

C-PAN and COMPaRE-PHC present:

Knowledge, nudge and nanny: What have we learnt from the recent efforts to change diets in England?

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Wednesday 14 October, 2015

Chairperson: Associate Professor Karen Campbell

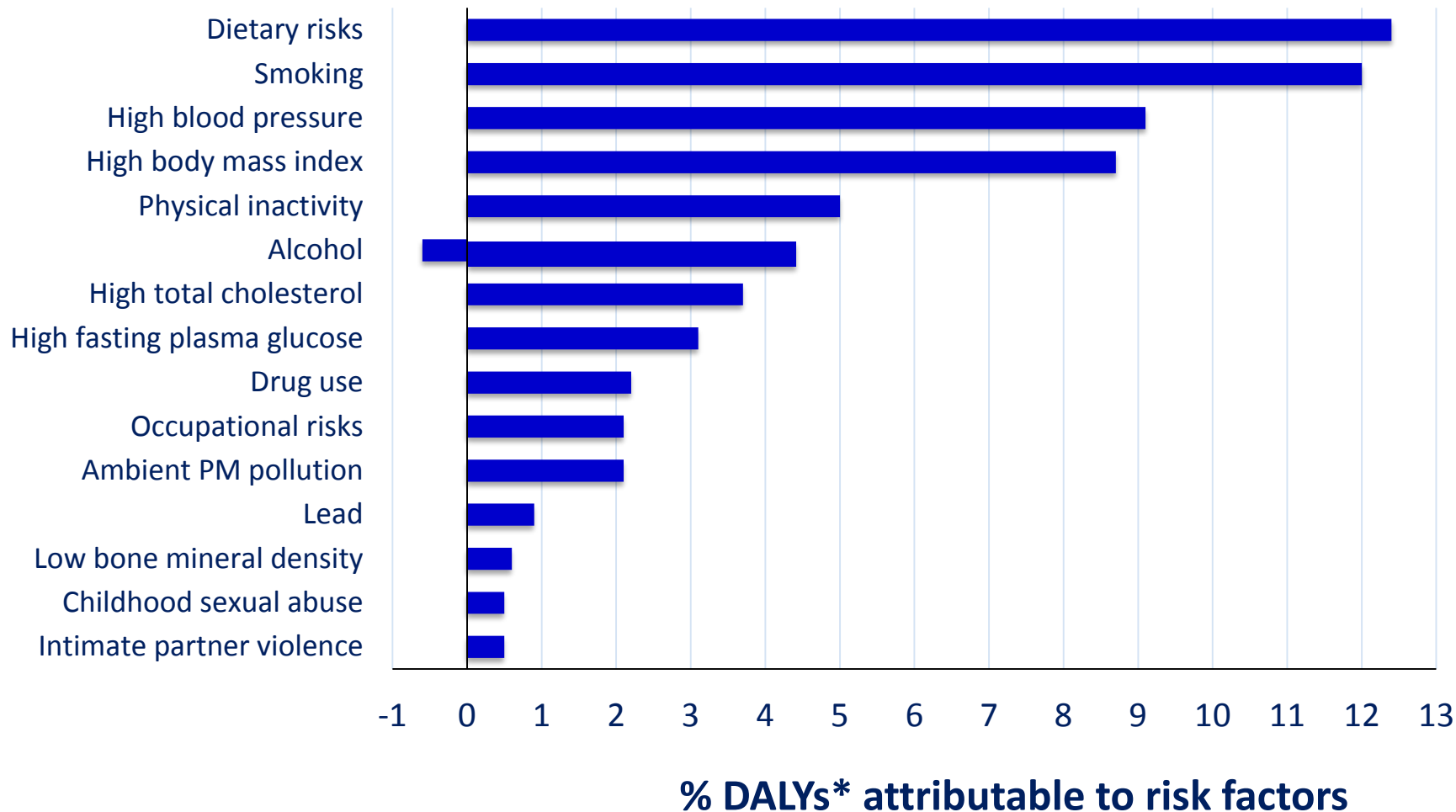


Centre for Physical Activity and Nutrition Research

Deakin University Cricos Provider Code: 00113B



Burden of disease attributable to 15 leading risk factors in 2010 (% of United Kingdom DALYs*)



*Disability Adjusted Life Years

The Prize: 33,000 premature deaths per year averted in UK by achieving dietary recommendations

	Fruit & Veg	Fibre	Fats (↑ Chol)	Fats (↑ BMI)	Salt (↑ BP)	Total
Coronary Heart Disease	7053	3661	4605	1544	3937	20800
Stroke	3383		-538	623	2408	5876
Cancer	4741			535	1205*	6481
Total	15177	3661	4067	2702	7550	33157

*direct impact (not mediated by blood pressure)

Progress towards dietary targets is slow

	NDNS 2000-2001		NDNS 2009/10		Targets
	Men	Women	Men	Women	
Energy (kcal)	2308	1635	2200	1638	2000/ (F) 2500 (M)
%Fat	35.5	34.7	35.2	34.4	35
%SFA	13.3	13.1	12.9	12.6	11
%NMES	13.5	12	12.9	12.2	10
Fibre (g/d)	15.2	12.6	14.7	12.8	18

BRING IN A SUGAR TAX



FATTY FOOD IS GOOD FOR YOU

Sugar vs. Cocaine
And the winner is...

ARE YOU POURING ON THE **POUNDS**?



DON'T DRINK YOURSELF FAT.

JUNK FOOD DIET LEADS TO MEMORY LOSS

Does sugar cause diabetes?

Jamie's plan: Tax sugar to fight fat



DIABETES RISK IN DAILY FIZZY DRINK

Health warning: exercise makes you fat
The 2nd girl... aged ten

CARBS ARE KILLING YOU!
WHY EATING FAT DOESN'T MAKE YOU FAT

Fat Vs. Sugar

Most see a link between obesity and sugary drinks

Could herbal pill cure your cravings for fatty foods?

2 MINUTES EXERCISE WILL BEAT DIABETES

It's not just water weight...
Too much sodium can make you

FAT!

SUGAR IS 'THE NEW TOBACCO'

How a fat tax could save the NHS billions
LOSE WEIGHT TO BEAT DEMENTIA

April 13, 2007

'Fat' gene found by scientists

Doctors are told to get tougher with patients about their weight, recommend counseling

FAT CHANCE
THE HIDDEN TRUTH ABOUT SUGAR, OBESITY AND DISEASE

Food industry must shape up to curb obesity

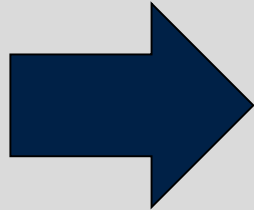
THOUSANDS MORE TO GET OBESITY OPS ON THE NHS

Nutrients

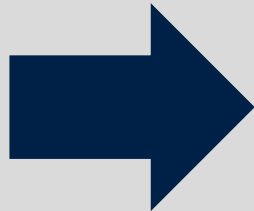
Foods

Diets

Fat



Carbohydrates

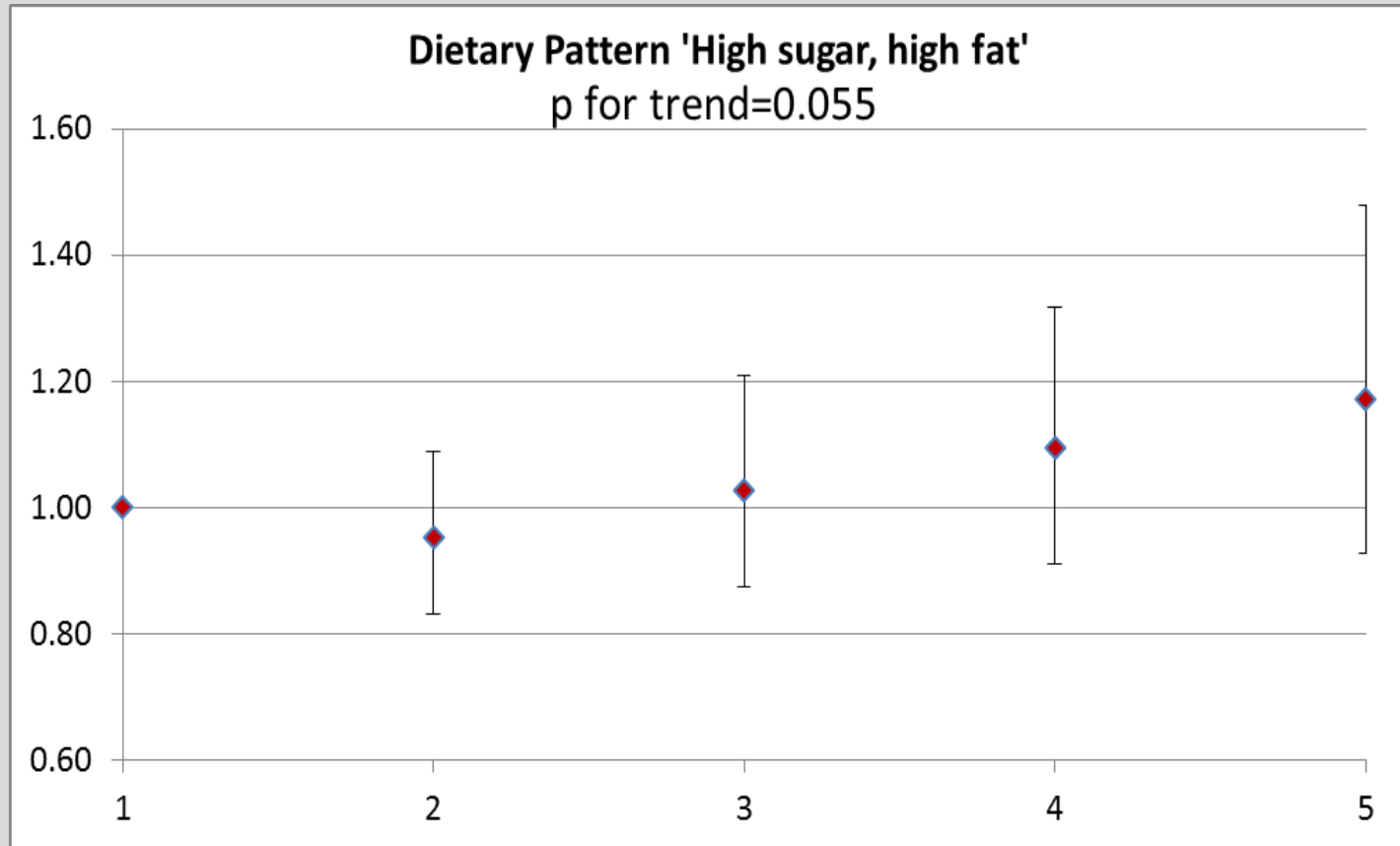


Protein



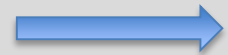
Relationship between a dietary pattern high in fat and sugar and excess weight gain

Odds ratio for obesity



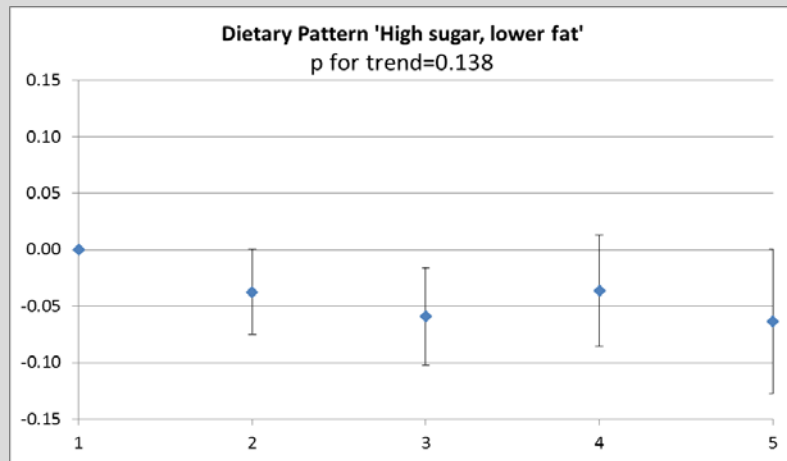
Quintiles of dietary pattern score

Increasing preponderance of high fat/high sugar food and drinks

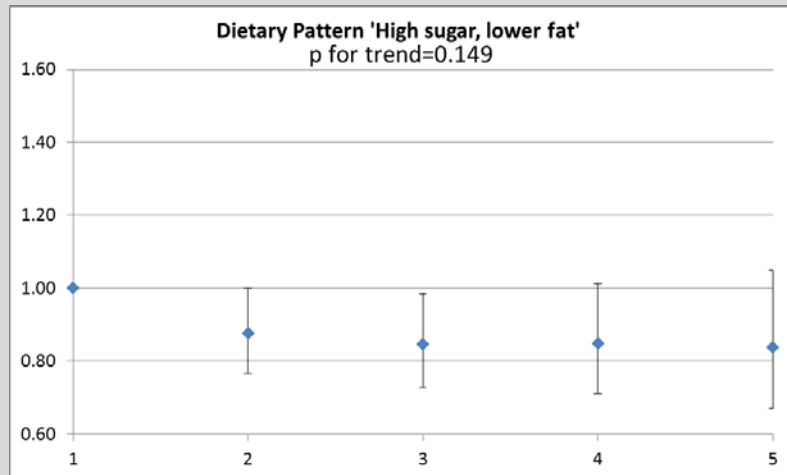


High Sugar Diets

Change in BMI z-score

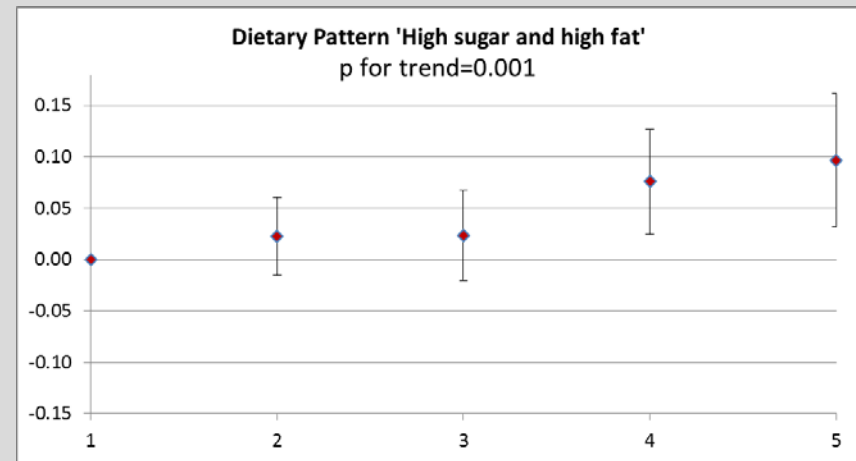


Odds ratio for obesity

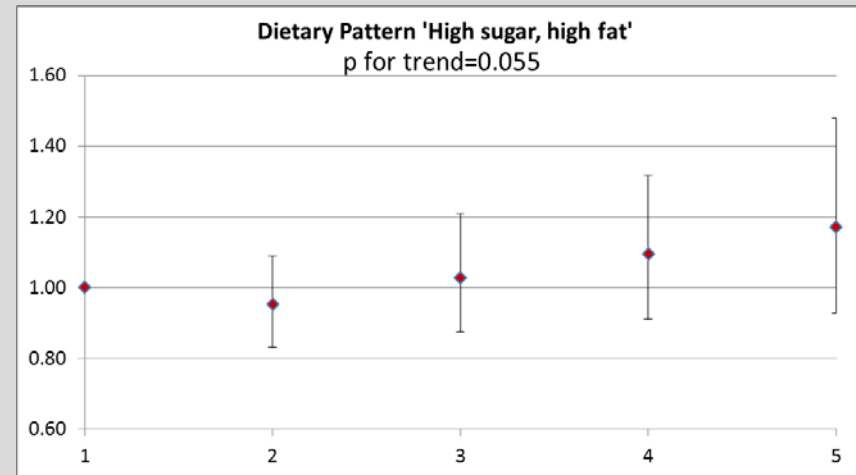


High Sugar and High Fat

Change in BMI z-score



Odds ratio for obesity



This high fat/high sugar dietary pattern is characterised by:

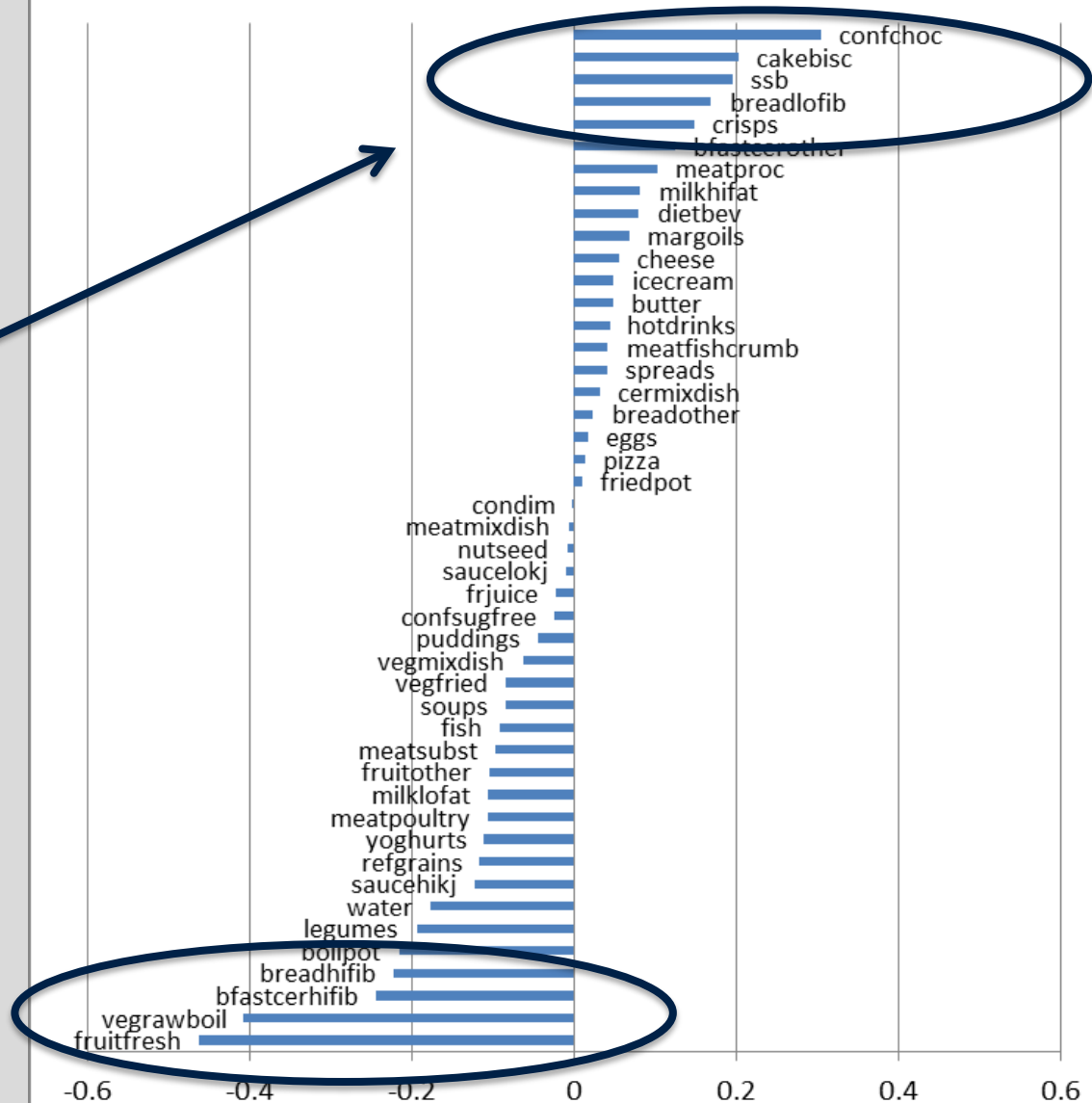
HIGH intakes of:

- Confectionary
- Cakes and biscuits
- Sugary drinks
- Low fibre bread
- Crisps

LOW intakes of

- Fresh fruit
- Raw/boiled vegetables
- High fibre breakfast cereals
- High fibre bread

DP1 - high NMES, high fat, energy-dense, low fibre pattern



How to make dietary change happen

Knowledge, Nudge or Nanny ?



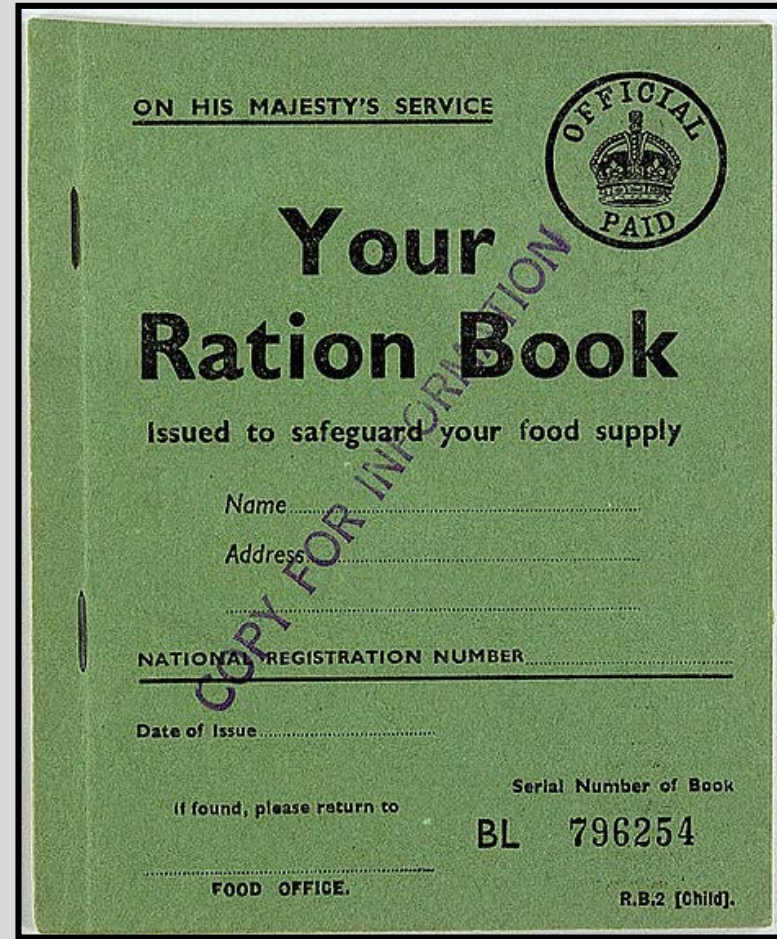
Education: necessary but not sufficient



Fundamental attribution error

The inclination to overemphasise the importance of knowledge, while ignoring the influence of environmental factors on human behaviour

How far are we prepared to compromise freedom to choose our food to benefit society at large?



The Nuffield Council intervention 'ladder'

Eliminate choice

Nanny

Restrict choice: regulate to restrict the options available to people with the aim of protecting them

Guide choice through disincentives: fiscal and other disincentives to influence people not to pursue certain activities

Guide choices through incentives: regulations to guide choices by fiscal and other mechanisms

Nudge

Guide choices through changing the default policy

Enable choice: supporting individuals to change their behaviours

Provide information: inform and educate the public

Do nothing or simply monitor the current situation

Knowledge

Examples from tobacco control policies

Eliminate choice	➡	Progressively raising minimum legal age for tobacco purchases ???
Restrict choice	➡	Ban smoking in public places
Guide choice through disincentives	➡	Tax
Guide choice through incentives	➡	Free access to smoking cessation services and NRT
Guide choices through changing the default policy	➡	Display bans, plain packaging
Enable choice	➡	E-cigarettes
Provide information	➡	Warnings on packs

Embedding behavioural interventions to treat obesity as part of a public health framework



- Health professionals add credibility to the message that obesity matters

- Prevention efforts in primary care supported by clear referral pathways

HOW?

- Behavioural interventions build a cadre of people who are motivated to change and start to change their micro-environment
- Increases citizen advocacy by professionals and the public for environmental change

The Diabetes Prevention Program:

Intensive behavioural intervention

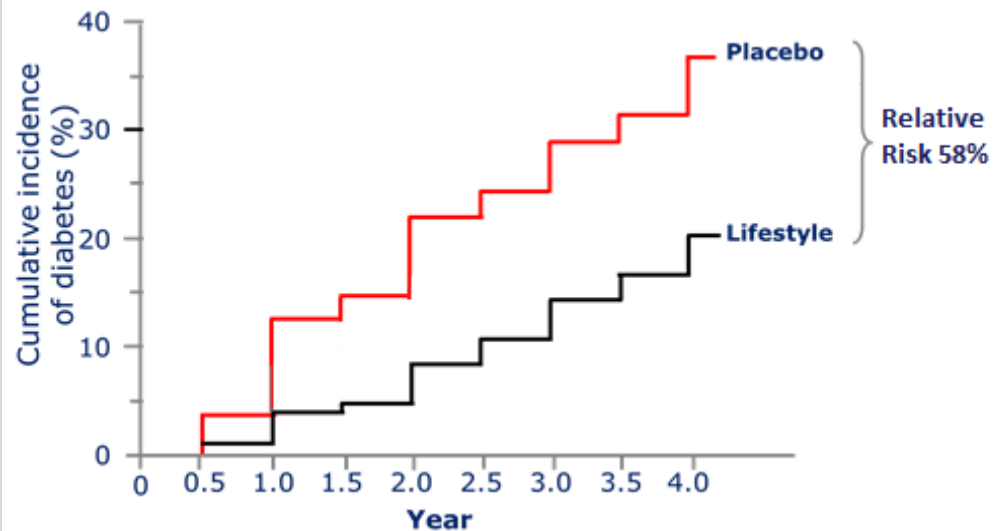
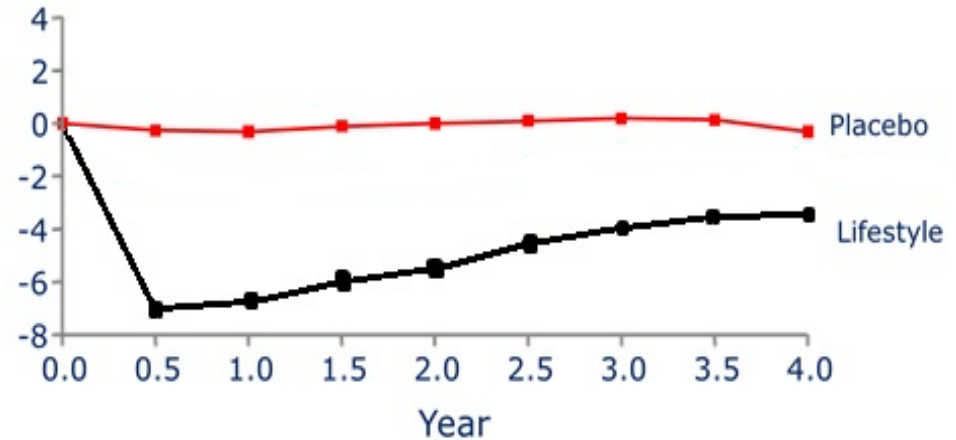


Modest weight loss



58% reduction in
incidence of diabetes
over 4 years

Weight loss (kg)



The WRAP trial: Weight loss Referrals for Adults in Primary care

To evaluate the clinical and cost effectiveness of 3 weight loss interventions that can be delivered in primary care:

- referral to a commercial provider for 12 weeks (CP12)
- referral to a commercial provider for 52 weeks (CP52)
- a brief intervention (BI)

Primary Research Questions:

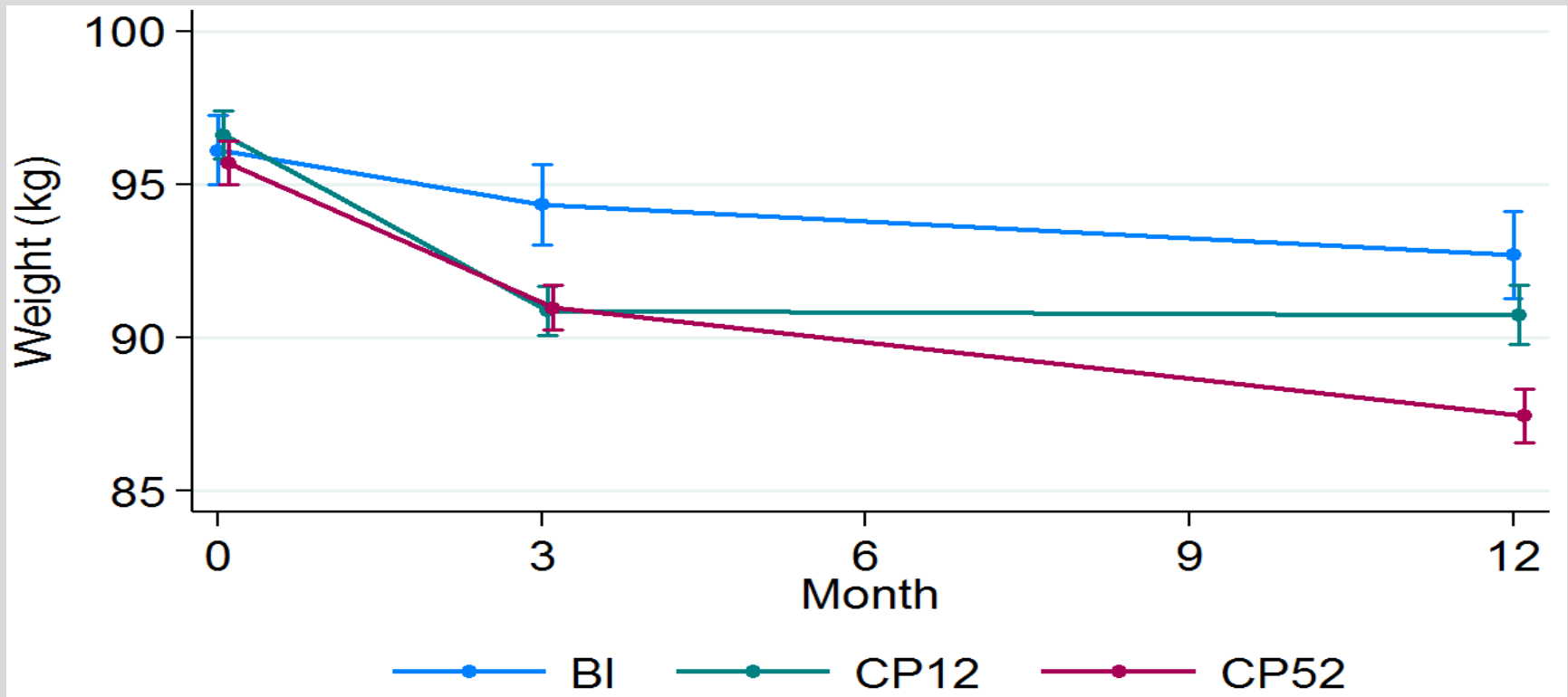
- Is 12 month weight loss greater for CP than BI?
- Is 12 month weight loss greater for CP52 than CP12?



Baseline Characteristics

	BI Mean (SD)	CP12 Mean (SD)	CP52 Mean (SD)
Weight (kg)	96.1 (16.4)	96.6 (17.9)	95.7 (16.4)
Fat mass (kg)	39.2 (9.9)	39.6 (11.8)	39.4 (11.1)
Waist (cm)	110 (11.9)	111 (12.4)	110 (12.7)
Systolic BP (mmHg)	130.6 (15.7)	133.5 (17.2)	133.3 (18.1)
Diastolic BP (mmHg)	79.7 (9.2)	80.7 (9.7)	79.9 (10.0)
Fasting Glucose (mmol/L)	5.8 (1.9)	5.6 (1.6)	5.8 (1.8)
HbA1c (mmol/mol)	41.9 (11.2)	40.9 (9.8)	41.7 (10.4)
Total Cholesterol (mmol/L)	5.5 (1.2)	5.3 (1.1)	5.3(1.1)
LDL Cholesterol (mmol/L)	3.1 (1.2)	3.0 (1.0)	2.9 (1.0)
HDL Cholesterol (mmol/L)	1.6 (0.6)	1.6 (0.6)	1.7 (0.6)
Triglycerides (mmol/L)	1.6 (0.9)	1.6 (0.8)	1.5 (0.7)

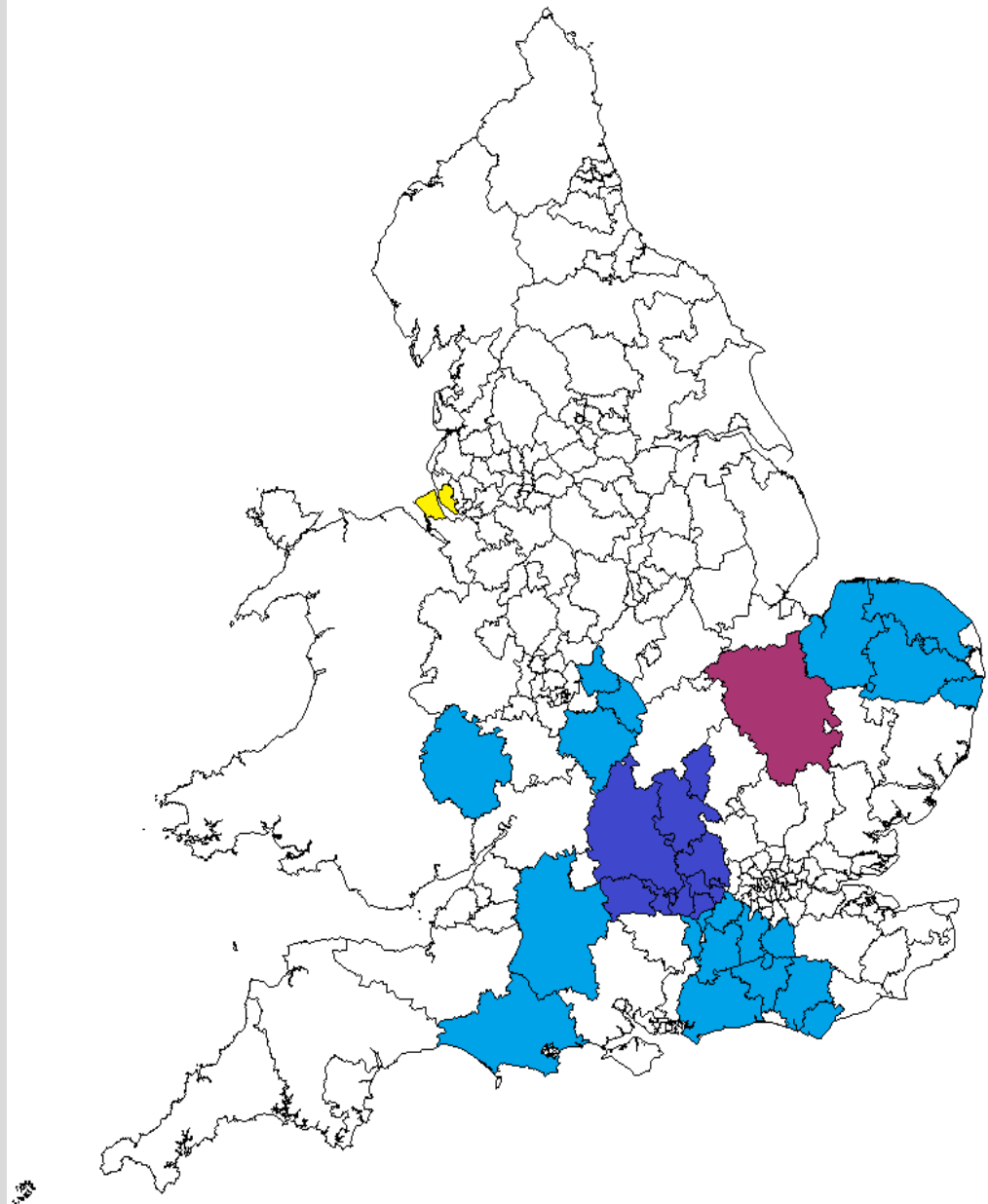
Weight Change Over Time



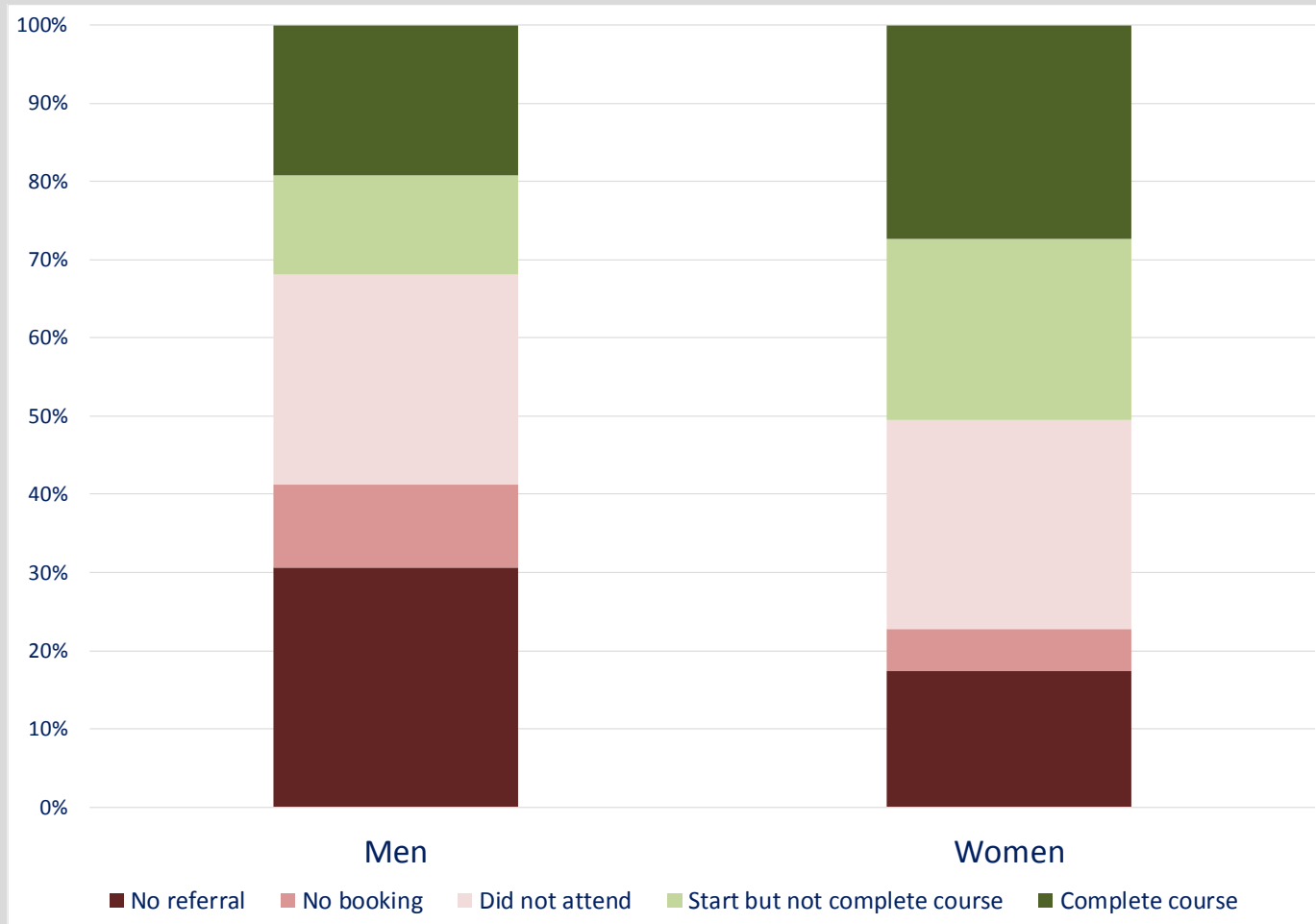
	BI	CP12	CP52	CP vs BI	CP52 vs CP12
MAR	-3.71	-4.91	-7.23	-2.21* (-3.53, -0.89)	-2.65* (-3.99, -1.32)

Recruitment

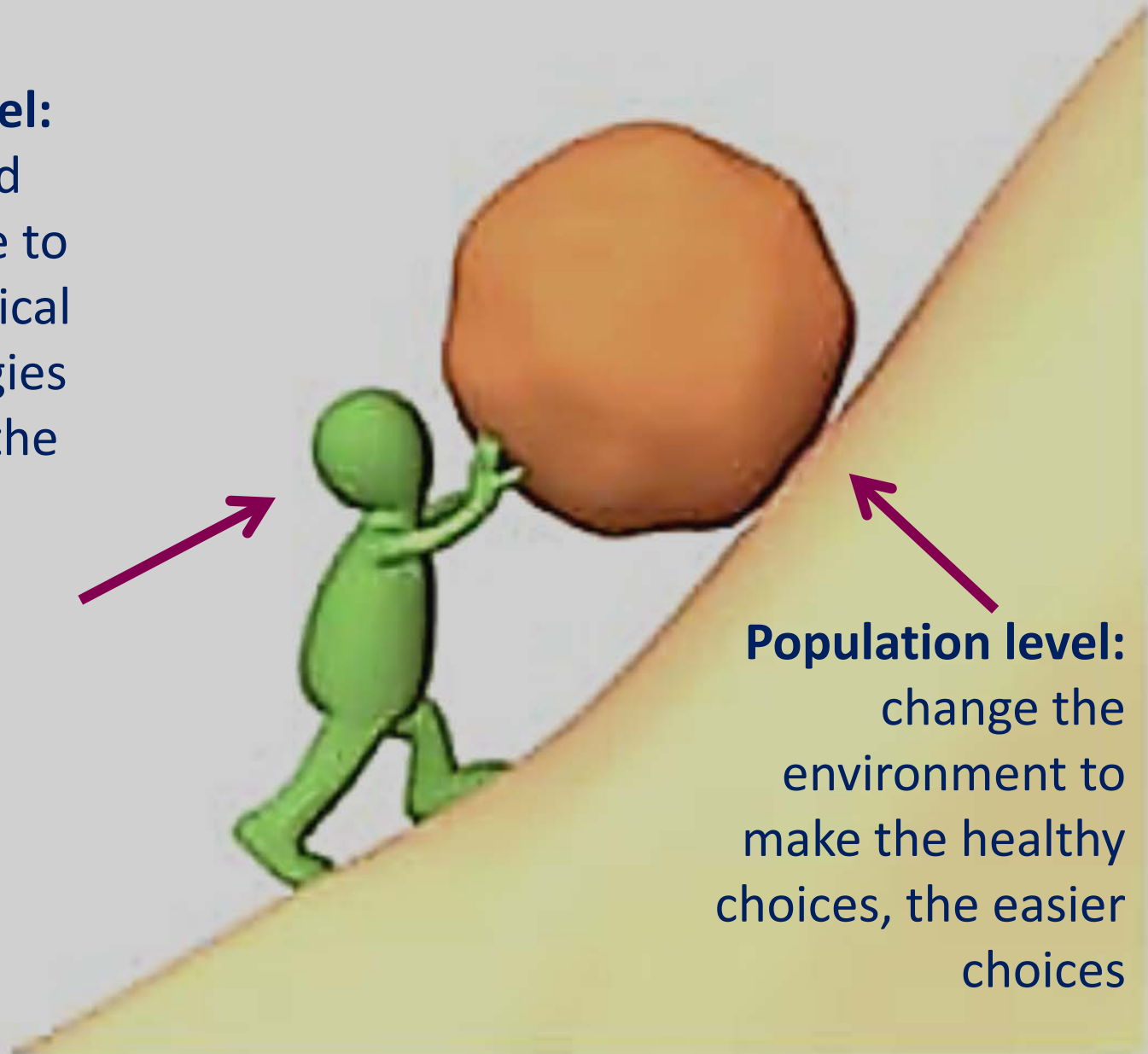
- 23 GP Practices
- ~50% > median IMD
- 1269 participants
- Recruited by letter from GP (~ 10% uptake)
- 68% Female
- 90% White



Uptake of support in routine practice – the BWeL trial: n = 1863, 61 practices, 136 GPs



Individual level:
encourage and
enable people to
develop practical
coping strategies
to withstand the
'obesogenic'
environment

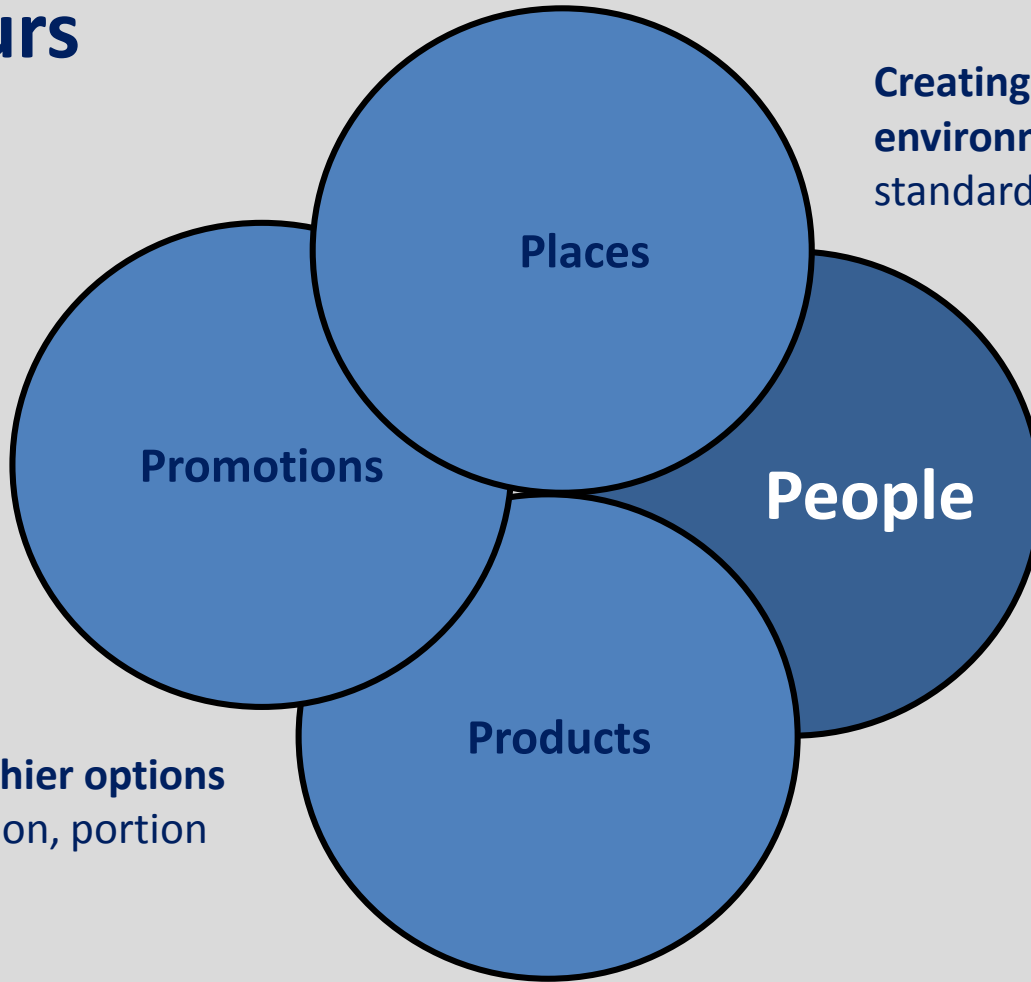


Population level:
change the
environment to
make the healthy
choices, the easier
choices

A public health approach to changing dietary behaviours

Shifting the balance of promotions e.g. marketing restrictions

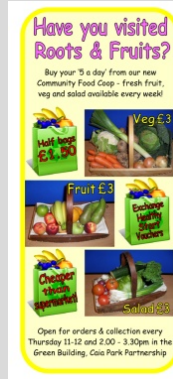
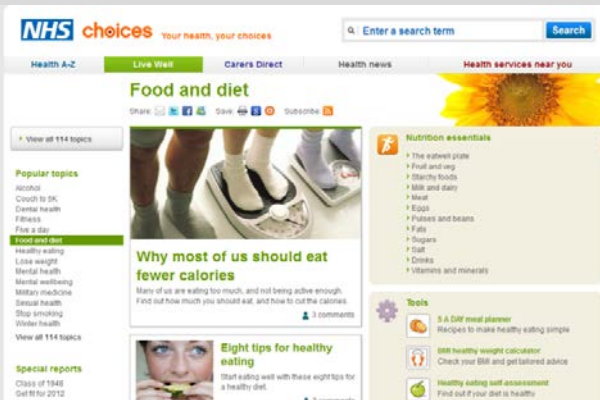
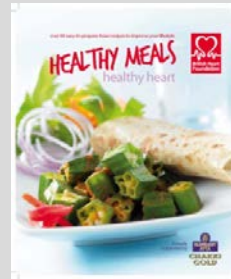
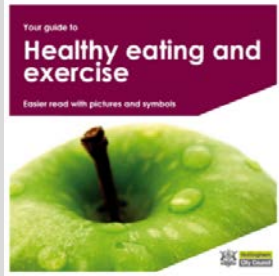
Providing healthier options e.g. reformulation, portion control



Creating a healthier environment e.g. school food standards

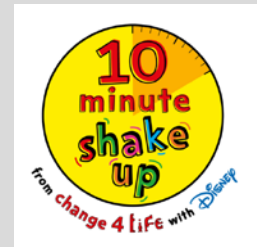
Making healthier choices easier e.g. campaigns, nutritional labelling

Traditional health promotion efforts have relied heavily on education

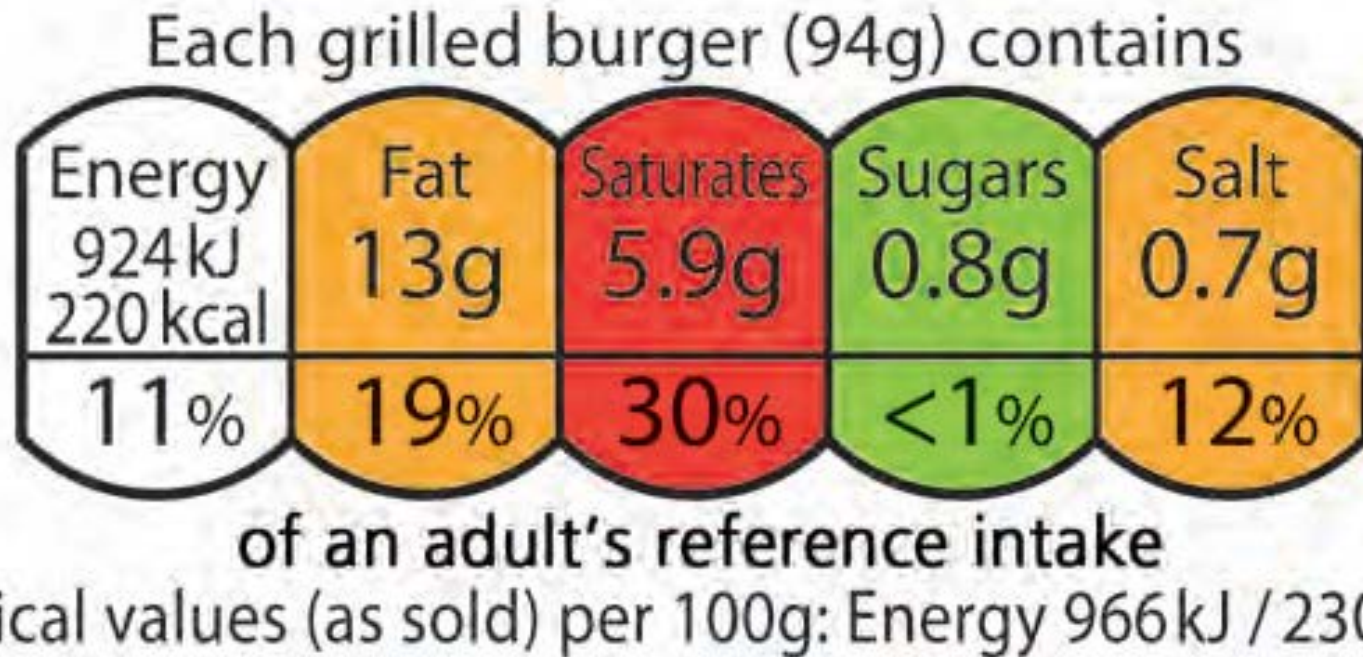


Using social marketing techniques to change behaviour: Change4Life

- 2.7 million people signed up to Change4Life
- Mix of information, goal setting, incentives, monitoring and feedback
- January 2014 Smart Swaps campaign led fall in purchases of carbonated sugary drinks by 8%
- Summer 2014 10 Minute Shake-Up campaign led to 5 extra minutes of activity a day per child over summer



Signposting healthier choices through labelling

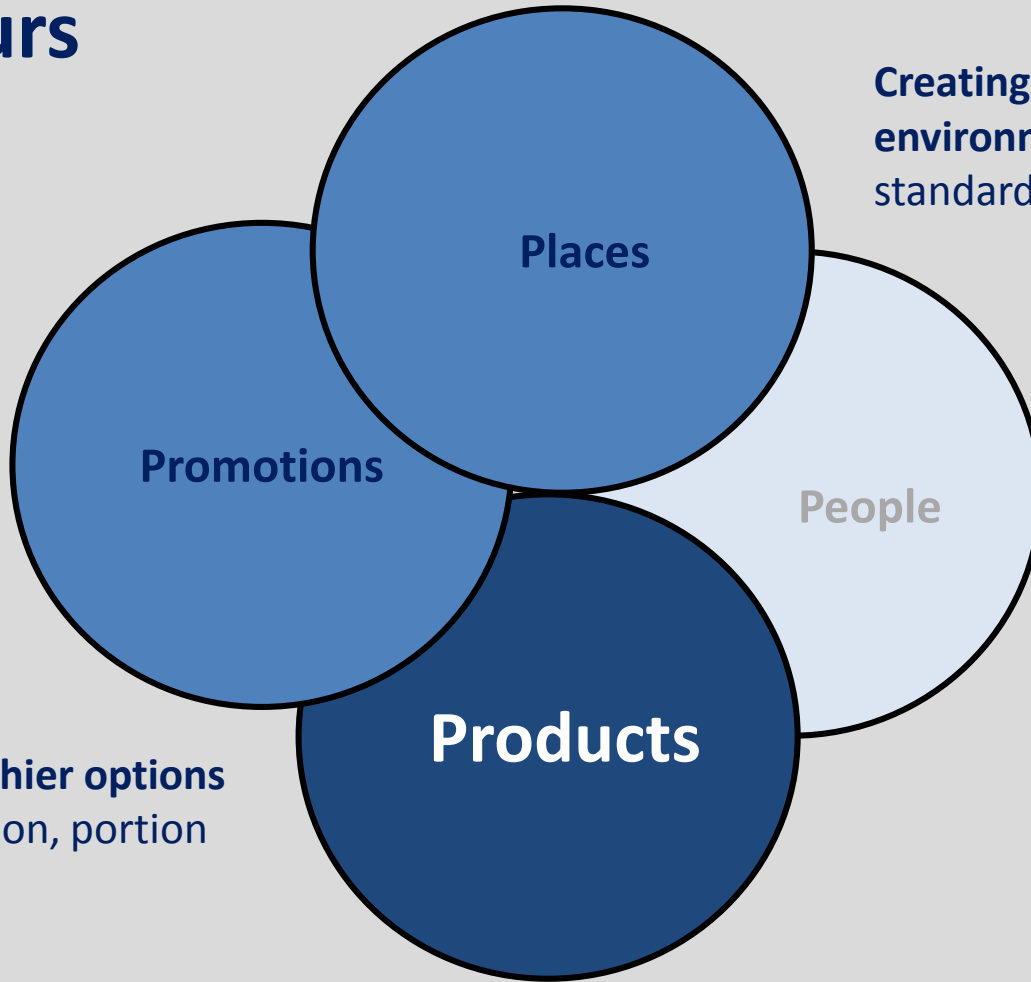


23 companies, representing two-thirds of pre-packaged food, have committed to adopt and implement a voluntary Front of Pack nutrition labelling scheme

A public health approach to changing dietary behaviours

Shifting the balance of promotions e.g. marketing restrictions

Providing healthier options e.g. reformulation, portion control



Creating a healthier environment e.g. school food standards

Making healthier choices easier e.g. campaigns, nutritional labelling

Reformulation to reduce fat, saturated fat, sugar and salt (and energy)



85% reduction in saturated fat



50% decrease in salt



30% less sugar



40% reduction in fat



50% decrease in salt



7% reduction in energy

Reducing calories by cutting portion size



Commitment to a 250 kcal maximum on single bars of confectionery from Mars, Nestle and Mondelez

Public acceptability is vital to the success of overt interventions

Household brands slash size of goods in 'hidden price hikes'

Household brands are slashing the size of their everyday goods while at the same time increasing their prices, a Which? report has found.

Twix chocolate bars have shrunk by almost 14 per cent from 58 grams to 50 grams Photo: ALAMY

By Richard Alleyne

6:00AM GMT 21 Mar 2013

The Telegraph

Why the food police want to shrink your custard creams

MINISTERS were warned to keep their hands off our custard creams last night after plans to make biscuits and cakes smaller were leaked.

EXPRESS

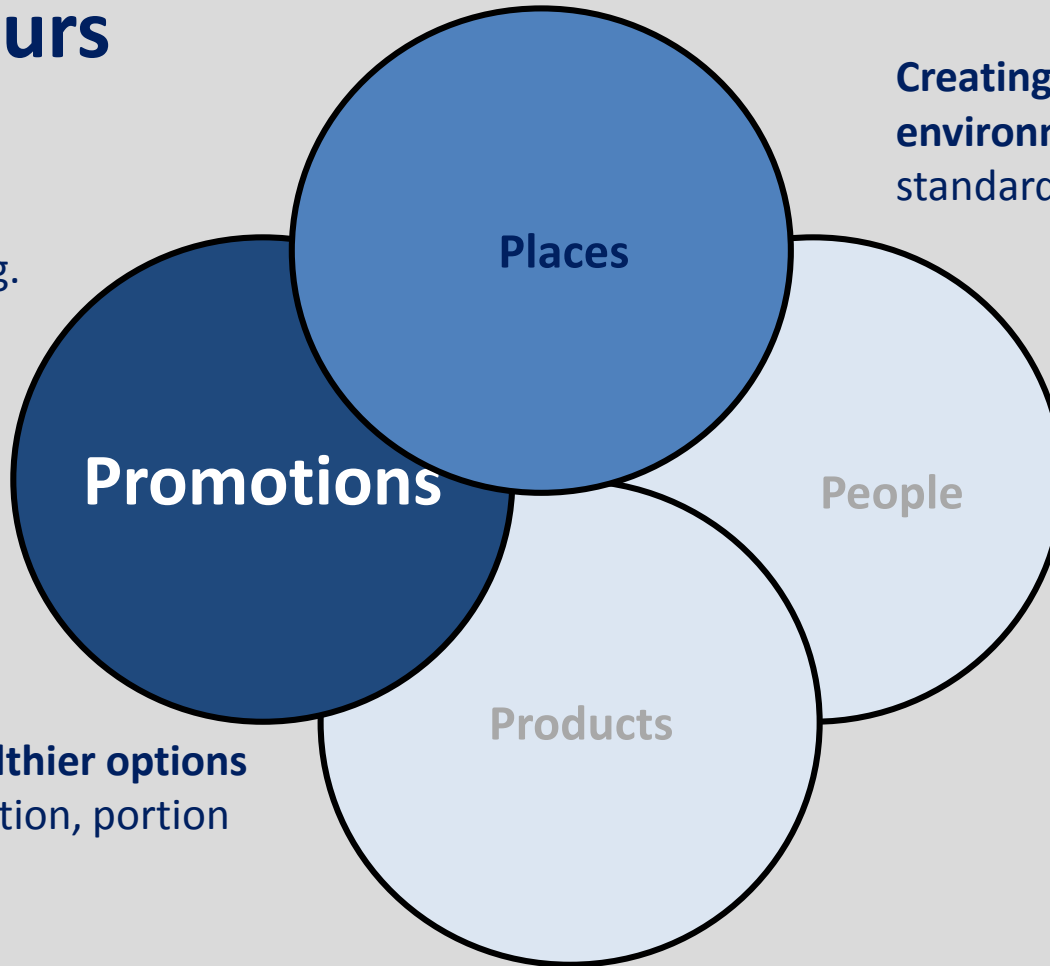
CRUSADING FOR A FAIRER BRITAIN



A public health approach to changing dietary behaviours

Shifting the balance of promotions e.g. marketing restrictions

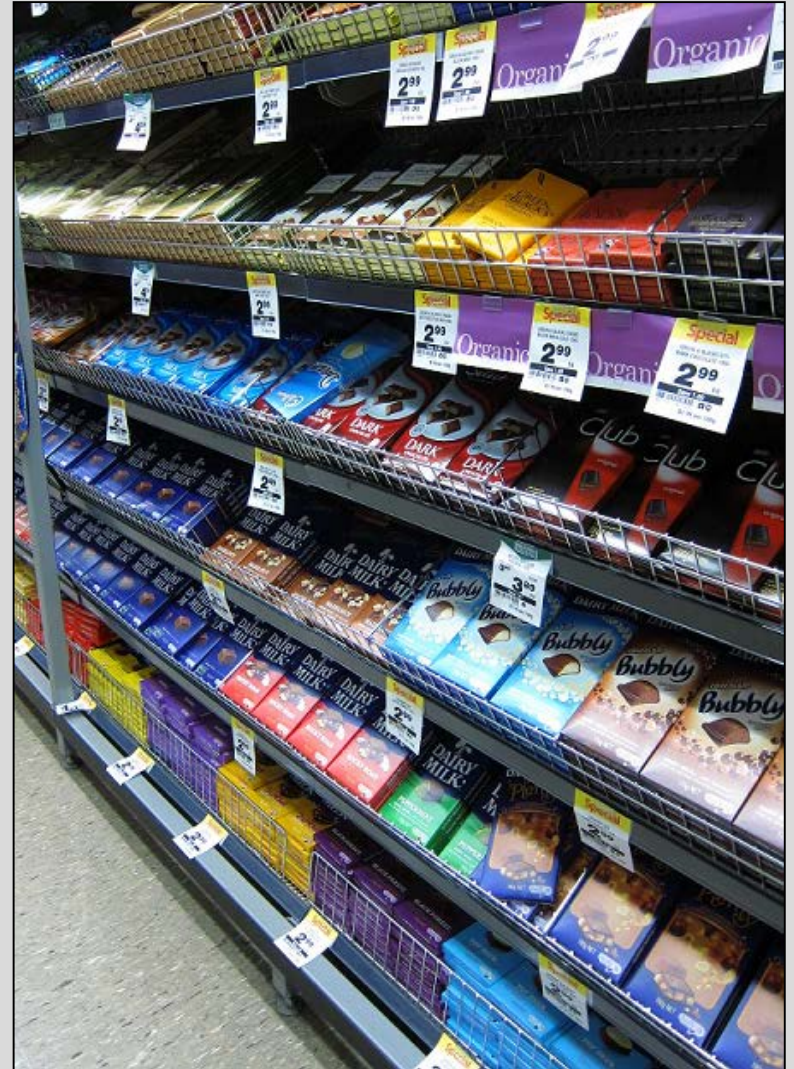
Providing healthier options e.g. reformulation, portion control



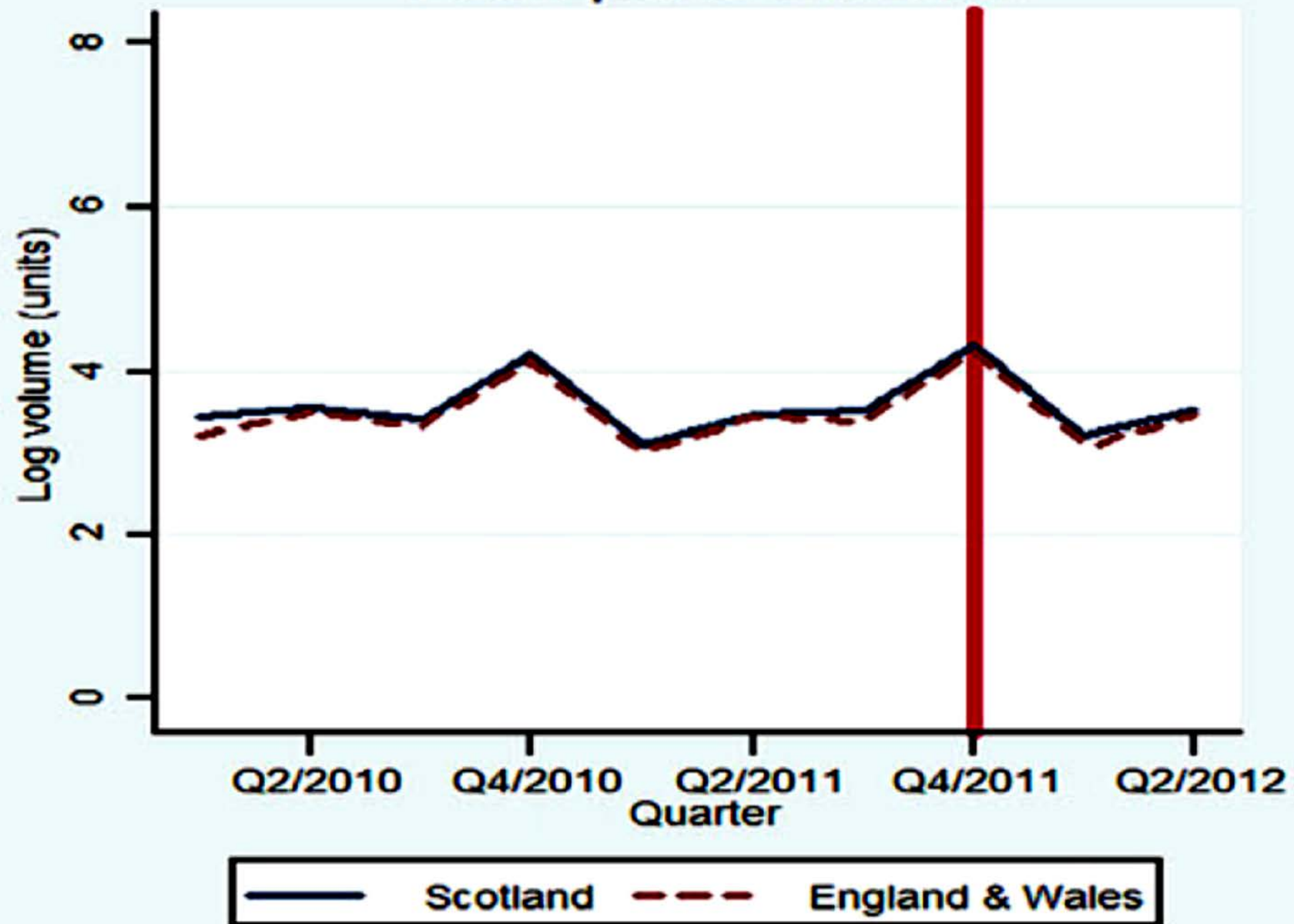
Creating a healthier environment e.g. school food standards

Making healthier choices easier e.g. campaigns, labelling

The in-store food environment



Total pure alcohol



Uplift in sales with 'gondola-end' promotions

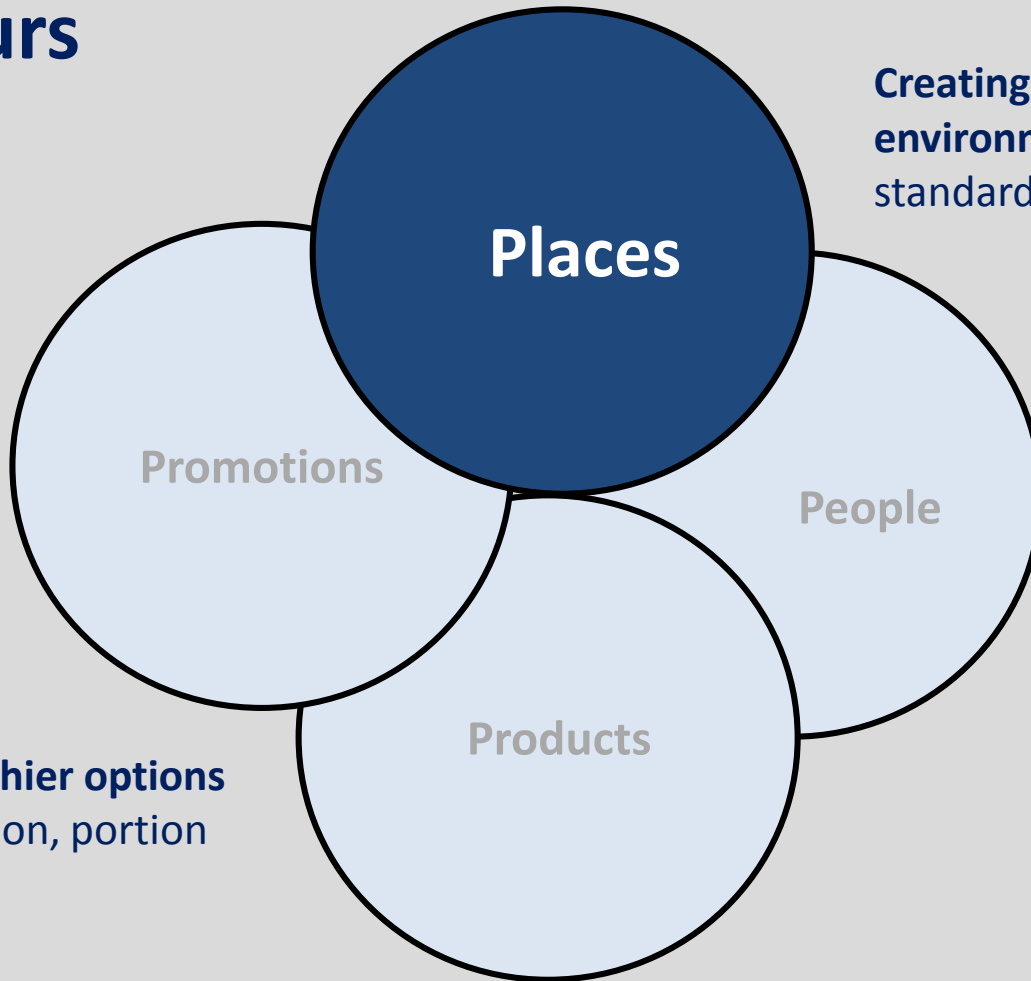
	Beer		Wine		Carbonates	
	Aisle end	Within aisle	Aisle end	Within aisle	Aisle end	Within aisle
Proportion of trolleys passing the display	33.8	22.5	27.6	21.1	51.1	30.2
No. of produce in each display location	2.85	12.91	7.62	10.89	2.09	7.38
No. of locations	8.38	20.92	10.08	29.31	8.34	20.77
Increase in sales (%)*	23.2		33.6		51.7	
Price promotion equivalent (%)	-4		-7		-22	

*Adj for no. of locations, price, proportion of week on promotion

A public health approach to changing dietary behaviours

Shifting the balance of promotions e.g. marketing restrictions

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Creating a healthier environment e.g. school food standards

Making healthier choices easier e.g. campaigns, nutritional labelling



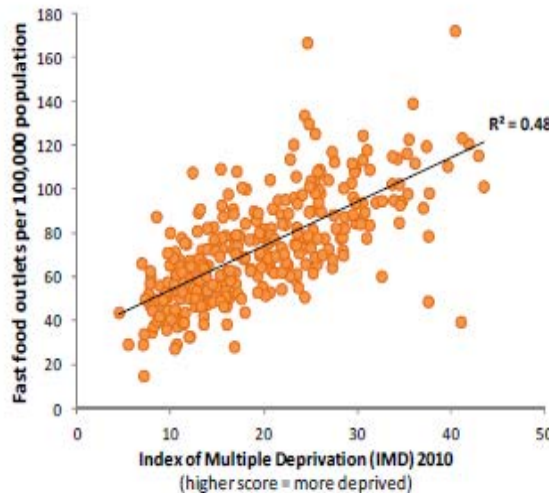
Exposure to takeaways associated with increased consumption and obesity

People who live and work near a high number of takeaway food outlets tend to eat more of these foods and are more likely to be obese than those who are less exposed

Burgoiné et al. BMJ. 2014 Mar 13;348:g1464.

Obesity and the environment Fast food outlets

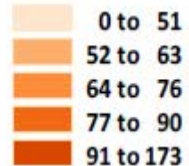
Relationship between density of fast food outlets and deprivation by local authority



London inset:



Fast food outlets
by local authority
per 100,000 population



England value
per 100,000 population

77.9

© Crown copyright and database rights 2012 Ordnance Survey 100020290

Data sources: InterestMap™, Ordnance Survey (2010)

Indices of Deprivation 2010, DCLG

ONS mid-year population estimates 2010

Using planning law to develop healthy 'zoning' policies

theguardian | The Observer

Takeaway ban near schools to help fight child obesity

Councils pledge to limit growth of fast-food outlets as nutritionists bid to make meals healthier – without customers noticing

Denis Campbell, health correspondent
The Observer, Sunday 28 February 2010



Many schoolchildren visit fast-food outlets during lunch breaks. Photograph: Getty Images



Judge bans fast food outlet near school

BY JOHN ASTON, PRESS ASSOCIATION FRIDAY 11 JUNE 2010

The Telegraph

Government may ban fast food near schools



Local authorities will be urged to consider the impact new fast food restaurants have on residents

BBC NEWS

NORTHAMPTON

Rushden wins battle to stop new chip shop business



20 June 2012 Last updated at 17:26

School Food Standards

A practical guide for schools
their cooks and caterers



The School Food Standards

Eating in school should be a pleasurable experience: time spent sharing good food with peers and teachers.

These school food standards are intended to help children develop healthy eating habits and ensure that they get the energy and nutrition they need across the whole school day. It is just as important to cook food that looks good and tastes delicious; to talk to children about what is an offer and recommend dishes; to reduce queuing; and to serve the food in a pleasant environment where they can eat with their friends.

As a general principle, it is important to provide a wide range of foods across the week. Variety is key – whether it is different fruits, vegetables, grains, pulses or types of meat and fish. Children love to hear the stories behind their food. Use fresh, sustainable and locally-sourced ingredients (best of all, from the school vegetable garden), and talk to them about what they are eating. Go to www.schoolfoodplan.com/ucwv to find examples of what other schools are doing to encourage children to eat well.

Buying foods in line with the Government Buying Standards will help reduce salt, saturated fat and sugar, and increase fruit, vegetable and fibre content.

* This Standard applies across the whole school day, including breakfasts, morning breaks, tuck shops, and after school clubs



Fruit and vegetables

One or more portions of vegetables or salad as an accompaniment every day

One or more portions of fruit every day

A dessert containing at least 50% fruit two or more times each week

At least three different fruits and three different vegetables each week



Milk and dairy

A portion of food from this group every day

Lower fat milk and lactose reduced milk must be available for drinking at least once a day during school hours



Meat, fish, eggs, beans and other non-dairy sources of protein

A portion of food from this group every day

A portion of meat or poultry on three or more days each week

Only fish once or more every three weeks

For vegetarians, a portion of non-dairy protein on three or more days each week

A meat or poultry product (manufactured or homemade, and meeting the legal requirements), no more than once each week in primary schools and twice each week in secondary schools*

Food provided outside lunch

• Fruit and/or vegetables available in all school food outlets

• No savoury crackers and breadsticks

• No cakes, biscuits, pastries or desserts (except yoghurt or fruit-based desserts containing at least 50% fruit)



Starchy food

One or more wholegrain varieties of starchy food each week

One or more portions of food from this group every day

Three or more different starchy foods each week

Starchy food cooked in fat or oil no more than two days each week*

Bread - with no added fat or oil - must be available every day



Healthier drinks*

Free, fresh drinking water at all times

The only drinks permitted are:

- Plain water (still or carbonated)
- Lower fat milk or lactose reduced milk
- Fruit or vegetable juice (max 150 ml)
- Plain soya, rice or oat drinks enriched with calcium; plain fermented milk (e.g. yoghurt) drinks

• Unsweetened combinations of fruit or vegetable juice with plain water (still or carbonated)

• Combinations of fruit juice and lower fat milk or plain yoghurt, plain soya, rice or oat drinks enriched with calcium; cocoa and lower fat milk; flavoured lower fat milk

• Tea, coffee, hot chocolate

Combination drinks are limited to a portion size of 330ml. They may contain added vitamins or minerals, but no more than 5% added sugars or honey or 150mls fruit juice. Fruit juice combination drinks must be at least 45% fruit juice





What's missing?

- **Information:** Consistent messages for consumers
- **Support:** Health professionals advocating dietary change and providing support for patients
- **Product renovation:** Across the board reformulation and innovation
- **Out-of-home:** Healthier options in all local food outlets
- **Marketing controls:** Restrictions on promotions for HFSS foods
- **Public procurement and provision:** Standards for hospitals, prisons etc
- **Workplace:** Incentives for employers to offer healthier food in workplace
- **Fiscal measures**

Can taxes help change dietary habits?

- Taxation is an established policy lever for tobacco and alcohol and clearly reduces consumption
- Health-related food taxes now introduced in France, Hungary, Finland, Norway, Mexico, some US states and some South Pacific islands (mostly sugary drinks)
- In Mexico a 10% tax on sugary drinks linked to ~ 10% decline in purchases
- Broad support from public health bodies in UK for tax on SSBs
- Public acceptability increasing: 41% adults support or strongly support a tax on SSBs

Taxing unhealthy food and drinks to improve health

An increasing number of countries are introducing taxes on unhealthy food and drinks, but will they improve health? **Oliver Mytton**, **Dushy Clarke**, and **Mike Rayner** examine the evidence

Oliver T Mytton *academic clinical fellow*, Dushy Clarke *researcher*, Mike Rayner *director*

British Heart Foundation Health Promotion Research Group, Department of Public Health, University of Oxford, Oxford OX3 7LF, UK

Some personal reflections

Population-level measures to promote a healthier diet are an essential complement to individual lifestyle interventions

Education is useful, but rarely sufficient and not always necessary

Engagement by health professionals adds credibility to interventions

Effective behavioural interventions build a cohort of people who become advocates for societal change

Action from industry is crucial to transform the food environment

There is a subtle balance of power between policymakers, industry and the public which needs to be understood and managed if effective policies are to be successfully adopted.

With thanks to:

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