

The Food Environment Around Secondary Schools

Anne Ellaway and Fiona Crawford
PHINS Seminar, 7th September 2012



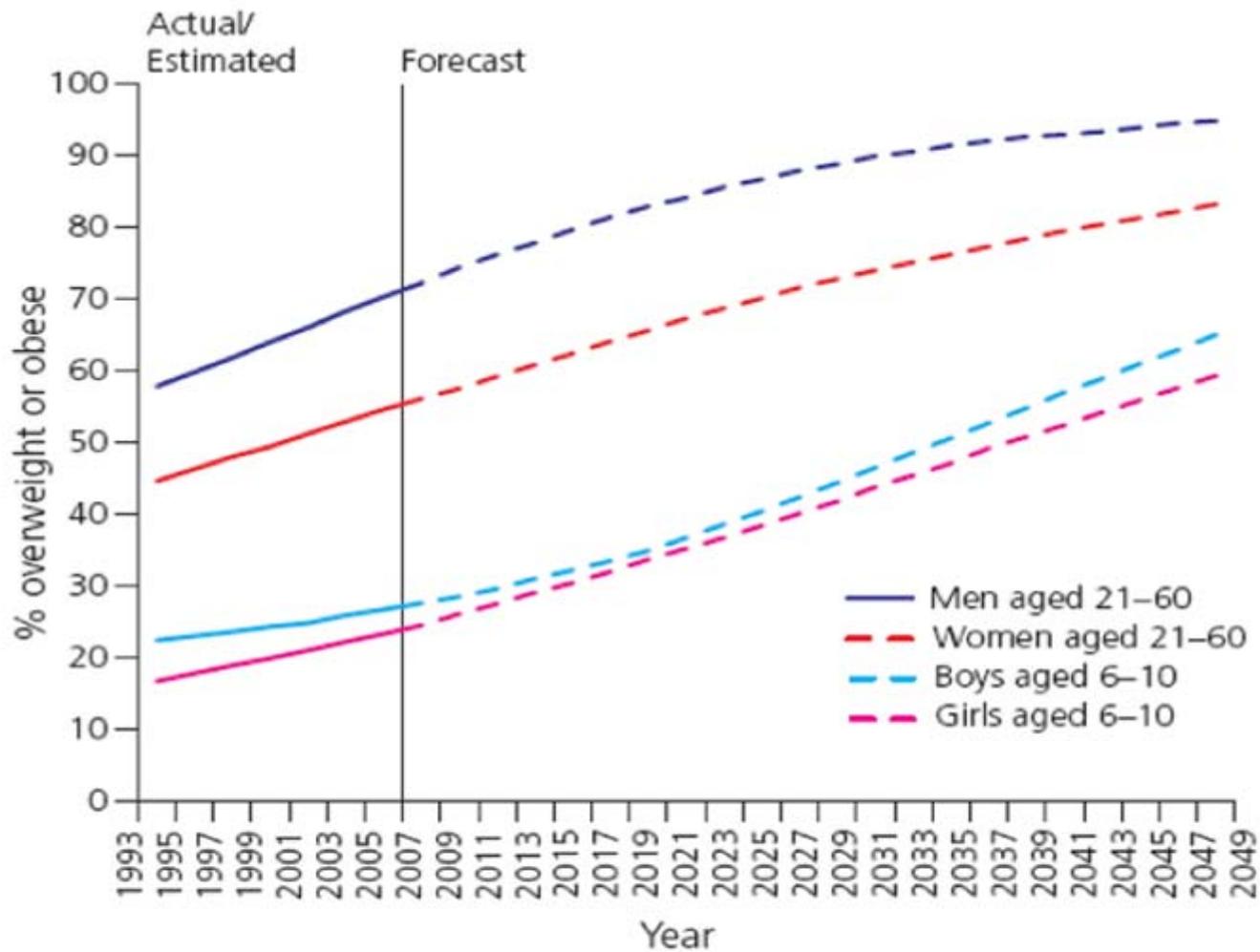
Outline

1. Socio-spatial distribution of food outlets around schools (Anne)
2. Pilot study on popular food choices and nutritional analysis (Fiona)

Scottish Health Survey

Almost a third of under 16 year olds are overweight/obese

Projected to rise.....



Source: *Foresight Tackling Obesities: Future Choices – Modelling Future Trends in Obesity and Their Impact on Health*

Background

Large increase in the consumption of drinks and foods outside of the home by young people

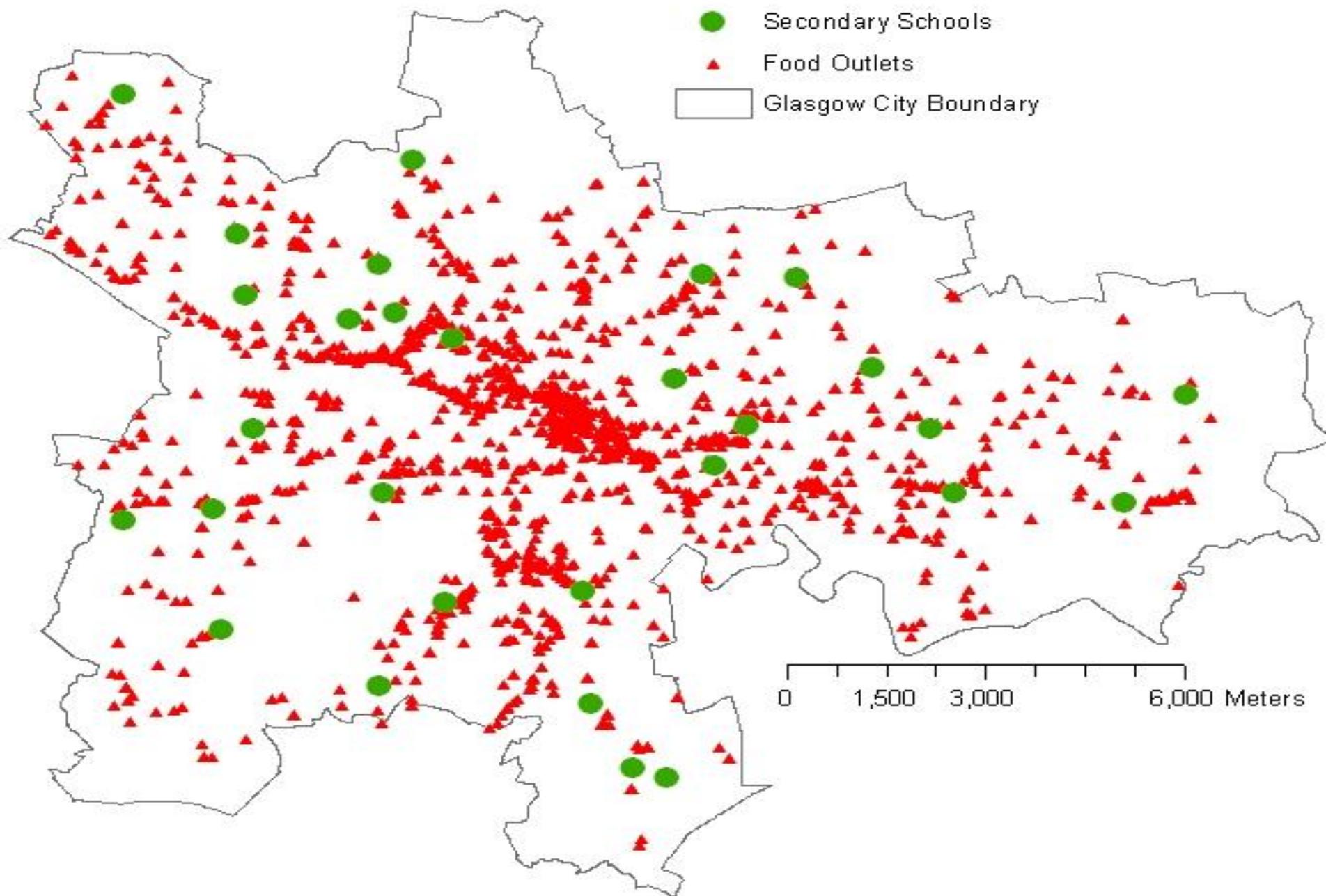
Improvement in school meals standards, but..... uptake falling among secondary school pupils (even among those eligible for free meals)

Role of food outlets around schools?

Do different types of food outlets cluster around secondary schools?

Higher in deprived areas?

Secondary Schools & food outlets in Glasgow



GIS Spatial Analysis

29 secondary schools across Glasgow:

2236 food outlets across the city (39% takeaways)

50% of all outlets within a 10 minute walk of schools

Average 35 outlets per school (range from 4 -100)

Few national fast food chains near schools

No clear pattern by area deprivation

*Ellaway, Macdonald et al, **Health & Place***

What we didn't know.....

Which shops are open at lunchtime

Where pupils choose to buy food

Which foods are most popular

What's being promoted to pupils

(only a third of Glasgow's secondary school pupils eat a school lunch)

Food Outlet Study

How does the quality of food purchased by secondary pupils from outlets near Glasgow secondary schools compare with nutrient standards set for food and drinks provided by schools in Scotland?



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Research Team

- Paul Birkin, Environmental Health, Glasgow City Council
- Helen Clark, Education Services, Glasgow City Council
- Fiona Crawford, Glasgow Centre for Population Health
- Anne Ellaway, MRC Social & Public Health Sciences Unit
- Helena Hailstone, Cordia
- Dionne Mackison, University of Stirling
- Kelda McLean, Glasgow Centre for Population Health
- John Mooney, MRC Scottish Collaboration for Public Health Research and Policy

Advisors :

- Annie Anderson (University of Dundee)
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Methods

1. Description of numbers and type of commercial outlets within 10 minute walk of five Glasgow secondary schools
2. Identification of popular outlets and observation of purchases by pupils
3. Purchase and analysis of a sample of popular savoury foods items to compare nutritional quality against Scottish nutrient standards for school lunches

Food Retail Environment

Clusters near schools, often on busy roads

Marked heterogeneity - chip shops, convenience stores, newsagents, bakeries, vans, cafés, pizzerias, sandwich shops and supermarkets

Diversity of internal environments and items on sale

Lunchtime offers, meal deals, price promotions etc.

School Kids Special

(take away only)

Mon - Fri 12.00 - 4.00pm

Hot Dog & Chips £2.10

Sausage, Chips & Can £2.00

Battered $\frac{1}{4}$ Pizza, Chips & Can £2.00

Chips Curry or Gravy £1.40

Chips £1.00

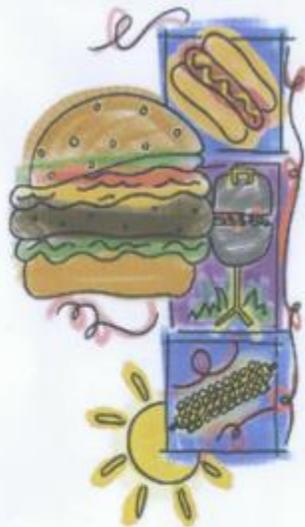
The Canteen

COME AND GET YOUR
LOYALTY CARD FOR
A FREE LUNCH.

DELICIOUS NEW MENU FOR
SCHOOLKIDS

BBQ Beef Burgers, Cajun Chicken
Burgers, Hot Dogs, Chicken Curry,
Filled Pitta Breads, Pizzas, Chips &
much more..... WE DO HALAL!

THE BEST VALUE FOR
MONEY IN



BUY 7 GET 1 FREE



Mortons Rolls
ANY FILLED ROLL 79p

- ROAST PORK
- ROAST TURKEY
- LUNCH TONGUE
- CHICKEN ROLL
- HONEY HAM
- CORNED BEEF
- GARLIC SAUSAGE
- TURKEY SADDLE
- ROAST BEEF
- CHEDDAR CHEESE
- STEAK LOAF
- JELLIED VEAL
- CHOPPED PORK
- BOILED GAMMON
- TUNA MAYONNAISE
- TUNA STEAK

FREE COLESLAW SALAD SAUCES MAYONNAISE

CANS BOTTLES WATER FROM 29p

n - Own Make

Finest Beef

Pupils' Purchasing Behaviour

Brisk exodus out of school (40 minute lunch break)

Long queues at most popular outlets – some evidence of particular age groups/sex favouring certain outlets

Chips, chips and more chips (with rolls, curry sauce, gravy, cheese, fish etc) most popular....

Next most popular - sausage rolls, pizza, pot noodles, beef burger/cheese burger, rolls and sausage, doner kebabs...

Followed by

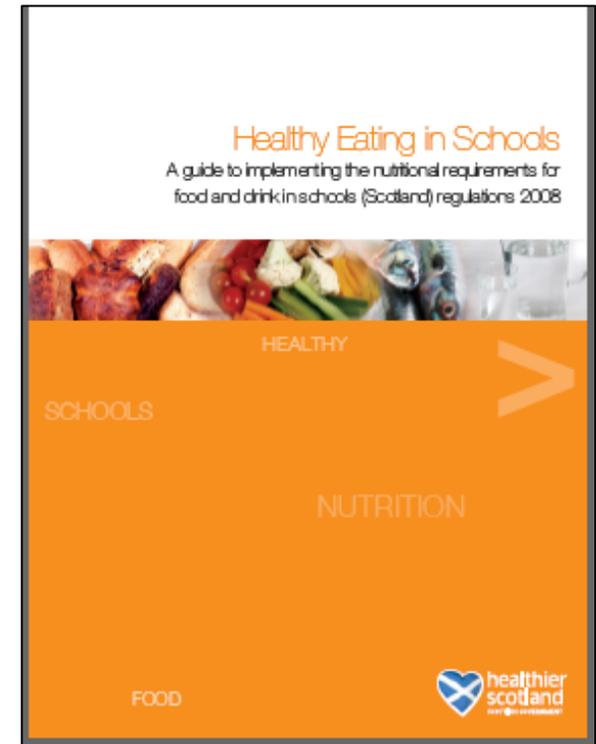


Nutrient Analysis

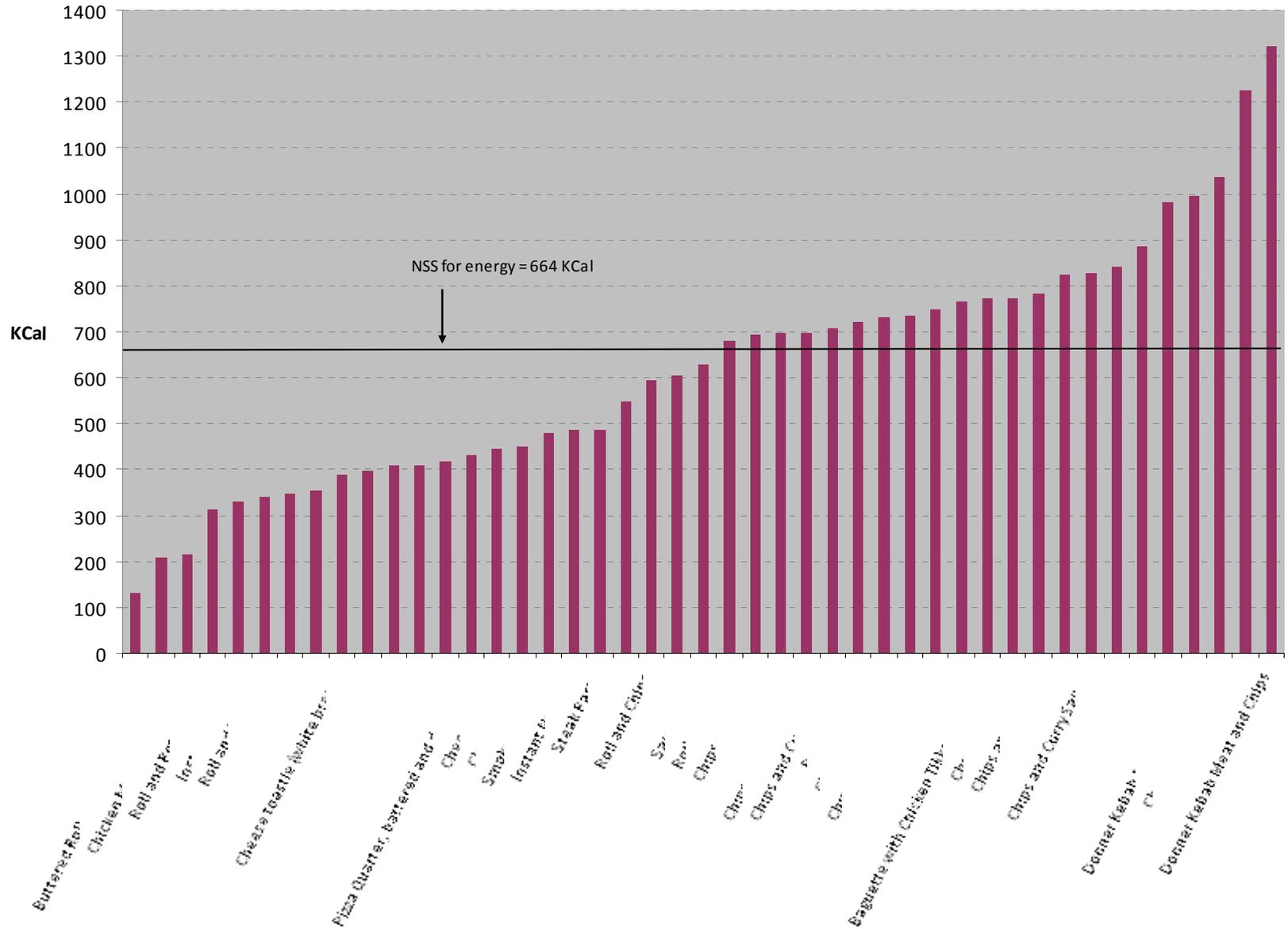
- 45 savoury food items
- Main focus energy, fat, saturated fat and salt
- Comparison with the Nutrient Standards for School Meals

Nutrient Standards for Schools

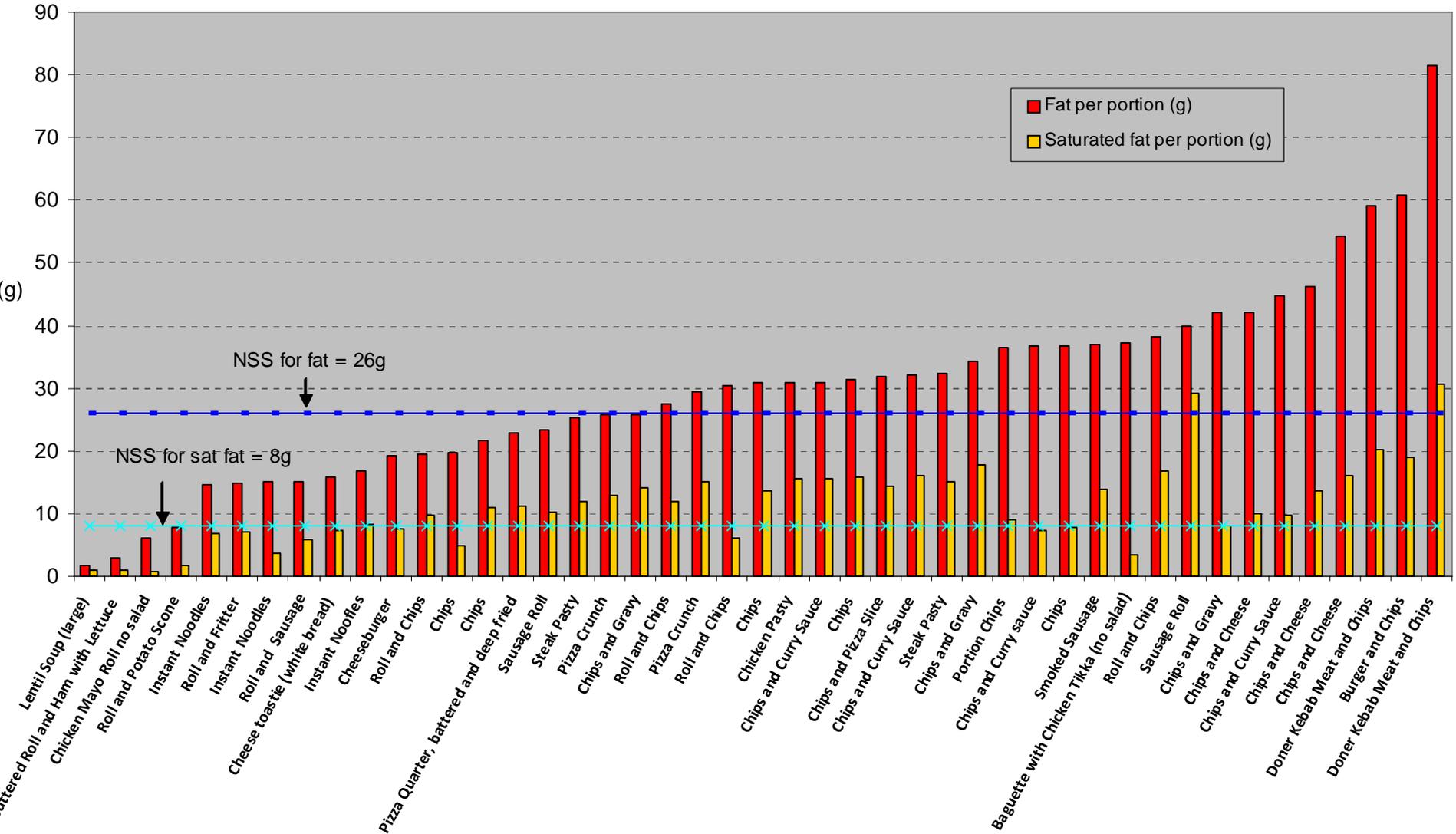
- Designed to ensure a third of daily nutritional requirements are provided by school meal
- Represent amount of energy and nutrients to be provided for an **average** day's school lunch



Energy



Fat & Saturated Fat



Salt

- Ranged from 0.4 -4.5g “per portion” salt
- Analysis did not incorporate:
 - added table salt
 - salt included in condiments
 - additional items purchased



Summary

- With regard to the nutrient standards:
 - Half the samples exceeded recommended energy levels
 - Over half exceeded recommended fat and saturated fat levels
 - Over a third exceeded recommended salt levels
- Analysis presented excludes:
 - Other purchases
 - Any meal “add ons” or condiments

Conclusions

Eating out of school at lunchtime is very popular amongst secondary pupils

External commercial outlets near secondary schools can be easily accessed by pupils during lunchtime

Many outlets use marketing and promotional strategies to encourage business from school pupils at lunchtime

'Out of school' savoury foods, popular with pupils are high in energy, fat and salt and are of very poor nutritional quality

More Information

- Ellaway A, Macdonald L, Lamb K, Thornton L, Day P, Pearce J. Do obesity-promoting food environments cluster around socially disadvantaged schools in Glasgow, Scotland? *Health & Place* June 2012
- GCPH Briefing Paper 35. Exploring the Nutritional Quality of 'Out of School' Foods Popular with School Pupils. June 2012

http://www.gcph.co.uk/publications/354_findings_series_35-out_of_school_foods

