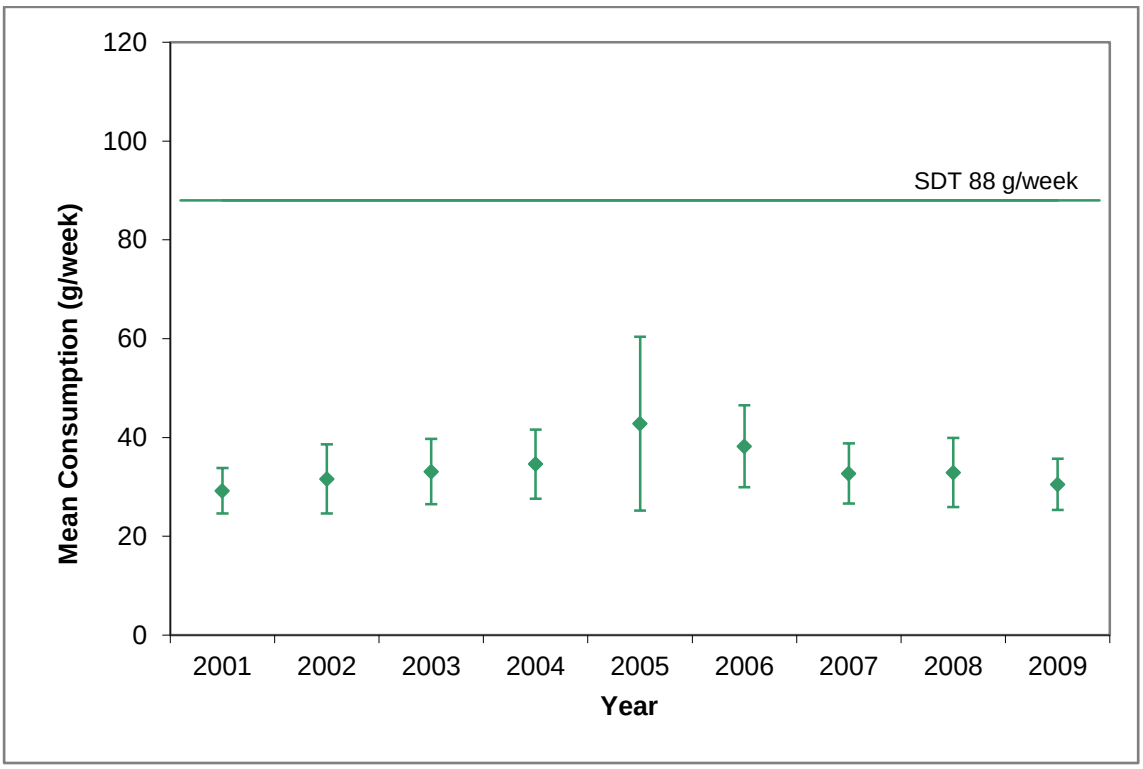
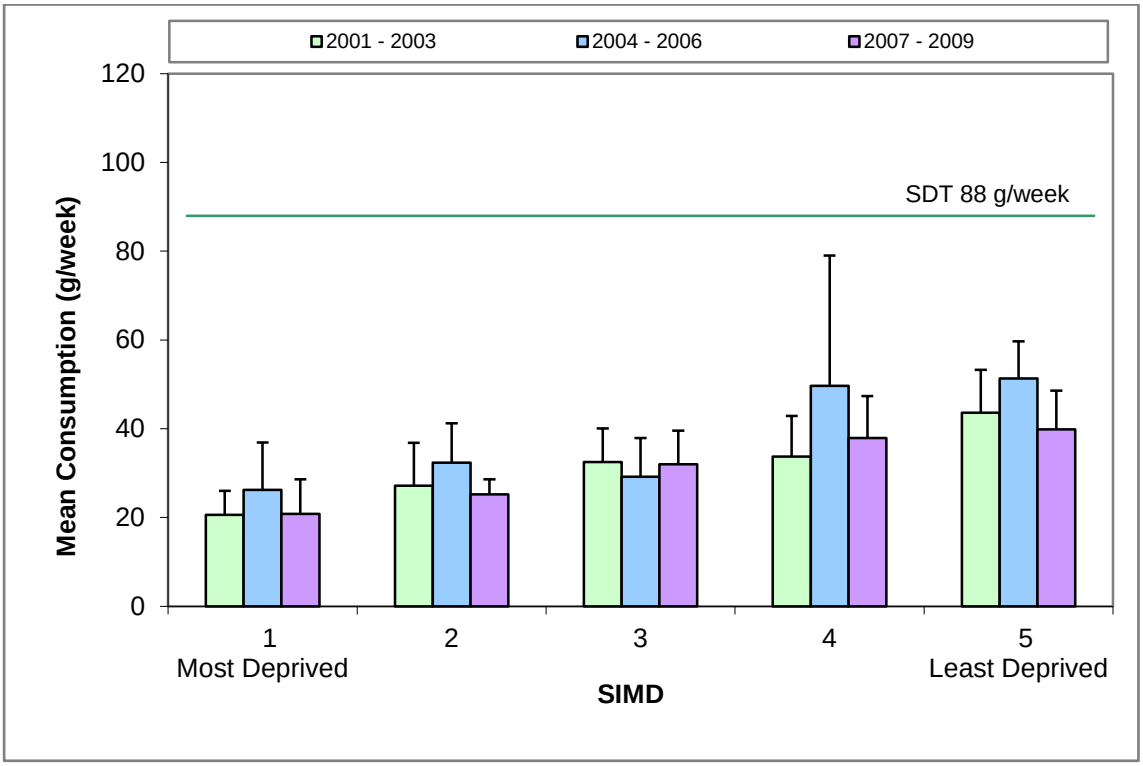


Figure 4b: By SIMD Quintile



3.2 Nutrient Intake Relating to the Scottish Dietary Targets and FSA Targets

Overall no significant changes were found in intakes of food energy, fat, complex carbohydrates or NSP over the period 2001-2009 (Table 4) and in 2009, the percentage of food energy from total fat remained above the SDT of no more than 35% at around 39% (Figure 5a).

There was a small but significant decrease in the percentage of food energy from saturated fat which fell from 15.5% in 2001 to 15.1% in 2009 (Table 4 and Figure 6a) (P-value of linear association = 0.036). However intakes remain higher than the SDT of no more than 11%. The percentage of food energy contributed by NMES rose slightly from 2001 to 2003 (from 15.5% to 16.1%) but then has steadily fallen to 14.8% in 2009 (Table 4 and Figure 7a) (P-value of linear association = 0.005). However, intakes remain higher than the SDT for children (less than 10% of total energy) and the UK Dietary Reference Values for adults (less than 11% of food energy) (Department of Health, 1991).

There was a small decrease in the percentage of food energy from saturated fat and non-milk extrinsic sugar (added sugar) intake but no change for total fat. All remained above the Scottish Dietary Targets

Complex carbohydrate (CHO) (the sum of the non-sugar carbohydrates i.e. starch plus non starch polysaccharides (NSP)) has fluctuated slightly between 2001 and 2009 with intakes in 2009 of 145g/day (Table 4, Figure 8a).

Table 5 and Figures 5b, 6b, and 8b show that there were no differences in the percentage of food energy from total fat and saturated fat, and intake of complex carbohydrate by SIMD quintile for 2007 to 2009. Table 5 and Figure 7b shows that NMES was significantly lower in the least deprived quintile (Quintile 5) at 14.3% of food energy, compared with 15.5% of food energy in the most deprived quintile (Quintile 1) (P-value of linear association = 0.011). A significant difference was also found in intake of NSP by SIMD quintile with intakes significantly higher in the least deprived quintile (Quintile 5) at 13.8g/day, compared with 11.4g/day in the most deprived quintile (Quintile 1) (Table 5) (P-value of linear association = <0.001). However mean intakes of both NMES and NSP in the least deprived quintile of SIMD still failed to meet recommended amounts. Results tables for 2001-2003 and 2004-2006 from Barton *et al*., (2010) are provided in Appendix 7 for comparison.

Non-milk extrinsic sugar expressed as a percentage of food energy was highest in the most deprived fifth of the population (which also had the highest consumption of soft drinks)

Analysis by SII and RII confirm the above differences by SIMD in absolute and relative terms.

Figures 5b, 6b, 7b and 8b illustrate nutrient intake over time with regards to deprivation and Appendix 8 provides the results of the SII and RII analysis showing that there has been no significant change in inequalities from 2001 to 2009.

Table 4: Intake of Scottish Diet Action Plan 1996 Target Nutrients by Year, 2001 to 2009

LCF data (units/person/day)

	Scottish Dietary Target	2001 Mean 95% CI	2002 Mean 95% CI	2003 Mean 95% CI	2004 Mean 95% CI	2005 Mean 95% CI	2006[1] Mean 95% CI	2007 Mean 95% CI	2008 Mean 95% CI	2009 Mean 95% CI	*P-value for Linear Association*
% Food Energy - Fat	≤35%	38.8	38.7	38.9	38.6	38.9	38.7	38.6	39.0	39.0	*0.638*
		38.1, 39.6	38.1, 39.2	38.2, 39.7	38.0, 39.2	38.2, 39.6	38.0, 39.4	38.0, 39.3	38.3, 39.6	38.4, 39.6	
% Food Energy - Saturated Fat	≤11%	15.5	15.6	15.6	15.4	15.4	15.7	15.3	15.3	15.1	***0.036***
		15.2, 15.8	15.3, 15.9	15.2, 16.0	15.1, 15.7	15.1, 15.7	15.3, 16.0	15.0, 15.6	15.0, 15.7	14.8, 15.4	
% Food Energy - NMES	Adults - No ↑[2] Children - <10%	15.5	15.6	16.1	15.5	15.2	15.0	14.9	15.0	14.8	***0.005***
		14.9, 16.1	15.1, 16.1	15.3, 16.8	14.8, 16.2	14.6, 15.9	14.4, 15.7	14.4, 15.5	14.4, 15.6	14.2, 15.5	
Complex CHO g	155g per day	146	145	141	139	141	141	147	144	145	*0.899*
		141, 151	140, 151	135, 146	134, 145	133, 148	134, 147	140, 153	135, 152	138, 151	
NSP g[3]		12.4	12.4	12.1	12.2	12.5	12.4	12.7	12.8	12.9	*0.088*
		11.9, 12.9	11.9, 12.9	11.6, 12.7	11.6, 12.8	12.0, 13.0	11.8, 13.0	12.0, 13.3	12.0, 13.6	12.2, 13.5	
Food Energy - MJ		8.7	8.6	8.6	8.4	8.4	8.3	8.7	8.5	8.5	*0.454*
		8.4, 9.0	8.3, 8.9	8.3, 8.9	8.1, 8.7	8.1, 8.7	8.0, 8.6	8.3, 9.2	7.9, 9.0	8.2, 8.8	
Food Energy - kcal		2066	2047	2044	1997	1999	1977	2081	2013	2022	*0.467*
		1998, 2134	1983, 2112	1963, 2125	1920, 2074	1916, 2081	1908, 2045	1978, 2184	1890, 2137	1951, 2093	
n Households *n People* *n People Weighted*[4]		*619* *1414* *5015*	*585* *1342* *4967*	*546* *1266* *4952*	*590* *1329* *4948*	*566* *1285* *4939*	*577* *1365* *4906*	*500* *1093* *5040*	*494* *1058* *5143*	*543* *1222* *5181*	

Household and eating out intakes combined

[1]From 2006 the EFS moved from a financial year to a calendar year basis. As a consequence of this the January to March 2006 data are duplicated in the 2005/2006 and the 2006 results

[2]DRV for Adults 11% Food Energy; [3]DRV=18g (Department of Health, 1991)

[4]The results are weighted to the Scottish population - the number provided is approximately 1000th of the Scottish population

Table 5: Intake of Scottish Diet Action Plan 1996 Target Nutrients by SIMD, 2007 to 2009 Combined

LCF data (units/person/day)

	Scottish Dietary Target	SIMD Quintile 1* Mean 95% CI	SIMD Quintile 2 Mean 95% CI	SIMD Quintile 3 Mean 95% CI	SIMD Quintile 4 Mean 95% CI	SIMD Quintile 5* Mean 95% CI	*P-value for Linear Association*	SII 95% CI	RII 95%CI
% Food Energy - Fat	≤35%	38.8	39.1	38.6	39.1	38.7	*0.922*	-0.1	0.00
		37.6, 39.9	38.2, 40.0	37.8, 39.5	38.1, 40.2	38.1, 39.3		-1.7, 1.6	-0.04, 0.04
% Food Energy - Saturated Fat	≤11%	15.2	15.0	15.3	15.3	15.4	*0.281*	0.3	0.02
		14.8, 15.7	14.6, 15.3	14.8, 15.8	14.9, 15.8	15.0, 15.7		-0.3, 0.9	-0.02, 0.06
% Food Energy - NMES	Adults - No ↑[1] Children - <10%	15.5	14.9	15.6	14.5	14.3	***0.011***	-1.5	-0.10
		14.6, 16.5	14.0, 15.8	14.4, 16.8	13.9, 15.1	13.7, 14.8		-2.6, -0.4	-0.17, -0.03
Complex CHO g	155g per day	143	143	144	147	147	*0.346*	6.1	0.04
		133, 154	136, 150	136, 152	136, 157	142, 153		-6.8, 19.1	-0.05, 0.13
NSP g[2]		11.4	12.4	12.6	13.1	13.8	***<0.001***	2.7	0.21
		10.5, 12.3	11.7, 13.2	11.9, 13.3	12.0, 14.2	13.2, 14.4		1.5, 3.9	0.12, 0.30
Food Energy - MJ		8.5	8.5	8.6	8.6	8.6	*0.625*	0.2	0.02
		7.9, 9.1	8.0, 8.9	8.2, 9.0	8.1, 9.1	8.3, 8.9		-0.6, 0.9	-0.07, 0.10
Food Energy - kcal		2022	2021	2037	2057	2048	*0.629*	42.7	0.02
		1889, 2156	1916, 2126	1944, 2131	1937, 2177	1971, 2126		-136, 221	-0.07, 0.11
n Households		*270*	*309*	*303*	*301*	*354*		*1537*	*1537*
n People		*540*	*658*	*656*	*665*	*852*		*3371*	*3371*
n People Weighted[3]		*2495*	*2974*	*2948*	*3057*	*3882*		*15356*	*15356*

Household and eating out intakes combined

***Scottish Index of Multiple Deprivation (SIMD) Quintiles: 1=Most Deprived; 5=Least Deprived; ** SII=Slope Index of Inequality; ***RII=Relative Index of Inequality**

[1]DRV for Adults 11% Food Energy; [2]DRV=18g (Department of Health, 1991)

[3]The results are weighted to the Scottish population - the number provided is approximately 1000[th] of the Scottish population

Figure 5: Mean (with 95% CI) total fat intake (% food energy) compared with SDT (<35% food energy)

Figure 5a: By Year 2001 - 2009

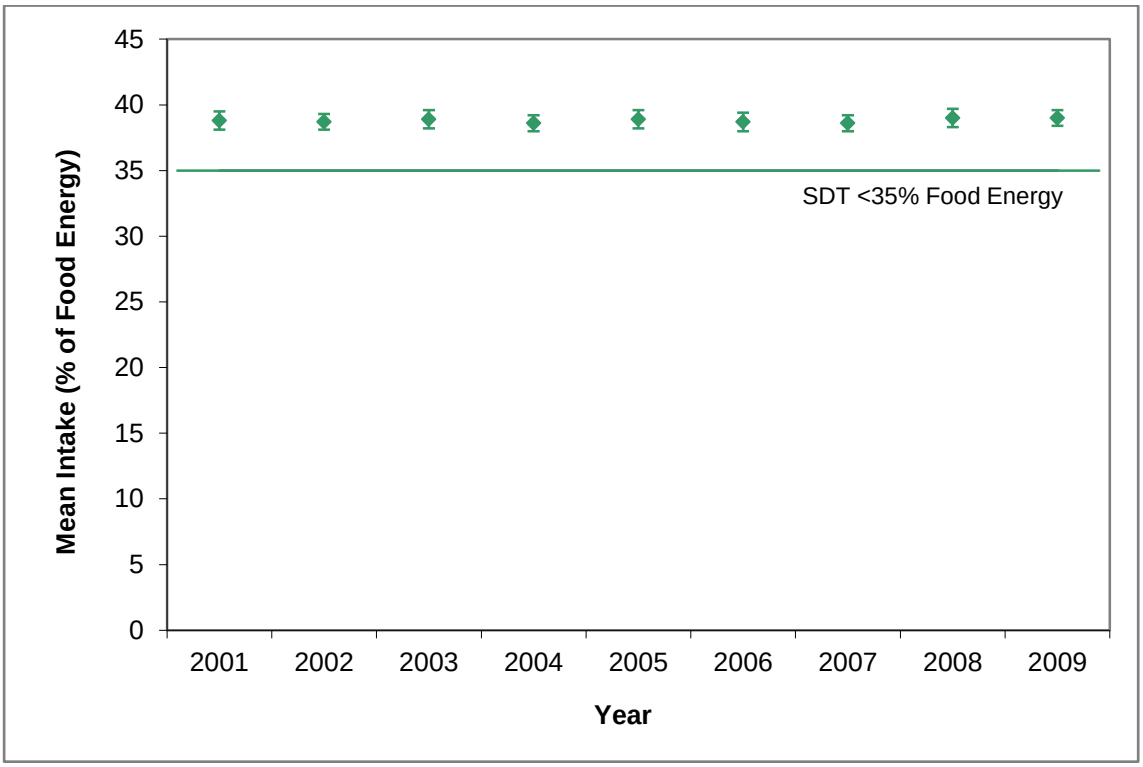


Figure 5b: By SIMD Quintile

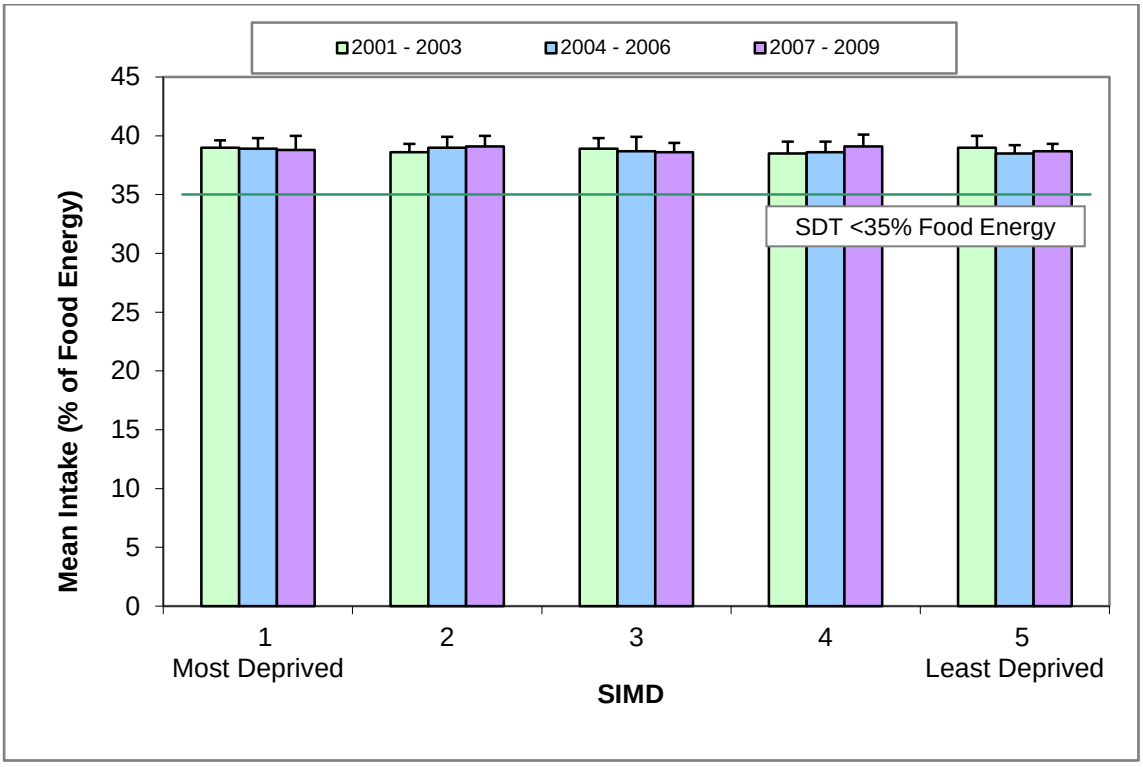


Figure 6: Mean (with 95% CI) saturated fat intake (% food energy) compared with SDT (<11% food energy)

Figure 6a: By Year 2001 - 2009

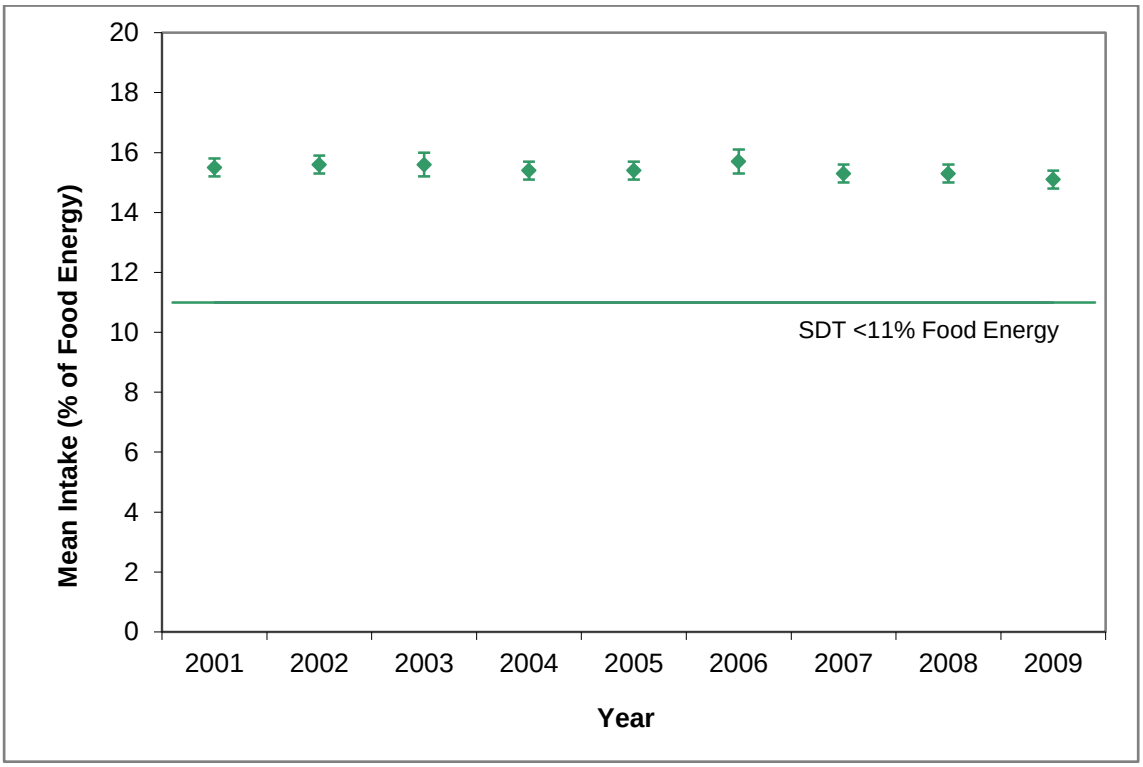


Figure 6b: By SIMD Quintile

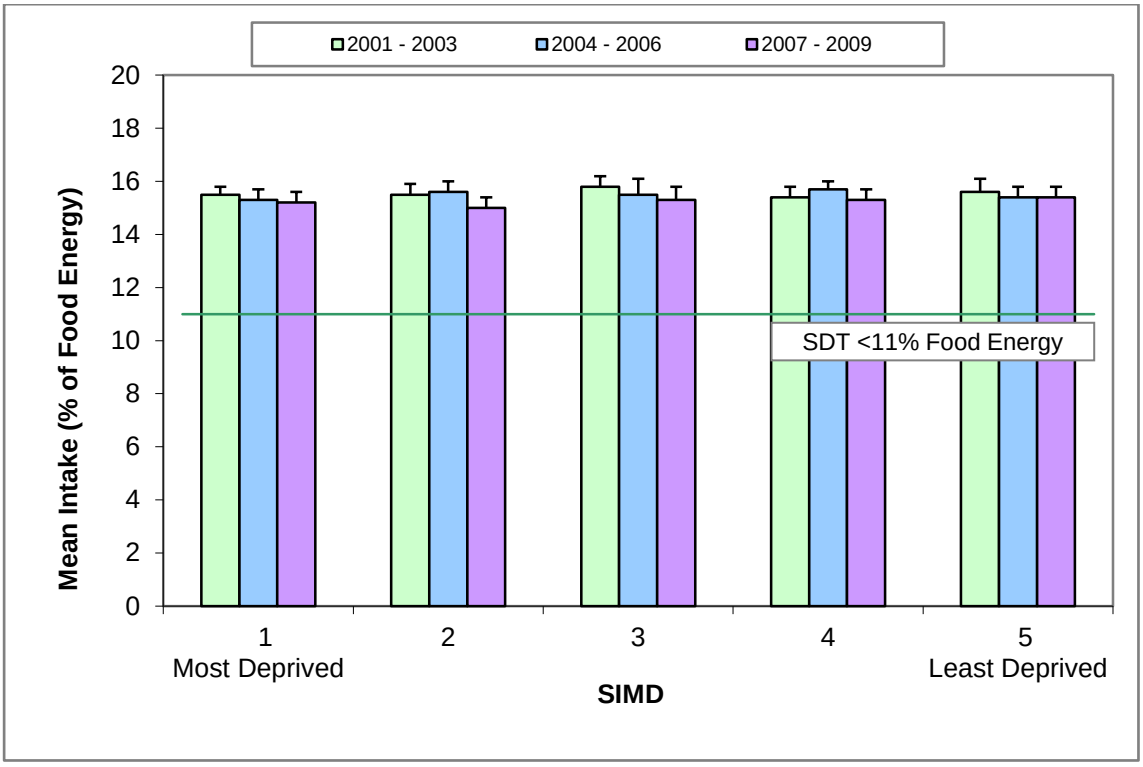


Figure 7: Mean (with 95% CI) NMES intake (% food energy) compared with DRV (<11% food energy)

Figure 7a: By Year 2001 - 2009

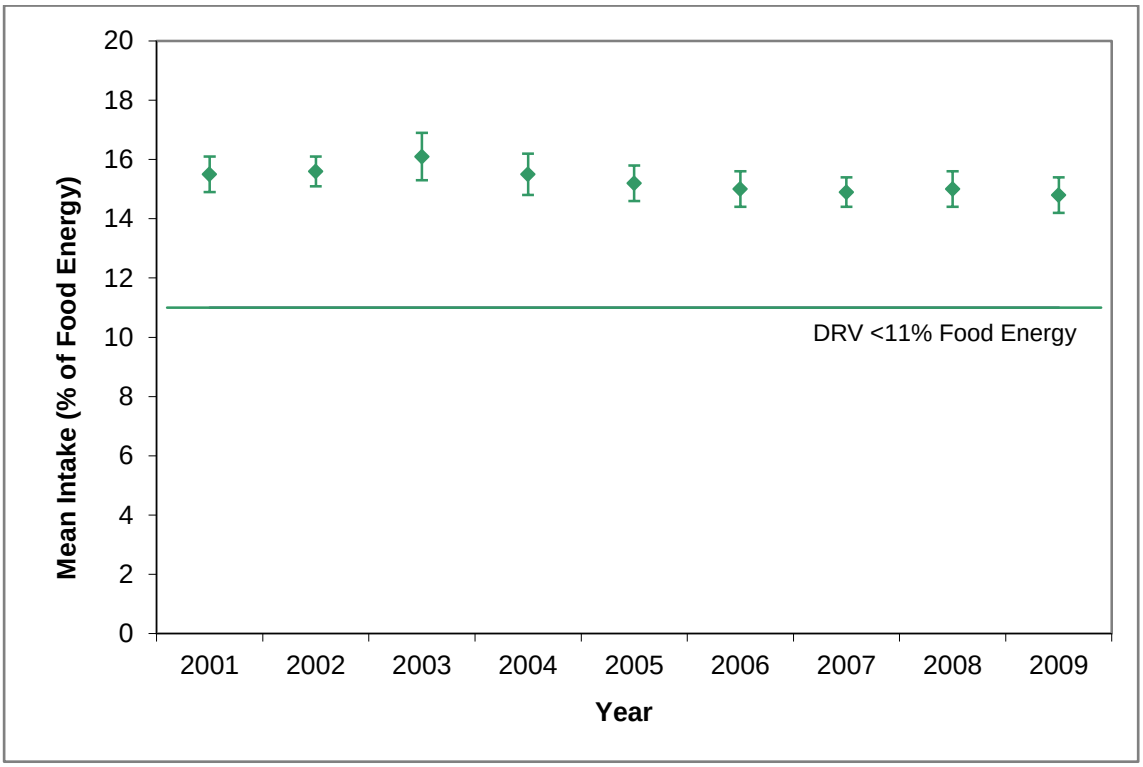


Figure 7b: By SIMD Quintile

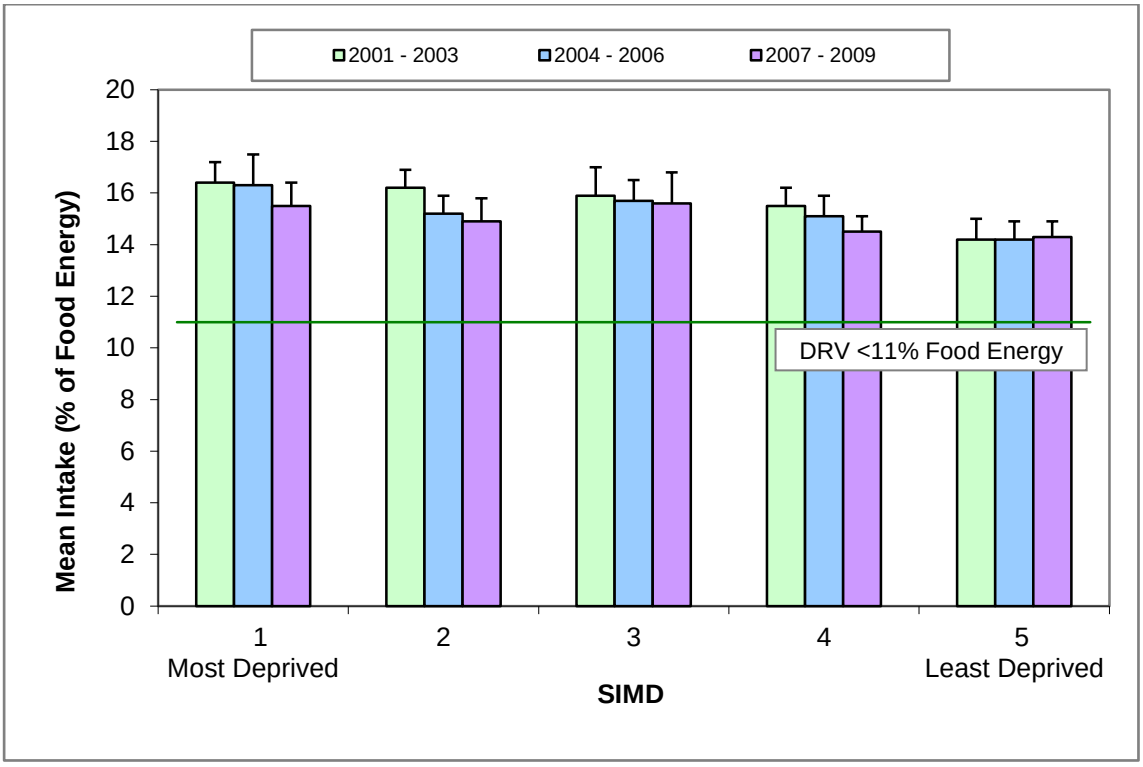


Figure 8: Mean (with 95% CI) complex carbohydrate intake compared with SDT (>155g/day)

Figure 8a: By Year 2001 - 2009

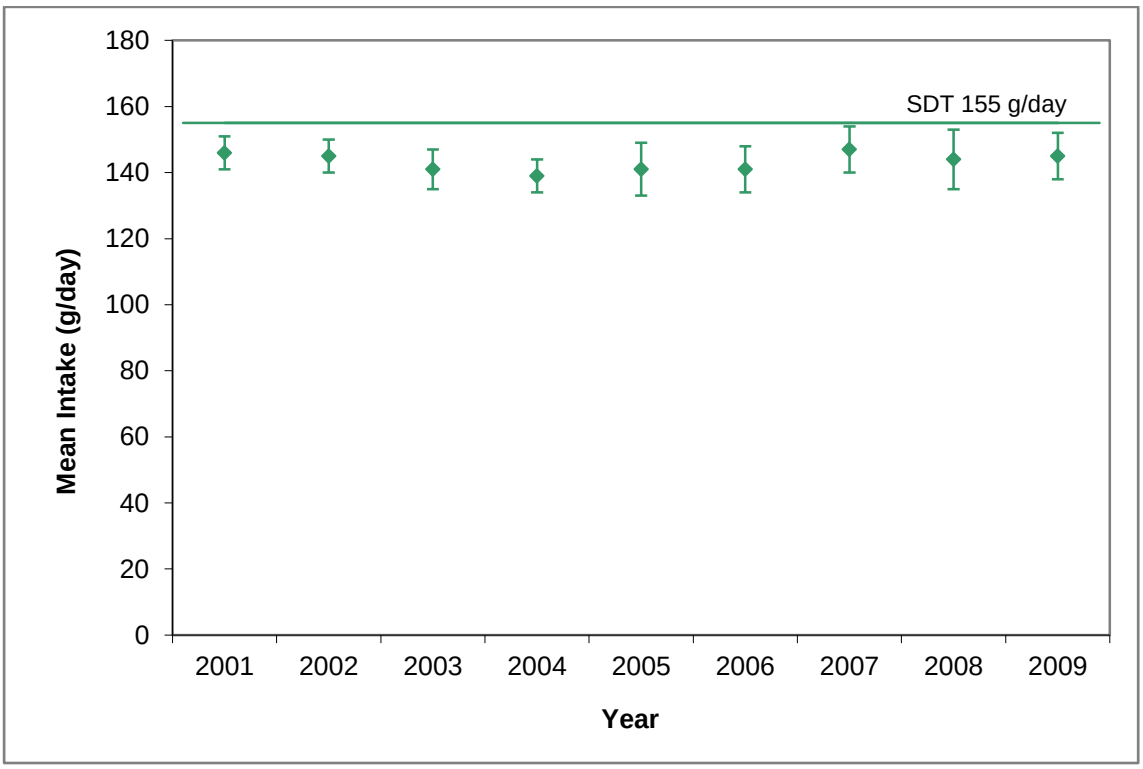
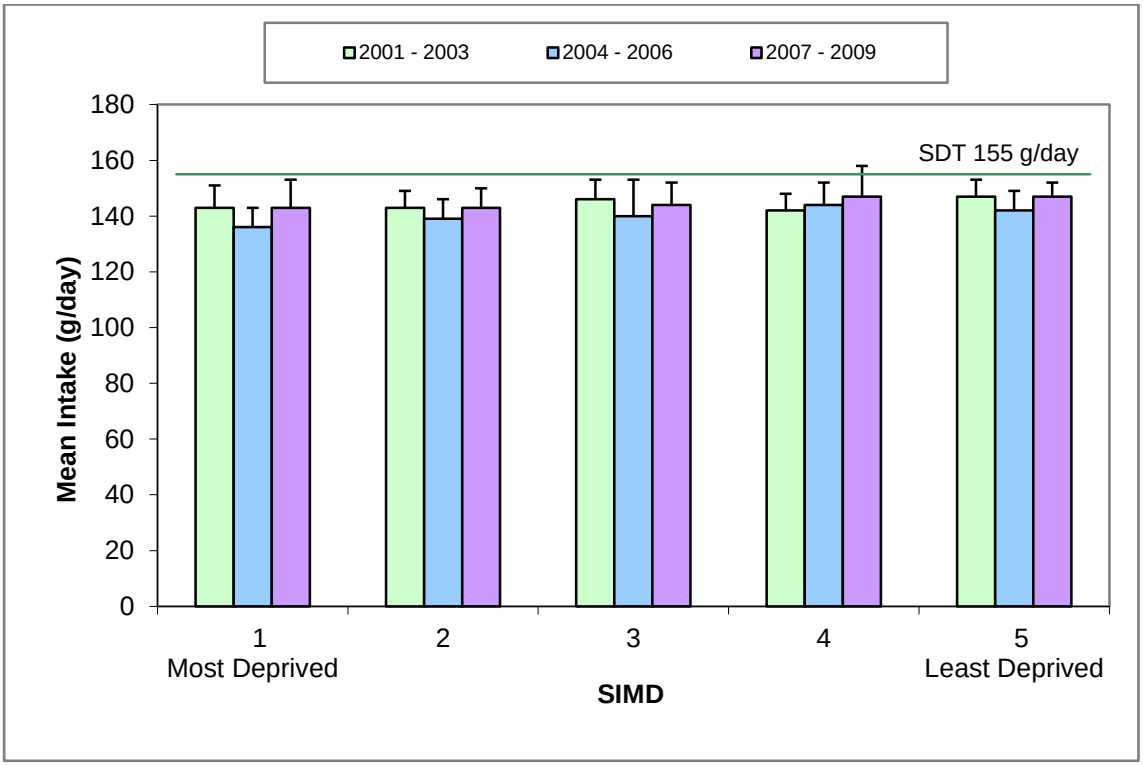


Figure 8b: By SIMD Quintile



3.3 Consumption of Additional Foods and Drinks Indicative of Diet Quality

Foods contributing NMES (Tables 6 and 8; Figures 9a and 9b)

Mean consumption of cakes, sweet biscuits and pastries have remained fairly constant with intakes in 2009 of about 39g/day. The initial upward, followed by downward trend in sugar confectionery and sugar containing soft drinks mirrored that for NMES (i.e. increased slightly from 2001 to 2003 but then fell again towards 2009) giving an overall fall from 7.6g/day in 2001 to 7.0/day in 2009 for sugar confectionery and 234g/day to 213g/day for sugar containing soft drinks (Table 6 and Figure 9a).

Sugar containing soft drink consumption was significantly higher in the most deprived quintile of SIMD (Quintile 1) with mean daily consumption 284g compared to 180g in the least deprived quintile (Quintile 5) which equates to a difference of approximately one third of a standard can (Table 8 and Figure 9b). Conversely, consumption of cakes and pastries was highest in the least deprived quintile (Quintile 5), with intakes of 20g/day compared to 15g/day in the most deprived quintile (Quintile 1). Results tables for foods contributing NMES for 2001-2003 and 2004-2006 from Barton *et al*., (2010) are provided in Appendix 7 for comparison.

Analysis by SII and RII confirm the above differences by SIMD in absolute and relative terms.

Figure 9b illustrates differences over time in sugar containing soft drink consumption with regards to deprivation.

Appendix 8 provides the results for the SII and RII analysis for consumption of sweet foods and drinks over time with regards to deprivation and shows that there has been no significant change in inequalities from 2001 to 2009 with the exception of sugar free soft drinks. In 2001-2003 the least deprived had a significantly higher consumption of sugar free soft drinks than the most deprived quintile; in 2004-2006 the opposite was found; and in 2007-2009 there was no significant difference between the two quintiles. This suggests that the inequality in sugar free soft drink consumption has disappeared.

Foods Contributing Fat (Tables 7 and 9)

Mean consumption of total red meat decreased slightly from 65g/day in 2001 to 61g/day in 2009 (P-value for linear association = 0.039) and this was partly accounted for by a fall in the other red meat products group (which includes the meat portion of sausages, meat pies, corned beef, burgers and pate and is a component of total red meat). Bacon and ham intakes have remained constant over the same time period. Total milk consumption decreased from 250g/day in 2001 to 232g/day in 2009 (P-value of linear association = 0.024). This was caused by a decrease in whole milk from 92g/day to 60g/day (P-value of linear association = <0.001) but there was also a slight increase in intakes of skimmed milks. The decrease in whole milk and total red meat is in line with the drop in saturated fat. Processed potato (e.g. chips) and savoury snack consumption has decreased slightly over the period from 33g/day in 2001 to 29g/day in 2009 and from 15g/day in 2001 to 14g/day in 2009 respectively (P-

values for linear association = 0.001 and 0.028 respectively). Takeaway food consumption has remained fairly constant at around 20g/day.

Consumption of foods in the other red meat products group; whole milk; processed potatoes and takeaway foods were significantly highest in the most deprived quintile of SIMD (Quintile 1) (Table 9). Mean consumption of whole milk was more than double for the most deprived compared to the least deprived quintile. Results tables for 2001-2003 and 2004-2006 from Barton *et al*., (2010) are provided in Appendix 7 for comparison.

Analysis by SII and RII confirm the above differences by SIMD in absolute and relative terms.

Appendix 8 provides the results for the SII and RII analysis for food consumption over time with regards to deprivation showing that there has been no significant change in inequalities from 2001 to 2009.

Table 6: Consumption of Additional Foods and Drinks Indicative of Diet Quality (sweet) by Year, 2001 to 2009

LCF data (g/person/day)

Food	2001 Mean 95% CI	2002 Mean 95% CI	2003 Mean 95% CI	2004 Mean 95% CI	2005 Mean 95% CI	2006[1] Mean 95% CI	2007 Mean 95% CI	2008 Mean 95% CI	2009 Mean 95% CI	*P-value for Linear Association*
Cakes and Pastries	18.1	16.9	16.9	17.7	16.4	18.1	17.4	19.1	16.1	*0.979*
	16.0, 20.2	15.0, 18.7	14.9, 18.8	15.6, 19.7	15.1, 17.8	16.3, 20.0	15.3, 19.5	16.9, 21.2	14.6, 17.5	
Sweet Biscuits	21.7	23.3	22.1	21.3	19.6	22.4	24.0	23.9	22.9	*0.195*
	20.0, 23.4	21.1, 25.5	20.0, 24.2	19.4, 23.3	17.5, 21.7	20.0, 24.8	21.3, 26.6	21.1, 26.8	20.6, 25.3	
Cakes, Sweet Biscuits and Pastries	39.8	40.2	39.0	39.0	36.0	40.6	41.4	43.0	39.0	*0.412*
	36.9, 42.7	36.8, 43.6	35.5, 42.5	35.7, 42.3	33.3, 38.8	37.1, 44.0	37.3, 45.4	38.6, 47.4	35.7, 42.3	
Sugar and Preserves	19.3	17.0	19.8	18.0	15.5	17.4	18.9	18.1	16.9	*0.458*
	16.8, 21.9	14.9, 19.2	16.4, 23.1	16.0, 20.0	13.4, 17.5	14.5, 20.3	15.7, 22.0	15.1, 21.1	13.7, 20.2	
Chocolate Confectionery	13.5	14.9	15.8	14.6	13.7	13.8	15.1	15.5	15.2	*0.455*
	11.6, 15.5	13.1, 16.7	13.8, 17.8	12.5, 16.7	12.0, 15.4	12.0, 15.5	12.2, 18.1	13.2, 17.9	13.1, 17.3	
Sugar Confectionery	7.6	7.9	7.9	7.1	6.8	6.6	6.8	6.5	7.0	***0.029***
	6.5, 8.7	6.6, 9.1	6.9, 8.8	6.2, 8.1	5.5, 8.0	5.4, 7.8	5.9, 7.6	5.0, 8.0	5.9, 8.2	
Total Confectionery	21.2	22.8	23.7	21.8	20.5	20.3	21.9	22.0	22.2	*0.769*
	18.6, 23.7	20.3, 25.2	21.3, 26.2	19.4, 24.1	18.2, 22.8	17.9, 22.8	18.5, 25.3	18.8, 25.2	19.5, 24.8	
Sugar Containing Soft Drinks	234	241	260	246	233	222	220	213	213	***0.007***
	208, 260	215, 266	235, 284	219, 272	204, 263	196, 248	194, 245	185, 242	185, 241	
Sugar Free Soft Drinks	98.2	108	106	85.0	84.9	112	86.3	100	78.3	*0.058*
	83.0, 113	89.2, 126	86.3, 126	72.4, 97.6	67.4, 102	91.3, 132	65.6, 107	81.0, 119	62.3, 94.3	
Total Soft Drinks	332	348	366	331	318	334	306	313	291	***0.001***
	305, 359	315, 382	337, 395	299, 362	280, 356	299, 369	269, 342	271, 355	259, 324	
n Households	*619*	*585*	*546*	*590*	*566*	*577*	*500*	*494*	*543*	
n People	*1414*	*1342*	*1266*	*1329*	*1285*	*1365*	*1093*	*1058*	*1222*	
n People Weighted[2]	*5015*	*4967*	*4952*	*4948*	*4939*	*4906*	*5040*	*5143*	*5181*	

Household and eating out consumption combined

[1]From 2006 the EFS moved from a financial year to a calendar year basis. As a consequence of this the January to March 2006 data are duplicated in the 2005/2006 and the 2006 results

[2]The results are weighted to the Scottish population, the number provided is approximately 1000th of the Scottish population

Table 7: Consumption of Additional Foods and Drinks Indicative of Diet Quality (not sweet) by Year, 2001 to 2009. LCF data (g/person/day)

Food	2001 Mean 95% CI	2002 Mean 95% CI	2003 Mean 95% CI	2004 Mean 95% CI	2005 Mean 95% CI	2006[1] Mean 95% CI	2007 Mean 95% CI	2008 Mean 95% CI	2009 Mean 95% CI	*P-value for Linear Association*
Total Red Meat[2]	64.6	64.5	66.3	61.1	62.1	60.1	64.8	58.1	61.1	***0.039***
	59.9, 69.3	60.7, 68.4	62.2, 70.3	57.3, 64.9	58.3, 65.9	56.3, 63.9	58.6, 71.0	52.3, 63.9	57.0, 65.1	
Bacon and Ham	12.4	11.7	12.4	11.4	11.8	11.9	12.0	11.9	12.7	*0.694*
	11.1, 13.7	10.5, 12.9	11.1, 13.8	10.4, 12.4	10.8, 12.8	10.6, 13.2	10.8, 13.2	10.5, 13.2	11.6, 13.9	
Other Red Meat Products[2,3]	28.8	28.6	30.9	27.1	28.6	25.5	28.5	24.9	27.7	***0.021***
	26.1, 31.6	26.5, 30.7	28.9, 32.9	24.8, 29.5	26.2, 30.9	23.2, 27.7	26.4, 30.5	21.8, 27.9	25.4, 30.1	
Butter	6.1	5.7	5.6	6.1	6.8	7.3	7.4	6.3	5.7	*0.239*
	5.2, 7.1	4.9, 6.6	4.3, 6.9	5.1, 7.0	5.6, 8.0	6.0, 8.5	6.2, 8.6	5.2, 7.4	4.8, 6.7	
Whole Milk	91.6	85.2	89.7	68.1	59.2	71.4	59.2	52.9	59.5	***<0.001***
	75.8, 107	72.9, 97.5	74.1, 105	56.2, 79.9	47.1, 71.2	56.9, 85.8	48.1, 70.3	38.0, 67.8	46.0, 72.9	
Semi-skimmed Milk	126	125	125	124	136	127	139	137	138	*0.081*
	111, 140	113, 138	112, 137	110, 138	122, 150	113, 141	125, 153	121, 154	120, 156	
Skimmed Milk	14.8	12.5	9.2	13.4	14.1	14.4	13.8	18.9	17.8	***0.045***
	8.9, 20.8	8.6, 16.5	6.0, 12.5	8.6, 18.2	9.1, 19.1	10.6, 18.1	9.2, 18.5	13.9, 23.8	13.0, 22.6	
Total Milk	250	249	245	227	225	233	234	226	232	***0.024***
	235, 266	235, 264	227, 263	210, 243	211, 239	217, 248	220, 248	207, 245	214, 251	
Processed Potatoes	32.8	32.8	31.9	28.0	27.5	28.1	28.7	26.8	29.1	***0.001***
	29.7, 36.0	29.8, 35.7	28.9, 34.9	25.5, 30.5	24.2, 30.8	25.3, 30.8	25.5, 32.0	23.3, 30.3	26.1, 32.0	
Savoury Snacks	14.6	14.4	14.6	12.0	12.5	12.4	13.5	12.3	13.5	***0.028***
	13.3, 16.0	13.1, 15.7	13.5, 15.8	10.8, 13.2	11.1, 13.9	11.3, 13.5	11.9, 15.1	10.6, 14.0	12.3, 14.7	
Takeaway Foods	19.9	23.9	21.0	19.9	20.5	21.0	21.0	18.1	21.3	*0.349*
	17.2, 22.6	21.0, 26.8	18.4, 23.7	16.8, 22.9	17.2, 23.7	18.1, 23.9	17.7, 24.4	15.5, 20.6	17.9, 24.6	
n Households	*619*	*585*	*546*	*590*	*566*	*577*	*500*	*494*	*543*	
n People	*1414*	*1342*	*1266*	*1329*	*1285*	*1365*	*1093*	*1058*	*1222*	
n People Weighted[4]	*5015*	*4967*	*4952*	*4948*	*4939*	*4906*	*5040*	*5143*	*5181*	

Household and eating out consumption combined

[1]From 2006 the EFS moved from a financial year to a calendar year basis. As a consequence of this the January to March 2006 data are duplicated in the 2005/2006 and the 2006 results

[2]Meat portion only – see appendices 2 & 4 for methodology; [3]Other Red Meat Products includes the meat portion of sausages, meat pies, corned beef, burgers and pate and is a component of total red meat; [4]The results are weighted to the Scottish population, the number provided is approximately 1000th of the Scottish population

Table 8: Consumption of Additional Foods and Drinks Indicative of Diet Quality (sweet) by SIMD, 2007 to 2009 Combined

LCF data (g/person/day)

Food	SIMD Quintile 1* Mean 95% CI	SIMD Quintile 2 Mean 95% CI	SIMD Quintile 3 Mean 95% CI	SIMD Quintile 4 Mean 95% CI	SIMD Quintile 5* Mean 95% CI	*P-value for Linear Association*	SII 95% CI	RII 95%CI
Cakes and Pastries	15.2	15.2	18.0	18.4	19.7	***0.006***	6.1	0.35
	12.8, 17.6	13.3, 17.1	15.8, 20.2	15.4, 21.3	17.4, 22.0		1.9, 10.3	0.11, 0.59
Sweet Biscuits	24.2	21.2	25.5	23.2	24.0	*0.692*	1.0	0.04
	20.5, 28.0	18.6, 23.8	21.1, 29.9	19.3, 27.1	21.7, 26.3		-3.8, 5.7	-0.16, 0.24
Cakes, Sweet Biscuits and Pastries	39.4	36.4	43.5	41.5	43.7	*0.070*	7.1	0.17
	34.0, 44.9	32.7, 40.1	38.0, 48.9	35.2, 47.8	40.3, 47.0		-0.5, 14.6	-0.01, 0.36
Sugar and Preserves	16.4	17.5	18.4	22.1	15.8	*0.779*	0.6	0.03
	13.4, 19.3	12.0, 23.0	16.0, 20.9	17.9, 26.2	13.3, 18.2		-5.0, 6.3	-0.28, 0.35
Chocolate Confectionery	13.6	15.5	16.6	14.1	16.1	*0.443*	1.7	0.11
	11.4, 15.7	11.9, 19.2	14.1, 19.1	11.4, 16.8	13.8, 18.4		-2.7, 6.0	-0.18, 0.39
Sugar Confectionery	7.9	6.8	6.7	6.7	6.1	*0.151*	-1.8	-0.26
	6.1, 9.8	5.8, 7.8	5.5, 8.0	5.2, 8.2	4.8, 7.4		-4.3, 0.7	-0.63, 0.10
Total Confectionery	21.5	22.3	23.3	20.7	22.2	*0.958*	-0.1	0.00
	18.1, 25.0	18.4, 26.3	20.3, 26.3	17.5, 24.0	19.5, 24.9		-5.6, 5.3	-0.25, 0.24
Sugar Containing Soft Drinks	284	246	214	175	180	***<0.001***	-134	-0.62
	244, 325	207, 286	186, 242	155, 195	157, 203		-185, -82.7	-0.86, -0.38
Sugar Free Soft Drinks	93.0	93.7	76.9	97.2	82.4	*0.629*	-9.4	-0.11
	66.3, 120	70.4, 117	62.1, 91.8	73.5, 121	63.8, 101		-47.8, 29.0	-0.54, 0.33
Total Soft Drinks	377	340	291	272	262	***<0.001***	-143	-0.47
	320, 434	295, 385	256, 326	237, 308	229, 295		-210, -76.7	-0.69, -0.25
n Households	*270*	*309*	*303*	*301*	*354*		*1537*	*1537*
n People	*540*	*658*	*656*	*665*	*852*		*3371*	*3371*
n People Weighted[1]	*2495*	*2974*	*2948*	*3057*	*3882*		*15356*	*15356*

Household and eating out intakes combined

***SIMD Quintiles: 1=Most Deprived; 5=Least Deprived; ** SII=Slope Index of Inequality; ***RII=Relative Index of Inequality**

[1]The results are weighted to the Scottish population, the number provided is approximately 1000th of the Scottish population

Table 9: Consumption of Additional Foods and Drinks Indicative of Diet Quality (not sweet) by SIMD, 2007 to 2009 Combined

LCF data (g/person/day)

Food	SIMD Quintile 1* Mean 95% CI	SIMD Quintile 2 Mean 95% CI	SIMD Quintile 3 Mean 95% CI	SIMD Quintile 4 Mean 95% CI	SIMD Quintile 5* Mean 95% CI	*P-value for Linear Association*	SII 95% CI	RII 95%CI
Total Red Meat[1]	63.7	64.9	60.3	62.4	57.0	*0.117*	-8.6	-0.14
	56.8, 70.6	58.9, 70.9	55.4, 65.2	53.5, 71.3	52.0, 62.0		-19.3, 2.1	-0.31, 0.03
Bacon and Ham	10.7	12.5	12.7	12.3	12.5	*0.275*	1.5	0.12
	8.8, 12.5	10.9, 14.2	11.7, 13.8	10.5, 14.1	11.1, 14.0		-1.3, 4.2	-0.11, 0.34
Other Red Meat Products[1,2]	33.4	30.6	25.8	24.6	23.0	***<0.001***	-13.1	-0.49
	29.2, 37.5	27.5, 33.8	22.7, 28.8	22.0, 27.3	20.0, 25.9		-18.3, -7.8	-0.68, -0.29
Butter	5.9	5.1	7.6	7.0	6.7	*0.138*	1.6	0.25
	4.7, 7.2	3.9, 6.2	6.0, 9.1	5.6, 8.3	5.3, 8.0		-0.6, 3.7	-0.09, 0.57
Whole Milk	91.1	59.4	60.4	41.9	43.2	***0.001***	-53	-0.93
	65.4, 117	47.0, 71.7	44.4, 76.4	30.4, 53.3	28.3, 58.1		-82.1, -23.9	-1.44, -0.42
Semi-skimmed Milk	135	128	142	146	138	*0.521*	10.9	0.08
	106, 164	108, 148	124, 160	122, 170	119, 157		-23.6, 45.3	-0.17, 0.33
Skimmed Milk	11.7	13.3	22.9	17.3	17.9	*0.129*	7.2	0.43
	4.9, 18.5	8.2, 18.5	14.5, 31.2	10.3, 24.4	12.2, 23.5		-2.3, 16.8	-0.14, 1.00
Total Milk	252	223	237	223	224	*0.101*	-26.2	-0.11
	227, 278	205, 241	217, 258	201, 245	206, 242		-58.1, 5.7	-0.25, 0.02
Processed Potatoes	35.4	32.2	27.6	25.7	22.9	***<0.001***	-15.5	-0.55
	30.6, 40.2	28.1, 36.2	24.2, 31.0	21.8, 29.7	19.6, 26.2		-22.4, -8.6	-0.79, -0.30
Savoury Snacks	14.0	13.3	13.4	12.8	12.3	*0.182*	-1.9	-0.15
	12.2, 15.8	11.7, 15.0	11.7, 15.1	10.7, 14.9	10.3, 14.4		-4.8, 0.9	-0.37, 0.07
Takeaway Foods	24.2	24.8	17.7	16.7	18.3	***0.008***	-9.4	-0.47
	19.1, 29.4	20.4, 29.3	14.4, 21.1	13.5, 19.9	14.8, 21.9		-16.4, -2.5	-0.82, -0.12
n Households	*270*	*309*	*303*	*301*	*354*		*1537*	*1537*
n People	*540*	*658*	*656*	*665*	*852*		*3371*	*3371*
n People Weighted[3]	*2495*	*2974*	*2948*	*3057*	*3882*		*15356*	*15356*

Household and eating out intakes combined

***Scottish Index of Multiple Deprivation (SIMD) Quintiles: 1=Most Deprived; 5=Least Deprived; ** SII=Slope Index of Inequality; ***RII=Relative Index of Inequality**

[1]Meat portion only – see appendices 2 & 4 for methodology; [2] Other Red Meat Products include the meat portion of sausages, meat pies, corned beef, burgers and pate and is a component of total red meat; [3]The results are weighted to the Scottish population, the number provided is approximately 1000th of the Scottish population

Figure 9: Mean (with 95% CI) sugar containing soft drink consumption

Figure 9a: By Year 2001 - 2009

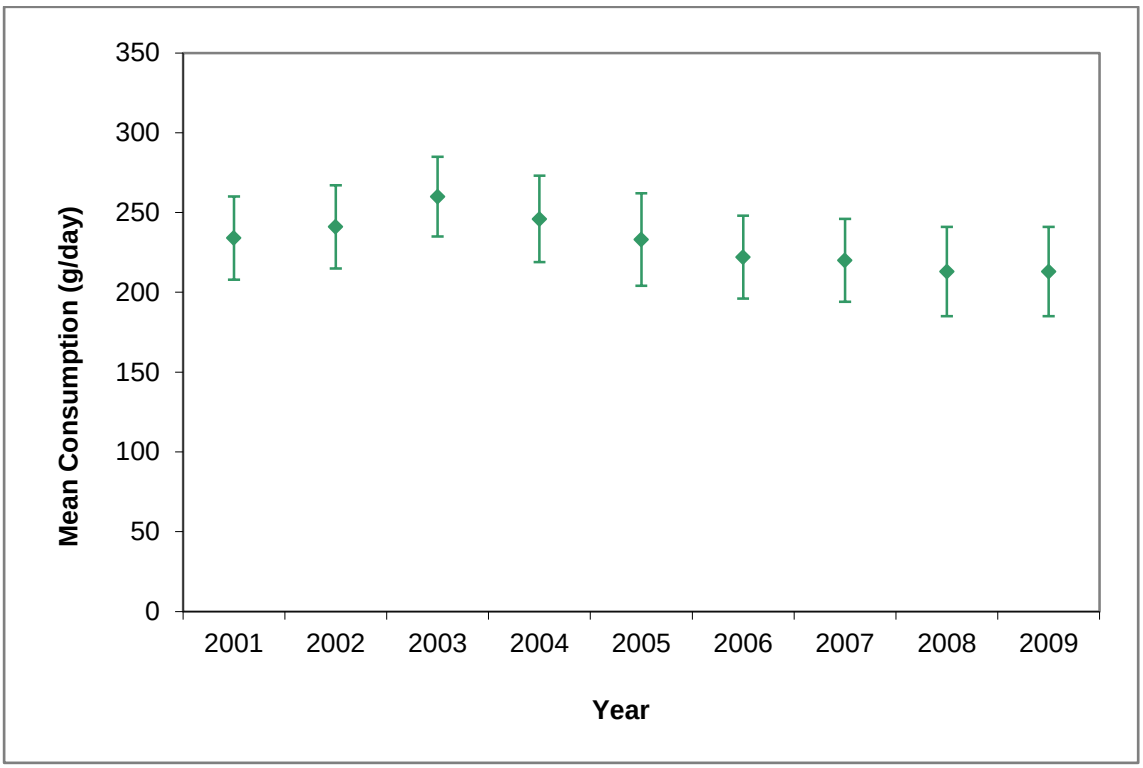
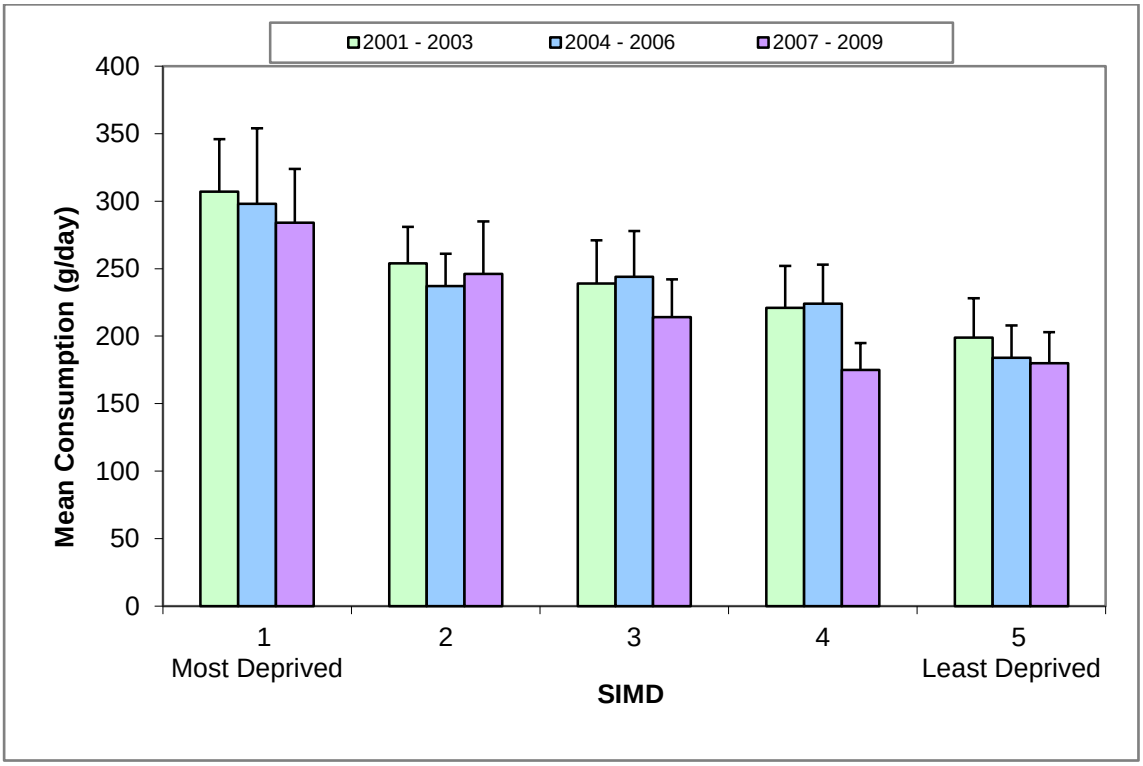


Figure 9b: By SIMD Quintile



3.4 Analysis by Urban Rural Classification (URC)

3.4.1 Food Consumption Relating to the Scottish Dietary Targets by URC Group

Fruit and Vegetables

Table 10 shows that unadjusted mean daily fruit and vegetable consumption was highest in the remote group of the URC. Mean daily consumption in the remote group was 322g compared with 261g in the urban group for 2001 to 2009 (P-value for overall association = <0.001). After adjustment for SIMD and in the fully adjusted model, the effect size between urban and remote areas attenuated (from 47.2g to 29.6g) (P-values for overall association = <0.001 and 0.028 respectively). Therefore, those living in rural areas were consuming approximately 30g more fruit and vegetables per day than those in urban areas, and this was independent of SIMD and a number of individual household level socio-economic status (SES) indicators.

Other foods in relation to the SDTs

Higher mean consumption for all foods, in relation to the SDTs, was seen for the remote areas compared with more urban areas (Table 10), (all statistically significant with the exception of vegetables, high fibre breakfast cereal and oil rich fish when unadjusted for deprivation). As with fruit and vegetables, on adjustment for SIMD and the individual household level SES variables, there was a degree of attenuation. However, after adjustment by both SIMD and the multivariable model, a significant difference was still found for total fruit and vegetables, vegetables, brown/wholemeal bread and fresh potatoes.

There was a higher mean consumption of all target foods in the remote rural compared to urban areas and fruit and vegetables, brown and wholemeal bread and fresh potato consumption remained higher after adjustment for a range of possible confounders

3.4.2 Nutrient Intake Relating to the Scottish Dietary Targets by URC Group

Table 11 shows that there are significant differences in energy intake, percentage of food energy from total fat, and saturated fat and in NSP intake by URC group with highest intakes in the rural and remote areas compared with urban areas. No differences were seen for NMES and complex carbohydrate by URC. On adjustment by SIMD and the individual household level SES variables there is a degree of attenuation but significant differences were still found for energy intakes and percentage of food energy from fat.

The percentage of energy from fat was highest in accessible small towns / rural areas but no differences due to area of deprivation were found

3.4.3 Consumption of Additional Foods and Drinks Indicative of Diet Quality by URC Group

Foods contributing NMES (Table 12)

Differences were seen in the consumption patterns of food/drink contributing to NMES by URC with sweet biscuits; total cakes, sweet biscuits and pastries and sugar and preserves being consumed more in remote areas and soft drinks of all types being consumed more in less remote areas. With the exception of the baked goods, these significant differences remained, after adjustment for SIMD and individual household level SES variables.

Foods Contributing Fat (Table 13)

Consumption of foods in the other red meat products group, processed potatoes and takeaway foods were highest in urban areas, and whilst there was a degree of attenuation on adjustment by SIMD and in the multivariable model, significant differences were found throughout. Consumption of butter, and bacon and ham were highest in remote areas. Following adjustment for SIMD, only the differences in consumption of bacon and ham remained significant and no difference was found for both food groups when adjusted in the multivariable model.

Table 10: Consumption of Scottish Diet Action Plan 1996 Target Foods by URC, 2001 to 2009 Combined

LCF data (g/person/day with the exception of fish g/person/week)

Food	URC	Mean	Unadjusted URC				URC Adjusted by SIMD Quintile			Multivariable Model[1]		
			95% CI	Parameter Estimates	95% CI	*P value*	Parameter Estimates	95% CI	*P value*	Parameter Estimates	95% CI	*P value*
Fruit and Vegetables[2, 3]	1	261	250, 272	0.0[4]			0.0[4]			0.0[4]		
	2	288	271, 305	27.0	7.6, 46.4	***<0.001***	9.1	-8.8, 26.9	***<0.001***	1.2	-12.5, 14.9	***0.028***
	3	322	302, 343	61.3	39.0, 83.7		47.2	26.4, 68.1		29.6	8.2, 51.1	
Fruit[2]	1	139	131, 146	0.0[4]			0.0[4]			0.0[4]		
	2	154	142, 166	15.5	2.9, 28.1	***<0.001***	2.8	-8.5, 14.2	***0.031***	-0.8	-10.0, 8.4	*0.319*
	3	170	155, 185	30.7	14.2, 47.2		20.3	5.4, 35.2		11.0	-4.2, 26.2	
Vegetables[3]	1	122	118, 127	0.0[4]			0.0[4]			0.0[4]		
	2	134	126, 141	11.5	2.5, 20.4	*0.637*	6.3	-2.5, 15.0	***<0.001***	2.0	-5.1, 9.2	***0.034***
	3	153	140, 165	30.6	17.8, 43.4		27.0	13.3, 40.6		18.6	4.6, 32.6	
Total Bread	1	101	98.3, 103	0.0[4]			0.0[4]			0.0[4]		
	2	102	97.7, 105	0.9	-3.3, 5.2	***<0.001***	3.0	-1.4, 7.3	*0.192*	0.1	-3.5, 3.6	*0.983*
	3	103	97.4, 109	2.8	-3.5, 9.0		4.7	-1.9, 11.3		-0.5	-6.4, 5.4	
Brown/Wholemeal Bread	1	20	19.0, 21.0	0.0[4]			0.0[4]			0.0[4]		
	2	22.7	21.1, 24.4	2.7	0.8, 4.7	***0.006***	1.6	-0.2, 3.5	***0.004***	1.1	-0.6, 2.8	***0.036***
	3	27	23.6, 30.5	7.0	3.4, 10.6		6.2	2.5, 9.9		4.6	1.0, 8.1	
Total Breakfast Cereal	1	19.7	18.7, 20.7	0.0[4]			0.0[4]			0.0[4]		
	2	22.6	20.8, 24.4	2.9	1.0, 4.8	***0.005***	1.5	-0.1, 3.1	*0.113*	0.9	-0.7, 2.5	*0.571*
	3	22.3	18.7, 26.0	2.6	-1.1, 6.3		1.5	-1.9, 5.0		-0.2	-3.3, 2.9	
High Fibre Breakfast Cereal	1	10.9	10.1, 11.7	0.0[4]			0.0[4]			0.0[4]		
	2	13.2	11.8, 14.6	2.3	0.7, 3.8	*0.151*	1.1	-0.2, 2.5	*0.122*	0.8	-0.5, 2.1	*0.469*
	3	13.4	10.5, 16.2	2.5	-0.4, 5.3		1.6	-1.0, 4.3		0.4	-2.1, 3.0	
Oil Rich Fish	1	32	28.9, 35.0	0.0[4]			0.0[4]			0.0[4]		
	2	32.7	28.5, 36.9	0.7	-4.2, 5.5	*0.081*	-1.9	-6.7, 2.9	*0.144*	-2.6	-7.1, 2.0	*0.181*
	3	54	31.5, 76.5	22.1	-0.3, 44.4		20.6	-0.4, 41.7		17.1	-3.2, 37.4	
White Fish	1	89.7	85.6, 93.7	0.0[4]			0.0[4]			0.0[4]		
	2	97.2	89.3, 105	7.5	-1.3, 16.3	***<0.001***	4.2	-4.8, 13.3	*0.200*	2.7	-5.6, 11.1	*0.636*
	3	105	89.4, 121	15.8	-0.6, 32.1		13.6	-2.0, 29.3		5.8	-7.7, 19.3	
Fresh Potatoes[5]	1	52.4	49.9, 54.9	0.0[4]			0.0[4]			0.0[4]		
	2	63.5	58.0, 69.0	11.1	5.0, 17.2	***<0.001***	11.5	5.3, 17.8	***<0.001***	8.3	2.6, 13.9	***0.001***
	3	70.2	60.6, 79.9	17.8	7.9, 27.8		18.2	8.5, 27.8		11.6	3.6, 19.5	

Household and eating out consumption combined; Urban Rural Classification (URC) Categories: 1 = Urban; 2 = Accessible small towns/ rural; 3 = Remote. From 2006 the EFS moved from a financial year to a calendar year basis. As a consequence of this the January to March 2006 data are duplicated in the 2005/2006 and the 2006 results. Sample Size: URC 1 = 3474 Households (HH), 7784 People (P), 31036 People Weighted (PW); URC 2 = 1116 HH, 2638 P, 10394 PW; and URC 3 = 428 HH, 946 P, 3637 PW. [1]URC adjusted by SIMD Quintile, Equivalised Income, HH Composition, HH Size, %GNWI Spent on Food, kcal and HRP Age; [2]Fruit includes fruit and vegetable juice; [3]Vegetables include baked beans; [4]Reference Category; [5]Part of complex carbohydrate target

Table 11: Intake of Scottish Diet Action Plan 1996 Target Nutrients by URC, 2001 to 2009 Combined

LCF data (units/person/day)

Nutrient	URC	Mean	95% CI	Unadjusted URC Parameter Estimates	95% CI	*P value*	URC Adjusted by SIMD Quintile Parameter Estimates	95% CI	*P value*	Multivariable Model[1] Parameter Estimates	95% CI	*P value*
	1	38.6	38.3, 38.9	0.0[2]			0.0[2]			0.0[2]		
% Food Energy - Fat	2	39.3	38.8, 39.8	0.7	0.1, 1.2	***0.035***	0.8	0.2, 1.3	***0.008***	0.8	0.2, 1.3	***0.013***
	3	39.2	38.4, 40.0	0.6	-0.2, 1.3		0.7	0.0, 1.5		0.6	-0.1, 1.4	
	1	15.3	15.2, 15.4	0.0[2]			0.0[2]			0.0[2]		
% Food Energy - Saturated Fat	2	15.6	15.4, 15.8	0.3	0.0, 0.6	***0.010***	0.3	0.0, 0.6	***0.018***	0.2	0.0, 0.5	*0.091*
	3	15.9	15.4, 16.4	0.6	0.1, 1.1		0.6	0.1, 1.1		0.4	-0.1, 0.9	
	1	15.4	15.2, 15.7	0.0[2]			0.0[2]			0.0[2]		
% Food Energy - NMES	2	14.8	14.5, 15.2	-0.6	-1.1, -0.1	*0.060*	-0.5	-1.0, 0.0	*0.176*	-0.5	-1.0, 0.0	*0.134*
	3	15.1	14.2, 16.0	-0.3	-1.3, 0.7		-0.3	-1.3, 0.7		-0.4	-1.4, 0.5	
	1	142	139, 144	0.0[2]			0.0[2]			0.0[2]		
Complex CHO g	2	146	142, 151	4.7	0.0, 9.5	*0.079*	4.5	-0.4, 9.3	*0.108*	-0.7	-3.4, 2.0	*0.806*
	3	148	137, 158	6.1	-4.6, 16.8		6.1	-4.4, 16.7		-1.2	-5.5, 3.2	
	1	12.2	12.0, 12.5	0.0[2]			0.0[2]			0.0[2]		
NSP g	2	12.9	12.5, 13.4	0.7	0.3, 1.2	***0.001***	0.5	0.0, 0.9	***0.005***	0.0	-0.2, 0.3	*0.080*
	3	13.5	12.6, 14.4	1.3	0.3, 2.2		1.1	0.2, 2.0		0.4	0.1, 0.8	
	1	8.4	8.3, 8.5	0.0[2]			0.0[2]			0.0[2]		
Food Energy - MJ	2	8.7	8.5, 9.0	0.3	0.1, 0.6	***0.005***	0.3	0.1, 0.6	***0.007***	0.3	0.1, 0.6	***0.015***
	3	8.9	8.5, 9.4	0.5	0.0, 1.0		0.5	0.0, 1.0		0.2	-0.2, 0.6	
	1	1999	1968, 2031	0.0[2]			0.0[2]			0.0[2]		
Food Energy - kcal	2	2078	2019, 2136	78.6	17.8, 139	***0.005***	80.3	16.9, 144	***0.006***	82.0	25.0, 139	***0.015***
	3	2128	2015, 2240	129	10.6, 247		130	12.1, 248		47.3	-47.8, 142	

Household and eating out consumption combined. Urban Rural Classification (URC) Categories: 1 = Urban; 2 = Accessible small towns/ rural; 3 = Remote. From 2006 the EFS moved from a financial year to a calendar year basis. As a consequence of this the January to March 2006 data are duplicated in the 2005/2006 and the 2006 results. Sample Size: URC 1 = 3474 Households (HH), 7784 People (P), 31036 People Weighted (PW); URC 2 = 1116 HH, 2638 P, 10394 PW; and URC 3 = 428 HH, 946 P, 3637 PW. [1]URC adjusted by SIMD Quintile, Equivalised Income, HH Composition, HH Size, %GNWI Spent on Food and HRP Age (also kcal for Complex CHO and NSP); [2]Reference Category

Table 12: Consumption of Additional Foods and Drinks Indicative of Diet Quality (sweet) by URC, 2001 to 2009 Combined

LCF data (g/person/day)

Food			Unadjusted URC			URC Adjusted by SIMD Quintile			Multivariable Model[1]		
	URC	Mean	95% CI	Parameter Estimates	95% CI	*P value*	Parameter Estimates	95% CI	*P value*	Parameter Estimates	95% CI	*P value*
Cakes and Pastries	1	17.1	16.3, 17.9	0.0[2]			0.0[2]			0.0[2]		
	2	17.5	16.4, 18.7	0.4	-1.1, 1.9	*0.247*	0.0	-1.6, 1.5	*0.379*	-0.8	-2.3, 0.6	*0.516*
	3	19.5	16.8, 22.1	2.3	-0.4, 5.1		1.9	-0.9, 4.8		-0.3	-2.8, 2.2	
Sweet Biscuits	1	21.6	20.8, 22.5	0.0[2]			0.0[2]			0.0[2]		
	2	23.7	22.0, 25.4	2.1	0.2, 3.9	***0.015***	1.8	-0.1, 3.7	***0.048***	0.6	-1.0, 2.2	*0.741*
	3	25.1	21.2, 29.1	3.5	-0.5, 7.5		2.9	-1.0, 6.9		0.3	-2.9, 3.5	
Cakes, Sweet Biscuits and Pastries	1	38.7	37.4, 40.1	0.0[2]			0.0[2]			0.0[2]		
	2	41.2	38.8, 43.6	2.5	-0.2, 5.2	***0.039***	1.8	-1.0, 4.5	*0.125*	-0.2	-2.5, 2.1	*0.981*
	3	44.6	38.8, 50.4	5.9	-0.1, 11.8		4.9	-1.0, 10.8		0.0	-4.5, 4.5	
Sugar and Preserves	1	16.5	15.2, 17.7	0.0[2]			0.0[2]			0.0[2]		
	2	19.3	17.5, 21.1	2.8	0.7, 4.9	***<0.001***	3.0	0.8, 5.2	***<0.001***	1.7	-0.2, 3.5	***0.003***
	3	26.3	21.7, 30.8	9.8	5.2, 14.4		9.7	5.0, 14.3		6.6	2.2, 10.9	
Chocolate Confectionery	1	14.7	13.8, 15.5	0.0[2]			0.0[2]			0.0[2]		
	2	14.9	13.5, 16.2	0.2	-1.4, 1.9	*0.956*	-0.1	-1.8, 1.7	*0.933*	-0.8	-2.4, 0.8	*0.356*
	3	14.6	12.3, 16.9	-0.1	-2.5, 2.4		-0.5	-3.0, 2.1		-1.5	-3.6, 0.7	
Sugar Confectionery	1	7.1	6.6, 7.5	0.0[2]			0.0[2]			0.0[2]		
	2	7.1	6.3, 7.9	0.0	-0.9, 0.9	*0.734*	0.1	-0.9, 1.0	*0.833*	-0.3	-1.2, 0.6	*0.743*
	3	7.7	6.2, 9.1	0.6	-0.9, 2.1		0.5	-1.1, 2.0		-0.3	-1.9, 1.3	
Total Confectionery	1	21.7	20.6, 22.8	0.0[2]			0.0[2]			0.0[2]		
	2	22.0	20.2, 23.7	0.2	-1.9, 2.4	*0.938*	0.0	-2.2, 2.2	*1.000*	-1.1	-3.1, 0.9	*0.323*
	3	22.3	19.3, 25.3	0.5	-2.6, 3.7		0.0	-3.2, 3.2		-1.8	-4.6, 1.0	
Sugar Containing Soft Drinks	1	243	230, 255	0.0[2]			0.0[2]			0.0[2]		
	2	213	198, 228	-29.4	-48.5, -10.3	***<0.001***	-14.9	-33.6, 3.7	***0.006***	-21.4	-39.8, -3.1	***0.001***
	3	185	158, 212	-57.5	-86.7, -28.2		-46.2	-74.7, -17.7		-47.8	-73.8, -21.8	
Sugar Free Soft Drinks	1	92.2	85.7, 98.8	0.0[2]			0.0[2]			0.0[2]		
	2	112	101, 123	19.5	6.0, 33.0	***0.001***	18.6	5.0, 32.3	***0.001***	17.1	4.0, 30.2	***0.001***
	3	75.1	58.2, 92.0	-17.1	-36.2, 1.9		-20.1	-40.1, 0.0		-19.4	-39.7, 0.9	
Total Soft Drinks	1	335	320, 350	0.0[2]			0.0[2]			0.0[2]		
	2	325	307, 343	-9.9	-33.1, 13.3	***<0.001***	3.7	-19.2, 26.5	***<0.001***	-4.3	-26.9, 18.2	***<0.001***
	3	260	233, 288	-74.6	-107, -42.4		-66.3	-98.8, -33.8		-67.3	-96.4, -38.1	

Household and eating out consumption combined. Urban Rural Classification (URC) Categories: 1 = Urban; 2 = Accessible small towns/ rural; 3 = Remote . From 2006 the EFS moved from a financial year to a calendar year basis. As a consequence of this the January to March 2006 data are duplicated in the 2005/2006 and the 2006 results. Sample Size: URC 1 = 3474 Households (HH), 7784 People (P), 31036 People Weighted (PW); URC 2 = 1116 HH, 2638 P, 10394 PW; and URC 3 = 428 HH, 946 P, 3637 PW. [1]URC adjusted by SIMD Quintile, Equivalised Income, HH Composition, HH Size, %GNWI Spent on Food, kcal and HRP Age. [2]Reference Category

Table 13: Consumption of Additional Foods and Drinks Indicative of Diet Quality (not sweet) by URC, 2001 to 2009 Combined.

LCF data (g/person/day)

Food			Unadjusted URC				URC Adjusted by SIMD Quintile			Multivariable Model[1]		
	URC	Mean	95% CI	Parameter Estimates	95% CI	*P value*	Parameter Estimates	95% CI	*P value*	Parameter Estimates	95% CI	*P value*
Total Red Meat[2]	1	62.0	60.2, 63.9	0.0[3]			0.0[3]			0.0[3]		
	2	63.5	60.2, 66.7	1.5	-2.1, 5.1	*0.678*	2.9	-1.0, 6.7	*0.294*	0.1	-3.1, 3.3	*0.757*
	3	63.7	57.2, 70.1	1.6	-4.9, 8.2		2.8	-3.8, 9.3		-2.8	-10.2, 4.7	
Bacon and Ham	1	11.6	11.1, 12.0	0.0[3]			0.0[3]			0.0[3]		
	2	12.8	11.9, 13.6	1.2	0.2, 2.1	***0.005***	1.1	0.2, 2.1	***0.020***	0.6	-0.3, 1.5	*0.316*
	3	13.8	12.3, 15.2	2.2	0.7, 3.7		2.1	0.4, 3.8		1.0	-0.7, 2.7	
Other Red Meat Products[2,4]	1	28.7	27.7, 29.7	0.0[3]			0.0[3]			0.0[3]		
	2	27.3	25.8, 28.7	-1.4	-3.0, 0.2	***<0.001***	0.3	-1.3, 1.9	***<0.001***	-0.7	-2.1, 0.7	***<0.001***
	3	22.1	19.9, 24.4	-6.5	-8.9, -4.2		-4.9	-7.3, -2.6		-6.7	-9.4, -4.1	
Butter	1	5.9	5.5, 6.3	0.0[3]			0.0[3]			0.0[3]		
	2	6.9	6.0, 7.9	1.1	0.0, 2.1	***0.009***	0.7	-0.4, 1.9	*0.084*	0.3	-0.7, 1.2	*0.585*
	3	8.3	6.4, 10.3	2.4	0.4, 4.4		2.0	-0.1, 4.0		0.9	-1.1, 2.9	
Whole Milk	1	70.9	64.8, 77.0	0.0[3]			0.0[3]			0.0[3]		
	2	66.5	56.4, 76.6	-4.4	-15.5, 6.6	*0.389*	4.9	-6.1, 15.8	*0.182*	3.0	-7.7, 13.7	*0.508*
	3	79.3	62.3, 96.3	8.4	-9.8, 26.7		17.0	-1.6, 35.6		11.1	-8.5, 30.6	
Semi-skimmed Milk	1	129	123, 136	0.0[3]			0.0[3]			0.0[3]		
	2	135	125, 145	5.7	-5.5, 16.9	*0.601*	3.6	-7.2, 14.5	*0.791*	-1.3	-11.7, 9.1	*0.497*
	3	131	115, 148	2.0	-16.0, 20.0		0.0	-17.6, 17.6		-9.9	-26.5, 6.7	
Skimmed Milk	1	14.2	12.3, 16.0	0.0[3]			0.0[3]			0.0[3]		
	2	14.7	10.8, 18.6	0.5	-3.6, 4.6	*0.942*	-0.2	-4.3, 3.9	*0.988*	-0.3	-4.4, 3.7	*0.969*
	3	15.0	8.5, 21.6	0.9	-6.0, 7.7		0.3	-6.6, 7.3		-0.7	-7.6, 6.2	
Total Milk	1	234	226, 241	0.0[3]			0.0[3]			0.0[3]		
	2	237	226, 248	3.5	-10.0, 17.0	*0.525*	10.7	-3.6, 25.0	*0.101*	4.1	-8.1, 16.3	*0.796*
	3	245	226, 265	11.4	-9.7, 32.6		19.1	-2.2, 40.4		2.6	-17.2, 22.5	
Processed Potatoes	1	31.2	29.9, 32.4	0.0[3]			0.0[3]			0.0[3]		
	2	27.6	25.3, 30.0	-3.5	-6.2, -0.9	***<0.001***	-2.1	-4.6, 0.4	***<0.001***	-2.7	-5.2, -0.2	***<0.001***
	3	20.8	18.1, 23.4	-10.4	-13.4, -7.5		-9.4	-12.3, -6.6		-10.0	-12.7, -7.4	
Savoury Snacks	1	13.5	12.9, 14.0	0.0[3]			0.0[3]			0.0[3]		
	2	13.4	12.5, 14.4	0.0	-1.2, 1.1	*0.271*	0.1	-1.1, 1.3	*0.265*	-0.2	-1.2, 0.9	*0.363*
	3	11.8	9.8, 13.8	-1.6	-3.7, 0.4		-1.6	-3.7, 0.5		-1.2	-2.9, 0.5	
Takeaway Foods	1	22.9	21.7, 24.1	0.0[3]			0.0[3]			0.0[3]		
	2	17.7	15.9, 19.6	-5.2	-7.3, -3.0	***<0.001***	-3.9	-6.2, -1.7	***<0.001***	-3.3	-5.5, -1.1	***<0.001***
	3	10.9	8.6, 13.2	-12.0	-14.6, -9.4		-10.6	-13.3, -7.9		-8.9	-11.3, -6.6	

Household and eating out consumption combined. Urban Rural Classification (URC) Categories: 1 = Urban; 2 = Accessible small towns/ rural; 3 = Remote. From 2006 the EFS moved from a financial year to a calendar year basis. As a consequence of this the January to March 2006 data are duplicated in the 2005/2006 and the 2006 results. Sample Size: URC 1 = 3474 Households (HH), 7784 People (P), 31036 People Weighted (PW); URC 2 = 1116 HH, 2638 P, 10394 PW; and URC 3 = 428 HH, 946 P, 3637 PW. [1]URC adjusted by SIMD Quintile, Equivalised Income, HH Composition, HH Size, %GNWI Spent on Food, kcal and HRP Age; [2]Meat portion only – see appendices 2 & 4 for methodology; [3]Reference Category; [4] Other Red Meat Products includes the meat portion of sausages, meat pies, corned beef, burgers and pate and is a component of total red meat

4. DISCUSSION

Food consumption and nutrient intake in Scotland calculated in the previous report (Barton *et al*., 2010) was updated by the addition of the years 2007, 2008 and 2009 to give trend data from 2001 through to 2009; this has been related to the SDTs. A summary of these results are presented in Table 14. These have been calculated using a standardised methodology developed by Barton *et al*., (2010) using the household and eating out data from the LCF, currently the only method of monitoring the recent diet in Scotland at a population level, as outlined in the introduction.

Table 14: Food/nutrient changes in relation to the Scottish Dietary Targets from 2001 to 2009

Target Food / Nutrient	Scottish Dietary Target	2001	2006	2009	Change Between 2001 and 2006	Change Between 2001 and 2009	Highest Consumption by SIMD[1]	Highest Consumption by URC[2]
Fruit and Vegetables	More than 400g per day	259g	276g	279g	↑	↑	Least Deprived	Remote
Bread (all types)	154g per day	111g	102g	94.7g	↓	↓	Most Deprived[†]	No Difference
Brown/Wholemeal Bread	More than 77g per day	18.2g	23.6g	21.4g	↑	↑	Least Deprived	Remote
Breakfast Cereals (all types)	34g per day	19.6g	19.3g	23.2g	No Change	↑	Least Deprived	No Difference
Oil Rich Fish	88g per week	29.2g	38.2g	30.5g	↑	No Change	Least Deprived	No Difference
White Fish	No decrease (figures per week)	96.4g	96.5g	92.8g	No Change	No Change	Least Deprived	No Difference
Fat	≤35% food energy	38.8%	38.7%	39.0%	No Change	No Change	No Difference	Accessible
Saturated Fat	≤11% of food energy	15.5%	15.7%	15.1%	No Change	↓	No Difference	No Difference
NMES	Adults - No ↑[3] Children - <10%	15.5%	15.0%	14.8%	No Change	↓	Most Deprived	No Difference
Total Complex Carbohydrates	155g per day	146g	141g	145g	No Change	No Change	No Difference	No Difference

[1]SIMD = Social Index of Multiple Deprivation, for combined years 2001-2003, 2004-2006 or 2007-2009, [†]No Difference 2004-2006; [2]URC = Urban Rural Classification after multivariable adjustment for combined years 2001-2009 (Categories: Urban; Accessible small towns/ rural; Remote); [3]DRV for Adults 11% Food Energy (Department of Health, 1991)

Results from the LCF suggest that the small statistically significant increase in mean consumption of fruit and vegetables was sustained in the population over the 9 years period from 2001 to 2009 inclusive. This increase is mostly explained by an increase in fruit rather than in vegetable intake although there does appear to have been a slight fall in fruit consumption and a slight increase in vegetable consumption over the last 2 years. Mean fruit and vegetable consumption remains around 1.5 portions below the population target of 5 portions per day and if the current rate of increase was to continue, it would take 29 years to reach this target. Over the same period, total bread consumption has fallen, although there appears to have been a shift in the type of bread being consumed, as consumption of brown/wholemeal bread has increased slightly. Breakfast cereal consumption has

increased slightly with the significant change being brought about by an increase in high fibre breakfast cereal consumption. Consumption of oil rich fish and white fish has not changed from 2001 although the previous report (Barton *et al*., 2010) suggested a slight increase in the former. It is possible that this increase was not maintained because of rising prices (Office for National Statistics, 2011). The small decrease in consumption of fresh potatoes was statistically significant. This does not appear to be because consumers favour ready-to-cook processed potatoes, as these too have experienced a significant decrease (Table 7).

Due to the fact that the LCF results are based on purchase data and are expressed per capita i.e. are an average of all ages, comparison of the results with other studies should be carried out with caution. The most recently reported UK intake of fruit and vegetables from the 2008-2010 NDNS was 336g/d for 19-64 year old adults (Department of Health and Food Standards Agency, 2011) (compared with approximately 224g/day in 2001/02 (Henderson et al., 2002)). More than half of this increase is due to the change in methodology in calculating fruit and vegetable intake which is reported as accounting for a 50g/day increase for vegetables and a 5-13g/day for fruit (Department of Health and Food Standards Agency, 2011). Part of the increase may also be due to the change from weighed to estimated intakes but regardless intakes are still considerably greater than that seen for the Scottish LCF analysis where intakes only increased to 279g/d in 2009. In the 2003 SHeS (Bromley *et al*., 2005), the mean frequency for fruit and vegetable consumption was 3.1 portions per day which is comparable to an intake of around 248g per day if an average portion size of around 80g is assumed. No statistically significant increase was apparent from 2003 to 2010 (Bromley *et al*., 2011a) with mean intakes in 2010 of 3.2 portions per day, comparable to an intake of around 256g per day. From this it can be deduced that fruit and vegetable intake in England (the majority of the consumers in the NDNS) is considerably higher than that in Scotland, and comparative figures given in the Family Food 2009 (Defra, 2010) report confirm this. The consequences of this difference on the mortality rates from coronary heart disease, stroke and cancer in Scotland compared to England have recently been explored by Scarborough and colleagues (2010). Using a macro simulation model which incorporated the results from the LCF they predicted that if Scotland had an average diet “equivalent in nutritional quality” to England 40% of this mortality gap would be removed. One of main contributors to the poorer nutritional quality was the lower fruit and vegetable intake in Scotland compared to England.

Nutrient intake data from the LCF suggest that the percentages of food energy from saturated fat and NMES have reduced slightly over the 9 year time period, whilst the percentage of food energy from fat, and complex carbohydrates intake has not changed. Intakes continue to be significantly higher than the SDTs for total fat, saturated fat and NMES and lower for complex carbohydrates. The decrease in saturated fat and NMES is encouraging as this was not apparent in the previous report (Barton *et al*., 2010). However the rate of change will need to be increased to provide a nutritionally significant improvement.

As previously mentioned due to the fact that the LCF results are based on purchase data and are expressed per capita i.e. are an average of all ages, comparison of the results with other studies

should be carried out with caution. UK NDNS data for 2008-2010 showed that total fat was 34.8% of food energy for adults aged 19-64 and increased to 36.4% for older adults (Department of Health and Food Standards Agency, 2011). These figures differ from the 39.0% of food energy estimated for 2009 from the LCF data. Part of this difference could be due to the fact that the results from the LCF include individuals of all ages; however, it is known that people often under-report food they know to be high in fat and/or sugar (Gibson, 2005). In addition the recent report by the UK Scientific Advisory Committee on Nutrition (2011) highlights that the NDNS has reported habitual energy intakes to be consistently below the estimated average requirement (Department of Health, 1991) at a time when overweight and obesity in the UK is rising, and suggest that under-reporting may explain this discrepancy. This may be the reason for the mismatch of these results on fat intake but highlights the difficulties in deciding whether the Scottish population is meeting the target for fat consumption. The UK National Diet and Nutrition Survey (NDNS) do not provide annual data in sufficient quantity to monitor dietary targets / goals for Scotland. An enhanced sample for the NDNS in Scotland will combine four years of data from the rolling programme, results are expected in 2013.

Statistically significant differences were seen in relation to SIMD, with the foods targeted for increase (fruit and vegetables, brown/wholemeal bread, breakfast cereal, oil rich fish, white fish and complex carbohydrates) showing the highest mean consumption in the least deprived quintile of the SIMD. Conversely for the foods which are associated with a poorer quality diet (cakes and pastries; sugar containing soft drinks; other red meat products (processed meat, pies and sausages); whole milk; processed potatoes and takeaway foods) mean consumption was highest in the most deprived quintiles. These foods are associated with a poorer quality diet and a consequent increased risk of obesity and chronic disease. A similar pattern was seen in the SHeS where those in the most deprived quintile were less likely to consume the foods targeted for increase (Bromley *et al.*, 2005; Bromley *et al.,* 2011a). These socio-economic differences in foods and food-groups mirror those of other recent studies and are discussed by Barton et al., (2010).

There is evidence that a high consumption of sugar containing drinks is a major contributor to the development of obesity (Malik *et al*., 2006). The analysis by SII and RII showed that there was no significant change in inequalities in food consumption from 2001 to 2009 with the exception of sugar free soft drink consumption. The difference found in 2001-2003 where the least deprived had a significantly higher consumption of sugar free soft drinks compared to the most deprived quintile was reversed by 2004-2006 and had apparently disappeared by 2007-2009. The reason for this is unclear but there has been a removal of sales of all carbonated drinks (sugared and sugar free) in schools over period 2008-2009, and young people are known to have the highest consumption of soft drinks (Department of Health and Food Standards Agency, 2011; Sheehy *et al*., 2008). However it seems unlikely that this would fully account for the resulting population change.

It is interesting to note that although the consumption of some of the main foods contributing to total fat and saturated fat intake, such as milk and processed meat, were higher in more deprived groups, no socioeconomic differences were detected in total fat and saturated fat intake. It should be noted

that some foods contributing to fat intake e.g. cheese and cream have not been monitored to date and these may be consumed in higher quantities in the least deprived groups which would explain the fact that no difference was found in fat and saturated fat by SIMD. In the 2001/02 NDNS those living in households receiving benefits were less likely to eat cheese (women only) and cream (both genders) (Henderson *et al*., 2002).

The differences in sugar containing soft drink consumption (higher in the most deprived groups) were reflected in a similar pattern for NMES intake. These socio-economic differences in foods and food groups mirrored those of other recent studies. The UK Low Income Diet and Nutrition Survey (LIDNS) (Nelson *et al*., 2007) found that "*generally, those on low income were less likely to eat wholemeal bread and vegetables. They tended to drink more soft drinks (not diet drinks) and eat more processed meats, whole milk and sugar*".

The survey of sugar intake among children in Scotland (Sheehy *et al*., 2008) also found that those living in deprived areas were significantly less likely to consume wholemeal bread, oily fish and fruit juice and were more likely to consume sugar containing soft drinks. This survey also found no significant associations between total fat or saturated fat (as a percentage of food energy) and SIMD, but those living in more deprived areas consumed significantly more foods with a high energy density such as processed meats, crisps and savoury snacks. This finding is in line with that of Wrieden *et al*. (2011), also using the LCF data, who found that those living in the most deprived areas were consuming diets with the highest energy density (176kcal/100g compared to 166kcal/100g) (averages for the most and least deprived quintiles). The Scottish Government is committed to tackling health inequalities and has published recommendations in Equally Well (Scottish Government, 2008a). The work reported here confirms the inequality that continues to exist in regards to healthy eating.

Previous analysis by URC gave inconsistent results due to the small sample size of the remote category (Barton *et al*., 2010) so for this report data were pooled for 2001-2009. Unadjusted analysis shows that accessible small towns/rural areas, and remote households typically purchase more of the "healthier foods" and less of the "unhealthier foods" than urban households but after multivariable adjustment (for individual household level socio economic status (SES) variables and energy intake as described in Barton *et al*., 2010) these differences only remained significant for vegetables, brown/wholemeal bread, fresh potatoes and total red meat (all highest in remote rural households). For example, mean daily fruit and vegetable consumption was 61g higher in the remote areas and 27g higher in the accessible small towns/rural areas than in urban areas for the period 2001 to 2009. After multivariable adjustment consumption in remote areas was 30g higher than urban (Table 10) with accessible small towns/ rural similar to urban areas. It was notable that vegetables, but not fruit, remained significantly higher in remote areas even after the multivariable adjustment.

Significant differences were found in energy intake and percentage of food energy from total fat following adjustment by the individual household level SES variables with highest intakes in the

accessible small towns/ rural areas compared with urban areas. However no differences were seen for NMES and complex carbohydrate by URC.

Consumption patterns of food/drink contributing to NMES and fat differed by URC despite the apparent similarity between overall NMES intake across the URC categories. This is likely to be because the higher consumption of sweet biscuits; total cakes, sweet biscuits and pastries; and sugar and preserves in remote areas is balanced by the higher consumption of soft drinks in less remote areas. Significant differences in all but the baked goods remained after adjustment for individual household level SES variables. Consumption of other red meat products (processed meat, pies and sausages), processed potatoes and takeaway foods were highest in urban areas, and whilst there was a degree of attenuation on adjustment by SIMD and in the multivariable model, significant differences were found throughout. Consumption of butter, and bacon and ham were highest in remote areas. Following adjustment for SIMD, only the differences in consumption of bacon and ham remained significant and no difference was found for both food groups when adjusted in the multivariable model. It is speculated that those living in accessible small towns/rural and remote areas may buy larger quantities of food because they make fewer shopping trips and that this could lead to them having an apparently greater energy intake (perhaps because they feel they have to shop during the reporting period). However this does not explain the lower intake of meat products and processed potatoes and it could be that access to small butchers and farm shops is easier in the more rural areas and means less reliance on the processed products. Further research is required to draw specific conclusions as to the reasons but it is worth noting that a report on accessing healthy food (Food Standards Agency Scotland, 2008) also acknowledged that the associations between access to healthy food and rural-urban and deprived-affluent areas were complex and that there were indications that a range of healthy food was less consistently accessible in urban deprived areas than elsewhere e.g. the authors note that their Healthy Eating Indicator Shopping Basket items were more likely to be provided in small general stores in more remote areas than in urban areas. However investigation is still required to see if the differences due to URC are not simply an artefact of purchase data.

These results suggest that rurality might be an important factor in the dietary choice of certain foods, but it is complicated by the fact that there appears to be a higher intake of fat in the accessible rural areas whilst intakes of more traditional foods (including healthy choices such as vegetables and brown/wholemeal bread) are highest in the remote rural areas.

Trends in food consumption and nutrient intake in Scotland have been explored using annual survey data from the LCF. Realistic estimates of food consumption and nutrient intake were calculated following adjustment for proportion of the food group of interest in a food; preparation and cooking; and the amount of food likely to be wasted (using figures from Defra based on national surveys of edible food waste (WRAP (2008)). New waste figures for 2011 from WRAP (2011) calculated for England suggest that there has been a reduction in estimated food waste since 2006/7. Careful consideration will need to be given as to how and at what point these new figures can be incorporated in future updates for Scotland.

Conclusion

The results of this report for 2007 to 2009 provide evidence that if trends continue with data for 2010 the SDTs will not have been met by 2010. They suggest very small improvements in fruit and vegetable consumption, brown/wholemeal bread and breakfast cereal consumption since 2001, with an increase in the consumption of breakfast cereal only being found since 2006. It is of particular concern that foods targeted for increased consumption were significantly lower in the most deprived groups of the population. However, there is no evidence to suggest that the gap between the most and least deprived is increasing with the same very small improvements being seen across all quintiles of SIMD. A slight decreases in the percentage of saturated fat and NMES was also apparent, another finding that was not seen from 2001-2006. There were differences in food consumption between urban and remote areas, and a higher intake of energy from fat in the accessible small towns and accessible rural areas compared with urban areas which needs further investigation.

A robust standardised methodology has been used to calculate food and nutrient intakes on a population basis. As in the previous report, clear inequalities continue to be apparent in food consumption for the period 2007 - 2009 between the least and most deprived. This monitoring work is of great importance in monitoring dietary goals and it is and can be further used to inform future policy to target diet and social inequalities.

The work reported is part of an on-going project to monitor the impact of policy initiatives in Scotland on secular trends in food and nutrient intake in Scotland. However, due to the fact that the data for the EFS is not available until at least 1 year after the end of the period of data collection the analysis reported here only provides estimates for the period to 2009. The impact of newer initiatives outlined in the Obesity Route Map (Scottish Government, 2010), Scotland's National Food and Drink Policy (Scottish Government, 2009b) and the Nutritional Requirements for Food and Drink in Schools (Scotland) regulations 2008 (Scottish Government, 2008b) on the Scottish diet will be measured in the coming years. This work will also be used to inform future policy to target diet and social inequalities.

5. REFERENCES

Barton KL, Wrieden WL, Gregor A, Armstrong J, Sherriff A (2010) Final report for the Food Standards Agency in Scotland. Project No S14035 Part A: Estimation of food and nutrient intakes from Expenditure and Food Survey data in Scotland 2001-2006. http://www.foodbase.org.uk//admintools/reportdocuments/418-1-1027_S14035_Final.pdf

Bromley C, *et al*. (2005) The Scottish Health Survey 2003. Volumes 1-4: The Scottish Executive. http://www.scotland.gov.uk/Publications/2005/11/25145024/50251

Bromley C, *et al*. (2011a) The Scottish Health Survey 2010. Volume 1 :Main Report. The Scottish Government. http://scotland.gov.uk/Resource/Doc/358842/0121284.pdf

Bromley C, *et al*. (2011b) The Scottish Health Survey 2010. Volume 2 :Technical Report. The Scottish Government. http://scotland.gov.uk/Resource/Doc/358966/0121307.pdf

Chan W, Brown J, Lee SM, Buss DH (1995) Meat, Poultry and Game, Fifth supplement to the Fifth Edition of McCance and Widdowson's The Composition of Foods. Cambridge: Royal Society of Chemistry.

Chan W, Brown J, Church SM, Buss DH (1996) Meat, Products and Dishes, Sixth supplement to the Fifth Edition of McCance and Widdowson's The Composition of Foods. Cambridge: Royal Society of Chemistry.

Chesher A (1997) Diet Reveals?: Semiparametric Estimation of Nutrient Intake-Age Relationships. Journal of the Royal Statistical Society. Series A (Statistics in Society) 160 (3) 389-428.

Department of Health and Food Standards Agency (2011) National Diet and Nutrition Survey: Headline results (text and tables) and Appendix A from Years 1 and 2 (combined) of the Rolling Programme 2008/9-2009/10. http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsStatistics/DH_128166

Department of Health (1991), Dietary Reference Values for Food Energy and Nutrients for the United Kingdom. Report of the Panel on Dietary Reference Values of the Committee on Medical Aspects of Food Policy (COMA) Department of Health report on Health and Social Subjects 41. London: HMSO.

Department of the Environment and Rural Affairs (2008) Family Food – A report on the 2007 Expenditure and Food Survey. http://www.defra.gov.uk/statistics/files/defra-stats-food-family-annual-2007.pdf

Department of the Environment and Rural Affairs (2010) Family Food 2009– A report on the 2009 Family Food Module of the Living Costs and Food Survey. http://www.defra.gov.uk/statistics/files/defra-stats-foodfarm-food-familyfood-2009-110525.pdf

Food Standards Agency in Scotland (2004) Report of the Working Group on Monitoring Scottish Dietary Targets. Aberdeen: FSAS.

Food Standards Agency in Scotland (2008). Accessing healthy food: A sentinel mapping study of healthy food retailing in Scotland. Executive Summary. http://www.food.gov.uk/multimedia/pdfs/accessfoodscotexec.pdf

Gibson, RS (2005) Principles of Nutritional Assessment (Chapter 5). Second Edition. New York: Oxford University Press Inc.

Henderson L, Gregory J, Swan G. (2002) The National Diet and Nutrition Survey: adults aged 19-64 years. Volume 1: Types and quantities of foods consumed. London: TSO.

Holland B, Unwin ID & Buss DH (1992a) Fruit and Nuts. The first supplement to McCance and Widdowson's The Composition of Foods (5th Edition). Cambridge: Royal Society of Chemistry.

Holland B, Welch AA & Buss DH (1992b) Vegetable Dishes. The second supplement to McCance and Widdowson's The Composition of Foods (5th Edition). Cambridge: Royal Society of Chemistry.

House of Commons Select Committee on Health (2004) Third Report of Session 2003-04: Obesity. London: The Stationary Office. http://www.parliament.the-stationery-office.co.uk/pa/cm200304/cmselect/cmhealth/23/23.pdf

Malik VS, Schulze MB and Hu FB (2006) Intake of sugar-sweetened beverages and weight gain: a systematic review. American Journal of Clinical Nutrition 84: 274–288.

Nelson M, Erens B, Bates B, Church S, Boshier T (2007) Low income, diet and nutrition survey. http://www.food.gov.uk/science/dietarysurveys/lidnsbranch/

Office for National Statistics. (2011) Focus on Consumer Price Indices. http://www.statistics.gov.uk/statbase/product.asp?vlnk=867.

Parkin DM, Boyd L, and Walker LC. (2011) The fraction of cancer attributable to lifestyle and environmental factors in the UK in 2010. British Journal of Cancer 105:S77-S81.

Scarborough P, Morgan RD, Webster P and Rayner M. (2011) Differences in coronary heart disease, stroke and cancer mortality rates between England, Wales, Scotland and Northern Ireland: the role of diet and nutrition. BMJ Open 1:e000263. doi:10.1136/bmjopen-2011-000263. http://bmjopen.bmj.com/content/1/1/e000263.full.pdf

Scientific Advisory Committee on Nutrition (SACN) (2010) Iron and Health. http://www.sacn.gov.uk/pdfs/sacn_iron_and_health_report_web.pdf

ScotPho (2007) Measuring Socio-Economic Inequalities in Health: A Practical Guide. http://www.scotpho.org.uk/nmsruntime/saveasdialog.asp?lID=4054&sID=3488

Scottish Executive (2004) Urban Rural Classification 2003 – 2004. http://www.scotland.gov.uk/Resource/Doc/47251/0028898.pdf

Scottish Government (2008a) Equally Well report of the ministerial task force on health inequalities. http://www.scotland.gov.uk/Resource/Doc/229649/0062206.pdf

Scottish Government (2008b) Healthy Eating in Schools: A guide to implementing the national requirements for food and drink in schools (Scotland) regulations 2008. http://www.scotland.gov.uk/Resource/Doc/238187/0065394.pdf

Scottish Government (2009a) Recipe for Success: Scotland's National Food and Drink Policy. http://www.scotland.gov.uk/Resource/Doc/277346/0083283.pdf

Scottish Government (2009b) Scottish Index of Multiple Deprivation. Edinburgh: Scottish Government. http://www.scotland.gov.uk/Topics/Statistics/SIMD/

Scottish Government (2010) Preventing Overweight and Obesity in Scotland: A Route Map Towards Healthy Weight. http://www.scotland.gov.uk/Resource/Doc/302783/0094795.pdf

Scottish Government (2011) Indicators to Monitor Progress of the Obesity Route Map. http://www.scotland.gov.uk/Resource/Doc/346011/0115167.pdf

Scottish Government (2011b) Obesity Route Map – Action Plan. http://www.scotland.gov.uk/Resource/Doc/346007/0115166.pdf

Shaw M, Galobardes B, Lawlor D, Lynch J, Wheeler B, Davey Smith G (2007) The handbook of inequality and socioeconomic position: concepts and measures. Bristol: Policy Press.

Sheehy C, McNeill G, Masson L, Craig L, Macdiarmid J, Holmes B, Nelson M, (2008) Survey of sugar intake among children in Scotland.http://www.food.gov.uk/multimedia/pdfs/sugarintakescot2008rep.pdf

The Scottish Office (1996) Scotland's health a challenge to us all. Eating for Health. A diet action plan for Scotland. Edinburgh: HMSO.

UK Data Archive - University of Essex. http://www.data-archive.ac.uk/

Waste and Resource Action Programme survey (WRAP) (2008) The food we waste. Oxon: WRAP

WRAP Scotland (2009) The food we waste in Scotland. Stirling: WRAP Scotland. http://www.wrap.org.uk/downloads/Food_waste_in_Scotland_FINAL_report_28_August_2009.2640adad.7550.pdf

WRAP (2009) Household Food and Drink Waste in the UK. Oxon: WRAP http://www.wrap.org.uk/downloads/Household_Food_and_Drink_Waste_in_the_UK_Nov_2011.9db06da8.8048.pdf

WRAP (2011) New estimates for household food and drink waste in the UK. Oxon: WRAP http://www.wrap.org.uk/downloads/New_estimates_for_household_food_and_drink_waste_in_the_UK_FINAL_v2.cfef61e6.11460.pdf

Wrieden W, Peace H, Armstrong J, Barton K (2003) Monitoring the Scottish Diet Action Plan Targets – Review of National dietary surveys and Scottish research studies. Aberdeen: Food Standards Agency in Scotland. http://www.food.gov.uk/multimedia/pdfs/scotdietmonitorreview.pdf

Wrieden WL, Barton KL, Armstrong J & McNeil G (2006) A review of food consumption and nutrient intakes from national surveys in Scotland: comparison to the Scottish Dietary Targets. Aberdeen: Food Standards Agency in Scotland. http://www.food.gov.uk/multimedia/pdfs/scotdietrytarg.pdf

Wrieden WL, Barton KL (2011) The Scottish Diet: estimations of energy density and expenditure. Aberdeen: Food Standards Agency in Scotland. http://www.foodbase.org.uk//admintools/reportdocuments/418-1-1108_S14035_Energy_Density_Final_Report.pdf

6. APPENDICES

Appendix 1: Derivation of SDTs and Accepted Definitions of Foods

Appendix 2: Further Detail on Methodology

Appendix 3: Advantages and Disadvantages of the LCF

Appendix 4: Coding Frame

Appendix 5: Flowchart of Data Handling Process

Appendix 6: Household and Eaten Out Results by Year 2001 - 2009

Appendix 7: SIMD Data for 2001-2003 and 2004-2006 and URC Data for 2001-2003, 2004-2006 and 2007-2009

Appendix 8: SII and RII Tables

Appendix 1: Derivation of SDTs and Accepted Definitions of Foods

The baseline figures quoted in Table 1 were those published in the Scottish Diet Action Plan in 1996 (The Scottish Office, 1996). These were originally derived mainly from the National Food Surveys (NFS) of 1989-1991 http://www.defra.gov.uk/statistics/foodfarm/food/familyfood/nationalfoodsurvey/ and were therefore an indication of food and nutrient intake at that time. The baseline figures were used to formulate the SDTs and were the best available at the time. However, a major limitation is that the 1989-1991 NFS did not include food and drink eaten outside the home or sweets and confectionery.

In addition, the calculations used to derive certain food groups e.g. fruit and vegetables, differed from those now advised (see text boxes on fruit and vegetables, breakfast cereals and oil rich fish).

FRUIT AND VEGETABLES

Original estimates of fruit and vegetable consumption were based simply on fresh and frozen varieties. Today it is recognised that the term 'fruit and vegetables' encompasses not only fresh and frozen varieties but also tinned, dried and juiced.

BREAKFAST CEREALS

The range of breakfast cereals available today has increased considerably since the targets were set. New products with high levels of sugar, salt and/or fat and often low levels of fibre have been introduced. The target does not distinguish between cereals that are high in fibre/low in sugar, and cereals that are low fibre/high in sugar, salt and sometimes fat. As wholegrain/high fibre breakfast cereals are more likely to make a positive contribution to improving diet, consumption has been reported for wholegrain/high fibre breakfast cereal as well as total breakfast cereal.

OIL RICH FISH

Estimates of oil rich fish consumption in early studies and some more recent surveys included canned tuna. The target to increase oil rich fish intake is based on gaining the health benefits of omega 3 fatty acids found in fish oils. Fresh tuna is a good source of omega 3 fatty acids, but during the process of canning tuna these oils are lost and replaced with other oils or brine. Consequently canned tuna has a low content of the omega 3 fatty acids and should not be included in the category of oil rich fish for monitoring progress towards this particular target.

In this report the results for food consumption and nutrient intake are calculated from the LCF which replaced the NFS in 2001. The composition of the categories of fruit and vegetables, breakfast cereals and oil-rich fish are defined as above to reflect current advice.

Appendix 2: Further Detail on Methodology

The Living Costs and Food Survey / Expenditure and Food Survey

The LCF is an annual household budget survey designed to collect information about household food and expenditure. The LCF provides a valuable source of information about food purchases of the population which can be translated into estimates of food consumption and nutrient intake (Wrieden *et al.*, 2006). The survey however is not designed to measure intakes of specific individuals. The LCF collects household food purchase and eating out data from every person over 7 years of age in each household over a 14 day period. Due to the nature of the data collected in household budget surveys it is not possible to produce median intakes. Therefore the prevalence of individuals who are particularly high or low consumers of specific foods cannot be determined.

Coding Frame

The detailed coding frame reported by Barton *et al.* (2010) compiled for both household and eaten out food purchases was used for the analysis (Appendix 4). This was based on that reported by Wrieden *et al*., 2006 which provides further detail on its derivation and on the disaggregation of foods where appropriate. The coding frame is based on 522 food codes allocated by Defra to household or eaten out food purchases. It lists groupings of foods (and codes) which form part of each dietary target (or food group of interest) and gives details of conversion factors applied to the food weights. Conversion factors are necessary to apply the proportion of the food code applicable to the target food – for example, the vegetable contribution of vegetarian dishes is x0.4, a factor calculated from the NDNS adults 19-64 (Henderson *et al*., 2002). Where no factor was necessary, a factor of 1.0 was applied. Due to the type of data is not possible to put a ceiling on the contribution that fruit juice and baked beans make to total fruit and vegetable intake and "5-a-day" as often happens in dietary survey reporting. It was decided following the Wrieden *et al*., 2006 report to only report total fruit and vegetable intake rather than with and without fruit juice and baked beans. This decision was based on the fact that average fruit juice intake from 2001-2003 was 42g/day and average baked bean consumption was 12g/day, therefore well below the ceilings usually applied to fruit juice and baked beans of one 80g portion per day.

Categorisation of Foods

The Defra EFS coding frames for household and eaten out food purchases were examined and foods forming part of each dietary target (or food group of interest) were selected and categorised accordingly.

Conversion Factor

The conversion factors are applied to food purchases to estimate the actual amount of each food that is consumed. A conversion factor was calculated (for each food code, for household and eating out purchases); for the proportion of fruit, vegetable, bread, meat etc. in a composite food; for the proportion of food in food grouping (where it bridges more than one food grouping); raw to cooked weight (where appropriate); proportion of inedible waste; and estimate of edible waste. Data for these

conversion factors were taken from the 1st, 2nd, 5th and 6th supplements of McCance and Widdowson's composition of foods (Holland *et al.,* 1992a; Holland *et al.,* 1992b; Chan *et al.,* 1995; Chan *et al.,* 1996). Where this data was not available from the above sources, information was sought from manufacturers' label data or market share data supplied by the Food Standards Agency.

Edible Waste

Estimates of waste for the UK population were first published by WRAP in 2008. The annex of the report on the 2007 EFS (Defra, 2008) expands on the information available in the WRAP report and provides waste information at a more detailed level. Defra have mapped waste figures, based on those in the WRAP report, to each of the food codes used in the LCF. This information was obtained from Defra and used to assign a waste factor to each food code. The waste figures were provided for single and multiple adult households and were linked to the appropriate type of household prior to analysis. The figures published by WRAP account for edible waste; inedible waste (i.e. bone) was taken into account when calculating the conversion factor for each food code.

Data Handling

LCF data for each year, in its raw form, was obtained from the UK Data Archive, University of Essex. The data comprised 3 files for each year – an Access database (Microsoft Corporation, 2003) containing raw data (at the household level) for food and drink purchases; and 2 SPSS files – one containing information on each household (HH file) and the other containing information on each person within each household (PP file). Appendix 5 provides a flowchart which illustrates the data handling process for data from each year, which are then merged in SPSS to obtain one working data file. The Scottish sample of the LCF for each year was extracted from the Access database and the HH and PP SPSS files. Each household was allocated a new ID due to overlap in Case IDs between years.

Data on sampling strata and clusters, SIMD, domains of SIMD, URC and raw Gross Normal Weekly Income (GNWI) were obtained from the UK ONS. Data on SIMD and domains of SIMD were provided as quintiles and URC in 3 categories. Data on SIMD and URC by postcode were initially obtained from Scottish Neighbourhood Statistics and the Scottish government respectively and sent to ONS to link to anonymised case ID's.

Food Purchase Data

The Access database containing the Scottish food purchase data was linked to a table constructed from the coding frame, which listed each food grouping, each food within these groupings and the appropriate conversion factor to be applied to the calculations (where no factor was necessary 1.0 was applied). This table also contained data on waste for single and multiple adult households. Single and multiple adult households were selected in turn, the appropriate adjustment was then made for waste and the databases re-joined.

Household consumption (based on purchases) for each food code was multiplied by the appropriate conversion factor and summed by food grouping. This was then divided by the number of individuals in the household and divided by 14 to obtain the mean daily consumption per person.

For nutrients: household consumption data minus waste (based on purchases) for each food code was multiplied by the appropriate nutrient content per gram (provided by Defra) to provide the nutrient intake per food. Household, eaten out and combined nutrient intakes for foods were then summed for each household. These were then divided by the number of individuals in the household and divided by 14 to obtain the mean daily intake per person for each nutrient.

Derivation of Additional Variables Required for Analysis Purposes

Additional descriptive variables for each household were extracted from the two SPSS files described previously and merged with data on sampling strata and clusters, SIMD, domains of SIMD, URC and raw GNWI obtained from ONS to form a SPSS file containing all additional variables. Where the household reference person (HRP) or their partner were under 18, they were re-coded as adults for the purposes of this analysis, as it affected both the household McClements score (see below) and category the household was assigned to for waste purposes.

The number of categories assigned to the variables on household size and composition were reduced to aid analysis and variables on GNWI, % GNWI spent on food and equivalised income were divided into quintiles by year. Due to the fact that income is likely to change over time, the income variables were split into quintiles by year rather than splitting the whole dataset into quintiles. This also had the benefit of ensuring that when data from additional years were added to the dataset each household would remain in its quintile position within each year.

Equivalised income adjusts actual income by household size and composition. It was calculated by dividing gross normal weekly household income by the McClements score for the household.

The McClements Score is calculated by allocating each household member the appropriate individual McClements score according to age and number in the household, then summing all scores in the household (Bromley *et al.,* 2011b).

Analysis of Data

The food consumption and nutrient intake data were exported to SPSS and merged with the additional variables file. Due to the multi-staged stratified sampling procedure of the LCF, data were analysed using Descriptive Statistics and General Linear Models within the Complex Samples module of SPSS, version 18 (SPSS Inc., Chicago, IL, USA) and weighted according to the Scottish population.

The data were weighted so that estimates obtained for mean food consumption and nutrient intake more accurately reflected that of the Scottish population. The weights were provided by Defra.

Overall associations between food consumption/nutrient intake and year, SIMD quintile or URC group were assessed by an adjusted Wald test. The adjusted Wald test was used in the general linear modelling section of the complex samples methodology module of SPSS and tests whether the value for all years, SIMD quintiles or URC categories are equal in a single test and produces a single P-value. Linear associations between food consumption/nutrient intake and year or SIMD quintile were assessed by linear regression within the general linear modelling section of the complex samples methodology module of SPSS.

Appendix 2: Further Detail on Methodology

Analysis by URC was carried out firstly unadjusted, secondly adjusted by SIMD quintile and thirdly adjusted by multivariables. The multivariable model used in the URC analysis further adjusted for SIMD quintile, equivalised income, HH composition, HH size, %GNWI spent on food, energy intake (kcal) and HRP age as these variables were all found to have an impact on food and nutrient intake. The decision as to which variables to include in the model was taken after analysis was carried out by each variable independently. This work also included the analysis by quintiles of individual domains of SIMD (namely education, employment, health and housing) but it was felt that as these are given different weightings in the overall SIMD score that it was better to use the overall SIMD score in the multivariable model rather than include all the individual domains.

Appendix 3: Advantages and Disadvantages of the LCF

The LCF and their predecessor, the NFS, are annual household budget surveys designed to collect information about household food and expenditure. Further details about the design of the EFS/NFS are discussed in an earlier report (Wrieden *et al.*, 2003). The EFS provides a valuable source of information about the food purchases of the population which can be translated into estimates of food consumption and nutrient intake (Wrieden *et al*., 2006). The survey however is not designed to measure intakes of specific individuals. The LCF collects household food purchase data from every person over 7 years of age in each household for a 14 day period. The length of time the food diaries are kept (14 days) is a major strength of this study, as for most foods and nutrients the balance of intake is over more than 7-10 days. Methods that assess diet over shorter periods of time, e.g. three to four or less days, are less likely to give an accurate measure of intake. Due to the nature of the data collected in household budget surveys it is not possible to produce median intakes. Therefore, the prevalence of individuals who are particularly high or low consumers of a food, food group or nutrient cannot be determined.

Advantages

- The LCF includes around 550 households (approximately 1,300 people) per year in mainland Scotland.
- It collects information over a period of 14 days on food and drink purchases and includes foods eaten within the household and those eaten out.
- The LCF records food acquisitions rather than consumption and is therefore possibly less susceptible to under-reporting and non-response bias than weighed intake dietary surveys (Chesher, 1997).
- The LCF is one of the few sources of information on food purchased out of the home. This can be compared with consumption in the home.
- It can be used to assess all the SDTs (except salt and NMES in children), using the varieties and composition of food groups which were developed for the Barton *et al.* (2010) report.
- Data is collected continuously and published annually; it is possible to merge datasets over a number of years.
- Further information can be gained by linkage of data from the LCF to the SIMD and URC (for more information see Scottish Government, 2009b & Scottish Executive, 2004 respectively).

Disadvantages

- The information collected is based on food purchased rather than actually eaten, so specific wastage factors are incorporated for different food groups, based on recent research by WRAP (2008). Although this is an improvement on the previously used 10% estimation of waste for all foods, the figures are based on research carried out in England and does not include flat dwelling households.

- Results obtained are an estimate of the consumption of a typical average household member so no information can be derived regarding the consumption by specific sub-groups e.g. children.
- Median and other distributional characteristics relating to consumption cannot be estimated.

Appendix 4: Coding Frame

This updated and simplified coding frame is based on that reported by Wrieden et al., 2006, which provides information on the disaggregation of foods where appropriate.

1. Dietary Target: Fruit and vegetables average to double to more than 400g per day

- Fruit including fruit (and vegetable) juice
- Vegetables including baked beans
- Fruit and Vegetables including fruit (and vegetable) juice and baked beans (addition of 1 and 2)

Household Fruit - including fruit (and vegetable) juice

Defra Code	Food Description	Factor	Single Adult HH Waste	Multiple Adult HH Waste
19603	Vegetable juices e.g. tomato juice, carrot juice	1	0.1	0.1
21001	Fresh oranges	1	0.3382	0.2325
21401	Other fresh citrus fruits	1	0.0536	0.041
21701	Fresh apples	1	0.6627	0.2772
21801	Fresh pears	1	0.1442	0.1929
22101	Fresh stone fruit	1	0.2036	0.1797
22201	Fresh grapes	1	0.0833	0.0778
22701	Other fresh soft fruit	1	0.433	0.2521
22801	Fresh bananas	1	0.1545	0.082
22901	Fresh melon	1	0.2848	0.1797
23101	Other fresh fruit	1	0.1404	0.0938
23301	Tinned peaches, pears & pineapples	0.6	0.0806	0.0899
23601	All other tinned or bottled fruit	0.52	0.0806	0.0899
24001	Dried fruit	3.71	0.0806	0.0899
24101	Frozen strawberries, apple slices, peach halves, oranges and other frozen fruits	1	0.0806	0.0899
24801	Pure fruit juices	1	0.1	0.1

Eating Out Fruit - including fruit (and vegetable) juice

Defra Code	Food Description	Factor	Single Adult HH Waste	Multiple Adult HH Waste
200101	All citrus fruit, fresh e.g. orange, grapefruit	1	0	0
200102	Banana, fresh	1	0	0
200103	Apples, fresh	1	0	0
200104	Pears, fresh	1	0	0
200105	Stone fruit, fresh e.g. apricot, plum, peach, cherry, avocado	1	0	0
200106	Grapes, fresh	1	0	0
200107	Soft fruit/berries, fresh e.g. strawberries, blackberries - no cream/ice cream	1	0	0
200108	Melon, fresh	1	0	0
200109	Pineapple, fresh	1	0	0
200110	Fresh fruit salad, without cream/ice cream	1	0	0
200111	Other fresh fruit (kiwi, passion) & 'fruit', type not specified	1	0	0
200112	Free school fruit	1	0	0
200201	Dried fruit e.g. sultanas, raisins	3.71	0	0
200301	Tinned, stewed/baked or processed fruit - without cream/ice cream	1	0	0
240301	Fruit filling e.g. peaches for pancakes	1	0	0
260204	PURE fruit juices	1	0	0
260205	Vegetable juices e.g. tomato juice, carrot juice	1	0	0
290205	Fruit and other pies/pastries	0.5	0	0

Household Vegetables - including baked beans

Defra Code	Food Description	Factor	Single Adult HH Waste	Multiple Adult HH Waste
16201	Cabbages, fresh	1	0.7014	0.4155
16301	Brussels sprouts, fresh	1	0.1701	0.0794
16401	Cauliflower, fresh	1	0.1449	0.1019
16701	Lettuce & leafy salads	1	0.5069	0.3519
16702	Prepared lettuce salads	1	0.6023	0.4633
16801	Peas, fresh	1	0.0917	0.0417
16901	Beans, fresh	1	0.5589	0.3071
17101	Other fresh green vegetables	1	0.2589	0.1589
17201	Carrots, fresh	1	0.3835	0.1681
17301	Turnips & swede, fresh	1	0.1231	0.0669
17401	Other root vegetable, fresh	1	0.225	0.1511
17501	Onions, leeks, shallots, fresh	1	0.2143	0.1408
17601	Cucumbers, fresh	1	0.3717	0.2357
17701	Mushrooms, fresh	1	0.1483	0.104
17801	Tomatoes, fresh	1	0.1582	0.0926
18301	Stewpack, stirfry pack, pack of mixed vegetables	1	0.3429	0.2301
18302	Stem vegetables	1	0.6075	0.453
18303	Marrow, courgettes, aubergine, pumpkin and other fresh vegetables	1	0.1691	0.1147
18304	Fresh herbs	1	0.1267	0.091
18401	Tomatoes, canned or bottled	1	0.1582	0.0926
18501	Peas, canned	1	0.0917	0.0417
18802	Baked beans in sauce	1	0.0828	0.0309
18803	Other canned beans & pulses	1	0.2589	0.1589
19101	Other canned vegetables	1	0.2589	0.1589
19201	Dried pulses other than air-dried	6.19	0.2589	0.1589
19501	Air-dried vegetables	14.39	0.3429	0.2301
19602	Tomato puree and vegetable purees	5.2	0.1267	0.091
20301	Peas, frozen	1	0.0917	0.0417
20401	Beans, frozen	1	0.5589	0.3071
20601	Ready meals & other vegetable products - frozen or not frozen	0.4	0.2563	0.29
20604	All vegetable takeaway products	0.4	0.2563	0.29
20801	Other frozen vegetables	1	0.2589	0.1589
29601	Pizzas - frozen and not frozen	0.16	0.2563	0.29
29602	Takeaway pizza	0.16	0.2563	0.29
31801	Soups - canned or cartons	0.3	0.2563	0.29
32001	Soups - from takeaway	0.3	0.2563	0.29
32201	Meals on wheels - items not specified	0.2	0.2563	0.29

Eating Out Vegetables - including baked beans

Defra Code	Food Description	Factor	Single Adult HH Waste	Multiple Adult HH Waste
100103	Vegetable or fruit based curry	0.4	0	0
100104	Dhal & Dhal dishes	0.4	0	0
100106	Other Indian dishes	0.4	0	0
100108	Indian buffet or shared meal or unspecified Indian meal	0.2	0	0
100201	Chinese or Thai meat or fish based dishes excluding curry	0.2	0	0
100202	Chop suey and fu yung dishes	0.2	0	0
100203	Chinese or Thai vegetable based main course dishes	0.4	0	0
100204	Chinese or Thai curry	0.2	0	0
100206	Other Chinese or Thai dishes	0.2	0	0
100207	Chinese or Thai buffet or shared meal or unspecified Chinese or Thai meal	0.2	0	0
100301	All other ethnic meals	0.2	0	0
110601	Meat and vegetable stews, casseroles or hotpots	0.2	0	0
110602	Chicken or turkey stews, casseroles or hotpots	0.2	0	0
110603	Meat lasagne, cannelloni, moussaka and other meat-based oven baked dishes	0.2	0	0
130201	Pizza - cheese & tomato, vegetable; incl Pizza, type not specified	0.4	0	0
130202	Pizza - meat, fish or poultry	0.16	0	0
150101	Lettuce & cress	1	0	0
150102	Other green vegetables e.g. spinach, cabbage, sprouts	1	0	0
150201	Peppers - raw/cooked	1	0	0
150202	Courgettes, marrow, aubergine, pumpkin, plantain, cucumbers	1	0	0
150203	Peas & sweetcorn	1	0	0
150204	Baked Beans and other beans (not green beans) & pulses	1	0	0
150205	Tomato - fresh, raw	1	0	0
150206	Tomato - cooked or processed	1	0	0
150301	Carrots	1	0	0
150302	Onions - raw or cooked incl 'onions' type not specified	1	0	0
150303	Onions - fried	1	0	0
150304	Other root vegetables/ tubers e.g. turnip, parsnip, radish, beetroot	1	0	0
150401	Mushrooms - raw or cooked	1	0	0
150501	Mixed vegetables and 'veg' type not specified.	1	0	0
150502	Other vegetables e.g. artichoke, asparagus	1	0	0
150503	Vegetables in batter or breadcrumbs and deep fried veg e.g. onion rings	0.4	0	0
150504	Onion and other vegetable bhajis & pakora	0.4	0	0
150601	Veggie burger, bean burger, veggie sausage, nut roast	0.4	0	0

Eating Out Vegetables - including baked beans (continued)

Defra Code	Food Description	Factor	Single Adult HH Waste	Multiple Adult HH Waste
150602	Vegetable lasagne, veg cannelloni, veg moussaka and other oven baked vegetable based dishes	0.4	0	0
150603	Stuffed vegetables (e.g. stuffed pepper) and vegetable based starter	0.4	0	0
150604	Vegetable based stews & casseroles and veg-based pies	0.4	0	0
160101	Mixed salad, main course - without dressing	1	0	0
160102	Mixed salad, side dish - without dressing; incl 'salad' type not specified	1	0	0
160103	Green salad - without dressing	1	0	0
160201	Vegetable/ fruit and nut salad - with dressing	0.4	0	0
160301	Meat salad e.g. beef, lamb salads	0.2	0	0
160302	Chicken or turkey salad	0.2	0	0
160303	Fish salad e.g. tuna, salmon salads	0.2	0	0
160401	Cheese salad including ploughman’s	0.2	0	0
160402	Egg salad	0.2	0	0
160501	Other salads e.g. Greek, Florida, Russian	0.2	0	0
160601	Salad buffet or buffet meal where items not specified	0.2	0	0
170105	Noodles with meat, vegetables etc.	0.2	0	0
180102	Vegetable-based soups	0.3	0	0
180104	Soups, other; incl soup not specified	0.3	0	0
230207	Vegetarian based sandwich on white bread or roll	0.4	0	0
230208	Vegetarian based sandwich on brown bread or roll	0.4	0	0
230209	Vegetarian based sandwich bread not specified	0.4	0	0
240102	Meat-based sauce e.g. Bolognese, chilli con carne	0.2	0	0
240104	Tomato-based sauce containing vegetables, incl ratatouille	0.4	0	0
240203	Coleslaw	0.4	0	0
240302	Vegetable filling	0.4	0	0
240701	Unspecified meal e.g. 'meal', 'school meal' or 'meal at work'	0.2	0	0

2. Dietary Target: Bread intake to increase by 45% from present daily intake of 106g, mainly using wholemeal and brown breads

- White Bread
- Brown / Wholemeal Bread
- Total Bread (addition of 1 and 2)

Household White Bread

Defra Code	Food Description	Factor	Single Adult HH Waste	Multiple Adult HH Waste
9502	Takeaway burger & bun	0.55	0.2563	0.29
25102	White bread, standard, unsliced	1	0.3335	0.2399
25202	White bread, standard, sliced	1	0.3335	0.2399
25701	White bread, premium, sliced and unsliced	1	0.3335	0.2399
25801	White bread, soft grain, sliced and unsliced	1	0.3335	0.2399
26302	Rolls - white, brown or wholemeal	0.78	0.3942	0.1718
26303	Malt bread and fruit loaves	1	0.0861	0.0241
26304	Vienna & French bread	1	0.3942	0.1718
26305	Starch reduced bread & rolls	1	0.3335	0.2399
26308	Other breads	1	0.3349	0.4585
26309	Sandwiches	0.3744	0.2563	0.29
26310	Sandwiches from takeaway	0.3744	0.2563	0.29
26311	Takeaway breads	1	0.3349	0.4585
26701	Buns, scones & teacakes	1	0.1239	0.1163
29601	Pizzas - frozen and not frozen	0.57	0.2563	0.29
29602	Takeaway pizza	0.57	0.2563	0.29

Eating Out White Bread

Defra Code	Food Description	Factor	Single Adult HH Waste	Multiple Adult HH Waste
100107	Indian breads	1	0	0
110301	Small or single burgers	0.66	0	0
110302	Large or double burgers	0.39	0	0
110303	Chicken burger	0.46	0	0
110404	Hot dogs and sausage sandwiches	0.54	0	0
120602	Fish burgers (in bun)	0.49	0	0
130201	Pizza - cheese & tomato, vegetable; incl pizza, type not specified	0.57	0	0
130202	Pizza - meat, fish or poultry	0.57	0	0
220101	White bread, with or without butter/margarine (toasted or untoasted)	1	0	0
220103	White, without butter/marg (or butter/marg not spec)	1	0	0
220105	Garlic bread	1	0	0
220106	Croissant	1	0	0
220107	Continental breads e.g. pitta, ciabatta, focaccia	1	0	0
220108	Muffins/ crumpets	1	0	0
220109	Fried bread, incl croutons	1	0	0
220110	Bread/ rolls/ toast etc, type not specified	0.78	0	0
230101	Meat-based, white bread/roll	0.52	0	0
230103	Meat-based, bread not specified	0.4056	0	0
230104	Chicken/turkey-based, white bread/roll	0.52	0	0
230106	Chicken/turkey-based, bread not specified	0.4056	0	0
230107	Bacon and egg, white bread/roll incl Bacon & Egg McMuffin	0.52	0	0
230109	Bacon and egg, bread not specified	0.4056	0	0
230110	Fish-based, white bread/roll	0.52	0	0
230112	Fish-based, bread not specified	0.4056	0	0
230201	Cheese-based, white bread/roll	0.52	0	0
230203	Cheese-based, bread not specified	0.4056	0	0
230204	Egg-based, white bread/roll incl Egg McMuffin	0.52	0	0
230206	Egg-based, bread not specified	0.4056	0	0
230207	Vegetarian-based, white bread/roll	0.52	0	0
230209	Vegetarian-based, bread not specified	0.4056	0	0
230210	Sweet-filled sandwich	0.4056	0	0
230211	Unspecified sandwiches or rolls	0.4056	0	0
290301	Waffles & pancakes	0.5	0	0
290401	Teacakes, scones, currant bun, iced bun	0.5	0	0

Household Brown/Wholemeal Bread

Defra Code	Food Description	Factor	Single Adult HH Waste	Multiple Adult HH Waste
25901	Brown bread, sliced and unsliced	1	0.3335	0.2399
26001	Wholemeal & granary bread, sliced and unsliced	1	0.3335	0.2399
26302	Rolls - white, brown or wholemeal	0.22	0.3942	0.1718
26309	Sandwiches	0.1056	0.2563	0.29
26310	Sandwiches from takeaway	0.1056	0.2563	0.29

Eating Out Brown/Wholemeal Bread

Defra Code	Food Description	Factor	Single Adult HH Waste	Multiple Adult HH Waste
220102	Brown or wholemeal bread, with or without butter/margarine (toasted or untoasted)	1	0	0
220104	Brown/ wholemeal, without butter/margarine	1	0	0
220110	Bread/ rolls/ toast etc, type not specified	0.22	0	0
230102	Meat-based, brown bread/roll	0.52	0	0
230103	Meat-based, bread not specified	0.1144	0	0
230105	Chicken/turkey-based, brown bread/roll	0.52	0	0
230106	Chicken/turkey-based, bread not specified	0.1144	0	0
230108	Bacon and egg, brown bread/roll	0.52	0	0
230109	Bacon and egg, bread not specified	0.1144	0	0
230111	Fish-based, brown bread/roll	0.52	0	0
230112	Fish-based, bread not specified	0.1144	0	0
230202	Cheese-based, brown bread/roll	0.52	0	0
230203	Cheese-based, bread not specified	0.1144	0	0
230205	Egg-based, brown bread/roll	0.52	0	0
230206	Egg-based, bread not specified	0.1144	0	0
230208	Vegetarian-based, brown bread/roll	0.52	0	0
230209	Vegetarian-based, bread not specified	0.1144	0	0
230210	Sweet-filled sandwich	0.1144	0	0
230211	Unspecified sandwiches or rolls	0.1144	0	0

3. Dietary Target: Breakfast cereals average intake to double from the present intake of 17g per day

Household Wholegrain/High Fibre Breakfast Cereals

Defra Code	Food Description	Factor	Single Adult HH Waste	Multiple Adult HH Waste
28101	Oatmeal and oat products	1	0.0275	0.0224
28202	Muesli	1	0.0275	0.0224
28203	High fibre breakfast cereals	1	0.0275	0.0224

Eating Out Wholegrain/High Fibre Breakfast Cereals

Defra Code	Food Description	Factor	Single Adult HH Waste	Multiple Adult HH Waste
190101	Muesli and Oat Crunch Cereals	1	0	0
190102	Other high fibre breakfast cereals e.g. Allbran, Weetabix	1	0	0
190104	Hot breakfast cereals e.g. porridge, Ready Brek	1	0	0

Household Low Fibre or High NMES Breakfast Cereal

Defra Code	Food Description	Factor	Single Adult HH Waste	Multiple Adult HH Waste
28204	Sweetened breakfast cereals	1	0.0275	0.0224

Eating Out Low Fibre or High NMES Breakfast Cereal

Defra Code	Food Description	Factor	Single Adult HH Waste	Multiple Adult HH Waste
190103	Sweetened breakfast cereals e.g. Frosties, Sugar Puffs	1	0	0

Household Low fibre and Lower NMES Breakfast Cereal

Defra Code	Food Description	Factor	Single Adult HH Waste	Multiple Adult HH Waste
28205	Other breakfast cereals	1	0.0275	0.0224

Eating Out Low Fibre and Lower NMES Breakfast Cereal

Defra Code	Food Description	Factor	Single Adult HH Waste	Multiple Adult HH Waste
190105	Other breakfast cereals and type not specified e.g. Cornflakes, Rice Krispies, Special K	1	0	0

4. Dietary Target: White fish consumption to be maintained at current levels, Oil rich fish consumption to increase from 44g per week to 88g per week

NB: Factors are multiplied by 7 in order that fish calculations can be carried out alongside those for other foods as the fish target is in grams per week and the other targets are in grams per day

Household Oil Rich Fish

Defra Code	Food Description	Factor	Single Adult HH Waste	Multiple Adult HH Waste
10601	Herring & other blue fish, fresh or chilled	7	0.096	0.0418
10602	Herring & other blue fish, frozen	7	0.096	0.0418
10701	Salmon, fresh or chilled	7	0.096	0.0418
10702	Salmon, frozen	7	0.096	0.0418
10801	Blue fish, dried or salted or smoked	7	0.096	0.0418
11901	Tinned salmon	7	0.096	0.0418
12001	Other tinned or bottled fish	1.33	0.096	0.0418
12103	Ready meals & other fish products - frozen or not frozen	1.05	0.2563	0.29

Eating Out Oil Rich Fish

Defra Code	Food Description	Factor	Single Adult HH Waste	Multiple Adult HH Waste
120201	Trout, tuna and salmon only - fresh - without sauce/dressing	7	0	0
120202	Other fatty fish - without sauce/dressing e.g. herring, mackerel, sardines	7	0	0
120401	Kippers and other smoked fish e.g. smoked salmon	7	0	0
120603	Fish based pie or other dish e.g. paella, kedgeree, tuna	1.05	0	0
160303	Fish salad e.g. tuna, salmon salads	0.7	0	0

Household White Fish

Defra Code	Food Description	Factor	Single Adult HH Waste	Multiple Adult HH Waste
10201	White fish, fresh or chilled	7	0.096	0.0418
10202	White fish, frozen	7	0.096	0.0418
11401	White fish, dried or salted or smoked	7	0.096	0.0418
11702	Shellfish, fresh or chilled	7	0.2178	0.0621
11703	Shellfish, frozen	7	0.2178	0.0621
11801	Takeaway fish	3.85	0.096	0.0418
12001	Other tinned or bottled fish	5.67	0.096	0.0418
12103	Ready meals & other fish products - frozen or not frozen	2.45	0.2563	0.29
12304	Takeaway fish products	3.5	0.2563	0.29
12305	Takeaway fish based meals	3.5	0.2563	0.29

Eating Out White Fish

Defra Code	Food Description	Factor	Single Adult HH Waste	Multiple Adult HH Waste
100101	Meat or fish based curry with sauce	1.75	0	0
100102	Meat or fish based curry without sauce	1.75	0	0
100201	Chinese or Thai meat or fish based dishes excluding curry	1.75	0	0
120101	White fish - grilled, steamed, baked or boiled - no sauce	7	0	0
120102	White fish - fried (incl in batter/breadcrumbs) - no sauce	3.85	0	0
120301	Shellfish - without sauce or dressing e.g. prawns, shrimps, oysters, crab	7	0	0
120501	Other fish products and unspecified 'fish' e.g. squid, sushi, crabsticks	7	0	0
120601	Fish, processed, in breadcrumbs (fish fingers, fish cakes, scampi) - without sauce/dressing	3.5	0	0
120602	Fish burgers [in bun]	1.575	0	0
120603	Fish based pie or other dish e.g. paella, kedgeree, tuna pasta bake	2.45	0	0
130202	Pizza - meat, fish or poultry	0.175	0	0
160303	Fish salad e.g. tuna, salmon salads	0.7	0	0
230110	Fish based sandwich on white bread or roll	2.31	0	0
230111	Fish based sandwich on brown bread or roll	2.31	0	0
230112	Fish based sandwich bread not specified	2.31	0	0
240103	Fish or seafood based sauce	3.43	0	0
240304	Fish-based filling e.g. tuna mayonnaise	4.55	0	0

5. Dietary Target: Increase average non sugar carbohydrate intake by 25% from 124g per day, through increased consumption of fruit and vegetables, bread, breakfast cereals, rice and pasta and through an increase of 25% in potato consumption

Household Fresh Potatoes

Defra Code	Food Description	Factor	Single Adult HH Waste	Multiple Adult HH Waste
15501	Potatoes - bought Jan-Aug, previous years crop	1	0.3718	0.2416
15502	Potatoes - bought Jan-Aug, this years crop	1	0.3718	0.2416
15503	Potatoes - bought Sep-Dec, this years crop or new imported	1	0.3718	0.2416
15504	Fresh potatoes not specified elsewhere	1	0.3718	0.2416
15505	Fresh new potatoes	1	0.3718	0.2416
15506	Fresh baking potatoes	1	0.3718	0.2416

Eating Out Fresh Potatoes

Defra Code	Food Description	Factor	Single Adult HH Waste	Multiple Adult HH Waste
140103	Potatoes - boiled & type not specified	1	0	0
140104	Potatoes - mashed	1	0	0
140105	Potatoes - roast	1	0	0
140106	Sautéed potatoes/ potato croquettes/ hash browns	1	0	0
140107	Baked/ jacket potatoes - no filling	1	0	0
140108	Other potato dishes (e.g. wedges, potato salad) & not specified	1	0	0

Additional Foods and Drinks Indicative of Diet Quality

Cakes, Biscuits and Pastries

Household Cakes and Pastries

Defra Code	Food Description	Factor	Single Adult HH Waste	Multiple Adult HH Waste
27001	Cakes & pastries, not frozen	1	0.2802	0.1703
27002	Takeaway pastries	1	0.2802	0.1703
28601	Puddings	1	0.0638	0.0283
29402	Cakes & pastries - frozen	1	0.2802	0.1703

Eating Out Cakes and Pastries

Defra Code	Food Description	Factor	Single Adult HH Waste	Multiple Adult HH Waste
290201	Doughnut	1	0	0
290202	Cream pastries e.g. chocolate éclairs, profiteroles	1	0	0
290203	Cream sponge/ gateau (not chocolate) e.g.Victoria sandwich	1	0	0
290204	Rich chocolate cake & chocolate gateau e.g. Death by Chocolate	1	0	0
290205	Fruit and other pies/pastries	1	0	0
290206	Fruit cake	1	0	0
290207	Other sponge cakes/desserts (not cream cakes)	1	0	0
290209	Meringue desserts incl Pavlova	1	0	0
290210	Cheesecake	1	0	0
290214	Other cakes and desserts incl not specified	1	0	0
290301	Waffles & pancakes	0.5	0	0
290401	Teacakes, scones, currant bun, iced bun	0.5	0	0

Household Sweet Biscuits

Defra Code	Food Description	Factor	Single Adult HH Waste	Multiple Adult HH Waste
27402	Sweet biscuits (not chocolate) & cereal bars	1	0.0539	0.0438
27702	Chocolate biscuits	1	0.0539	0.0438

Eating Out Sweet Biscuits

Defra Code	Food Description	Factor	Single Adult HH Waste	Multiple Adult HH Waste
300101	Fully-coated chocolate biscuits/ wafers	1	0	0
300102	Sweet biscuits incl half- coated chocolate biscuits	1	0	0
300103	Cereal bars and cereal based cakes	1	0	0

Sugar and Preserves

Household Sugar and Preserves

Defra Code	Food Description	Factor	Single Adult HH Waste	Multiple Adult HH Waste
15001	Sugar	1	0.1267	0.091
15101	Jams & fruit curds	1	0.1267	0.091
15201	Marmalade	1	0.1267	0.091
15301	Syrup, treacle	1	0.1267	0.091
15401	Honey	1	0.1267	0.091
32303	Other spreads & dressings	1	0.1267	0.091
32901	Jelly squares or crystals	1	0.0638	0.0283

Eating Out Sugar and Preserves

Defra Code	Food Description	Factor	Single Adult HH Waste	Multiple Adult HH Waste
240106	Sweet sauce e.g. syrup, treacle, chocolate sauce	1	0	0
240402	Jam, marmalade & honey	1	0	0
240405	Sugar (as an addition to tea, coffee etc)	1	0	0
290212	Jelly	1	0	0

Confectionery

Household Chocolate Confectionery

Defra Code	Food Description	Factor	Single Adult HH Waste	Multiple Adult HH Waste
35001	Chocolate bars - solid	1	0.0958	0.0575
35101	Chocolate bars - filled	1	0.0958	0.0575

Eating Out Chocolate Confectionery

Defra Code	Food Description	Factor	Single Adult HH Waste	Multiple Adult HH Waste
280101	Chocolate bars & sweets – solid, unfilled incl 'chocolate', type not specified	1	0	0
280102	Chocolate-coated bars & sweets - filled e.g. Mars, Snickers, Minstrels	1	0	0
280103	Single chocolate (after dinner)	1	0	0

Household Sugar Confectionery

Defra Code	Food Description	Factor	Single Adult HH Waste	Multiple Adult HH Waste
35301	Mints	1	0.0958	0.0575
35302	Boiled sweets	1	0.0958	0.0575
35401	Fudges, toffees, caramels	1	0.0958	0.0575
35501	Takeaway confectionery	1	0.0958	0.0575

Eating Out Sugar Confectionery

Defra Code	Food Description	Factor	Single Adult HH Waste	Multiple Adult HH Waste
280105	Mints e.g. Polo, Extra Strong	1	0	0
280106	Boiled sweets, jellies e.g. fruit gums incl 'sweets', type not specified	1	0	0
280107	Toffee/fudge, uncoated eg Toffos, Choc Eclairs, caramels	1	0	0
280108	Pick n mix, nougat, liquorice and other sweets	1	0	0

Soft Drinks

Household Sugar Containing Soft Drinks

Defra Code	Food Description	Factor	Single Adult HH Waste	Multiple Adult HH Waste
34001	Soft drinks, concentrated, not low calorie	1	0.1	0.1
34101	Soft drinks, not concentrated, not low calorie	1	0.1	0.1

Eating Out Sugar Containing Soft Drinks

Defra Code	Food Description	Factor	Single Adult HH Waste	Multiple Adult HH Waste
260203	Soft drink (incl carbonates & still), not low calorie incl low calorie/ not low cal not specified	1	0	0
260206	Soft drink where pure juice or juice drink not specified	1	0	0

Household Sugar Free Soft Drinks

Defra Code	Food Description	Factor	Single Adult HH Waste	Multiple Adult HH Waste
34301	Soft drinks, concentrated, low calorie	1	0.1	0.1
34401	Soft drinks, not concentrated, low calorie	1	0.1	0.1

Eating Out Sugar Free Soft Drinks

Defra Code	Food Description	Factor	Single Adult HH Waste	Multiple Adult HH Waste
260202	Soft drink (incl carbonates & still), low calorie	1	0	0

Meat and Meat Products

Household Total Red Meat

Defra Code	Food Description	Factor	Single Adult HH Waste	Multiple Adult HH Waste
5502	Bacon and ham joints, uncooked	0.69104	0.2041	0.133
5505	Bacon and ham rashers, uncooked	0.65825	0.2041	0.133
5801	Cooked ham & bacon	1	0.2041	0.133
3102	Beef: joints (including sides) on the bone	0.561	0.0815	0.0457
3103	Beef: joints (boned)	0.632697	0.0815	0.0457
3104	Beef steak (less expensive)	0.636751	0.0815	0.0457
3105	Beef steak (more expensive)	0.728463	0.0815	0.0457
3106	Beef, minced	0.82	0.0815	0.0457
3107	All other beef and veal	0.62	0.0815	0.0457
3601	Mutton	0.617767	0.0224	0.0262
3602	Lamb joints	0.589275	0.0224	0.0262
3603	Lamb chops	0.549128	0.0224	0.0262
3604	All other lamb	0.714897	0.0224	0.0262
4101	Pork joints	0.570298	0.2041	0.133
4102	Pork chops – uncooked	0.588	0.2041	0.133
4103	Pork fillets and steak	0.65	0.2041	0.133
4104	All other pork – uncooked	0.625934	0.2041	0.133
4603	Ox liver	0.91	0.0815	0.0457
4604	Lambs liver	0.78	0.0224	0.0262
4605	Pigs liver	0.88	0.2041	0.133
4607	All other liver	0.884907	0.0584	0.0401
5101	All offals other than liver	0.56119	0.0584	0.0401
6201	Corned beef/ corned meat (canned or sliced)	1	0.0815	0.0457
6601	Other cooked meat	0.954007	0.0584	0.0401
7102	Other canned meat and canned meat products	0.532811	0.0584	0.0401
7801	Other meat (rabbit, venison, etc) – uncooked	0.594	0.0584	0.0401
7901	Sausages (uncooked) - pork	0.78	0.0584	0.0401
8001	Sausages (uncooked) - beef	0.779	0.0584	0.0401
8302	Meat pies	0.271562	0.2563	0.29
8303	Sausage rolls	0.28	0.2563	0.29
8401	Meat pies, pasties and puddings	0.27445	0.2563	0.29
8501	Burgers	0.73	0.0584	0.0401
8901	COMPLETE meat-based ready meals	0.144783	0.2563	0.29
8902	Other convenience meat products	0.240481	0.2563	0.29
9301	Pâté	1	0.1324	0.0755
9302	Delicatessen type sausages: cooked or cured	1	0.0584	0.0401
9403	Meat pastes and spreads	1	0.1324	0.0755
9501	Takeaway meat pies & pasties	0.266316	0.2563	0.29
9502	Burger & bun eg hamburger	0.485	0.2563	0.29
9503	Kebabs	0.5	0.2563	0.29
9504	Sausages & saveloys	1	0.2563	0.29
9505	MEAT- based meals incl Indian & Chinese takeaways	0.208303	0.2563	0.29
9506	Miscellaneous meats	0.649653	0.2563	0.29

Eaten Out Total Red Meat

Defra Code	Food Description	Factor	Single Adult HH Waste	Multiple Adult HH Waste
100101	Meat or fish based curry with sauce	0.0928	0	0
100102	Meat or fish based curry without sauce	0.5	0	0
100201	Chinese or Thai meat or fish based dishes excluding curry	0.17	0	0
100202	Chop suey and fu yung dishes	0.09	0	0
110101	Steak - without sauce e.g. braised, sirloin	1	0	0
110102	Roast meat with sauce or gravy	0.64	0	0
110103	Pork chops with sauce or gravy	0.81	0	0
110104	Lamb chops with sauce or gravy	0.67	0	0
110105	Spare ribs	1	0	0
110106	Bacon	1	0	0
110107	Gammon or ham	1	0	0
110108	All offal including liver, kidney, tongue	1	0	0
110204	Game with sauce or gravy	0.71	0	0
110301	Small or single burgers	0.39	0	0
110302	Large or double burgers	0.58	0	0
110401	Kebabs - all types including chicken	0.5	0	0
110402	Plain sausages e.g. beef, pork	1	0	0
110403	Other sausages	1	0	0
110404	Hot dogs and sausage sandwiches	0.1769	0	0
110501	Meat pies (pastry topped) and pasties	0.16	0	0
110502	Meat pies (potato topped e.g. shepherd's pie)	0.1963	0	0
110503	Sausage roll (pastry)	0.28	0	0
110601	Meat and vegetable stews, casseroles or hotpots	0.0529	0	0
110603	Meat lasagne, cannelloni, moussaka and other meat-based oven baked dishes	0.2041	0	0
110701	All pates	0.5	0	0
110801	Other meat products or dishes	0.2592	0	0
130202	Pizza - meat, fish or poultry	0.0337	0	0
160301	Meat salad e.g. beef, lamb salads	0.314	0	0
170105	Noodles with meat, vegetables etc.	0.2	0	0
230101	Meat based sandwich on white bread or roll	0.242	0	0
230102	Meat based sandwich on brown bread or roll	0.242	0	0
230103	Meat based sandwich bread not specified	0.242	0	0
230107	Bacon and egg based sandwich on white bread or roll including Bacon and Egg McMuffin	0.25	0	0
230108	Bacon and egg based sandwich on brown bread or roll	0.25	0	0
230109	Bacon and egg based sandwich bread not specified	0.25	0	0
240102	Meat-based sauce e.g. bolognese, chilli con carne	0.3366	0	0

Household Bacon and Ham

Defra Code	Food Description	Factor	Single Adult HH Waste	Multiple Adult HH Waste
5502	Bacon and ham joints, uncooked	0.69104	0.2041	0.133
5505	Bacon and ham rashers, uncooked	0.65825	0.2041	0.133
5801	Cooked ham & bacon	1	0.2041	0.133

Eaten Out Bacon and Ham

Defra Code	Food Description	Factor	Single Adult HH Waste	Multiple Adult HH Waste
110106	Bacon	1	0	0
110107	Gammon or ham	1	0	0
230107	Bacon and egg based sandwich on white bread or roll including Bacon and Egg McMuffin	0.25	0	0
230108	Bacon and egg based sandwich on brown bread or roll	0.25	0	0
230109	Bacon and egg based sandwich bread not specified	0.25	0	0

Household Other Red Meat Products

Defra Code	Food Description	Factor	Single Adult HH Waste	Multiple Adult HH Waste
6201	Corned beef/ corned meat (canned or sliced)	1	0.0815	0.0457
6601	Other cooked meat	0.954007	0.0584	0.0401
7102	Other canned meat and canned meat products	0.532811	0.0584	0.0401
7901	Sausages (uncooked) - pork	0.78	0.0584	0.0401
8001	Sausages (uncooked) - beef	0.779	0.0584	0.0401
8302	Meat pies	0.271562	0.2563	0.29
8303	Sausage rolls	0.28	0.2563	0.29
8401	Meat pies, pasties and puddings	0.27445	0.2563	0.29
8501	Burgers	0.73	0.0584	0.0401
8902	Other convenience meat products	0.240481	0.2563	0.29
9301	Pâté	1	0.1324	0.0755
9302	Delicatessen type sausages: cooked or cured	1	0.0584	0.0401
9403	Meat pastes and spreads	1	0.1324	0.0755
9501	Takeaway meat pies & pasties	0.266316	0.2563	0.29
9502	Burger & bun e.g. hamburger	0.485	0.2563	0.29
9503	Kebabs	0.5	0.2563	0.29
9504	Sausages & saveloys	1	0.2563	0.29
9506	Miscellaneous meats	0.649653	0.2563	0.29

Eaten Out Other Red Meat Products

Defra Code	Food Description	Factor	Single Adult HH Waste	Multiple Adult HH Waste
110301	Small or single burgers	0.39	0	0
110302	Large or double burgers	0.58	0	0
110401	Kebabs - all types including chicken	0.5	0	0
110402	Plain sausages e.g. beef, pork	1	0	0
110403	Other sausages	1	0	0
110404	Hot dogs and sausage sandwiches	0.1769	0	0
110501	Meat pies (pastry topped) and pasties	0.16	0	0
110502	Meat pies (potato topped e.g. shepherd's pie)	0.1963	0	0
110503	Sausage roll (pastry)	0.28	0	0
110701	All pates	0.5	0	0
110801	Other meat products or dishes	0.2592	0	0
130202	Pizza - meat, fish or poultry	0.0337	0	0
160301	Meat salad e.g. beef, lamb salads	0.314	0	0
230101	Meat based sandwich on white bread or roll	0.242	0	0
230102	Meat based sandwich on brown bread or roll	0.242	0	0
230103	Meat based sandwich bread not specified	0.242	0	0

Milk

Household Whole Milk

Defra Code	Food Description	Factor	Single Adult HH Waste	Multiple Adult HH Waste
402	UHT milk	1	0.1	0.1
403	Sterilised	1	0.1	0.1
404	Pasteurised/ homogenised	1	0.1	0.1

Household Semi-skimmed Milk

Defra Code	Food Description	Factor	Single Adult HH Waste	Multiple Adult HH Waste
1503	Semi-skimmed milk	1	0.1	0.1

Household Skimmed Milk

Defra Code	Food Description	Factor	Single Adult HH Waste	Multiple Adult HH Waste
1502	Fully skimmed milk	1	0.1	0.1

Household Total Milk

Defra Code	Food Description	Factor	Single Adult HH Waste	Multiple Adult HH Waste
402	UHT milk	1	0.1	0.1
403	Sterilised	1	0.1	0.1
404	Pasteurised/ homogenised	1	0.1	0.1
501	School milk	1	0.1	0.1
601	Welfare milk	1	0.1	0.1
901	Condensed or evaporated milk	2.6	0.1	0.1
1102	Infant or baby milks - ready to drink	1	0.1	0.1
1103	Infant or baby milks - dried	1	0.1	0.1
1201	Instant dried milk	1	0.1	0.1
1502	Fully skimmed milk	1	0.1	0.1
1503	Semi-skimmed milk	1	0.1	0.1
1605	Dried milk products	1	0.1	0.1
1606	Milk drinks & other milks (replaced 200405 onwards)	1	0.1	0.1
1607	Milk drinks & other milks	1	0.1	0.1

Eating Out Total Milk

Defra Code	Food Description	Factor	Single Adult HH Waste	Multiple Adult HH Waste
260301	Milk as a drink	1	0	0
260302	Milk on cereal	1	0	0
260303	Milkshake and flavoured milk	1	0	0
260304	Free school milk	1	0	0

Butter

Household Butter

Defra Code	Food Description	Factor	Single Adult HH Waste	Multiple Adult HH Waste
13501	Butter	1	0.0386	0.0176

Processed Potatoes

Household Processed Potatoes

Defra Code	Food Description	Factor	Single Adult HH Waste	Multiple Adult HH Waste
19702	Chips - frozen or not frozen	1	0.3718	0.2416
19703	Takeaway chips	1	0.3718	0.2416
19801	Instant potato	1	0.3718	0.2416
19901	Canned potatoes	1	0.3718	0.2416
20101	Other potato products - frozen or not frozen	1	0.3718	0.2416

Eating Out Processed Potatoes

Defra Code	Food Description	Factor	Single Adult HH Waste	Multiple Adult HH Waste
140101	Chips & French fries - from fast food outlet e.g. McDonalds	1	0	0
140102	Chips - served with meal e.g. from restaurant, chip shop	1	0	0

Savoury Snacks

Household Savoury Snacks

Defra Code	Food Description	Factor	Single Adult HH Waste	Multiple Adult HH Waste
20002	Crisps & potato snacks	1	0.1239	0.0809
29909	Cereal snacks	1	0.0275	0.0224
29916	Takeaway crisps, savoury snacks, popcorn, popadums, prawn crackers	1	0.1239	0.0809

Eating Out Savoury Snacks

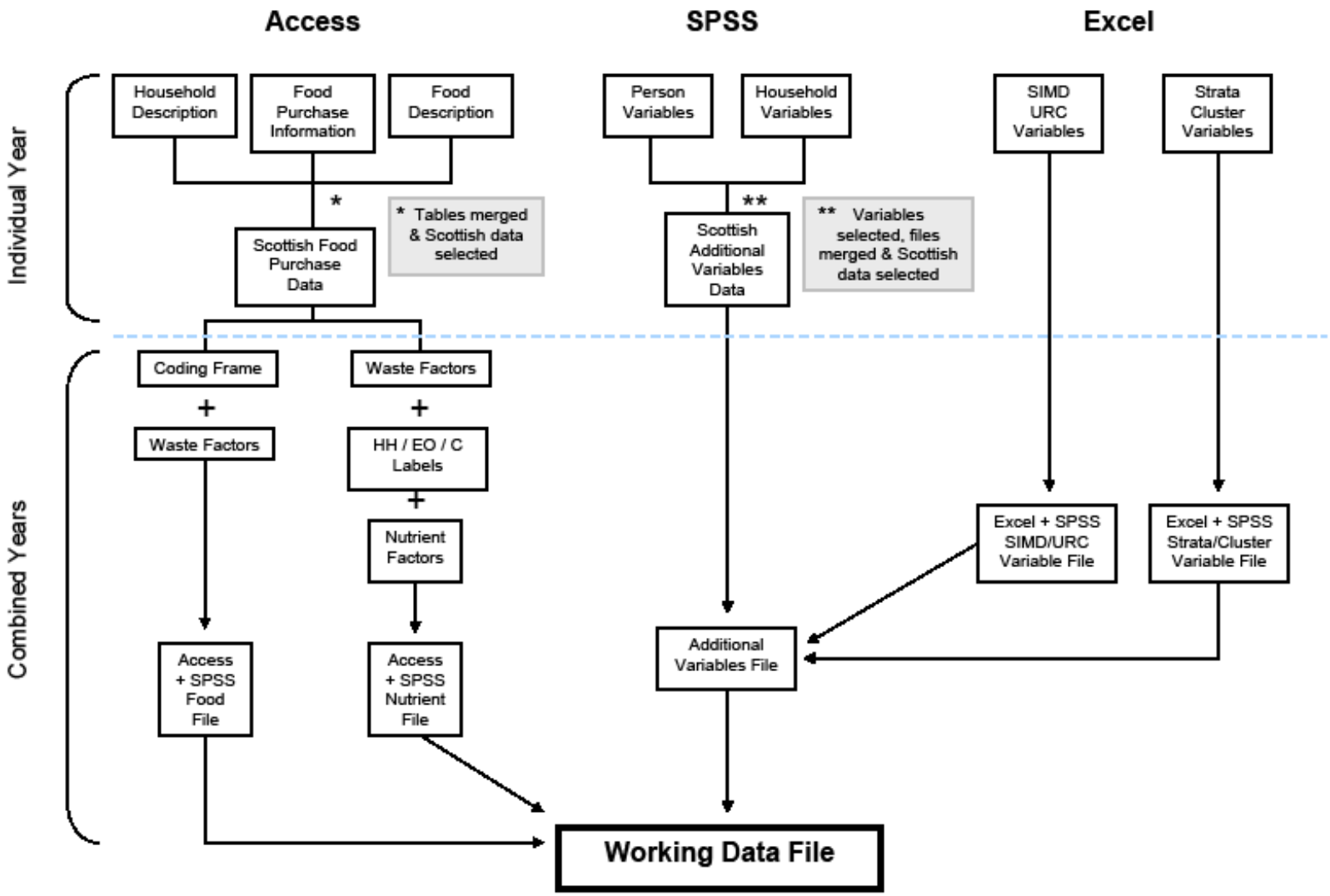
Defra Code	Food Description	Factor	Single Adult HH Waste	Multiple Adult HH Waste
310102	Potato crisps or snacks including unspecified 'crisps', prawn crackers	1	0	0
310103	Corn snacks, based on maize	1	0	0
310104	Wheat-based savoury snack	1	0	0

Takeaway Foods

Household Takeaway Foods

Defra Code	Food Description	Factor	Single Adult HH Waste	Multiple Adult HH Waste
5904	Takeaway chicken	1	0.1855	0.0837
9501	Takeaway meat pies & pasties	1	0.2563	0.29
9502	Takeaway burger & bun	1	0.2563	0.29
9503	Takeaway kebabs	1	0.2563	0.29
9504	Takeaway sausages & saveloys	1	0.2563	0.29
9505	Takeaway meat based meals	1	0.2563	0.29
9506	Takeaway miscellaneous meats	1	0.2563	0.29
11801	Takeaway fish	1	0.096	0.0418
12304	Takeaway fish products	1	0.2563	0.29
12305	Takeaway fish based meals	1	0.2563	0.29
19703	Takeaway chips	1	0.3718	0.2416
20604	All vegetable takeaway products	1	0.2563	0.29
26310	Sandwiches from takeaway	1	0.2563	0.29
26311	Takeaway breads	1	0.3349	0.4585
27002	Takeaway pastries	1	0.2802	0.1703
28704	Takeaway rice	1	0.2335	0.1402
29503	Takeaway pasta & noodles	1	0.2563	0.29
29602	Takeaway pizza	1	0.2563	0.29
29916	Takeaway crisps, savoury snacks, popcorn, popadoms, prawn crackers	1	0.1239	0.0809
32001	Soups - from takeaway	1	0.2563	0.29
32101	Other takeaway food brought home	1	0.2563	0.29
32704	Takeaway sauces and mayonnaise	1	0.1267	0.091
33304	Takeaway ice cream, ice cream products, milkshakes	1	0.0638	0.0283
35501	Takeaway confectionery	1	0.0958	0.0575

Appendix 5: Flowchart of Data Handling Process



Consumption of Scottish Diet Action Plan 1996 Target Foods by Year 2001 to 2009

LCF data (g/person/day with the exception of fish g/person/week)

Food	2001 Mean 95% CI	2002 Mean 95% CI	2003 Mean 95% CI	2004 Mean 95% CI	2005 Mean 95% CI	2006[1] Mean 95% CI	2007 Mean 95% CI	2008 Mean 95% CI	2009 Mean 95% CI	*P-value for Linear Association*
HH Fruit and Vegetables[2,3]	244 226, 263	247 226, 267	231 211, 251	251 229, 274	268 248, 288	261 242, 280	275 251, 300	270 251, 289	263 243, 283	***0.004***
EO Fruit and Vegetables[2,3]	15.0 13.5, 16.6	15.6 13.8, 17.4	16.3 14.1, 18.6	15.3 13.0, 17.7	15.8 13.9, 17.6	15.7 14.0, 17.5	15.5 13.1, 17.8	14.6 12.6, 16.6	15.1 12.9, 17.3	*0.477*
HH Fruit[2]	128 115, 142	131 116, 147	124 111, 138	135 121, 149	148 134, 162	142 131, 154	159 142, 177	149 134, 164	139 126, 152	***0.006***
EO Fruit[2]	1.7 1.3, 2.1	2.2 1.6, 2.7	1.7 1.2, 2.1	2.7 1.7, 3.7	2.1 1.6, 2.7	2.2 1.7, 2.7	2.5 2.0, 3.0	1.8 1.3, 2.4	2.1 1.6, 2.6	*0.424*
HH Vegetables[3]	116 107, 125	115 107, 123	107 97.9, 115	117 106, 127	120 112, 129	118 107, 129	116 105, 126	121 111, 131	124 112, 136	***0.046***
EO Vegetables[3]	10.5 9.4, 11.7	10.6 9.2, 12.0	11.4 9.6, 13.2	10.1 8.6, 11.6	10.7 9.2, 12.3	9.9 8.6, 11.2	9.5 7.7, 11.3	10.0 8.4, 11.6	9.8 8.4, 11.2	***0.046***
HH Total Bread	98.1 92.4, 104	95.2 90.3, 100	90.1 84.0, 96.1	88.9 84.3, 93.4	88.4 82.5, 94.2	89.7 83.9, 95.4	86.7 81.1, 92.3	81.7 77.8, 85.7	84.3 79.1, 89.4	***<0.001***
EO Total Bread	13.0 11.4, 14.5	13.4 12.1, 14.8	12.1 10.6, 13.6	11.4 10.0, 12.7	11.8 10.2, 13.5	12.4 10.8, 14.1	11.2 9.6, 12.8	11.2 9.5, 12.9	10.5 9.2, 11.7	***<0.001***
HH Brown/Wholemeal Bread	17.0 15.1, 18.9	17.7 15.4, 20.1	15.6 13.7, 17.5	20.7 18.4, 23.0	20.8 18.2, 23.5	22.0 19.4, 24.6	21.7 18.8, 24.6	22.0 19.0, 24.9	19.9 18.3, 21.6	***<0.001***
EO Brown/Wholemeal Bread	1.2 0.9, 1.5	1.2 0.9, 1.5	1.4 0.9, 1.9	1.6 1.1, 2.1	1.4 0.9, 1.8	1.6 1.2, 2.0	1.8 1.3, 2.3	1.6 1.2, 2.0	1.5 1.1, 1.9	*0.171*
n Households *n People* *n People Weighted[4]*	*619* *1414* *5015*	*585* *1342* *4967*	*546* *1266* *4952*	*590* *1329* *4948*	*566* *1285* *4939*	*577* *1365* *4906*	*500* *1093* *5040*	*494* *1058* *5143*	*543* *1222* *5181*	

Household and eating out consumption combined

[1]From 2006 the EFS moved from a financial year to a calendar year basis. As a consequence of this the January to March 2006 data are duplicated in the 2005/2006 and the 2006 results

[2]Fruit includes fruit and vegetable juice; [3]Vegetables include baked beans; [4]The results are weighted to the Scottish population - the number provided is approximately 1000th of the Scottish population

Consumption of Scottish Diet Action Plan 1996 Target Foods by Year 2001 to 2009 (Continued)

LCF data (g/person/day with the exception of fish g/person/week)

Food	2001 Mean 95% CI	2002 Mean 95% CI	2003 Mean 95% CI	2004 Mean 95% CI	2005 Mean 95% CI	2006[1] Mean 95% CI	2007 Mean 95% CI	2008 Mean 95% CI	2009 Mean 95% CI	*P-value for Linear Association*
HH Total Breakfast Cereal	19.5 17.3, 21.7	19.6 17.2, 22.0	19.1 16.4, 21.8	20.7 18.5, 23.0	19.3 17.1, 21.5	19.2 17.0, 21.3	22.2 19.4, 25.0	21.5 18.5, 24.6	23.2 20.7, 25.7	***0.008***
EO Total Breakfast Cereal	0.1 0.0, 0.1	0.0 0.0, 0.1	0.1 0.0, 0.2	0.0 0.0, 0.1	0.1 0.0, 0.1	0.1 0.0, 0.3	0.1 0.0, 0.2	0.0 0.0, 0.1	0.1 0.0, 0.2	*0.993*
HH High Fibre Breakfast Cereal	10.0 8.4, 11.6	10.5 8.7, 12.2	10.3 8.4, 12.1	11.1 9.2, 13.0	11.1 9.6, 12.6	11.0 9.2, 12.8	13.4 11.5, 15.2	12.8 10.3, 15.4	13.8 11.8, 15.8	***0.001***
EO High Fibre Breakfast Cereal	0.1 0.0, 0.1	0.0 0.0, 0.1	0.0 0.0, 0.1	0.0 0.0, 0.1	0.0 0.0, 0.1	0.1 0.0, 0.2	0.1 0.0, 0.2	0.0 0.0, 0.1	0.1 0.0, 0.1	*0.659*
HH Oil Rich Fish	28.1 23.7, 32.5	30.3 23.6, 36.9	31.6 25.0, 38.2	33.4 26.6, 40.1	41.3 23.8, 58.9	36.8 28.7, 45.0	32.0 25.9, 38.0	31.9 24.9, 38.8	29.0 24.3, 33.8	*0.678*
EO Oil Rich Fish	1.1 0.5, 1.7	1.4 0.5, 2.3	1.5 0.8, 2.2	1.2 0.3, 2.1	1.5 0.8, 2.1	1.4 0.8, 2.0	0.8 0.4, 1.2	1.1 0.5, 1.6	1.5 0.6, 2.3	*0.426*
HH White Fish	79.8 70.3, 89.2	75.0 66.1, 84.0	77.8 67.8, 87.8	72.2 63.7, 80.8	69.2 58.2, 80.2	81.0 71.0, 91.0	85.1 71.2, 99.1	79.3 66.4, 92.3	75.7 67.4, 84.1	*0.696*
EO White Fish	16.7 13.9, 19.5	17.7 14.6, 20.8	14.6 11.9, 17.3	14.2 11.6, 16.8	16.6 14.2, 19.0	15.5 13.0, 17.9	13.1 10.5, 15.6	13.7 10.8, 16.5	17.1 13.7, 20.4	*0.457*
HH Fresh Potatoes[2]	62.9 54.8, 71.0	54.9 48.7, 61.1	53.2 47.7, 58.7	51.4 45.5, 57.3	54.5 49.5, 59.5	57.2 49.6, 64.8	51.0 44.8, 57.2	51.6 44.2, 59.0	47.3 41.7, 53.0	***0.001***
EO Fresh Potatoes[2]	2.9 2.2, 3.6	3.3 2.6, 3.9	2.8 2.2, 3.5	2.4 1.7, 3.1	2.8 2.2, 3.5	2.6 2.1, 3.1	2.4 1.8, 3.1	2.4 1.8, 3.0	2.8 2.3, 3.3	*0.264*
n Households	*619*	*585*	*546*	*590*	*566*	*577*	*500*	*494*	*543*	
n People	*1414*	*1342*	*1266*	*1329*	*1285*	*1365*	*1093*	*1058*	*1222*	
n People Weighted[3]	*5015*	*4967*	*4952*	*4948*	*4939*	*4906*	*5040*	*5143*	*5181*	

Household and eating out consumption combined

[1]From 2006 the EFS moved from a financial year to a calendar year basis. As a consequence of this the January to March 2006 data are duplicated in the 2005/2006 and the 2006 results.

[2]Part of complex carbohydrate target; [3]The results are weighted to the Scottish population - the number provided is approximately 1000th of the Scottish population

Appendix 6: Household and Eaten Out Results by Year 2001 - 2009

Intake of Scottish Diet Action Plan 1996 Target Nutrients by Year 2001 to 2009: LCF data (units/person/day)

	2001	2002	2003	2004	2005	2006[1]	2007	2008	2009	*P-value for Linear Association*
	Mean 95% CI	Mean 95% CI	Mean 95% CI	Mean 95% CI	Mean 95% CI	Mean 95% CI	Mean 95% CI	Mean 95% CI	Mean 95% CI	
HH % Food Energy - Fat	38.2	38.1	38.3	37.9	38.2	38.1	38.0	38.4	38.5	*0.649*
	37.4, 38.9	37.5, 38.7	37.5, 39.1	37.2, 38.6	37.3, 39.1	37.3, 38.9	37.1, 38.8	37.6, 39.1	37.9, 39.2	
EO % Food Energy - Fat	39.1	38.5	39.9	38.9	38.6	39.3	38.9	39.5	39.1	*0.052*
	38.2, 39.9	37.6, 39.4	38.9, 40.9	37.7, 40.1	37.3, 39.9	38.4, 40.2	37.8, 40.0	38.4, 40.5	38.2, 40.0	
HH % Food Energy - Saturated Fat	15.8	15.8	16.0	15.6	15.7	16.0	15.4	15.5	15.3	***0.001***
	15.5, 16.0	15.5, 16.2	15.5, 16.4	15.3, 16	15.3, 16.0	15.6, 16.3	15.1, 15.8	15.2, 15.9	15.0, 15.6	
EO % Food Energy - Saturated Fat	13.6	13.5	13.6	13.4	13.1	13.4	13.2	13.2	13.5	*0.588*
	13.1, 14.1	13.1, 13.9	13.1, 14.1	12.8, 14.0	12.5, 13.7	12.9, 13.9	12.7, 13.8	12.8, 13.6	13.0, 13.9	
HH % Food Energy - NMES	15.5	15.6	16.1	15.7	15.2	15.1	14.8	15.2	14.7	*0.063*
	14.7, 16.2	15.0, 16.1	15.3, 16.9	14.9, 16.4	14.5, 15.8	14.4, 15.9	14.2, 15.4	14.5, 15.9	14.0, 15.3	
EO % Food Energy - NMES	20.4	21.6	19.9	19.8	20.5	19.4	20.5	18.1	19.7	***0.007***
	18.8, 22.1	19.8, 23.4	18.2, 21.6	17.8, 21.9	18.4, 22.5	17.8, 20.9	18.3, 22.8	16.0, 20.3	17.7, 21.6	
HH Complex CHO g	124	124	117	120	120	122	127	125	127	***0.027***
	119, 129	118, 129	112, 123	115, 125	114, 127	116, 129	120, 134	117, 133	121, 133	
EO Complex CHO g	22.4	21.7	23.2	19.6	20.6	18.4	20.0	18.8	17.7	***<0.001***
	20.0, 24.7	19.2, 24.2	20.4, 26.1	17.0, 22.1	17.9, 23.4	16.6, 20.1	16.2, 23.8	15.7, 21.9	15.4, 20.1	
HH NSP g	10.3	10.4	9.9	10.4	10.6	10.7	10.8	11.0	11.2	***0.001***
	9.8, 10.8	9.9, 11.0	9.4, 10.4	9.9, 10.9	10.1, 11.0	10.2, 11.3	10.2, 11.4	10.3, 11.7	10.7, 11.8	
EO NSP g	2.1	2.0	2.2	1.8	1.9	1.7	1.8	1.8	1.6	***<0.001***
	1.8, 2.3	1.7, 2.2	1.9, 2.5	1.5, 2.1	1.6, 2.2	1.5, 1.9	1.4, 2.2	1.4, 2.1	1.4, 1.9	
HH Food Energy - MJ	7.4	7.4	7.3	7.3	7.2	7.3	7.7	7.4	7.5	*0.380*
	7.1, 7.7	7.1, 7.7	7.0, 7.6	7.0, 7.6	6.9, 7.6	7.0, 7.6	7.2, 8.1	6.9, 7.9	7.2, 7.8	
EO Food Energy - MJ	1.3	1.2	1.3	1.1	1.2	1.0	1.1	1.0	1.0	***<0.001***
	1.1, 1.4	1.1, 1.4	1.2, 1.4	1.0, 1.2	1.0, 1.3	1.0, 1.1	0.9, 1.3	0.9, 1.2	0.9, 1.1	
HH Food Energy - kcal	1764	1752	1735	1739	1724	1728	1822	1768	1785	*0.172*
	1695, 1832	1680, 1824	1653, 1816	1666, 1812	1650, 1797	1658, 1797	1714, 1929	1654, 1882	1718, 1852	
EO Food Energy - kcal	302	295	310	258	275	249	259	245	237	***<0.001***
	273, 331	265, 326	275, 344	227, 289	243, 307	227, 271	216, 302	210, 281	207, 267	
n Households	*619*	*585*	*546*	*590*	*566*	*577*	*500*	*494*	*543*	
n People	*1414*	*1342*	*1266*	*1329*	*1285*	*1365*	*1093*	*1058*	*1222*	
n People Weighted[3]	*5015*	*4967*	*4952*	*4948*	*4939*	*4906*	*5040*	*5143*	*5181*	

Household and eating out consumption combined [1]From 2006 the EFS moved from a financial year to a calendar year basis. As a consequence of this the January to March 2006 data are duplicated in the 2005/2006 and the 2006 results. [2]The results are weighted to the Scottish population - the number provided is approximately 1000th of the Scottish population

Consumption of Additional Foods and Drinks Indicative of Diet Quality (sweet) by Year - 2001 to 2009: LCF data (g/person/day)

Food	2001 Mean 95% CI	2002 Mean 95% CI	2003 Mean 95% CI	2004 Mean 95% CI	2005 Mean 95% CI	2006[1] Mean 95% CI	2007 Mean 95% CI	2008 Mean 95% CI	2009 Mean 95% CI	*P-value for Linear Association*
HH Cakes and Pastries	15.3	13.7	14.2	14.9	13.3	15.3	14.4	16.3	12.8	*0.823*
	13.4, 17.2	12.1, 15.4	12.4, 16.0	13.0, 16.8	12.2, 14.5	13.4, 17.2	12.4, 16.3	14.0, 18.6	11.4, 14.3	
EO Cakes and Pastries	2.8	3.1	2.6	2.7	3.1	2.8	3.0	2.7	3.2	*0.661*
	2.3, 3.3	2.7, 3.6	2.2, 3.1	2.3, 3.2	2.5, 3.7	2.3, 3.4	2.4, 3.6	2.2, 3.3	2.7, 3.7	
HH Sweet Biscuits	21.1	22.9	21.5	20.8	19.2	21.9	23.5	23.5	22.5	*0.249*
	19.4, 22.9	20.7, 25.1	19.4, 23.7	18.8, 22.8	17.1, 21.3	19.5, 24.4	20.7, 26.3	20.6, 26.4	20.3, 24.8	
EO Sweet Biscuits	0.6	0.5	0.6	0.5	0.4	0.5	0.5	0.4	0.4	***0.020***
	0.4, 0.7	0.3, 0.6	0.4, 0.7	0.4, 0.7	0.4, 0.5	0.3, 0.7	0.3, 0.7	0.3, 0.6	0.3, 0.5	
HH Cakes, Sweet Biscuits and Pastries	36.4	36.6	35.8	35.7	32.5	37.2	37.9	39.8	35.4	*0.399*
	33.6, 39.3	33.3, 39.9	32.4, 39.2	32.5, 38.9	29.9, 35.1	33.9, 40.6	33.8, 41.9	35.2, 44.4	32.3, 38.4	
EO Cakes, Sweet Biscuits and Pastries	3.4	3.6	3.2	3.3	3.6	3.3	3.5	3.2	3.6	*0.253*
	2.8, 3.9	3.1, 4.1	2.7, 3.8	2.8, 3.8	2.9, 4.2	2.8, 3.9	2.8, 4.2	2.6, 3.7	3.0, 4.2	
HH Sugar and Preserves	19.2	16.8	19.7	17.9	15.4	17.3	18.8	18.0	16.7	*0.649*
	16.7, 21.7	14.7, 19.0	16.3, 23.0	15.9, 19.9	13.3, 17.4	14.4, 20.2	15.6, 21.9	15.0, 21.0	13.5, 20.0	
EO Sugar and Preserves	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	*0.364*
	0.1, 0.2	0.1, 0.3	0.0, 0.1	0.1, 0.2	0.0, 0.2	0.0, 0.2	0.1, 0.2	0.0, 0.1	0.1, 0.3	
HH Chocolate Confectionery	11.3	12.4	13.4	13.0	11.8	11.9	13.5	13.9	13.9	*0.088*
	9.4, 13.3	10.6, 14.1	11.4, 15.4	10.9, 15.0	10.1, 13.4	10.2, 13.6	10.6, 16.5	11.5, 16.3	11.9, 16.0	
EO Chocolate Confectionery	2.2	2.6	2.4	1.6	1.9	1.8	1.6	1.6	1.2	***<0.001***
	1.9, 2.5	2.0, 3.1	2.0, 2.8	1.2, 2.1	1.5, 2.4	1.4, 2.2	1.3, 1.9	1.1, 2.1	1.0, 1.5	
HH Sugar Confectionery	6.0	6.3	6.5	6.1	5.7	5.9	6.0	6.1	6.6	*0.653*
	5.1, 7.0	5.2, 7.4	5.6, 7.4	5.2, 7.0	4.7, 6.7	4.8, 7.0	5.1, 6.8	4.6, 7.6	5.4, 7.7	
EO Sugar Confectionery	1.6	1.5	1.4	1.0	1.0	0.7	0.8	0.4	0.5	***<0.001***
	1.0, 2.2	1.0, 2.0	1.0, 1.7	0.6, 1.4	0.6, 1.5	0.5, 0.9	0.5, 1.1	0.3, 0.5	0.4, 0.6	
HH Total Confectionery	17.4	18.7	19.9	19.1	17.5	17.8	19.5	20.0	20.5	*0.118*
	14.9, 19.8	16.5, 20.9	17.5, 22.3	16.8, 21.4	15.4, 19.5	15.5, 20.1	16.1, 22.9	16.8, 23.3	17.9, 23.1	
EO Total Confectionery	3.8	4.1	3.8	2.6	3.0	2.5	2.4	2.0	1.7	***<0.001***
	3.0, 4.6	3.1, 5.1	3.2, 4.4	2.0, 3.3	2.3, 3.7	2.0, 3.0	1.9, 2.9	1.4, 2.5	1.4, 2.0	
n Households	*619*	*585*	*546*	*590*	*566*	*577*	*500*	*494*	*543*	
n People	*1414*	*1342*	*1266*	*1329*	*1285*	*1365*	*1093*	*1058*	*1222*	
n People Weighted[2]	*5015*	*4967*	*4952*	*4948*	*4939*	*4906*	*5040*	*5143*	*5181*	

Household and eating out consumption combined; [1]From 2006 the EFS moved from a financial year to a calendar year basis. As a consequence of this the January to March 2006 data are duplicated in the 2005/2006 and the 2006 results; [2]The results are weighted to the Scottish population - the number provided is approximately 1000th of the Scottish population

Consumption of Additional Foods and Drinks Indicative of Diet Quality (sweet) by Year - 2001 to 2009 (Continued): LCF (g/person/day)

Food	2001 Mean 95% CI	2002 Mean 95% CI	2003 Mean 95% CI	2004 Mean 95% CI	2005 Mean 95% CI	2006[1] Mean 95% CI	2007 Mean 95% CI	2008 Mean 95% CI	2009 Mean 95% CI	*P-value for Linear Association*
HH Sugar Containing Soft Drinks	185 161, 209	188 166, 211	215 192, 238	209 184, 234	192 165, 218	185 161, 210	183 156, 210	182 156, 208	179 152, 206	*0.446*
EO Sugar Containing Soft Drinks	48.8 42.9, 54.6	52.1 44.8, 59.3	44.8 39.5, 50.1	36.5 30.3, 42.8	41.7 35.5, 47.9	36.7 31.2, 42.1	36.6 31.0, 42.2	31.7 26.5, 36.9	34.2 28.6, 39.9	***<0.001***
HH Sugar Free Soft Drinks	84.9 71.3, 98.6	96.0 78.4, 114	91.4 73.0, 110	76.8 65.0, 88.7	75.5 59.4, 91.6	102 82.4, 122	77.7 57.8, 97.6	93.0 74.1, 112	72.4 57.0, 87.8	*0.464*
EO Sugar Free Soft Drinks	13.2 10.0, 16.4	11.7 9.1, 14.3	14.9 11.3, 18.6	8.2 6.0, 10.4	9.4 6.4, 12.4	9.5 6.7, 12.2	8.6 6.2, 10.9	7.2 5.1, 9.3	5.9 4.4, 7.3	***<0.001***
HH Total Soft Drinks	270 245, 295	284 255, 314	306 280, 333	286 256, 316	267 233, 301	288 256, 320	261 223, 298	275 235, 314	251 219, 283	*0.799*
EO Total Soft Drinks	62.0 55.1, 69.0	63.8 55.9, 71.6	59.7 52.5, 66.9	44.7 37.6, 51.9	51.1 44.1, 58.2	46.1 39.4, 52.8	45.2 38.5, 51.8	38.9 32.6, 45.2	40.1 34.3, 45.9	***<0.001***
n Households	*619*	*585*	*546*	*590*	*566*	*577*	*500*	*494*	*543*	
n People	*1414*	*1342*	*1266*	*1329*	*1285*	*1365*	*1093*	*1058*	*1222*	
n People Weighted[2]	*5015*	*4967*	*4952*	*4948*	*4939*	*4906*	*5040*	*5143*	*5181*	

Household and eating out consumption combined

[1]From 2006 the EFS moved from a financial year to a calendar year basis. As a consequence of this the January to March 2006 data are duplicated in the 2005/2006 and the 2006 results

[2]The results are weighted to the Scottish population - the number provided is approximately 1000th of the Scottish population

Consumption of Additional Foods and Drinks Indicative of Diet Quality (not sweet) by Year - 2001 to 2009: LCF data (g/person/day)

Food	2001 Mean 95% CI	2002 Mean 95% CI	2003 Mean 95% CI	2004 Mean 95% CI	2005 Mean 95% CI	2006[1] Mean 95% CI	2007 Mean 95% CI	2008 Mean 95% CI	2009 Mean 95% CI	*P-value for Linear Association*
HH Total Red Meat[2]	58.3	58.3	60.5	55.7	56.3	54.4	59.4	53.0	55.4	
	53.8, 62.7	54.4, 62.2	56.3, 64.6	52.0, 59.4	52.8, 59.8	50.6, 58.1	53.3, 65.5	47.5, 58.5	51.7, 59.2	*0.051*
EO Total Red Meat[2]	6.3	6.3	5.8	5.4	5.8	5.7	5.4	5.1	5.6	
	5.4, 7.2	5.7, 6.9	5.0, 6.6	4.4, 6.4	4.9, 6.6	4.9, 6.6	4.6, 6.3	4.1, 6.2	4.7, 6.6	***0.049***
HH Bacon and Ham	11.9	11.3	11.9	10.9	11.3	11.3	11.4	11.3	12.0	
	10.7, 13.2	10.1, 12.5	10.6, 13.3	9.9, 11.9	10.4, 12.2	10.0, 12.5	10.4, 12.5	9.9, 12.6	10.9, 13.1	*0.871*
EO Bacon and Ham	0.4	0.4	0.5	0.5	0.5	0.7	0.6	0.6	0.7	
	0.3, 0.5	0.3, 0.5	0.3, 0.6	0.4, 0.6	0.4, 0.6	0.5, 0.8	0.3, 0.9	0.4, 0.9	0.5, 1.0	***<0.001***
HH Other Red Meat Products[2, 3]	24.4	24.2	26.6	23.7	24.7	21.8	24.8	21.7	24.2	
	21.9, 26.8	22.1, 26.3	24.6, 28.6	21.4, 25.9	22.6, 26.8	19.7, 23.9	22.6, 26.9	18.9, 24.6	22.0, 26.4	*0.151*
EO Other Red Meat Products[2, 3]	4.5	4.4	4.3	3.5	3.9	3.7	3.7	3.1	3.5	
	3.8, 5.1	3.9, 4.8	3.7, 5.0	2.8, 4.1	3.2, 4.5	3.1, 4.3	3.1, 4.3	2.5, 3.8	2.8, 4.3	***0.002***
HH Butter	6.1	5.7	5.6	6.1	6.8	7.3	7.4	6.3	5.7	
	5.2, 7.1	4.9, 6.6	4.3, 6.9	5.1, 7.0	5.6, 8.0	6.0, 8.5	6.2, 8.6	5.2, 7.4	4.8, 6.7	***0.045***
HH Whole Milk	91.6	85.2	89.7	68.1	59.2	71.4	59.2	52.9	59.5	
	75.8, 107	72.9, 97.5	74.1, 105	56.2, 79.9	47.1, 71.2	56.9, 85.8	48.1, 70.3	38.0, 67.8	46.0, 72.9	***<0.001***
HH Semi-skimmed Milk	126	125	125	124	136	127	139	137	138	
	111, 140	113, 138	112, 137	110, 138	122, 150	113, 141	125, 153	121, 154	120, 156	***0.038***
HH Skimmed Milk	14.8	12.5	9.2	13.4	14.1	14.4	13.8	18.9	17.8	
	8.9, 20.8	8.6, 16.5	6.0, 12.5	8.6, 18.2	9.1, 19.1	10.6, 18.1	9.2, 18.5	13.9, 23.8	13.0, 22.6	*0.130*
HH Total Milk	247	244	240	222	221	229	232	224	229	
	231, 262	230, 259	222, 258	205, 238	208, 235	213, 244	217, 246	205, 243	210, 247	***0.007***
EO Total Milk	3.6	5.0	4.5	5.0	3.5	4.0	2.4	2.1	3.2	
	2.6, 4.6	3.2, 6.8	3.0, 6.0	3.2, 6.7	2.0, 5.1	2.2, 5.9	1.2, 3.7	1.1, 3.2	2.0, 4.4	***0.012***
HH Processed Potatoes	22.8	23.4	23.9	21.2	20.0	20.6	21.7	21.1	22.4	
	20.2, 25.4	20.9, 25.9	21.2, 26.6	18.8, 23.5	17.3, 22.6	18.2, 23.0	18.7, 24.8	17.5, 24.7	19.7, 25.1	*0.447*
EO Processed Potatoes	10.0	9.4	8.0	6.8	7.5	7.4	7.0	5.7	6.7	
	8.6, 11.5	8.2, 10.6	7.0, 9.0	5.7, 8.0	6.1, 8.8	6.4, 8.4	5.9, 8.2	4.8, 6.7	5.8, 7.5	***<0.001***
HH Savoury Snacks	12.2	12.2	12.5	10.7	10.8	10.9	12.1	11.0	12.3	
	11.0, 13.4	11.0, 13.4	11.4, 13.5	9.5, 11.8	9.5, 12.2	9.8, 12.0	10.6, 13.6	9.5, 12.6	11.1, 13.5	*0.886*
EO Savoury Snacks	2.5	2.2	2.1	1.3	1.6	1.5	1.4	1.2	1.1	
	2.1, 2.8	1.8, 2.6	1.8, 2.5	1.0, 1.7	1.3, 2.0	1.2, 1.8	1.1, 1.7	1.0, 1.5	0.9, 1.3	***<0.001***
HH Takeaway Foods	19.9	23.9	21.0	19.9	20.5	21.0	21.0	18.1	21.3	
	17.2, 22.6	21.0, 26.8	18.4, 23.7	16.8, 22.9	17.2, 23.7	18.1, 23.9	17.7, 24.4	15.5, 20.6	17.9, 24.6	*0.134*
n Households	*619*	*585*	*546*	*590*	*566*	*577*	*500*	*494*	*543*	
n People	*1414*	*1342*	*1266*	*1329*	*1285*	*1365*	*1093*	*1058*	*1222*	
n People Weighted[3]	*5015*	*4967*	*4952*	*4948*	*4939*	*4906*	*5040*	*5143*	*5181*	

[1]From 2006 the EFS moved from a financial year to a calendar year basis. As a consequence of this the January to March 2006 data are duplicated in the 2005/2006 and the 2006 results
[2]Meat portion only – see appendices 3 & 4 for methodology; [3]The results are weighted to the Scottish population, the number provided is approximately 1000th of the Scottish population

Appendix 7: SIMD Data for 2001-2003 and 2004-2006 and URC Data for 2001-2003, 2004-2006 and 2007-2009

Consumption of Scottish Diet Action Plan 1996 Target Foods by SIMD Quintile, 2001 to 2003 Combined

EFS data (g/person/day with the exception of fish g/person/week)

Food	**Scottish Dietary Target**	**SIMD Quintile 1*** Mean 95% CI	**SIMD Quintile 2** Mean 95% CI	**SIMD Quintile 3** Mean 95% CI	**SIMD Quintile 4** Mean 95% CI	**SIMD Quintile 5*** Mean 95% CI	***P-value for Linear Association***	**SII** 95% CI	**RII** 95%CI
Fruit and Vegetables[1, 2]	400g per day	184	221	274	291	317	***<0.001***	167	0.65
		167, 202	205, 236	250, 297	268, 315	292, 342		132, 202	0.51, 0.79
Fruit[1]		84.3	104	144	161	176	***<0.001***	119	0.90
		72.8, 95.7	94.4, 113	128, 159	143, 178	157, 194		95.5, 143	0.72, 1.07
Vegetables[2]		100	117	130	131	141	***<0.001***	47.7	0.39
		90.7, 109	108, 126	118, 142	120, 141	131, 151		31.4, 63.9	0.25, 0.52
Total Bread	154g per day	115	109	109	102	101	***0.002***	-17.7	-0.16
		107, 123	101, 116	102, 117	96.7, 108	94.7, 106		-28.7, -6.6	-0.27, -0.06
Brown/Wholemeal Bread		13.0	15.7	17.6	21.3	22.9	***<0.001***	12.6	0.70
		10.7, 15.2	13.4, 17.9	15.4, 19.8	18.3, 24.4	20.1, 25.7		8.2, 17.1	0.46, 0.95
Total Breakfast Cereal	34g per day	15.4	16.5	19.5	23.0	23.2	***<0.001***	10.9	0.56
		13.1, 17.7	14.1, 18.9	17.3, 21.6	20.6, 25.4	20.1, 26.2		6.6, 15.3	0.34, 0.78
High Fibre Breakfast Cereal		6.7	8.7	9.3	12.7	14.3	***<0.001***	9.5	0.92
		5.1, 8.3	6.7, 10.6	7.5, 11.0	10.5, 15.0	11.5, 17.1		5.9, 13.0	0.57, 1.26
Oil Rich Fish	88g per week	20.6	27.2	32.5	33.7	43.6	***<0.001***	25.4	0.81
		15.2, 26.1	17.6, 36.8	24.9, 40.0	24.5, 42.9	33.9, 53.2		12.8, 38.1	0.41, 1.22
White Fish	No decrease[3]	81.8	88.2	96.9	102	101	***0.011***	26.1	0.28
		68.3, 95.3	77.6, 98.9	85.4, 108	89.3, 115	87.7, 114		6.3, 46.0	0.07, 0.49
Fresh Potatoes[4]		60.2	62.0	66.6	63.2	47.1	***0.022***	-10.9	-0.18
		53.0, 67.3	55.5, 68.4	57.8, 75.5	56.1, 70.3	42.6, 51.5		-20.7, -1.0	-0.35, -0.02
n Households		*366*	*383*	*351*	*352*	*298*		*1750*	*1750*
n People		*810*	*838*	*793*	*841*	*740*		*4022*	*4022*
n People Weighted[5]		*3044*	*3075*	*2913*	*3140*	*2764*		*14935*	*14935*

Household and eating out consumption combined

***Scottish Index of Multiple Deprivation (SIMD) Quintiles: 1=Most Deprived; 5=Least Deprived; ** SII=Slope Index of Inequality; ***RII=Relative Index of Inequality**

[1]Fruit includes fruit and vegetable juice; [2]Vegetables include baked beans; [3]NFS figure reported by Wrieden *et al.* (2006) for 1996 was 107g per week; [4]Part of complex carbohydrate target

[5]The results are weighted to the Scottish population, the number provided is approximately 1000[th] of the Scottish population

Appendix 7: SIMD Data for 2001-2003 and 2004-2006 and URC Data for 2001-2003, 2004-2006 and 2007-2009

Consumption of Scottish Diet Action Plan 1996 Target Foods by SIMD Quintile, 2004 to 2006 Combined

EFS data (g/person/day with the exception of fish g/person/week)

Food	**Scottish Dietary Target**	**SIMD Quintile 1*** Mean 95% CI	**SIMD Quintile 2** Mean 95% CI	**SIMD Quintile 3** Mean 95% CI	**SIMD Quintile 4** Mean 95% CI	**SIMD Quintile 5*** Mean 95% CI	***P-value for Linear Association***	**SII** 95% CI	**RII** 95%CI
Fruit and Vegetables[1, 2]	400g per day	209	245	264	310	332	***<0.001***	157	0.57
		187, 232	221, 268	239, 288	285, 336	311, 352		124, 190	0.45, 0.69
Fruit[1]		102	128	139	173	183	***<0.001***	104	0.71
		86.9, 117	113, 142	125, 152	157, 189	167, 198		81.9, 126	0.56, 0.86
Vegetables[2]		107	117	125	137	149	***<0.001***	52.9	0.41
		97.0, 118	106, 129	112, 138	123, 150	135, 163		34.1, 71.8	0.27, 0.56
Total Bread	154g per day	101	108	101	102	94.5	*0.073*	-10.8	-0.11
		93.8, 108	100, 117	91.6, 111	94.1, 109	88.3, 101		-22.6, 1.0	-0.22, 0.01
Brown/Wholemeal Bread		18.2	19.6	24.8	24.9	25.3	***0.001***	9.6	0.42
		14.8, 21.6	16.9, 22.2	20.6, 29.0	21.6, 28.3	22.2, 28.3		4.4, 14.8	0.19, 0.65
Total Breakfast Cereal	34g per day	14.7	17.1	17.4	22.7	25.3	***<0.001***	13.8	0.70
		12.5, 16.9	14.4, 19.8	15.0, 19.9	19.5, 26.0	22.2, 28.5		9.7, 17.9	0.49, 0.90
High Fibre Breakfast Cereal		7.5	8.5	9.7	13.7	15.1	***<0.001***	10.5	0.95
		5.8, 9.1	6.3, 10.6	8.0, 11.3	11.2, 16.3	12.8, 17.4		7.1, 13.8	0.64, 1.24
Oil Rich Fish	88g per week	26.2	32.4	29.2	49.7	51.3	***<0.001***	34.2	0.89
		15.5, 36.8	23.6, 41.1	20.5, 38.0	20.4, 79.0	42.9, 59.7		19.0, 49.4	0.49, 1.28
White Fish	No decrease[3]	73.7	80.5	91.1	95.0	102	***<0.001***	36.5	0.41
		65.4, 82.0	62.8, 98.1	75.2, 107	80.8, 109	90.0, 115		19.0, 54.0	0.21, 0.60
Fresh Potatoes[4]		54.9	59.2	55.4	53.7	59.7	*0.652*	2.8	0.05
		47.4, 62.4	49.5, 69.0	45.9, 64.8	45.2, 62.2	52.1, 67.2		-9.5, 15.1	-0.17, 0.27
n Households		*336*	*346*	*345*	*310*	*394*		*1731*	*1731*
n People		*744*	*761*	*755*	*703*	*1012*		*3975*	*3975*
n People Weighted[5]		*2740*	*2776*	*2855*	*2668*	*3738*		*14776*	*14776*

Household and eating out consumption combined

***Scottish Index of Multiple Deprivation (SIMD) Quintiles: 1=Most Deprived; 5=Least Deprived; ** SII=Slope Index of Inequality; ***RII=Relative Index of Inequality**

From 2006 the EFS moved from a financial year to a calendar year basis. As a consequence of this the January to March 2006 data are duplicated in the 2005/2006 and the 2006 results

[1]Fruit includes fruit and vegetable juice; [2]Vegetables include baked beans; [3]NFS figure reported by Wrieden *et al.* (2006) for 1996 was 107g per week; [4]Part of complex carbohydrate target

[5]The results are weighted to the Scottish population, the number provided is approximately 1000[th] of the Scottish population

Appendix 7: SIMD Data for 2001-2003 and 2004-2006 and URC Data for 2001-2003, 2004-2006 and 2007-2009

Intake of Scottish Diet Action Plan 1996 Target Nutrients by SIMD, 2001 to 2003 Combined

EFS data (units/person/day)

	Scottish Dietary Target	**SIMD Quintile 1*** Mean 95% CI	**SIMD Quintile 2** Mean 95% CI	**SIMD Quintile 3** Mean 95% CI	**SIMD Quintile 4** Mean 95% CI	**SIMD Quintile 5*** Mean 95% CI	***P-value for Linear Association***	**SII** 95% CI	**RII** 95%CI
% Food Energy - Fat	≤35%	39.0	38.6	38.9	38.5	39.0	*0.784*	-0.2	-0.01
		38.4, 39.7	37.9, 39.4	38.0, 39.9	37.5, 39.4	38.0, 40.0		-1.4, 1.1	-0.04, 0.03
% Food Energy - Saturated Fat	≤11%	15.5	15.5	15.8	15.4	15.6	*0.757*	0.1	0.01
		15.2, 15.7	15.1, 15.9	15.4, 16.2	15.0, 15.8	15.1, 16.1		-0.4, 0.6	-0.03, 0.04
% Food Energy - NMES	Adults - No ↑[1] Children - <10%	16.4	16.2	15.9	15.5	14.2	***<0.001***	-2.4	-0.15
		15.6, 17.3	15.5, 16.9	14.8, 17.0	14.8, 16.3	13.4, 14.9		-3.7, -1.1	-0.24, -0.07
Complex CHO g	155g per day	143	143	146	142	147	*0.509*	3.6	0.02
		135, 150	137, 149	139, 152	136, 149	141, 153		-7.5, 14.8	-0.05, 0.10
NSP[2] g		11.2	12.0	12.4	12.8	13.2	***<0.001***	2.4	0.20
		10.5, 11.9	11.5, 12.5	11.9, 13.0	12.1, 13.4	12.6, 13.8		1.3, 3.5	0.11, 0.28
Food Energy - MJ		8.6	8.5	8.9	8.5	8.6	*0.924*	0.0	0.00
		8.1, 9.1	8.2, 8.9	8.5, 9.3	8.1, 8.8	8.3, 9.0		-0.7, 0.6	-0.08, 0.07
Food Energy - kcal		2052	2034	2111	2015	2055	*0.922*	-7.2	0.00
		1935, 2169	1955, 2113	2019, 2203	1930, 2100	1974, 2135		-163, 148	-0.08, 0.07
n Households		*366*	*383*	*351*	*352*	*298*		*1750*	*1750*
n People		*810*	*838*	*793*	*841*	*740*		*4022*	*4022*
n People Weighted[3]		*3044*	*3075*	*2913*	*3140*	*2764*		*14935*	14935

Household and eating out intakes combined

***Scottish Index of Multiple Deprivation (SIMD) Quintiles: 1=Most Deprived; 5=Least Deprived; ** SII=Slope Index of Inequality; ***RII=Relative Index of Inequality**

[1]DRV for Adults 11% Food Energy; [2]DRV=18g (Department of Health, 1991)

[3]The results are weighted to the Scottish population - the number provided is approximately 1000th of the Scottish population

Appendix 7: SIMD Data for 2001-2003 and 2004-2006 and URC Data for 2001-2003, 2004-2006 and 2007-2009

Intake of Scottish Diet Action Plan 1996 Target Nutrients by SIMD, 2004 to 2006 Combined

EFS data (units/person/day)

	Scottish Dietary Target	**SIMD Quintile 1*** Mean 95% CI	**SIMD Quintile 2** Mean 95% CI	**SIMD Quintile 3** Mean 95% CI	**SIMD Quintile 4** Mean 95% CI	**SIMD Quintile 5*** Mean 95% CI	***P-value for Linear Association***	**SII** 95% CI	**RII** 95%CI
% Food Energy - Fat	≤35%	38.9	39.0	38.7	38.6	38.5	*0.285*	-0.6	-0.02
		38.0, 39.8	38.1, 39.8	37.5, 39.8	37.7, 39.4	37.8, 39.1		-1.8, 0.5	-0.05, 0.01
% Food Energy - Saturated Fat	≤11%	15.3	15.6	15.5	15.7	15.4	*0.584*	0.2	0.01
		14.9, 15.7	15.2, 16.0	14.9, 16.0	15.4, 16.1	15.0, 15.9		-0.5, 0.9	-0.03, 0.06
% Food Energy - NMES	Adults - No ↑[1] Children - <10%	16.3	15.2	15.7	15.1	14.2	***0.007***	-2.2	-0.14
		15.1, 17.5	14.5, 15.8	14.9, 16.5	14.3, 15.9	13.5, 14.9		-3.8, -0.6	-0.25, -0.04
Complex CHO g	155g per day	136	139	140	144	142	*0.159*	8.2	0.06
		129, 143	132, 147	127, 153	136, 151	135, 150		-3.3, 19.7	-0.02, 0.14
NSP[2] g		11.3	11.7	12.3	13.0	13.2	***<0.001***	2.6	0.21
		10.7, 12.0	11.1, 12.4	11.4, 13.1	12.3, 13.7	12.6, 13.9		1.6, 3.6	0.13, 0.29
Food Energy - MJ		8.3	8.3	8.3	8.7	8.3	*0.706*	0.1	0.01
		7.9, 8.8	7.9, 8.7	7.8, 8.8	8.2, 9.1	7.9, 8.6		-0.5, 0.7	-0.06, 0.08
Food Energy - kcal		1983	1967	1979	2066	1972	*0.713*	25.8	0.01
		1880, 2086	1871, 2063	1865, 2093	1961, 2172	1889, 2054		-120, 171	-0.06, 0.09
n Households		*336*	*346*	*345*	*310*	*394*		*1731*	*1731*
n People		*744*	*761*	*755*	*703*	*1012*		*3975*	*3975*
n People Weighted[3]		*2740*	*2776*	*2855*	*2668*	*3738*		*14776*	14776

Household and eating out intakes combined

From 2006 the EFS moved from a financial year to a calendar year basis. As a consequence of this the January to March 2006 data are duplicated in the 2005/2006 and the 2006 results

***Scottish Index of Multiple Deprivation (SIMD) Quintiles: 1=Most Deprived; 5=Least Deprived; ** SII=Slope Index of Inequality; ***RII=Relative Index of Inequality**

[1]DRV for Adults 11% Food Energy; [2]DRV=18g (Department of Health, 1991)

[3]The results are weighted to the Scottish population - the number provided is approximately 1000th of the Scottish population

Consumption of Additional Foods and Drinks Indicative of Diet Quality (sweet) by SIMD, 2001 to 2003 Combined

EFS data (g/person/day)

Food	**SIMD Quintile 1*** Mean 95% CI	**SIMD Quintile 2** Mean 95% CI	**SIMD Quintile 3** Mean 95% CI	**SIMD Quintile 4** Mean 95% CI	**SIMD Quintile 5*** Mean 95% CI	***P-value for Linear Association***	**SII** 95% CI	**RII** 95%CI
Cakes and Pastries	16.1	16.8	17.3	18.5	17.8	*0.225*	2.6	0.15
	13.9, 18.2	14.2, 19.4	15.1, 19.5	16.0, 21.0	14.9, 20.6		-1.6, 6.9	-0.09, 0.40
Sweet Biscuits	20.1	21.8	24.6	24.1	21.3	*0.237*	2.7	0.12
	18.3, 21.9	19.3, 24.2	21.9, 27.2	21.8, 26.4	18.1, 24.6		-1.6, 7.0	-0.07, 0.31
Cakes, Sweet Biscuits and Pastries	36.1	38.6	41.9	42.6	39.1	*0.145*	5.4	0.14
	33.0, 39.3	34.2, 42.9	37.7, 46.0	38.6, 46.7	33.9, 44.3		-1.6, 12.3	-0.04, 0.31
Sugar and Preserves	18.7	20.6	21.5	17.7	14.9	***0.046***	-4.8	-0.26
	15.3, 22.0	17.3, 24.0	16.2, 26.8	14.8, 20.6	12.0, 17.8		-9.7, 0.1	-0.52, 0.01
Chocolate Confectionery	14.2	13.9	15.4	15.0	15.3	*0.407*	1.7	0.11
	11.8, 16.6	11.9, 15.9	13.1, 17.7	12.4, 17.6	12.8, 17.9		-2.3, 5.7	-0.16, 0.39
Sugar Confectionery	8.4	6.7	9.3	7.8	6.7	*0.279*	-1.0	-0.13
	7.1, 9.7	5.8, 7.6	7.5, 11.1	6.4, 9.2	5.6, 7.8		-2.9, 0.9	-0.37, 0.12
Total Confectionery	22.6	20.6	24.7	22.8	22.1	*0.806*	0.7	0.03
	19.2, 25.9	18.0, 23.2	21.5, 27.8	19.7, 26.0	18.9, 25.2		-4.5, 5.8	-0.20, 0.26
Sugar Containing Soft Drinks	307	254	239	221	199	***<0.001***	-123	-0.50
	268, 347	227, 281	207, 270	190, 251	170, 228		-178, -68.7	-0.73, -0.28
Sugar Free Soft Drinks	85.4	99.4	108	116	112	***0.021***	35.6	0.34
	70.2, 101	77.8, 121	89.1, 127	93.9, 138	91.2, 133		6.2, 65.1	0.06, 0.63
Total Soft Drinks	392	353	346	337	312	***0.004***	-87.8	-0.25
	355, 430	322, 385	309, 384	299, 374	276, 347		-146, -29.4	-0.42, -0.08
n Households	*366*	*383*	*351*	*352*	*298*		*1750*	*1750*
n People	*810*	*838*	*793*	*841*	*740*		*4022*	*4022*
n People Weighted[1]	*3044*	*3075*	*2913*	*3140*	*2764*		*14935*	*14935*

Household and eating out intakes combined

***SIMD Quintiles: 1=Most Deprived; 5=Least Deprived; ** SII=Slope Index of Inequality; ***RII=Relative Index of Inequality**

[1]The results are weighted to the Scottish population, the number provided is approximately 1000th of the Scottish population

Consumption of Additional Foods and Drinks Indicative of Diet Quality (sweet) by SIMD, 2004 to 2006 Combined

EFS data (g/person/day)

Food	SIMD Quintile 1* Mean 95% CI	SIMD Quintile 2 Mean 95% CI	SIMD Quintile 3 Mean 95% CI	SIMD Quintile 4 Mean 95% CI	SIMD Quintile 5* Mean 95% CI	*P-value for Linear Association*	SII 95% CI	RII 95%CI
Cakes and Pastries	16.1	18.1	16.0	19.3	17.6	*0.361*	1.9	0.11
	12.9, 19.4	15.5, 20.7	13.9, 18.1	16.7, 22.0	15.5, 19.7		-2.3, 6.0	-0.13, 0.34
Sweet Biscuits	21.6	20.2	22.0	22.1	20.1	*0.700*	-0.9	-0.04
	18.5, 24.7	17.0, 23.4	18.6, 25.4	19.4, 24.8	17.9, 22.3		-5.5, 3.7	-0.26, 0.18
Cakes, Sweet Biscuits and Pastries	37.8	38.3	38.0	41.4	37.7	*0.779*	1.0	0.03
	32.7, 42.9	33.8, 42.8	33.4, 42.5	37.4, 45.5	34.2, 41.2		-6.2, 8.2	-0.16, 0.21
Sugar and Preserves	19.7	15.3	16.8	19.4	14.7	*0.327*	-3.4	-0.20
	14.4, 24.9	12.7, 17.9	13.6, 19.9	15.5, 23.2	11.9, 17.6		-10.2, 3.4	-0.60, 0.20
Chocolate Confectionery	13.2	13.9	14.4	15.4	13.6	*0.657*	0.8	0.06
	11.2, 15.2	11.9, 15.9	11.6, 17.2	12.2, 18.6	11.3, 15.9		-2.8, 4.4	-0.20, 0.31
Sugar Confectionery	6.9	7.2	7.1	7.2	6.0	*0.315*	-1.1	-0.16
	5.7, 8.1	5.6, 8.8	5.3, 8.8	5.1, 9.2	5.0, 7.1		-3.3, 1.1	-0.49, 0.16
Total Confectionery	20.2	21.1	21.5	22.6	19.6	*0.899*	-0.3	-0.01
	17.3, 23.0	18.6, 23.6	17.5, 25.4	18.3, 26.8	16.6, 22.5		-5.5, 4.8	-0.26, 0.23
Sugar Containing Soft Drinks	298	237	244	224	184	***<0.001***	-124	-0.53
	242, 354	213, 261	210, 277	195, 253	160, 209		-186, -62.5	-0.79, -0.27
Sugar Free Soft Drinks	109	90.2	119	84.1	73.9	***0.019***	-40.1	-0.43
	80.5, 137	70.0, 110	89.7, 148	64.6, 104	61.8, 86.0		-73.4, -6.7	-0.78, -0.07
Total Soft Drinks	407	327	362	308	258	***<0.001***	-164	-0.50
	341, 472	292, 363	313, 412	267, 349	231, 286		-238, -90.1	-0.73, -0.28
n Households	*336*	*346*	*345*	*310*	*394*		*1731*	*1731*
n People	*744*	*761*	*755*	*703*	*1012*		*3975*	*3975*
n People Weighted[1]	*2740*	*2776*	*2855*	*2668*	*3738*		*14776*	*14776*

Household and eating out intakes combined

From 2006 the EFS moved from a financial year to a calendar year basis. As a consequence of this the January to March 2006 data are duplicated in the 2005/2006 and the 2006 results

***SIMD Quintiles: 1=Most Deprived; 5=Least Deprived; ** SII=Slope Index of Inequality; ***RII=Relative Index of Inequality**

[1]The results are weighted to the Scottish population, the number provided is approximately 1000th of the Scottish population

Appendix 7: SIMD Data for 2001-2003 and 2004-2006 and URC Data for 2001-2003, 2004-2006 and 2007-2009

Consumption of Additional Foods and Drinks Indicative of Diet Quality (not sweet) by SIMD, 2001 to 2003 Combined

EFS data (g/person/day)

Food	**SIMD Quintile 1*** Mean 95% CI	**SIMD Quintile 2** Mean 95% CI	**SIMD Quintile 3** Mean 95% CI	**SIMD Quintile 4** Mean 95% CI	**SIMD Quintile 5*** Mean 95% CI	***P-value for Linear Association***	**SII** 95% CI	**RII** 95%CI
Total Red Meat[1]	70.3	65.4	69.1	60.3	60.5	***0.002***	-12.2	-0.19
	65.4, 75.2	60.9, 69.8	63.4, 74.7	55.3, 65.2	55.7, 65.3		-19.5, -4.9	-0.30, -0.08
Bacon and Ham	12.1	12.7	12.7	11.1	12.3	*0.648*	-0.6	-0.05
	10.6, 13.5	11.2, 14.2	11.0, 14.3	9.7, 12.6	10.4, 14.1		-3.3, 2.0	-0.27, 0.16
Other Red Meat Products[1,2]	36.5	31.0	28.7	25.7	25.0	***<0.001***	-14.1	-0.48
	33.6, 39.4	28.5, 33.4	25.8, 31.5	23.2, 28.2	22.5, 27.6		-18.0, -10.3	-0.61, -0.35
Butter	4.7	5.6	7.1	5.9	5.8	*0.110*	1.4	0.24
	3.6, 5.7	4.4, 6.8	5.2, 9.0	4.5, 7.4	4.8, 6.9		-0.3, 3.2	-0.05, 0.55
Whole Milk	123	99.3	92.9	64.9	62.2	***<0.001***	-77.7	-0.88
	101, 146	82.1, 116	73.4, 113	50.4, 79.4	44.6, 79.9		-109, -46.2	-1.23, -0.52
Semi-skimmed Milk	120	122	118	128	139	*0.128*	21.0	0.17
	101, 138	107, 138	104, 132	111, 146	123, 155		-6.7, 48.8	-0.05, 0.39
Skimmed Milk	10.3	8.8	14.8	12.2	15.3	*0.138*	6.5	0.53
	4.8, 15.7	5.4, 12.2	6.2, 23.5	6.4, 18.0	9.1, 21.5		-2.1, 15.2	-0.17, 1.25
Total Milk	276	255	245	226	238	***0.007***	-53.2	-0.21
	256, 296	232, 278	224, 266	205, 248	213, 263		-90.5, -15.9	-0.36, -0.06
Processed Potatoes	37.9	34.6	32.2	29.1	28.5	***<0.001***	-12.1	-0.37
	34.5, 41.3	31.3, 37.9	28.3, 36.1	26.0, 32.2	25.3, 31.8		-16.8, -7.4	-0.52, -0.23
Savoury Snacks	15.5	14.5	13.6	14.6	14.4	*0.365*	-1.1	-0.08
	14.0, 17.1	13.0, 16.1	12.1, 15.2	13.1, 16.1	13.0, 15.8		-3.6, 1.3	-0.25, 0.09
Takeaway Foods	26.5	24.2	18.3	17.7	21.2	***0.002***	-8.8	-0.41
	22.3, 30.7	20.5, 27.9	15.4, 21.3	14.0, 21.5	17.4, 25.1		-14.2, -3.5	-0.66, -0.16
n Households	*366*	*383*	*351*	*352*	*298*		*1750*	*1750*
n People	*810*	*838*	*793*	*841*	*740*		*4022*	*4022*
n People Weighted[3]	*3044*	*3075*	*2913*	*3140*	*2764*		*14935*	14935

Household and eating out intakes combined

***Scottish Index of Multiple Deprivation (SIMD) Quintiles: 1=Most Deprived; 5=Least Deprived; ** SII=Slope Index of Inequality; ***RII=Relative Index of Inequality**

[1]Meat portion only – see appendices 3 & 4 for methodology; [2]The results are weighted to the Scottish population, the number provided is approximately 1000th of the Scottish population

Consumption of Additional Foods and Drinks Indicative of Diet Quality (not sweet) by SIMD, 2004 to 2006 Combined

EFS data (g/person/day)

Food	SIMD Quintile 1* Mean 95% CI	SIMD Quintile 2 Mean 95% CI	SIMD Quintile 3 Mean 95% CI	SIMD Quintile 4 Mean 95% CI	SIMD Quintile 5* Mean 95% CI	*P-value for Linear Association*	SII 95% CI	RII 95%CI
Total Red Meat[1]	66.7 60.8, 72.6	64.9 57.7, 72.1	59.9 54.7, 65.1	60.6 55.3, 65.9	55.4 51.2, 59.7	***0.003***	-13.9 -22.8, -5.1	-0.23 -0.37, -0.08
Bacon and Ham	11.8 9.8, 13.9	10.5 9.1, 11.8	11.9 10.6, 13.3	13.7 12.3, 15.1	10.9 9.4, 12.5	*0.809*	0.3 -2.6, 3.3	0.03 -0.22, 0.28
Other Red Meat Products[1,2]	32.5 29.2, 35.8	31.2 27.3, 35.2	26.8 24.3, 29.3	24.8 22.1, 27.5	21.6 19.6, 23.7	***<0.001***	-14.4 -19.2, -9.6	-0.53 -0.71, -0.35
Butter	4.6 3.2, 6.0	7.0 5.8, 8.2	7.8 6.0, 9.6	7.4 6.0, 8.7	6.8 5.0, 8.6	*0.117*	2.1 -0.5, 4.8	0.31 -0.07, 0.72
Whole Milk	93.4 74.9, 112	78.7 64.4, 93.0	63.9 44.8, 82.9	64.3 52.4, 76.2	39.5 25.7, 53.2	***<0.001***	-63.6 -88.6, -38.7	-0.96 -1.34, -0.58
Semi-skimmed Milk	124 102, 146	109 92.0, 126	137 115, 159	128 112, 144	142 124, 159	*0.066*	28.7 -1.9, 59.2	0.22 -0.01, 0.46
Skimmed Milk	10.4 5.6, 15.1	14.1 8.3, 19.9	9.6 2.9, 16.3	10.1 5.5, 14.6	22.6 18.0, 27.3	***0.004***	12.1 4.1, 20.1	0.87 0.29, 1.45
Total Milk	254 232, 275	219 200, 238	224 202, 247	226 209, 243	220 194, 245	*0.138*	-30.4 -70.8, 10.0	-0.13 -0.31, 0.04
Processed Potatoes	35.7 32.2, 39.1	30.9 27.7, 34.2	26.9 22.6, 31.2	27.1 23.5, 30.7	21.1 18.5, 23.8	***<0.001***	-17.0 -21.5, -12.5	-0.61 -0.77, -0.45
Savoury Snacks	12.8 10.7, 14.9	12.9 11.3, 14.5	12.3 10.1, 14.4	12.4 10.6, 14.3	11.4 10.2, 12.6	*0.204*	-1.8 -4.5, 1.0	-0.15 -0.37, 0.08
Takeaway Foods	25.3 20.8, 29.9	24.1 20.0, 28.1	19.9 16.3, 23.5	18.1 14.2, 22.1	16.5 13.5, 19.5	***<0.001***	-11.9 -18.0, -5.9	-0.58 -0.88, -0.29
n Households	*336*	*346*	*345*	*310*	*394*		*1731*	*1731*
n People	*744*	*761*	*755*	*703*	*1012*		*3975*	*3975*
n People Weighted[3]	*2740*	*2776*	*2855*	*2668*	*3738*		*14776*	14776

Household and eating out intakes combined

From 2006 the EFS moved from a financial year to a calendar year basis. As a consequence of this the January to March 2006 data are duplicated in the 2005/2006 and the 2006 results

***Scottish Index of Multiple Deprivation (SIMD) Quintiles: 1=Most Deprived; 5=Least Deprived; ** SII=Slope Index of Inequality; ***RII=Relative Index of Inequality**

[1]Meat portion only – see appendices 3 & 4 for methodology; [2]The results are weighted to the Scottish population, the number provided is approximately 1000th of the Scottish population

Consumption of Scottish Diet Action Plan 1996 Target Foods by URC, 2001 to 2003 Combined

EFS data (g/person/day with the exception of fish g/person/week)

Food	URC	Mean	95% CI	Unadjusted URC Parameter Estimates	95% CI	*P value*	URC Adjusted by SIMD Quintile Parameter Estimates	95% CI	*P value*	Multivariable Model[1] Parameter Estimates	95% CI	*P value*
	1	243	226, 260	0.0[4]			0.0[4]			0.0[4]		
Fruit and Vegetables[2, 3]	2	275	253, 297	32.4	4, 60.7	***0.004***	14.9	-11.2, 41	***0.024***	8.3	-10.3, 26.9	*0.247*
	3	317	271, 364	74.3	25.8, 122.9		61.7	17.5, 106		29.3	-8.1, 66.8	
	1	127	115, 138	0.0[4]			0.0[4]			0.0[4]		
Fruit[2]	2	140	123, 157	12.9	-7.3, 33	***0.040***	-0.5	-18.1, 17	*0.090*	-3.7	-17.1, 9.7	*0.439*
	3	170	138, 203	43.7	9.5, 77.9		34.0	2.1, 65.9		14.9	-15.3, 45.0	
	1	116	110, 123	0.0[4]			0.0[4]			0.0[4]		
Vegetables[3]	2	136	127, 144	19.5	8.2, 30.8	***<0.001***	15.4	3.8, 27.1	***0.005***	12.0	2.6, 21.4	***0.016***
	3	147	126, 168	30.7	8.5, 52.9		27.7	5.8, 49.7		14.5	-2.4, 31.3	
	1	107	103, 111	0.0[4]			0.0[4]			0.0[4]		
Total Bread	2	107	99.6, 114	-0.1	-7.8, 7.5	*0.754*	2.2	-5.5, 9.9	*0.611*	-0.6	-6.3, 5.0	*0.900*
	3	111	101, 121	4.1	-6.8, 15		5.5	-6.5, 17.6		-2.0	-11.3, 7.2	
	1	16.4	14.9, 17.9	0.0[4]			0.0[4]			0.0[4]		
Brown/Wholemeal Bread	2	21.4	18.5, 24.2	5.0	1.6, 8.4	***0.005***	4.0	0.7, 7.2	***0.011***	3.3	0.4, 6.2	***0.032***
	3	21.7	17.9, 25.5	5.3	1.1, 9.5		5.1	1.1, 9.2		3.2	-0.3, 6.8	
	1	18.3	16.7, 19.9	0.0[4]			0.0[4]			0.0[4]		
Total Breakfast Cereal	2	21.0	18.5, 23.5	2.7	-0.1, 5.6	***0.041***	1.6	-0.9, 4.2	*0.059*	1.4	-1.2, 4.0	*0.163*
	3	25.5	19.2, 31.7	7.2	1, 13.5		6.8	1.1, 12.5		5.3	-0.3, 10.9	
	1	9.3	8.0, 10.6	0.0[4]			0.0[4]			0.0[4]		
High Fibre Breakfast Cereal	2	11.9	10.2, 13.7	2.6	0.6, 4.6	***0.021***	2.0	0.1, 3.8	***0.038***	1.8	0.0, 3.6	*0.110*
	3	14.1	9.4, 18.9	4.9	0, 9.8		5.0	0.2, 9.7		3.7	-1.4, 8.8	
	1	31.4	26.0, 36.7	0.0[4]			0.0[4]			0.0[4]		
Oil Rich Fish	2	27.8	22.1, 33.6	-3.5	-11.4, 4.4	***0.008***	-5.8	-13.7, 2.1	***0.002***	-6.9	-14.6, 0.9	***0.044***
	3	45.2	35.0, 55.3	13.8	2.9, 24.6		12.7	2.2, 23.3		5.4	-5.9, 16.6	
	1	89.7	83.2, 96.3	0.0[4]			0.0[4]			0.0[4]		
White Fish	2	97.5	86.0, 109	7.8	-5.1, 20.6	***0.028***	4.9	-7.8, 17.7	*0.057*	4.2	-6.4, 14.9	*0.328*
	3	123	97.3, 148	32.8	6.6, 58.9		30.9	5.1, 56.7		15.2	-8.8, 39.3	
	1	55.5	51.7, 59.3	0.0[4]			0.0[4]			0.0[4]		
Fresh Potatoes[5]	2	68.9	60.3, 77.5	13.4	4.2, 22.5	***0.001***	12.9	4.1, 21.7	***0.004***	9.1	1.4, 16.7	*0.050*
	3	70.5	60.8, 80.2	15.0	5.1, 25		12.2	2.1, 22.4		5.2	-5.1, 15.5	

Household and eating out consumption combined; Urban Rural Classification (URC) Categories: 1 = Urban; 2 = Accessible small towns/ rural; 3 = Remote
Sample Size: URC 1 = 1181 Households (HH), 2698 People (P), 10010 People Weighted (PW); URC 2 = 445 HH, 1064 P, 3997 PW; and URC 3 = 124 HH, 260 People, 928 PW
[1]URC adjusted by SIMD Quintile, Equivalised Income, HH Composition, HH Size, %GNWI Spent on Food, kcal and HRP Age; [2]Fruit includes fruit and vegetable juice; [3]Vegetables include baked beans; [4]Reference Category; [5]Part of complex carbohydrate target

Appendix 7: SIMD Data for 2001-2003 and 2004-2006 and URC Data for 2001-2003, 2004-2006 and 2007-2009

Consumption of Scottish Diet Action Plan 1996 Target Foods by URC, 2004 to 2006 Combined

EFS data (g/person/day with the exception of fish g/person/week)

Food			Unadjusted URC				URC Adjusted by SIMD Quintile			Multivariable Model[1]		
	URC	Mean	95% CI	Parameter Estimates	95% CI	*P value*	Parameter Estimates	95% CI	*P value*	Parameter Estimates	95% CI	*P value*
Fruit and Vegetables[2, 3]	1	267	251, 283	0.0[4]			0.0[4]			0.0[4]		
	2	284	254, 313	16.3	-15.4, 48	***0.002***	0.8	-32.5, 34	*0.265*	3.1	-23.5, 29.6	***0.041***
	3	316	284, 348	48.7	13.5, 83.9		31.5	-6.4, 69.4		36.9	8.7, 65.2	
Fruit[2]	1	142	132, 153	0.0[4]			0.0[4]			0.0[4]		
	2	157	137, 177	14.6	-6.0, 35.2	*0.184*	3.3	-17.4, 24.0	*0.908*	4.0	-13.0, 20.9	*0.748*
	3	160	139, 181	17.7	-5.9, 41.4		4.5	-19.7, 28.8		7.2	-13.6, 27.9	
Vegetables[3]	1	125	118, 132	0.0[4]			0.0[4]			0.0[4]		
	2	127	113, 140	1.7	-13.8, 17.2	*0.057*	-2.6	-19.4, 14.3	*0.170*	-0.9	-15.4, 13.6	*0.089*
	3	156	132, 180	30.9	5.9, 56.0		27.0	-1.5, 55.5		29.8	3.2, 56.4	
Total Bread	1	101	96.4, 105	0.0[4]			0.0[4]			0.0[4]		
	2	101	92.9, 109	0.1	-7.9, 8.2	*0.932*	0.7	-7.3, 8.7	*0.862*	0.7	-6.2, 7.6	*0.880*
	3	102	94.8, 110	1.6	-7.0, 10.3		2.6	-6.9, 12.2		2.0	-5.9, 10.0	
Brown/Wholemeal Bread	1	21.7	19.6, 23.7	0.0[4]			0.0[4]			0.0[4]		
	2	23.2	19.9, 26.4	1.5	-2.4, 5.4	*0.059*	0.4	-3.5, 4.3	*0.169*	1.3	-2.5, 5.1	*0.183*
	3	28.8	23.4, 34.2	7.2	1.3, 13.0		5.5	-0.3, 11.3		5.5	-0.3, 11.2	
Total Breakfast Cereal	1	19.1	17.6, 20.6	0.0[4]			0.0[4]			0.0[4]		
	2	22.8	19.9, 25.8	3.7	0.4, 7.0	*0.086*	2.5	-0.4, 5.4	*0.236*	2.6	-0.1, 5.3	*0.162*
	3	19.4	12.8, 26.0	0.3	-6.5, 7.1		-0.9	-6.9, 5.0		-1.4	-7.4, 4.5	
High Fibre Breakfast Cereal	1	10.6	9.5, 11.8	0.0[4]			0.0[4]			0.0[4]		
	2	12.5	10.2, 14.8	1.9	-0.7, 4.5	*0.316*	0.9	-1.6, 3.4	*0.770*	1.3	-0.9, 3.5	*0.498*
	3	12.0	6.8, 17.2	1.4	-3.9, 6.7		0.2	-4.7, 5.1		0.2	-4.6, 5.0	
Oil Rich Fish	1	34.4	29.1, 39.7	0.0[4]			0.0[4]			0.0[4]		
	2	36.3	26.2, 46.4	1.9	-9.4, 13.3	*0.387*	-0.3	-11.5, 10.9	*0.364*	0.9	-10.4, 12.1	*0.286*
	3	68.3	20.4, 116	33.9	-14.8, 82.6		32.8	-12.6, 78.1		33.2	-8.0, 74.4	
White Fish	1	87.5	80.8, 94.3	0.0[4]			0.0[4]			0.0[4]		
	2	93.8	75.3, 112	6.3	-12.4, 25.0	*0.740*	2.4	-17.6, 22.5	*0.969*	4.4	-13.6, 22.5	*0.884*
	3	94.2	74.6, 114	6.6	-14.3, 27.5		1.7	-19.6, 23.0		3.8	-16.4, 23.9	
Fresh Potatoes[5]	1	53.9	49.6, 58.3	0.0[4]			0.0[4]			0.0[4]		
	2	62.1	48.0, 76.1	8.1	-6.5, 22.8	*0.126*	9.2	-6.5, 24.8	*0.078*	9.8	-4.9, 24.6	*0.086*
	3	66.3	53.7, 78.9	12.4	-1.1, 25.8		15.0	1.1, 28.9		12.3	0.0, 24.5	

Household and eating out consumption combined; Urban Rural Classification (URC) Categories: 1 = Urban; 2 = Accessible small towns/ rural; 3 = Remote. From 2006 the EFS moved from a financial year to a calendar year basis. As a consequence of this the January to March 2006 data are duplicated in the 2005/2006 and the 2006 results. Sample Size: URC 1 = 1249 Households (HH), 2797 People (P), 10405 People Weighted (PW); URC 2 = 300 HH, 743 P, 2724 PW; and URC 3 = 182 HH, 435 P, 1646 PW.

[1]URC adjusted by SIMD Quintile, Equivalised Income, HH Composition, HH Size, %GNWI Spent on Food, kcal and HRP Age; [2]Fruit includes fruit and vegetable juice; [3]Vegetables include baked beans; [4]Reference Category; [5]Part of complex carbohydrate target

Consumption of Scottish Diet Action Plan 1996 Target Foods by URC, 2007 to 2009 Combined

LCF data (g/person/day with the exception of fish g/person/week)

Food				Unadjusted URC			URC Adjusted by SIMD Quintile			Multivariable Model[1]		
	URC	Mean	95% CI	Parameter Estimates	95% CI	*P value*	Parameter Estimates	95% CI	*P value*	Parameter Estimates	95% CI	*P value*
Fruit and Vegetables[2, 3]	1	272	253, 291	0.0[4]			0.0[4]			0.0[4]		
	2	305	276, 335	33.2	-0.8, 67.1	***0.010***	13.0	-18.1, 44.0	***0.046***	-4.9	-30.6, 20.7	*0.637*
	3	337	291, 383	64.8	16.7, 113		59.6	12.5, 107		23.9	-32.1, 79.9	
Fruit[2]	1	147	133, 160	0.0[4]			0.0[4]			0.0[4]		
	2	168	148, 189	21.7	-0.1, 43.5	***0.034***	8.9	-10.5, 28.3	*0.146*	-0.2	-17.5, 17.1	*0.700*
	3	183	147, 220	36.7	-1.8, 75.1		35.0	-2.9, 72.9		17.7	-24.0, 59.5	
Vegetables[3]	1	125	118, 133	0.0[4]			0.0[4]			0.0[4]		
	2	137	123, 151	11.5	-4.8, 27.7	***0.007***	4.0	-11.6, 19.7	***0.022***	-4.7	-16.8, 7.3	*0.607*
	3	154	137, 170	28.2	11.1, 45.2		24.6	7.7, 41.5		6.1	-17.4, 29.7	
Total Bread	1	94.5	91.1, 97.9	0.0[4]			0.0[4]			0.0[4]		
	2	96.2	91.0, 101	1.7	-4.3, 7.7	*0.724*	5.2	-1.2, 11.6	*0.202*	0.4	-5.6, 6.5	*0.854*
	3	98.2	86.1, 110	3.8	-8.5, 16.0		7.3	-6.2, 20.9		-3.0	-15.7, 9.8	
Brown/Wholemeal Bread	1	21.8	20.5, 23.2	0.0[4]			0.0[4]			0.0[4]		
	2	23.9	20.8, 27.0	2.1	-1.4, 5.5	*0.143*	1.3	-2.2, 4.7	*0.192*	-0.3	-3.5, 2.9	*0.520*
	3	28.8	20.5, 37.2	7.0	-1.1, 15.1		7.4	-0.8, 15.6		3.7	-3.1, 10.5	
Total Breakfast Cereal	1	21.6	19.7, 23.5	0.0[4]			0.0[4]			0.0[4]		
	2	24.2	20.8, 27.6	2.6	-1.0, 6.1	*0.216*	0.6	-2.7, 3.8	*0.844*	-0.8	-4.0, 2.4	*0.643*
	3	24.0	19.4, 28.7	2.4	-2.6, 7.4		1.2	-4.5, 7.0		-2.2	-7.7, 3.3	
High Fibre Breakfast Cereal	1	12.7	11.1, 14.3	0.0[4]			0.0[4]			0.0[4]		
	2	15.0	12.3, 17.8	2.3	-0.8, 5.4	*0.199*	0.5	-2.5, 3.5	*0.874*	-0.5	-3.6, 2.5	*0.749*
	3	14.8	10.6, 19.0	2.1	-2.4, 6.7		0.9	-4.0, 5.8		-1.7	-6.7, 3.2	
Oil Rich Fish	1	30.2	25.5, 34.9	0.0[4]			0.0[4]			0.0[4]		
	2	35.2	28.1, 42.3	5.0	-3.7, 13.8	*0.378*	1.2	-7.3, 9.7	*0.776*	-0.9	-9.4, 7.6	*0.977*
	3	39.7	18.1, 61.4	9.5	-12.8, 31.9		6.8	-14.9, 28.6		0.7	-20.3, 21.7	
White Fish	1	91.7	83.9, 99.5	0.0[4]			0.0[4]			0.0[4]		
	2	99.2	88.1, 110	7.5	-7.2, 22.2	*0.430*	4.4	-9.9, 18.7	*0.512*	-0.8	-14.9, 13.3	*0.961*
	3	108	69.9, 146	16.3	-22.1, 54.7		18.2	-19.6, 56.1		4.0	-26.6, 34.7	
Fresh Potatoes[5]	1	48.0	43.6, 52.4	0.0[4]			0.0[4]			0.0[4]		
	2	58.7	50.8, 66.7	10.7	1.8, 19.7	***0.011***	10.6	0.8, 20.4	***0.013***	5.3	-3.5, 14.1	*0.075*
	3	76.1	49.4, 103	28.1	1.3, 54.8		27.6	2.2, 53.0		16.0	-2.2, 34.1	

Household and eating out consumption combined; Urban Rural Classification (URC) Categories: 1 = Urban; 2 = Accessible small towns/ rural; 3 = Remote
Sample Size: URC 1 = 1044 Households (HH), 2289 People (P), 10620 People Weighted (PW); URC 2 = 371 HH, 831 P, 3673 PW; and URC 3 = 122 HH, 251 P, 1063 PW.
[1]URC adjusted by SIMD Quintile, Equivalised Income, HH Composition, HH Size, %GNWI Spent on Food, kcal and HRP Age; [2]Fruit includes fruit and vegetable juice; [3]Vegetables include baked beans; [4]Reference Category; [5]Part of complex carbohydrate target

Appendix 7: SIMD Data for 2001-2003 and 2004-2006 and URC Data for 2001-2003, 2004-2006 and 2007-2009

Intake of Scottish Diet Action Plan 1996 Target Nutrients by URC, 2001 to 2003 Combined

EFS data (units/person/day)

Nutrient			Unadjusted URC				URC Adjusted by SIMD Quintile			Multivariable Model[1]		
	URC	Mean	95% CI	Parameter Estimates	95% CI	*P value*	Parameter Estimates	95% CI	*P value*	Parameter Estimates	95% CI	*P value*
	1	38.7	38.2, 39.1	0.0[2]			0.0[2]			0.0[2]		
% Food Energy - Fat	2	39.3	38.5, 40.0	0.6	-0.3, 1.5	*0.362*	0.8	-0.1, 1.7	*0.223*	0.9	0.0, 1.8	*0.143*
	3	38.6	37.1, 40.0	-0.1	-1.4, 1.2		0.1	-1.3, 1.4		0.1	-1.2, 1.4	
	1	15.5	15.3, 15.7	0.0[2]			0.0[2]			0.0[2]		
% Food Energy - Saturated Fat	2	15.7	15.3, 16.1	0.2	-0.3, 0.6	*0.736*	0.2	-0.3, 0.6	*0.730*	0.2	-0.2, 0.6	*0.642*
	3	15.5	14.8, 16.3	0.0	-0.7, 0.8		0.0	-0.8, 0.8		-0.1	-0.9, 0.7	
	1	15.8	15.4, 16.3	0.0[2]			0.0[2]			0.0[2]		
% Food Energy - NMES	2	15.3	14.6, 15.9	-0.6	-1.3, 0.2	*0.382*	-0.4	-1.3, 0.4	*0.560*	-0.5	-1.3, 0.4	*0.517*
	3	16.2	13.6, 18.7	0.3	-2.2, 2.9		0.3	-2.2, 2.7		0.2	-2.1, 2.6	
	1	143	139, 147	0.0[2]			0.0[2]			0.0[2]		
Complex CHO g	2	145	140, 151	2.1	-3.9, 8.2	*0.403*	2.6	-3.5, 8.7	*0.340*	-1.0	-4.9, 2.8	*0.802*
	3	151	139, 163	8.3	-4.4, 20.9		8.9	-4.0, 21.9		0.9	-5.1, 7.0	
	1	12.0	11.6, 12.4	0.0[2]			0.0[2]			0.0[2]		
NSP g	2	12.9	12.4, 13.4	0.9	0.2, 1.5	***0.008***	0.7	0.1, 1.3	***0.021***	0.4	0.0, 0.8	*0.052*
	3	13.4	12.4, 14.5	1.4	0.3, 2.6		1.3	0.3, 2.4		0.5	0.0, 1.0	
	1	8.5	8.3, 8.8	0.0[2]			0.0[2]			0.0[2]		
Food Energy - MJ	2	8.7	8.4, 9.0	0.2	-0.2, 0.5	*0.183*	0.2	-0.2, 0.6	*0.223*	0.3	-0.1, 0.7	*0.288*
	3	9.1	8.5, 9.7	0.6	-0.1, 1.2		0.6	-0.1, 1.2		-0.1	-0.9, 0.6	
	1	2033	1980, 2087	0.0[2]			0.0[2]			0.0[2]		
Food Energy - kcal	2	2074	2002, 2146	40.6	-49.5, 131	*0.182*	48.5	-46.9, 144	*0.222*	68.4	-21.6, 158	*0.284*
	3	2166	2029, 2303	132.7	-13.4, 279		133.6	-26.4, 294		-27.7	-209, 153	

Household and eating out consumption combined. Urban Rural Classification (URC) Categories: 1 = Urban; 2 = Accessible small towns/ rural; 3 = Remote
Sample Size: URC 1 = 1181 Households (HH), 2698 People (P), 10010 People Weighted (PW); URC 2 = 445 HH, 1064 P, 3997 PW; and URC 3 = 124 HH, 260 P, 928 PW
[1]URC adjusted by SIMD Quintile, Equivalised Income, HH Composition, HH Size, %GNWI Spent on Food, kcal and HRP Age; [2]Reference Category

Appendix 7: SIMD Data for 2001-2003 and 2004-2006 and URC Data for 2001-2003, 2004-2006 and 2007-2009

Intake of Scottish Diet Action Plan 1996 Target Nutrients by URC, 2004 to 2006 Combined

EFS data (units/person/day)

Nutrient			Unadjusted URC				URC Adjusted by SIMD Quintile			Multivariable Model[1]		
	URC	Mean	95% CI	Parameter Estimates	95% CI	*P value*	Parameter Estimates	95% CI	*P value*	Parameter Estimates	95% CI	*P value*
% Food Energy - Fat	1	38.6	38.1, 39.1	0.0[2]			0.0[2]			0.0[2]		
	2	38.6	37.7, 39.5	0.0	-1.0, 1.0	*0.345*	0.1	-0.9, 1.1	*0.259*	0.1	-0.8, 1.0	*0.185*
	3	39.4	38.4, 40.4	0.8	-0.3, 1.9		0.9	-0.2, 2.1		1.0	-0.1, 2.1	
% Food Energy - Saturated Fat	1	15.3	15.1, 15.6	0.0[2]			0.0[2]			0.0[2]		
	2	15.6	15.1, 16.0	0.2	-0.3, 0.7	***0.032***	0.2	-0.3, 0.7	*0.058*	0.2	-0.3, 0.7	*0.061*
	3	16.3	15.7, 17.0	1.0	0.3, 1.8		1.0	0.2, 1.8		1.0	0.2, 1.7	
% Food Energy - NMES	1	15.5	14.9, 16.1	0.0[2]			0.0[2]			0.0[2]		
	2	14.7	14.0, 15.5	-0.7	-1.7, 0.2	*0.171*	-0.6	-1.5, 0.3	*0.218*	-0.7	-1.6, 0.2	*0.084*
	3	14.7	14.0, 15.4	-0.8	-1.7, 0.1		-0.8	-1.7, 0.1		-1.1	-2.0, -0.1	
Complex CHO g	1	139	135, 144	0.0[2]			0.0[2]			0.0[2]		
	2	144	135, 153	4.4	-5.0, 13.9	*0.628*	3.4	-6.5, 13.2	*0.796*	1.8	-4.5, 8.1	*0.796*
	3	141	127, 156	2.1	-13.8, 18.1		0.8	-15.5, 17.1		-0.5	-8.4, 7.4	
NSP g	1	12.2	11.8, 12.6	0.0[2]			0.0[2]			0.0[2]		
	2	12.6	11.8, 13.3	0.4	-0.4, 1.2	*0.282*	0.1	-0.7, 1.0	*0.701*	0.1	-0.4, 0.6	*0.193*
	3	13.1	11.7, 14.5	0.9	-0.6, 2.3		0.5	-0.9, 2.0		0.6	0.0, 1.2	
Food Energy - MJ	1	8.3	8.1, 8.5	0.0[2]			0.0[2]			0.0[2]		
	2	8.5	8.0, 8.9	0.1	-0.3, 0.6	*0.693*	0.1	-0.3, 0.5	*0.850*	0.2	-0.2, 0.5	*0.582*
	3	8.5	7.9, 9.1	0.2	-0.5, 0.9		0.1	-0.6, 0.8		0.2	-0.4, 0.8	
Food Energy - kcal	1	1980	1929, 2031	0.0[2]			0.0[2]			0.0[2]		
	2	2015	1911, 2119	34.5	-70, 139	*0.692*	25.6	-78.5, 130	*0.848*	40.6	-47.5, 129	*0.579*
	3	2023	1874, 2173	43.3	-122, 208		25.1	-143, 193		43.5	-103, 190	

Household and eating out consumption combined. Urban Rural Classification (URC) Categories: 1 = Urban; 2 = Accessible small towns/ rural; 3 = Remote
From 2006 the EFS moved from a financial year to a calendar year basis. As a consequence of this the January to March 2006 data are duplicated in the 2005/2006 and the 2006 results
Sample Size: URC 1 = 1249 Households (HH), 2797 People (P), 10405 People Weighted (PW); URC 2 = 300 HH, 743 P, 2724 PW; and URC 3 = 182 HH, 435 P, 1646 PW
[1]URC adjusted by SIMD Quintile, Equivalised Income, HH Composition, HH Size, %GNWI Spent on Food, kcal and HRP Age; [2]Reference Category

Appendix 7: SIMD Data for 2001-2003 and 2004-2006 and URC Data for 2001-2003, 2004-2006 and 2007-2009

Intake of Scottish Diet Action Plan 1996 Target Nutrients by URC, 2007 to 2009 Combined

LCF data (units/person/day)

Nutrient			Unadjusted URC				URC Adjusted by SIMD Quintile			Multivariable Model[1]		
	URC	Mean	95% CI	Parameter Estimates	95% CI	*P value*	Parameter Estimates	95% CI	*P value*	Parameter Estimates	95% CI	*P value*
% Food Energy - Fat	1	38.5	38.1, 39.0	0.0[2]			0.0[2]			0.0[2]		
	2	39.7	38.8, 40.6	1.2	0.1, 2.2	***0.049***	1.3	0.3, 2.3	***0.026***	1.1	0.1, 2.1	*0.087*
	3	39.5	38.1, 40.9	0.9	-0.4, 2.3		1.1	-0.4, 2.5		0.7	-0.8, 2.1	
% Food Energy - Saturated Fat	1	15.1	14.9, 15.3	0.0[2]			0.0[2]			0.0[2]		
	2	15.6	15.1, 16.0	0.5	0.0, 0.9	*0.089*	0.5	-0.1, 1.0	*0.157*	0.3	-0.2, 0.8	*0.468*
	3	15.7	14.8, 16.5	0.6	-0.3, 1.4		0.6	-0.3, 1.4		0.2	-0.6, 1.0	
% Food Energy - NMES	1	15.1	14.6, 15.5	0.0[2]			0.0[2]			0.0[2]		
	2	14.5	13.9, 15.1	-0.6	-1.5, 0.3	*0.382*	-0.5	-1.4, 0.4	*0.505*	-0.5	-1.4, 0.5	*0.599*
	3	14.9	13.0, 16.7	-0.2	-2.2, 1.8		-0.3	-2.2, 1.7		-0.2	-2.0, 1.7	
Complex CHO g	1	143	139, 146	0.0[2]			0.0[2]			0.0[2]		
	2	150	141, 158	7.1	-1.7, 15.9	*0.176*	7.3	-1.8, 16.3	*0.171*	-2.1	-7.1, 2.9	*0.451*
	3	154	128, 181	11.8	-14.1, 37.7		12.9	-12.4, 38.3		-4.5	-13.3, 4.2	
NSP g	1	12.4	12.0, 12.9	0.0[2]			0.0[2]			0.0[2]		
	2	13.3	12.4, 14.2	0.9	-0.1, 1.8	*0.076*	0.6	-0.3, 1.5	*0.129*	-0.3	-0.8, 0.2	*0.493*
	3	14.1	11.9, 16.3	1.7	-0.5, 3.9		1.7	-0.4, 3.8		0.0	-0.8, 0.9	
Food Energy - MJ	1	8.3	8.1, 8.6	0.0[2]			0.0[2]			0.0[2]		
	2	8.9	8.5, 9.4	0.6	0.1, 1.1	***0.008***	0.7	0.2, 1.1	***0.008***	0.5	0.1, 1.0	***0.025***
	3	9.5	8.3, 10.7	1.1	-0.1, 2.3		1.2	0.0, 2.4		0.6	-0.2, 1.4	
Food Energy - kcal	1	1986	1928, 2043	0.0[2]			0.0[2]			0.0[2]		
	2	2129	2023, 2234	143	31.9, 255	***0.008***	157	38.0, 275	***0.007***	127	16.6, 238	***0.024***
	3	2256	1968, 2544	271	-19.1, 560		295	10.6, 580		145	-37.9, 327	

Household and eating out consumption combined. Urban Rural Classification (URC) Categories: 1 = Urban; 2 = Accessible small towns/ rural; 3 = Remote
Sample Size: URC 1 = 1044 Households (HH), 2289 People (P), 10620 People Weighted (PW); URC 2 = 371 HH, 831 P, 3673 PW; and URC 3 = 122 HH, 251 P, 1063 PW.
[1]URC adjusted by SIMD Quintile, Equivalised Income, HH Composition, HH Size, %GNWI Spent on Food, kcal and HRP Age; [2]Reference Category

Consumption of Additional Foods and Drinks Indicative of Diet Quality (sweet) by URC, 2001 to 2003 Combined

EFS data (g/person/day)

Food			Unadjusted URC				URC Adjusted by SIMD Quintile			Multivariable Model[1]		
	URC	Mean	95% CI	Parameter Estimates	95% CI	*P value*	Parameter Estimates	95% CI	*P value*	Parameter Estimates	95% CI	*P value*
Cakes and Pastries	1	17.7	16.1, 19.2	0.0[2]			0.0[2]			0.0[2]		
	2	15.9	14.0, 17.8	-1.8	-4.2, 0.6	*0.088*	-2.4	-4.9, 0.1	***0.048***	-2.9	-5.2, -0.7	***0.037***
	3	19.0	15.7, 22.3	1.3	-2.4, 5.0		0.7	-2.9, 4.4		-2.0	-5.9, 1.8	
Sweet Biscuits	1	21.7	20.5, 22.9	0.0[2]			0.0[2]			0.0[2]		
	2	22.8	20.3, 25.3	1.1	-1.7, 4.0	***0.007***	0.3	-2.8, 3.4	***0.049***	-0.5	-3.2, 2.2	*0.173*
	3	28.3	24.5, 32.0	6.6	2.6, 10.6		5.3	1.0, 9.5		3.3	-0.6, 7.1	
Cakes, Sweet Biscuits and Pastries	1	39.4	37.1, 41.6	0.0[2]			0.0[2]			0.0[2]		
	2	38.7	35.0, 42.4	-0.7	-5.0, 3.7	***0.039***	-2.1	-6.6, 2.4	*0.061*	-3.5	-7.1, 0.2	*0.116*
	3	47.2	40.8, 53.7	7.9	1.1, 14.7		6.0	-0.8, 12.8		1.2	-5.2, 7.7	
Sugar and Preserves	1	17.3	15.5, 19.1	0.0[2]			0.0[2]			0.0[2]		
	2	19.9	17.7, 22.2	2.7	0.0, 5.4	***0.036***	3.0	0.1, 5.8	***0.038***	1.8	-0.8, 4.4	*0.142*
	3	29.3	15.4, 43.2	12.0	-1.6, 25.6		11.5	-1.8, 24.8		9.1	-3.1, 21.4	
Chocolate Confectionery	1	15.0	13.6, 16.4	0.0[2]			0.0[2]			0.0[2]		
	2	14.8	12.2, 17.5	-0.1	-3.2, 2.9	***0.025***	-0.5	-3.6, 2.7	***0.022***	-0.7	-3.6, 2.2	***0.004***
	3	11.9	10.0, 13.7	-3.1	-5.4, -0.8		-3.6	-6.1, -1.0		-4.4	-7.0, -1.8	
Sugar Confectionery	1	7.7	6.9, 8.5	0.0[2]			0.0[2]			0.0[2]		
	2	8.0	6.8, 9.3	0.4	-1.2, 1.9	*0.891*	0.3	-1.3, 1.9	*0.906*	0.2	-1.3, 1.6	*0.728*
	3	7.8	5.3, 10.3	0.2	-2.4, 2.7		-0.2	-3.0, 2.5		-0.9	-3.3, 1.5	
Total Confectionery	1	22.7	20.8, 24.5	0.0[2]			0.0[2]			0.0[2]		
	2	22.9	19.6, 26.2	0.2	-3.7, 4.2	*0.249*	-0.2	-4.3, 4.0	*0.174*	-0.6	-4.2, 3.1	***0.001***
	3	19.7	16.4, 23.0	-3.0	-6.6, 0.7		-3.8	-7.9, 0.3		-5.3	-8.1, -2.4	
Sugar Containing Soft Drinks	1	258	237, 279	0.0[2]			0.0[2]			0.0[2]		
	2	221	192, 250	-37.1	-73.4, -0.9	***0.032***	-24.7	-59.9, 10.4	*0.119*	-22.5	-56.0, 10.9	*0.071*
	3	204	156, 252	-54.2	-104, -3.9		-45.6	-95.9, 4.8		-43.6	-84.2, -2.9	
Sugar Free Soft Drinks	1	103	91.3, 114	0.0[2]			0.0[2]			0.0[2]		
	2	115	97.3, 133	12.9	-9.0, 34.7	***0.003***	6.6	-15.5, 28.7	***0.002***	11.3	-10.3, 32.9	***<0.001***
	3	71.6	51.0, 92.2	-30.9	-56.4, -5.5		-38.0	-65.5, -10.5		-44.3	-72.5, -16.1	
Total Soft Drinks	1	361	338, 383	0.0[2]			0.0[2]			0.0[2]		
	2	336	303, 369	-24.3	-65.4, 16.8	***0.002***	-18.1	-60, 23.8	***0.003***	-11.3	-50.8, 28.3	***<0.001***
	3	275	233, 318	-85.1	-132, -38.4		-83.6	-130, -36.6		-87.9	-128, -48.2	

Household and eating out consumption combined. Urban Rural Classification (URC) Categories: 1 = Urban; 2 = Accessible small towns/ rural; 3 = Remote
Sample Size: URC 1 = 1181 Households (HH), 2698 People (P), 10010 People Weighted (PW); URC 2 = 445 HH, 1064 P, 3997 PW; and URC 3 = 124 HH, 260 P, 928 PW
[1]URC adjusted by SIMD Quintile, Equivalised Income, HH Composition, HH Size, %GNWI Spent on Food, kcal and HRP Age; [2]Reference Category

Appendix 7: SIMD Data for 2001-2003 and 2004-2006 and URC Data for 2001-2003, 2004-2006 and 2007-2009

Consumption of Additional Foods and Drinks Indicative of Diet Quality (sweet) by URC, 2004 to 2006 Combined

EFS data (g/person/day)

Food				Unadjusted URC			URC Adjusted by SIMD Quintile			Multivariable Model[1]		
	URC	Mean	95% CI	Parameter Estimates	95% CI	*P value*	Parameter Estimates	95% CI	*P value*	Parameter Estimates	95% CI	*P value*
Cakes and Pastries	1	17.1	15.5, 18.7	0.0[2]			0.0[2]			0.0[2]		
	2	18.1	16.2, 20.0	1.0	-1.6, 3.7	*0.610*	0.8	-1.9, 3.5	*0.736*	0.6	-1.9, 3.2	*0.885*
	3	18.6	15.2, 22.0	1.5	-2.2, 5.2		1.4	-2.6, 5.4		0.5	-3.2, 4.3	
Sweet Biscuits	1	20.7	19.2, 22.3	0.0[2]			0.0[2]			0.0[2]		
	2	21.7	18.6, 24.8	1.0	-2.4, 4.3	*0.608*	0.9	-2.4, 4.2	*0.663*	0.6	-2.5, 3.6	*0.935*
	3	22.6	16.9, 28.4	1.9	-4.1, 7.9		1.6	-4.5, 7.6		-0.3	-5.6, 5.1	
Cakes, Sweet Biscuits and Pastries	1	37.8	35.3, 40.3	0.0[2]			0.0[2]			0.0[2]		
	2	39.8	35.8, 43.8	2.0	-2.8, 6.8	*0.445*	1.7	-2.9, 6.3	*0.519*	1.2	-3.0, 5.3	*0.850*
	3	41.2	33.5, 48.9	3.4	-4.7, 11.5		2.9	-5.3, 11.1		0.2	-6.9, 7.4	
Sugar and Preserves	1	16.8	14.8, 18.7	0.0[2]			0.0[2]			0.0[2]		
	2	15.2	12.2, 18.3	-1.5	-5.0, 1.9	*0.105*	-1.3	-4.4, 1.8	*0.142*	-0.9	-4.0, 2.1	*0.201*
	3	21.4	17.1, 25.6	4.6	-0.1, 9.4		4.4	-0.5, 9.3		3.2	-1.0, 7.5	
Chocolate Confectionery	1	13.5	12.3, 14.8	0.0[2]			0.0[2]			0.0[2]		
	2	14.5	12.1, 16.9	1.0	-1.6, 3.6	*0.333*	0.8	-1.9, 3.5	*0.462*	-0.1	-2.5, 2.3	*0.620*
	3	16.5	12.6, 20.4	3.0	-1.1, 7.1		2.7	-1.6, 6.9		1.8	-2.0, 5.6	
Sugar Confectionery	1	6.9	6.0, 7.7	0.0[2]			0.0[2]			0.0[2]		
	2	6.2	4.8, 7.6	-0.7	-2.2, 0.9	*0.533*	-0.7	-2.3, 1.0	*0.566*	-1.1	-2.7, 0.5	*0.389*
	3	7.6	5.2, 10.0	0.7	-1.8, 3.2		0.7	-1.9, 3.3		-0.1	-2.6, 2.5	
Total Confectionery	1	20.4	18.7, 22.1	0.0[2]			0.0[2]			0.0[2]		
	2	20.7	17.9, 23.6	0.3	-2.9, 3.6	*0.453*	0.2	-3.1, 3.4	*0.534*	-1.2	-4.0, 1.7	*0.543*
	3	24.1	18.5, 29.8	3.7	-2.2, 9.6		3.4	-2.7, 9.4		1.7	-3.8, 7.3	
Sugar Containing Soft Drinks	1	246	223, 268	0.0[2]			0.0[2]			0.0[2]		
	2	228	201, 256	-17.3	-52.4, 17.9	***<0.001***	-8.2	-40.0, 23.5	***<0.001***	-20.6	-54.1, 12.9	***<0.001***
	3	168	145, 192	-77.2	-110, -44.7		-73.2	-110, -36.6		-76.7	-111, -42.3	
Sugar Free Soft Drinks	1	92.8	80.4, 105	0.0[2]			0.0[2]			0.0[2]		
	2	110	83.3, 136	16.8	-13.0, 46.6	*0.226*	18.8	-8.8, 46.5	*0.140*	14.5	-9.7, 38.6	*0.198*
	3	75.3	46.2, 104	-17.5	-49.5, 14.6		-19.4	-54.7, 15.8		-14.7	-48.4, 19.0	
Total Soft Drinks	1	338	309, 367	0.0[2]			0.0[2]			0.0[2]		
	2	338	298, 378	-0.5	-50.2, 49.3	***0.001***	10.6	-30.8, 52.0	***0.002***	-6.1	-45.3, 33.0	***0.001***
	3	244	203, 284	-94.7	-142, -44.7		-92.6	-149, -36.0		-91.5	-140, -42.5	

Household and eating out consumption combined. Urban Rural Classification (URC) Categories: 1 = Urban; 2 = Accessible small towns/ rural; 3 = Remote
From 2006 the EFS moved from a financial year to a calendar year basis. As a consequence of this the January to March 2006 data are duplicated in the 2005/2006 and the 2006 results
Sample Size: URC 1 = 1181 Households (HH), 2698 People (P), 10010 People Weighted (PW); URC 2 = 445 HH, 1064 P, 3997 PW; and URC 3 = 124 HH, 260 P, 928 PW. [1]URC adjusted by SIMD Quintile, Equivalised Income, HH Composition, HH Size, %GNWI Spent on Food, kcal and HRP Age. [2]Reference Category

Consumption of Additional Foods and Drinks Indicative of Diet Quality (sweet) by URC, 2007 to 2009 Combined

LCF data (g/person/day)

Food			Unadjusted URC				URC Adjusted by SIMD Quintile			Multivariable Model[1]		
	URC	Mean	95% CI	Parameter Estimates	95% CI	*P value*	Parameter Estimates	95% CI	*P value*	Parameter Estimates	95% CI	*P value*
Cakes and Pastries	1	16.6	15.3, 17.9	0.0[2]			0.0[2]			0.0[2]		
	2	18.9	17.0, 20.9	2.3	-0.4, 5.0	*0.124*	1.6	-1.4, 4.6	*0.310*	-0.2	-2.8, 2.4	*0.978*
	3	21.3	14.4, 28.2	4.7	-2.3, 11.6		4.4	-2.6, 11.4		0.3	-4.4, 5.0	
Sweet Biscuits	1	22.5	20.8, 24.1	0.0[2]			0.0[2]			0.0[2]		
	2	26.1	23.5, 28.8	3.7	0.8, 6.5	***0.040***	3.8	0.9, 6.6	***0.031***	1.1	-1.5, 3.7	*0.629*
	3	26.3	17.0, 35.5	3.8	-5.6, 13.2		4.0	-5.2, 13.2		-1.3	-7.8, 5.2	
Cakes, Sweet Biscuits and Pastries	1	39.1	36.6, 41.5	0.0[2]			0.0[2]			0.0[2]		
	2	45.1	41.3, 48.8	6.0	1.6, 10.4	***0.027***	5.4	0.8, 9.9	*0.054*	0.9	-3.0, 4.9	*0.870*
	3	47.5	32.4, 62.7	8.5	-6.8, 23.7		8.4	-6.8, 23.6		-1.0	-10.4, 8.4	
Sugar and Preserves	1	15.4	13.2, 17.6	0.0[2]			0.0[2]			0.0[2]		
	2	21.6	18.4, 24.7	6.2	2.1, 10.2	***<0.001***	6.2	2.0, 10.3	***<0.001***	3.5	0.0, 7.0	***0.005***
	3	31.2	20.5, 41.9	15.8	5.2, 26.4		15.2	4.8, 25.7		9.5	0.2, 18.8	
Chocolate Confectionery	1	15.4	13.5, 17.4	0.0[2]			0.0[2]			0.0[2]		
	2	15.2	13.3, 17.1	-0.3	-3.1, 2.5	*0.890*	-0.6	-3.6, 2.4	*0.853*	-1.8	-4.7, 1.1	*0.274*
	3	14.0	8.4, 19.6	-1.5	-7.5, 4.6		-1.6	-7.8, 4.5		-3.6	-8.3, 1.0	
Sugar Confectionery	1	6.7	6.0, 7.4	0.0[2]			0.0[2]			0.0[2]		
	2	6.7	5.5, 7.9	0.0	-1.4, 1.4	*0.712*	0.3	-1.1, 1.7	*0.603*	-0.4	-1.7, 1.0	*0.852*
	3	7.6	5.5, 9.8	0.9	-1.4, 3.3		1.2	-1.2, 3.5		0.0	-2.7, 2.7	
Total Confectionery	1	22.1	19.9, 24.4	0.0[2]			0.0[2]			0.0[2]		
	2	21.9	19.4, 24.3	-0.3	-3.7, 3.1	*0.979*	-0.3	-3.9, 3.2	*0.979*	-2.1	-5.4, 1.1	*0.241*
	3	21.6	16.3, 26.9	-0.5	-6.5, 5.4		-0.5	-6.5, 5.5		-3.6	-8.2, 0.9	
Sugar Containing Soft Drinks	1	225	208, 242	0.0[2]			0.0[2]			0.0[2]		
	2	193	174, 213	-31.5	-58.0, -5.0	*0.063*	-7.9	-34.4, 18.7	*0.819*	-15.3	-42.0, 11.5	*0.514*
	3	194	119, 269	-30.5	-109, 48.2		-9.4	-80.5, 61.8		-12.8	-76.8, 51.2	
Sugar Free Soft Drinks	1	82.0	68.8, 95.1	0.0[2]			0.0[2]			0.0[2]		
	2	109	92.7, 126	27.3	5.0, 49.6	*0.052*	31.2	7.4, 55.0	***0.033***	29.8	6.9, 52.7	***0.039***
	3	77.8	48.3, 107	-4.2	-35.5, 27.2		-1.1	-36.1, 33.8		2.7	-34.3, 39.7	
Total Soft Drinks	1	307	281, 333	0.0[2]			0.0[2]			0.0[2]		
	2	303	280, 325	-4.2	-42.3, 33.9	*0.637*	23.3	-15.3, 61.9	*0.297*	14.5	-24.8, 53.8	*0.566*
	3	272	205, 339	-34.7	-109, 39.6		-10.5	-79.9, 58.9		-10.1	-76.2, 55.9	

Household and eating out consumption combined. Urban Rural Classification (URC) Categories: 1 = Urban; 2 = Accessible small towns/ rural; 3 = Remote
Sample Size: URC 1 = 1044 Households (HH), 2289 People (P), 10620 People Weighted (PW); URC 2 = 371 HH, 831 P, 3673 PW; and URC 3 = 122 HH, 251 P, 1063 PW.
[1]URC adjusted by SIMD Quintile, Equivalised Income, HH Composition, HH Size, %GNWI Spent on Food, kcal and HRP Age. [2]Reference Category

Consumption of Additional Foods and Drinks Indicative of Diet Quality (not sweet) by URC, 2001 to 2003 Combined
EFS data (g/person/day)

Food			Unadjusted URC				URC Adjusted by SIMD Quintile			Multivariable Model[1]		
	URC	Mean	95% CI	Parameter Estimates	95% CI	*P value*	Parameter Estimates	95% CI	*P value*	Parameter Estimates	95% CI	*P value*
Total Red Meat[2]	1	64.9	62.1, 67.7	0.0[3]			0.0[3]			0.0[3]		
	2	66.0	61.0, 71.1	1.1	-4.9, 7.1	*0.828*	2.6	-3.6, 8.9	*0.626*	0.6	-3.8, 5.1	***0.070***
	3	63.6	57.6, 69.6	-1.3	-7.7, 5.1		-0.9	-8.3, 6.4		-7.8	-14.8, -0.9	
Bacon and Ham	1	11.9	11.0, 12.9	0.0[3]			0.0[3]			0.0[3]		
	2	12.6	11.2, 14.0	0.7	-0.9, 2.3	*0.558*	0.9	-0.8, 2.6	*0.470*	0.3	-1.1, 1.8	*0.880*
	3	12.8	10.1, 15.4	0.9	-1.9, 3.6		1.0	-2.0, 4.0		-0.4	-3.3, 2.6	
Other Red Meat Products[2, 4]	1	30.1	28.5, 31.8	0.0[3]			0.0[3]			0.0[3]		
	2	29.0	26.6, 31.4	-1.2	-3.9, 1.6	***0.017***	0.7	-2.0, 3.4	*0.089*	0.2	-2.2, 2.7	***0.001***
	3	24.0	20.0, 27.9	-6.2	-10.3, -2.0		-4.6	-9.0, -0.2		-6.9	-10.4, -3.4	
Butter	1	5.4	4.7, 6.2	0.0[3]			0.0[3]			0.0[3]		
	2	6.5	5.0, 8.0	1.1	-0.6, 2.7	*0.305*	0.8	-0.8, 2.4	*0.567*	0.3	-1.0, 1.7	*0.871*
	3	6.6	3.7, 9.5	1.2	-1.8, 4.1		0.7	-2.5, 3.8		-0.4	-3.5, 2.8	
Whole Milk	1	91.5	80.4, 103	0.0[3]			0.0[3]			0.0[3]		
	2	77.2	61.3, 93.1	-14.3	-33.2, 4.5	*0.175*	-4.3	-23.5, 14.9	*0.334*	-4.1	-21.2, 13.0	*0.308*
	3	110	74.8, 145	18.6	-18.5, 55.7		25.7	-12.1, 63.5		28.0	-11.4, 67.4	
Semi-skimmed Milk	1	126	116, 136	0.0[3]			0.0[3]			0.0[3]		
	2	129	115, 144	3.7	-13.5, 20.9	***0.004***	2.9	-14.6, 20.4	***0.012***	-1.9	-19.7, 15.8	***<0.001***
	3	102	89.4, 114	-23.8	-39.8, -7.9		-22.2	-38.8, -5.5		-34.4	-51.1, -17.8	
Skimmed Milk	1	11.0	8.5, 13.5	0.0[3]			0.0[3]			0.0[3]		
	2	15.5	7.5, 23.5	4.5	-3.9, 12.9	*0.554*	4.2	-4.1, 12.5	*0.597*	4.1	-3.4, 11.5	*0.449*
	3	10.9	6.8, 15.1	-0.1	-5.1, 5.0		-0.3	-6.2, 5.6		-2.4	-8.9, 4.1	
Total Milk	1	250	237, 264	0.0[3]			0.0[3]			0.0[3]		
	2	244	227, 261	-6.5	-28.8, 15.7	*0.763*	2.9	-21.7, 27.6	*0.972*	0.1	-23.5, 23.8	*0.877*
	3	242	203, 281	-8.5	-48.1, 31.2		0.9	-39.7, 41.5		-10.7	-51.9, 30.6	
Processed Potatoes	1	35.0	32.8, 37.1	0.0[3]			0.0[3]			0.0[3]		
	2	28.3	25.3, 31.4	-6.6	-10.2, -3.0	***<0.001***	-5.7	-9.4, -1.9	***0.001***	-5.2	-9.1, -1.3	***0.001***
	3	24.2	17.9, 30.5	-10.7	-17.2, -4.3		-10.4	-17.1, -3.8		-10.8	-17.5, -4.1	
Savoury Snacks	1	15.0	14.1, 15.8	0.0[3]			0.0[3]			0.0[3]		
	2	14.0	12.6, 15.4	-1.0	-2.7, 0.7	*0.248*	-0.9	-2.6, 0.9	*0.361*	-0.8	-2.4, 0.7	*0.467*
	3	12.8	9.5, 16.0	-2.2	-5.5, 1.1		-1.9	-5.1, 1.3		-1.2	-3.9, 1.5	
Takeaway Foods	1	23.5	21.5, 25.4	0.0[3]			0.0[3]			0.0[3]		
	2	18.8	15.6, 22.0	-4.7	-8.3, -1.1	***<0.001***	-3.1	-6.8, 0.5	***0.010***	-2.6	-6.3, 1.1	***0.006***
	3	13.7	9.4, 18.0	-9.8	-14.5, -5.1		-7.9	-13.1, -2.6		-7.5	-12.0, -3.0	

Household and eating out consumption combined. Urban Rural Classification (URC) Categories: 1 = Urban; 2 = Accessible small towns/ rural; 3 = Remote. Sample Size: URC 1 = 1181 Households (HH), 2698 People (P), 10010 People Weighted (PW); URC 2 = 445 HH, 1064 P, 3997 PW; and URC 3 = 124 HH, 260 P, 928 PW. [1]URC adjusted by SIMD Quintile, Equivalised Income, HH Composition, HH Size, %GNWI Spent on Food, kcal and HRP Age; [2]Meat portion only – see appendices 3 & 4 for methodology; [3]Reference Category

Consumption of Additional Foods and Drinks Indicative of Diet Quality (not sweet) by URC, 2004 to 2006 Combined
EFS data (g/person/day)

Food			Unadjusted URC				URC Adjusted by SIMD Quintile			Multivariable Model[1]		
	URC	Mean	95% CI	Parameter Estimates	95% CI	*P value*	Parameter Estimates	95% CI	*P value*	Parameter Estimates	95% CI	*P value*
Total Red Meat[2]	1	61.0	57.7, 64.3	0.0[3]			0.0[3]			0.0[3]		
	2	63.1	57.7, 68.5	2.1	-3.6, 7.9	*0.298*	3.5	-2.6, 9.7	*0.274*	3.1	-2.2, 8.4	*0.113*
	3	58.3	52.8, 63.9	-2.6	-8.8, 3.5		-0.9	-7.6, 5.9		-2.0	-7.0, 3.0	
Bacon and Ham	1	11.0	10.2, 11.8	0.0[3]			0.0[3]			0.0[3]		
	2	12.6	11.0, 14.1	1.6	-0.1, 3.3	***0.015***	1.4	-0.5, 3.4	*0.071*	1.5	-0.3, 3.2	***0.034***
	3	14.9	12.5, 17.3	3.9	1.3, 6.5		3.5	0.5, 6.5		3.5	0.9, 6.2	
Other Red Meat Products[2, 4]	1	27.9	26.0, 29.8	0.0[3]			0.0[3]			0.0[3]		
	2	27.4	24.7, 30.0	-0.5	-3.4, 2.3	***0.001***	0.8	-2.0, 3.6	***0.001***	0.3	-2.3, 2.9	***0.034***
	3	21.0	17.4, 24.6	-6.9	-10.7, -3.0		-5.3	-9.0, -1.5		-5.8	-10.5, -1.2	
Butter	1	6.3	5.5, 7.0	0.0[3]			0.0[3]			0.0[3]		
	2	7.2	5.3, 9.1	0.9	-1.1, 2.9	*0.217*	0.6	-1.5, 2.6	*0.396*	0.7	-1.2, 2.5	*0.392*
	3	9.0	5.8, 12.1	2.7	-0.5, 5.9		2.3	-1.0, 5.5		2.0	-1.1, 5.1	
Whole Milk	1	67.1	58.0, 76.2	0.0[3]			0.0[3]			0.0[3]		
	2	56.2	40.2, 72.2	-10.9	-28.3, 6.5	*0.320*	-4.6	-20.4, 11.2	*0.412*	-5.2	-21.6, 11.1	*0.532*
	3	75.7	44.7, 107	8.6	-23.5, 40.7		15.8	-14.6, 46.2		12.6	-18.8, 44.0	
Semi-skimmed Milk	1	129	117, 140	0.0[3]			0.0[3]			0.0[3]		
	2	132	114, 149	2.6	-1.8, 23.3	*0.899*	-0.2	-21.3, 21	*0.803*	1.0	-17.6, 19.7	*0.672*
	3	126	99.5, 152	-3.4	-33.0, 26.3		-8.9	-38.8, 21.1		-11.0	-41.3, 19.4	
Skimmed Milk	1	13.9	10.9, 17.0	0.0[3]			0.0[3]			0.0[3]		
	2	12.7	6.9, 18.5	-1.2	-7.6, 5.1	*0.873*	-1.1	-6.9, 4.7	*0.759*	-0.7	-6.8, 5.4	*0.799*
	3	16.2	4.2, 28.1	2.2	-10.1, 14.5		4.0	-8.8, 16.7		0.0[3]	-8.7, 16.7	
Total Milk	1	229	216, 241	0.0[3]			0.0[3]			0.0[3]		
	2	220	198, 242	-8.8	-33.7, 16.1	*0.621*	-4.4	-28.4, 19.6	*0.655*	-4.1	-26.1, 17.9	*0.836*
	3	237	209, 264	8.1	-22.5, 38.8		12.3	-19.9, 44.4		6.8	-25.4, 39.0	
Processed Potatoes	1	29.0	26.6, 31.3	0.0[3]			0.0[3]			0.0[3]		
	2	28.9	24.5, 33.3	-0.1	-4.8, 4.7	***<0.001***	1.4	-2.9, 5.6	***<0.001***	0.6	-3.5, 4.7	***<0.001***
	3	19.1	16.1, 22.2	-9.8	-13.5, -6.2		-8.5	-11.8, -5.1		-8.2	-11.7, -4.8	
Savoury Snacks	1	12.3	11.4, 13.2	0.0[3]			0.0[3]			0.0[3]		
	2	12.8	11.1, 14.6	0.5	-1.5, 2.6	*0.636*	0.6	-1.4, 2.7	*0.624*	-0.1	-1.9, 1.8	*0.852*
	3	11.4	8.8, 14.0	-0.9	-3.6, 1.8		-0.8	-3.6, 2.0		-0.7	-3.2, 1.8	
Takeaway Foods	1	22.4	20.3, 24.5	0.0[3]			0.0[3]			0.0[3]		
	2	20.1	16.3, 24.0	-2.3	-6.6, 2.1	***<0.001***	-1.4	-5.7, 3.0	***<0.001***	-1.5	-5.8, 2.9	***<0.001***
	3	9.2	6.8, 11.6	-13.2	-16.3, -10.0		-12.2	-15.5, -8.9		-10.5	-13.9, -7.0	

Household and eating out consumption combined. Urban Rural Classification (URC) Categories: 1 = Urban; 2 = Accessible small towns/ rural; 3 = Remote. From 2006 the EFS moved from a financial year to a calendar year basis. As a consequence of this the January to March 2006 data are duplicated in the 2005/2006 and the 2006 results. Sample Size: URC 1 = 1249 Households (HH), 2797 People (P), 10405 People Weighted (PW); URC 2 = 300 HH, 743 P, 2724 PW; and URC 3 = 182 HH, 435 P, 1646 PW. [1]URC adjusted by SIMD Quintile, Equivalised Income, HH Composition, HH Size, %GNWI Spent on Food, kcal and HRP Age; [2]Meat portion only – see appendices 3 & 4 for methodology; [3]Reference Category

Consumption of Additional Foods and Drinks Indicative of Diet Quality (not sweet) by URC, 2007 to 2009 Combined
LCF data (g/person/day)

Food			Unadjusted URC				URC Adjusted by SIMD Quintile			Multivariable Model[1]		
	URC	Mean	95% CI	Parameter Estimates	95% CI	*P value*	Parameter Estimates	95% CI	*P value*	Parameter Estimates	95% CI	*P value*
Total Red Meat[2]	1	60.4	57.1, 63.6	0.0[3]			0.0[3]			0.0[3]		
	2	61.0	55.8, 66.2	0.7	-5.2, 6.5	*0.496*	2.2	-4.2, 8.6	*0.335*	-3.3	-9.1, 2.6	*0.537*
	3	72.0	52.0, 92.0	11.6	-8.2, 31.4		12.6	-6.5, 31.7		1.4	-20.8, 23.7	
Bacon and Ham	1	11.9	11.1, 12.6	0.0[3]			0.0[3]			0.0[3]		
	2	13.1	11.7, 14.5	1.2	-0.4, 2.8	*0.228*	1.0	-0.7, 2.7	*0.444*	-0.1	-1.7, 1.5	*0.535*
	3	12.9	10.9, 14.9	1.0	-1.0, 3.0		0.9	-1.4, 3.1		-1.4	-4.0, 1.1	
Other Red Meat Products[2, 4]	1	28.0	26.5, 29.6	0.0[3]			0.0[3]			0.0[3]		
	2	25.4	23.1, 27.6	-2.7	-5.4, 0.0	***0.004***	-0.6	-3.1, 2.0	*0.070*	-2.3	-4.6, 0.0	***0.004***
	3	22.3	19.1, 25.5	-5.7	-9.2, -2.3		-4.2	-7.7, -0.7		-7.7	-12.3, -3.2	
Butter	1	5.9	5.2, 6.7	0.0[3]			0.0[3]			0.0[3]		
	2	7.3	5.8, 8.7	1.3	-0.4, 3.0	***0.046***	1.0	-0.8, 2.9	*0.162*	0.0	-1.5, 1.6	*0.977*
	3	8.8	5.6, 12.0	2.8	-0.4, 6.1		2.5	-0.9, 5.8		0.3	-2.6, 3.1	
Whole Milk	1	55.2	46.9, 63.5	0.0[3]			0.0[3]			0.0[3]		
	2	62.5	46.0, 79.0	7.3	-10.3, 24.8	*0.710*	18.3	1.0, 35.7	*0.100*	15.2	-2.5, 32.9	*0.241*
	3	58.1	31.9, 84.3	2.9	-25.8, 31.5		13.1	-15.5, 41.7		2.9	-26.6, 32.4	
Semi-skimmed Milk	1	133	121, 145	0.0[3]			0.0[3]			0.0[3]		
	2	144	123, 165	10.6	-10.2, 31.5	*0.201*	8.9	-11.4, 29.3	*0.204*	-1.8	-21.9, 18.3	*0.865*
	3	166	126, 207	32.9	-9.1, 75.0		30.7	-9.0, 70.3		8.2	-25.3, 41.8	
Skimmed Milk	1	17.4	13.8, 20.9	0.0[3]			0.0[3]			0.0[3]		
	2	15.3	9.7, 21.0	-2.1	-7.8, 3.6	*0.770*	-4.7	-11.3, 1.9	*0.357*	-5.9	-12.2, 0.4	*0.130*
	3	16.8	1.6, 32.0	-0.5	-16.6, 15.5		-3.9	-20.8, 13.0		-7.0	-22.0, 8.1	
Total Milk	1	223	210, 236	0.0[3]			0.0[3]			0.0[3]		
	2	243	223, 263	19.8	-3.9, 43.6	*0.078*	27.3	1.7, 52.9	***0.022***	12.3	-9.0, 33.7	*0.484*
	3	261	221, 302	38.0	-4.8, 80.7		45.8	4.0, 87.5		11.4	-17.7, 40.6	
Processed Potatoes	1	29.8	27.5, 32.0	0.0[3]			0.0[3]			0.0[3]		
	2	25.9	21.4, 30.4	-3.9	-9.2, 1.5	***0.001***	-1.8	-6.7, 3.1	***0.006***	-2.8	-7.4, 1.8	***<0.001***
	3	20.2	16.2, 24.3	-9.5	-14.2, -4.9		-8.6	-13.5, -3.6		-10.6	-15.2, -5.9	
Savoury Snacks	1	13.2	12.0, 14.3	0.0[3]			0.0[3]			0.0[3]		
	2	13.3	11.5, 15.1	0.2	-2.0, 2.3	*0.781*	0.4	-1.9, 2.6	*0.706*	-0.1	-2.1, 1.9	*0.723*
	3	11.6	6.8, 16.5	-1.6	-6.5, 3.4		-1.6	-6.6, 3.4		-1.4	-5.1, 2.3	
Takeaway Foods	1	22.8	20.6, 25.1	0.0[3]			0.0[3]			0.0[3]		
	2	14.8	11.8, 17.9	-8.0	-11.8, -4.2	***<0.001***	-6.7	-11.0, -2.3	***0.001***	-5.6	-9.4, -1.9	***0.001***
	3	11.1	6.2, 16.0	-11.7	-17.0, -6.4		-10.4	-15.8, -4.9		-8.5	-12.7, -4.3	

Household and eating out consumption combined. Urban Rural Classification (URC) Categories: 1 = Urban; 2 = Accessible small towns/ rural; 3 = Remote. Sample Size: URC 1 = 1044 Households (HH), 2289 People (P), 10620 People Weighted (PW); URC 2 = 371 HH, 831 P, 3673 PW; and URC 3 = 122 HH, 251 P, 1063 PW.
[1]URC adjusted by SIMD Quintile, Equivalised Income, HH Composition, HH Size, %GNWI Spent on Food, kcal and HRP Age; [2]Meat portion only – see appendices 3 & 4 for methodology; [3]Reference Category

Slope Index of Inequality (SII) and Relative Index of Inequality (RII) for the relation of SIMD quintiles on Scottish Diet Action Plan (1996) Target Foods

LCF data

Food	2001-2003 SII[2] 95% CI	2004-2006[1] SII[2] 95% CI	2007-2009 SII[2] 95% CI	*P-value*	2001-2003 RII 95%CI	2004-2006[1] RII 95%CI	2007-2009 RII 95%CI
Fruit and Vegetables[3, 4]	167	157	166	*0.905*	0.65	0.57	0.58
	132, 202	124, 190	128, 204		0.51, 0.79	0.45, 0.69	0.45, 0.72
Fruit[3]	119	104	112	*0.664*	0.90	0.71	0.72
	95.5, 143	81.9, 126	85.3, 138		0.72, 1.07	0.56, 0.86	0.55, 0.90
Vegetables[4]	47.7	52.9	54.3	*0.852*	0.39	0.41	0.42
	31.4, 63.9	34.1, 71.8	35.2, 73.3		0.25, 0.52	0.27, 0.56	0.27, 0.56
Total Bread	-17.7	-10.8	-14.1	*0.715*	-0.16	-0.11	-0.15
	-28.7, -6.6	-22.6, 1.0	-23.5, -4.7		-0.27, -0.06	-0.22, 0.01	-0.25, -0.05
Brown/Wholemeal Bread	12.6	9.6	9.1	*0.542*	0.70	0.42	0.40
	8.2, 17.1	4.4, 14.8	4.0, 14.2		0.46, 0.95	0.19, 0.65	0.18, 0.62
Total Breakfast Cereal	10.9	13.8	13.4	*0.604*	0.56	0.70	0.60
	6.6, 15.3	9.7, 17.9	8.3, 18.4		0.34, 0.78	0.49, 0.90	0.37, 0.82
High Fibre Breakfast Cereal	9.5	10.5	11.5	*0.691*	0.92	0.95	0.86
	5.9, 13.0	7.1, 13.8	8.3, 14.8		0.57, 1.26	0.64, 1.24	0.62, 1.10
Oil Rich Fish	25.4	34.2	25.1	*0.589*	0.81	0.89	0.78
	12.8, 38.1	19.0, 49.4	13.7, 36.5		0.41, 1.22	0.49, 1.28	0.43, 1.14
White Fish	26.1	36.5	39.1	*0.692*	0.28	0.41	0.41
	6.3, 46.0	19.0, 54.0	10.9, 67.3		0.07, 0.49	0.21, 0.60	0.12, 0.71
Fresh Potatoes[5]	-10.9	2.8	5.8	*0.060*	-0.18	0.05	0.11
	-20.7, -1.0	-9.5, 15.1	-5.3, 16.8		-0.35, -0.02	-0.17, 0.27	-0.10, 0.32
n Households	*1750*	*1731*	*1537*		*1750*	*1731*	*1537*
n People	*4022*	*3975*	*3371*		*4022*	*3975*	*3371*
n People Weighted[6]	*14935*	*14776*	*15356*		*14935*	*14776*	*15356*

Household and eating out consumption combined

[1]From 2006 the EFS moved from a financial year to a calendar year basis. As a consequence of this the January to March 2006 data are duplicated in the 2005/2006 and the 2006 results

[2]Mean difference in intake (g/person/day with the exception of fish g/person/week) in the most deprived relative to the least deprived (slope of the gradient between the most deprived and the least deprived)

[3]Fruit includes fruit and vegetable juice; [4]Vegetables include baked beans; [5]Part of complex carbohydrate target

[6]The results are weighted to the Scottish population, the number provided is approximately 1000th of the Scottish population

Slope Index of Inequality (SII) and Relative Index of Inequality (RII) for the relation of SIMD quintiles on nutrient intake

LCF data

	2001-2003	2004-2006[1]	2007-2009	*P-value*	2001-2003	2004-2006[1]	2007-2009
	SII[2] 95% CI	**SII**[2] 95% CI	**SII**[2] 95% CI		**RII** 95%CI	**RII** 95%CI	**RII** 95%CI
% Food Energy - Fat	-0.2	-0.6	-0.1	*0.832*	-0.01	-0.02	0.00
	-1.4, 1.1	-1.8, 0.5	-1.7, 1.6		-0.04, 0.03	-0.05, 0.01	-0.04, 0.04
% Food Energy -Saturated Fat	0.1	0.2	0.3	*0.848*	0.01	0.01	0.02
	-0.4, 0.6	-0.5, 0.9	-0.3, 0.9		-0.03, 0.04	-0.03, 0.06	-0.02, 0.06
% Food Energy - NMES	-2.4	-2.2	-1.5	*0.527*	-0.15	-0.14	-0.10
	-3.7, -1.1	-3.8, -0.6	-2.6, -0.4		-0.24, -0.07	-0.25, -0.04	-0.17, -0.03
Complex CHO g	3.6	8.2	6.1	*0.822*	0.02	0.06	0.04
	-7.5, 14.8	-3.3, 19.7	-6.8, 19.1		-0.05, 0.10	-0.02, 0.14	-0.05, 0.13
NSP g	2.4	2.6	2.7	*0.924*	0.20	0.21	0.21
	1.3, 3.5	1.6, 3.6	1.5, 3.9		0.11, 0.28	0.13, 0.29	0.12, 0.30
Food Energy, MJ	0.0	0.1	0.2	*0.901*	0.00	0.01	0.02
	-0.7, 0.6	-0.5, 0.7	-0.6, 0.9		-0.08, 0.07	-0.06, 0.08	-0.07, 0.10
Food Energy, kcal	-7.2	25.8	42.7	*0.903*	0.00	0.01	0.02
	-163, 148	-120, 171	-136, 221		-0.08, 0.07	-0.06, 0.09	-0.07, 0.11
n Households	*1750*	*1731*	*1537*		*1750*	*1731*	*1537*
n People	*4022*	*3975*	*3371*		*4022*	*3975*	*3371*
n People Weighted[3]	*14935*	*14776*	*15356*		14935	14776	*15356*

Household and eating out intakes combined

[1]From 2006 the EFS moved from a financial year to a calendar year basis. As a consequence of this the January to March 2006 data are duplicated in the 2005/2006 and the 2006 results

[2]Mean difference in intake (units/person/day) in the most deprived relative to the least deprived (slope of the gradient between the most deprived and the least deprived)

[3]The results are weighted to the Scottish population - the number provided is approximately 1000th of the Scottish population

Appendix 8: SII and RII Tables

Slope Index of Inequality (SII) and Relative Index of Inequality (RII) for the relation of SIMD quintiles on Scottish Diet Report (1993) Target Foods (sweet) not included in SDAP

LCF data (g/person/day)

Food	2001-2003 SII[2] 95% CI	2004-2006[1] SII[2] 95% CI	2007-2009 SII[2] 95% CI	*P-value*	2001-2003 RII 95%CI	2004-2006[1] RII 95%CI	2007-2009 RII 95%CI
Cakes and Pastries	2.6	1.9	6.1	*0.281*	0.15	0.11	0.35
	-1.6, 6.9	-2.3, 6.0	1.9, 10.3		-0.09, 0.40	-0.13, 0.34	0.11, 0.59
Sweet Biscuits	2.7	-0.9	1.0	*0.511*	0.12	-0.04	0.04
	-1.6, 7.0	-5.5, 3.7	-3.8, 5.7		-0.07, 0.31	-0.26, 0.18	-0.16, 0.24
Cakes, Sweet Biscuits and Pastries	5.4	1.0	7.1	*0.498*	0.14	0.03	0.17
	-1.6, 12.3	-6.2, 8.2	-0.5, 14.6		-0.04, 0.31	-0.16, 0.21	-0.01, 0.36
Sugar and Preserves	-4.8	-3.4	0.6	*0.344*	-0.26	-0.20	0.03
	-9.7, 0.1	-10.2, 3.4	-5.0, 6.3		-0.52, 0.01	-0.60, 0.20	-0.28, 0.35
Chocolate Confectionery	1.7	0.8	1.7	*0.919*	0.11	0.06	0.11
	-2.3, 5.7	-2.8, 4.4	-2.7, 6.0		-0.16, 0.39	-0.20, 0.31	-0.18, 0.39
Sugar Confectionery	-1.0	-1.1	-1.8	*0.871*	-0.13	-0.16	-0.26
	-2.9, 0.9	-3.3, 1.1	-4.3, 0.7		-0.37, 0.12	-0.49, 0.16	-0.63, 0.10
Total Confectionery	0.7	-0.3	-0.1	*0.952*	0.03	-0.01	0.00
	-4.5, 5.8	-5.5, 4.8	-5.6, 5.3		-0.20, 0.26	-0.26, 0.23	-0.25, 0.24
Sugar Containing Soft Drinks	-123	-124	-134	*0.954*	-0.50	-0.53	-0.62
	-178, -68.7	-186, -62.5	-185, -82.7		-0.73, -0.28	-0.79, -0.27	-0.86, -0.38
Sugar Free Soft Drinks	35.6	-40.1	-9.4	***0.007***	0.34	-0.43	-0.11
	6.2, 65.1	-73.4, -6.7	-47.8, 29.0		0.06, 0.63	-0.78, -0.07	-0.54, 0.33
Total Soft Drinks	-87.8	-164	-143	*0.236*	-0.25	-0.50	-0.47
	-146, -29.4	-238, -90.1	-210, -76.7		-0.42, -0.08	-0.73, -0.28	-0.69, -0.25
n Households	*1750*	*1731*	*1537*		*1750*	*1731*	*1537*
n People	*4022*	*3975*	*3371*		*4022*	*3975*	*3371*
n People Weighted[3]	*14935*	*14776*	*15356*		*14935*	*14776*	*15356*

Household and eating out consumption combined

[1]From 2006 the EFS moved from a financial year to a calendar year basis. As a consequence of this the January to March 2006 data are duplicated in the 2005/2006 and the 2006 results

[2]Mean difference in intake (g/person/day) in the most deprived relative to the least deprived (slope of the gradient between the most deprived and the least deprived)

[3]The results are weighted to the Scottish population, the number provided is approximately 1000th of the Scottish population

Slope Index of Inequality (SII) and Relative Index of Inequality (RII) for the relation of SIMD quintiles on Scottish Diet Report (1993) Target Foods (not sweet) not included in SDAP

LCF data (g/person/day)

Food	2001-2003 SII[2] 95% CI	2004-2006[1] SII[2] 95% CI	2007-2009 SII[2] 95% CI	*P-value*	2001-2003 RII 95%CI	2004-2006[1] RII 95%CI	2007-2009 RII 95%CI
Total Red Meat[3]	-12.2	-13.9	-8.6	*0.743*	-0.19	-0.23	-0.14
	-19.5, -4.9	-22.8, -5.1	-19.3, 2.1		-0.30, -0.08	-0.37, -0.08	-0.31, 0.03
Bacon and Ham	-0.6	0.3	1.5	*0.547*	-0.05	0.03	0.12
	-3.3, 2.0	-2.6, 3.3	-1.3, 4.2		-0.27, 0.16	-0.22, 0.28	-0.11, 0.34
Other Red Meat Products[3, 4]	-14.1	-14.4	-13.1	*0.924*	-0.48	-0.53	-0.49
	-18.0, -10.3	-19.2, -9.6	-18.3, -7.8		-0.61, -0.35	-0.71, -0.35	-0.68, -0.29
Butter	1.4	2.1	1.6	*0.908*	0.24	0.31	0.25
	-0.3, 3.2	-0.5, 4.8	-0.6, 3.7		-0.05, 0.55	-0.07, 0.72	-0.09, 0.57
Whole Milk	-77.7	-63.6	-53	*0.513*	-0.88	-0.96	-0.93
	-109, -46.2	-88.6, -38.7	-82.1, -23.9		-1.23, -0.52	-1.34, -0.58	-1.44, -0.42
Semi-skimmed Milk	21.0	28.7	10.9	*0.741*	0.17	0.22	0.08
	-6.7, 48.8	-1.9, 59.2	-23.6, 45.3		-0.05, 0.39	-0.01, 0.46	-0.17, 0.33
Skimmed Milk	6.5	12.1	7.2	*0.602*	0.53	0.87	0.43
	-2.1, 15.2	4.1, 20.1	-2.3, 16.8		-0.17, 1.25	0.29, 1.45	-0.14, 1.00
Total Milk	-53.2	-30.4	-26.2	*0.518*	-0.21	-0.13	-0.11
	-90.5, -15.9	-70.8, 10.0	-58.1, 5.7		-0.36, -0.06	-0.31, 0.04	-0.25, 0.02
Processed Potatoes	-12.1	-17.0	-15.5	*0.392*	-0.37	-0.61	-0.55
	-16.8, -7.4	-21.5, -12.5	-22.4, -8.6		-0.52, -0.23	-0.77, -0.45	-0.79, -0.30
Savoury Snacks	-1.1	-1.8	-1.9	*0.894*	-0.08	-0.15	-0.15
	-3.6, 1.3	-4.5, 1.0	-4.8, 0.9		-0.25, 0.09	-0.37, 0.08	-0.37, 0.07
Takeaway Foods	-8.8	-11.9	-9.4	*0.688*	-0.41	-0.58	-0.47
	-14.2, -3.5	-18.0, -5.9	-16.4, -2.5		-0.66, -0.16	-0.88, -0.29	-0.82, -0.12
n Households	*1750*	*1731*	*1537*		*1750*	*1731*	*1537*
n People	*4022*	*3975*	*3371*		*4022*	*3975*	*3371*
n People Weighted[5]	*14935*	*14776*	*15356*		14935	14776	*15356*

Household and eating out consumption combined

[1]From 2006 the EFS moved from a financial year to a calendar year basis. As a consequence of this the January to March 2006 data are duplicated in the 2005/2006 and the 2006 results

[2]Mean difference in intake (g/person/day) in the most deprived relative to the least deprived (slope of the gradient between the most deprived and the least deprived)

[3]Meat portion only – see appendices 3 & 4 for methodology; [4]The results are weighted to the Scottish population, the number provided is approximately 1000th of the Scottish population