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IFST Lecture 2012

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Institute of
Food Science & Technology





Food for a Fitter Future: Consumer Choice or Industry Responsibility?

Dr Susan Jebb

Head of Diet and Population Health, MRC Human Nutrition Research, Cambridge & Chair, Responsibility Deal Food Network

Humans are endowed with an
ANCIENT PHYSIOLOGY moulded
by famine ...



*“A grain in the balance will determine
which individual shall live
and which shall die”*

Charles Darwin, The Origin of Species

.... and ill equipped to handle the modern food environment

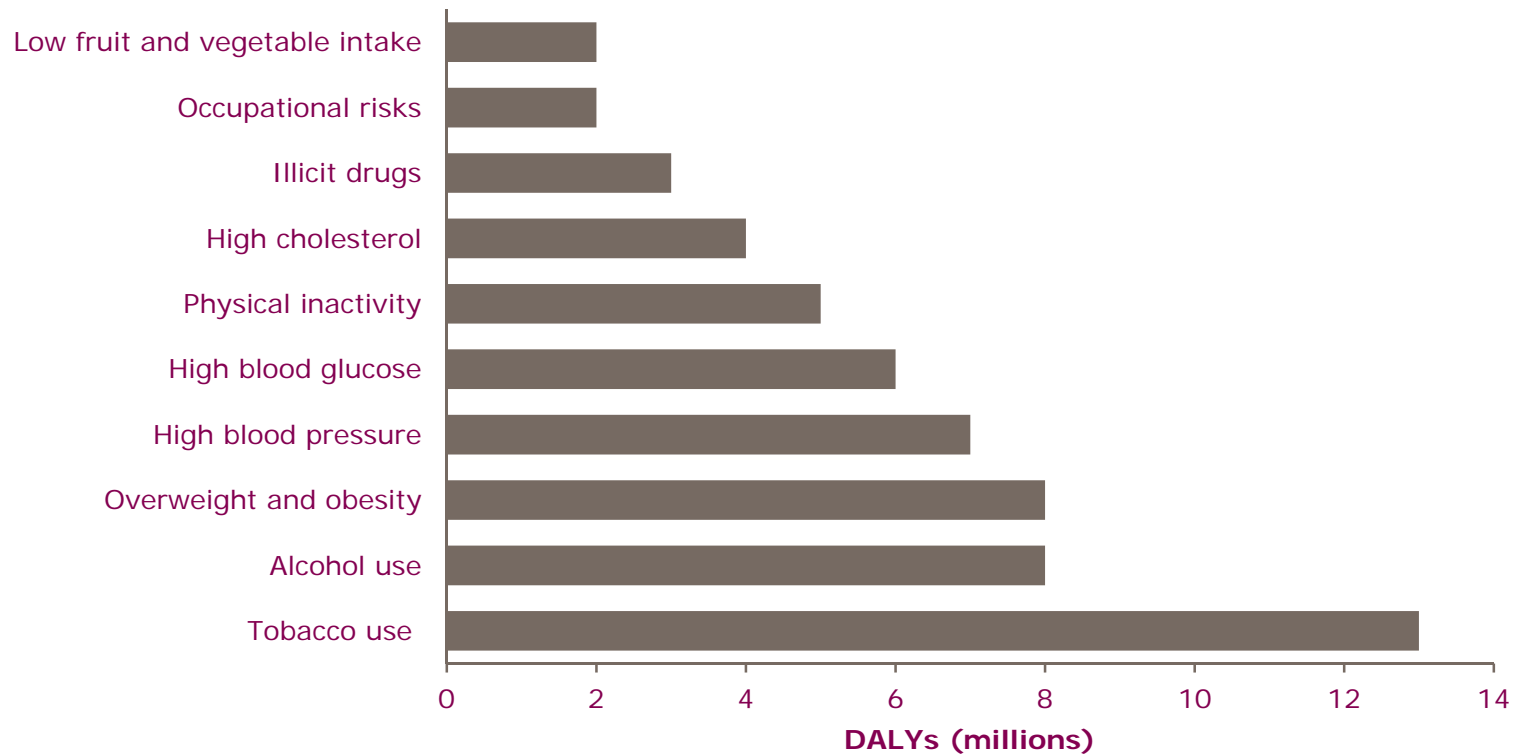


... especially when we do so little!



Poor diet is a major contributor to ill-health

Leading risk factors in high income countries



Improvements in dietary habits may avoid 70,000 premature deaths in the UK

Modelling suggests that a shift to the recommended balanced diet could yield significant health and economic benefits

Avoided premature mortality and quality adjusted life years gained, UK¹

	Premature mortality avoided	Quality adjusted life years gained)
Increase fruit and vegetable intake by 136g/day	42,000	411,000
Reduce daily salt intake from average 9g to 6g	20,000	170,000
Cut sat fat intake by 2.5% of energy	3,500	33,000
Cut added sugar intake by 1.75% of energy	3,500	49,000

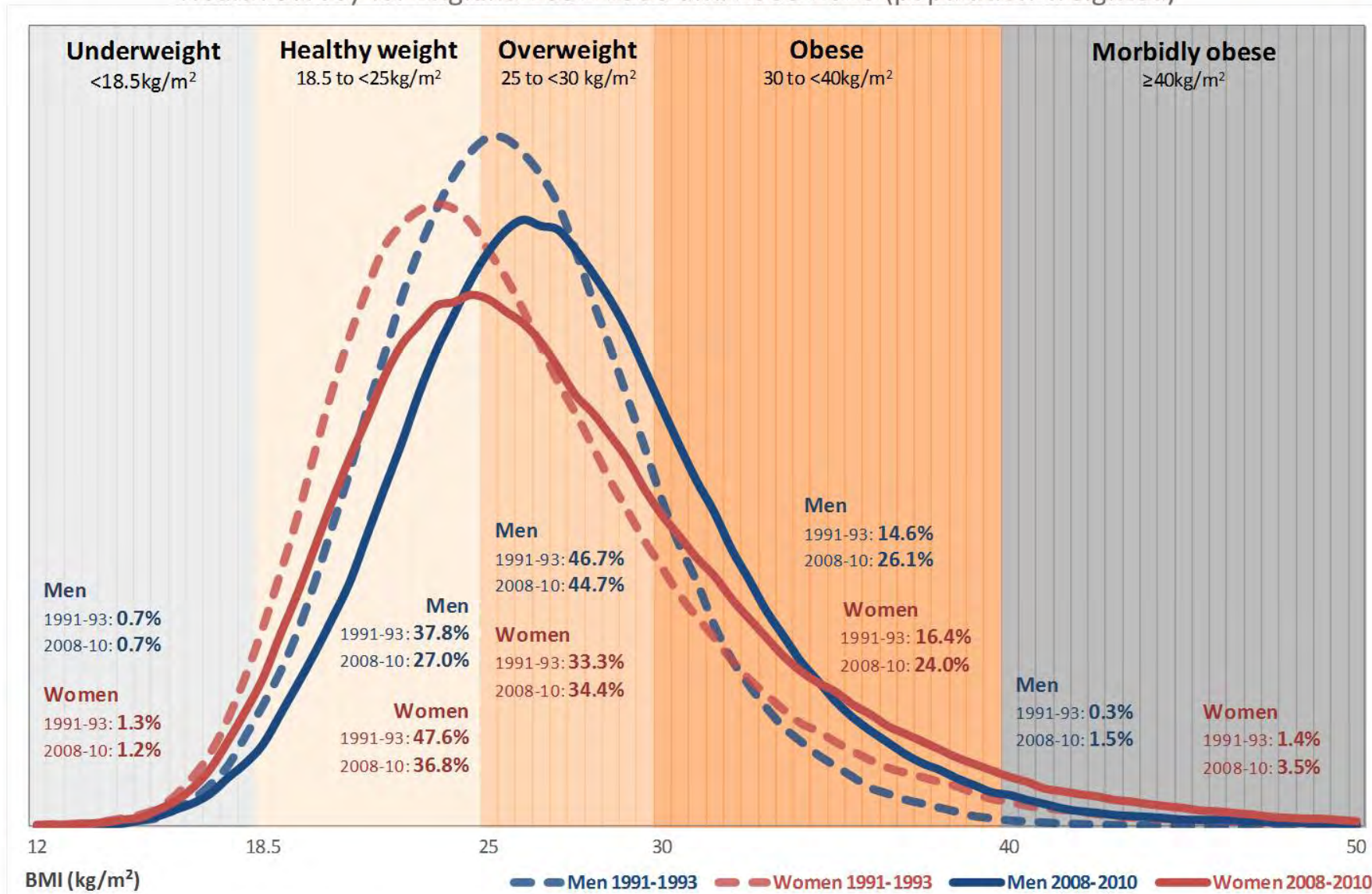
Obesity – the BIG problem

- 26% adults are obese and further 38% overweight
- 16% young people (2-15y) are obese and a further 14% overweight
- Direct costs to NHS estimated at £5.1 billion/y
- Indirect costs to wider economy approx. £16 billion/y



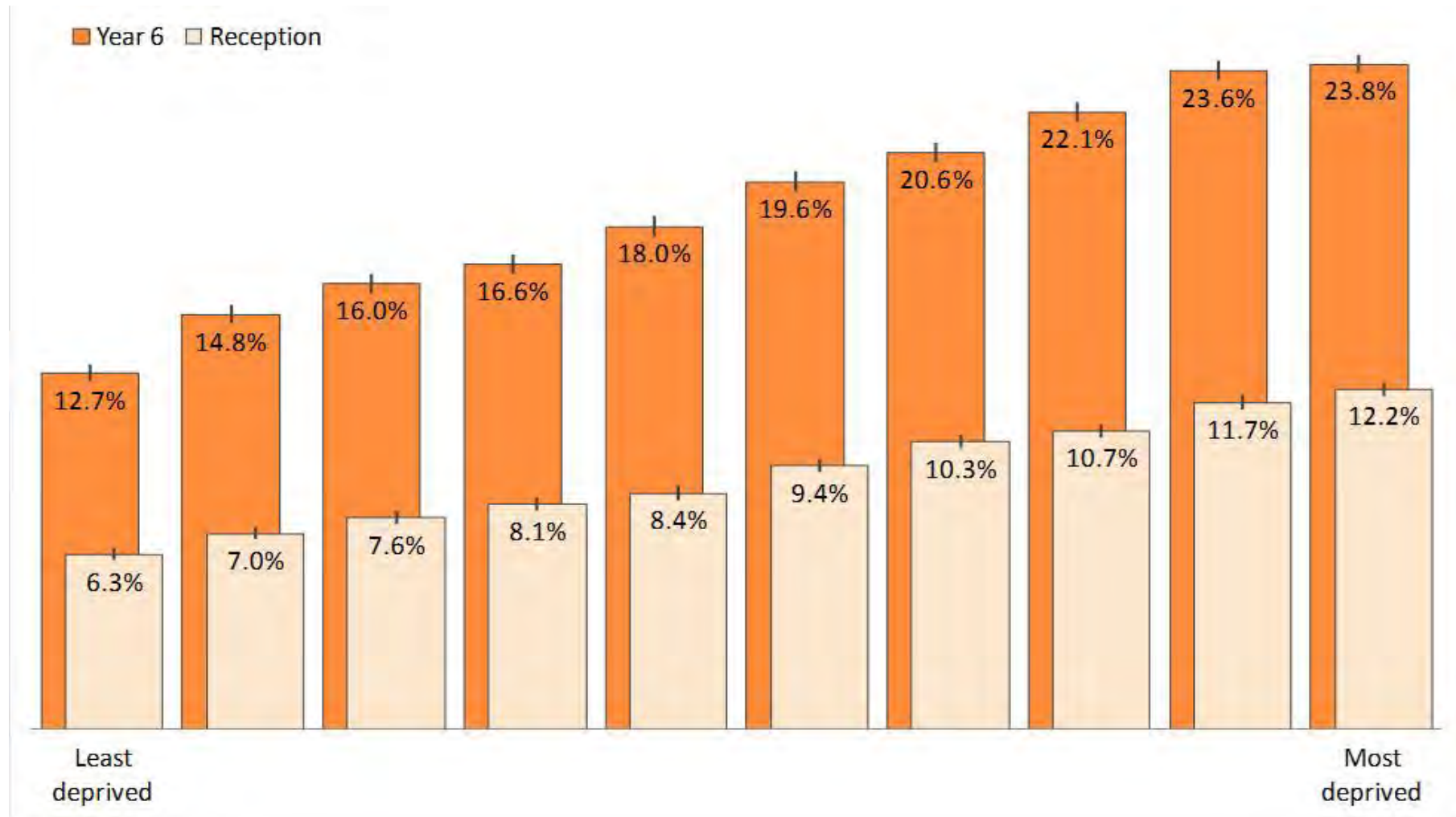
Change in the adult BMI distribution

Health Survey for England 1991-1993 and 2008-2010 (population weighted)



Prevalence of obesity by deprivation decile

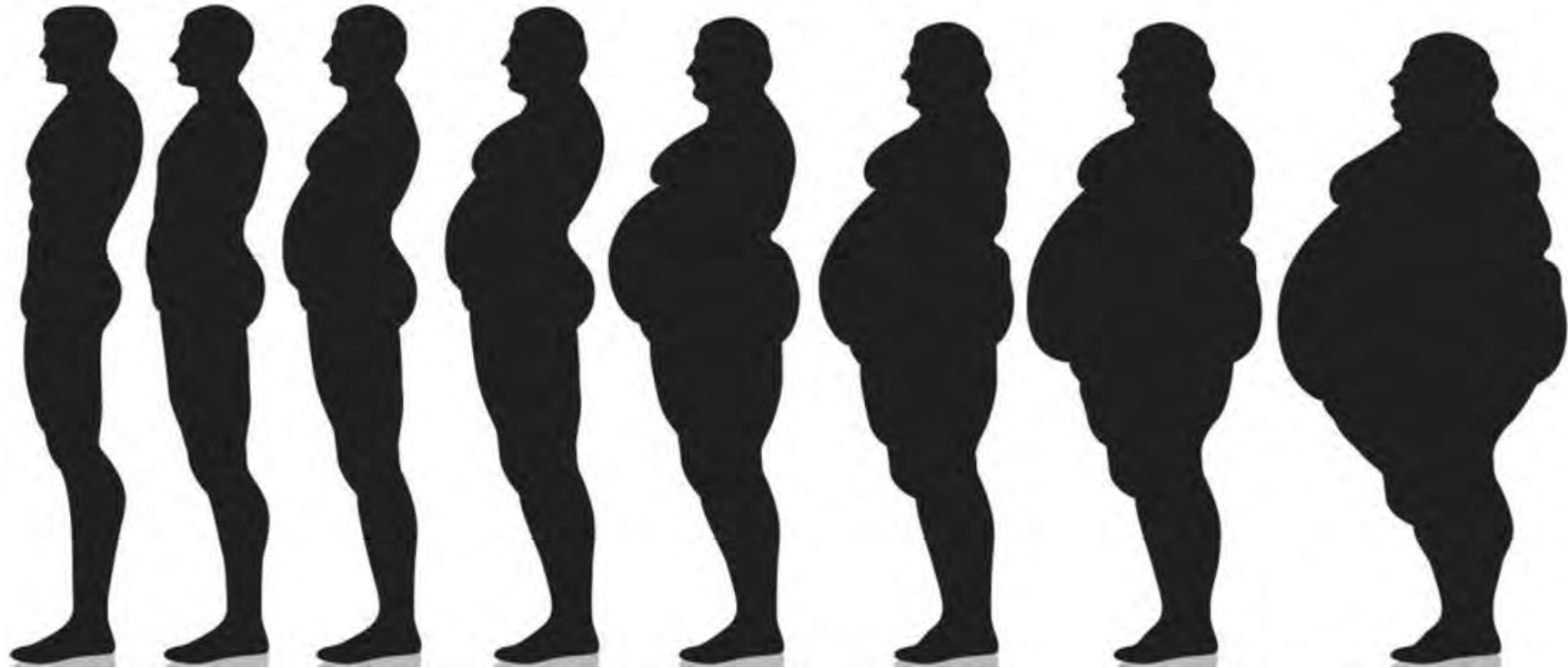
National Child Measurement Programme 2010/11



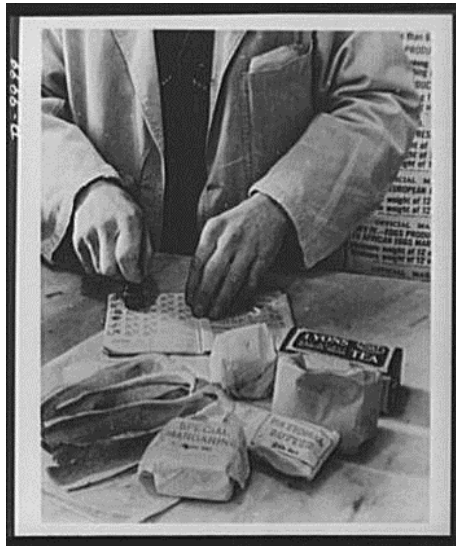
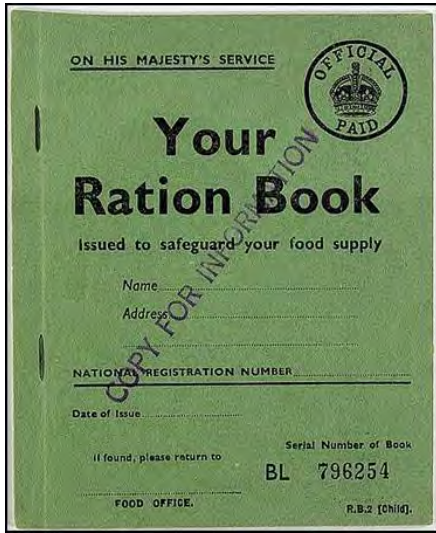
Child obesity: BMI \geq 95th centile of the UK90 growth reference

Deprivation deciles assigned using the Index of Multiple Deprivation 2010

The problem is clear



The solution is not



Changing relationships between government, industry and consumers

- 1920-70's: Governments sought to intervene in agricultural production and markets to boost output, with consumers as passive recipients
- 1980's: Marked shifts towards more open markets with farmers competing in a global market to supply increasingly efficient systems of food manufacture and distribution
- 1990's: Consumers in the driving seat of the modern food economy with industry competing to meet their demands

Expectation

That consumers would choose well and the newly flexible food supply chain would make a healthy diet available, affordable & acceptable

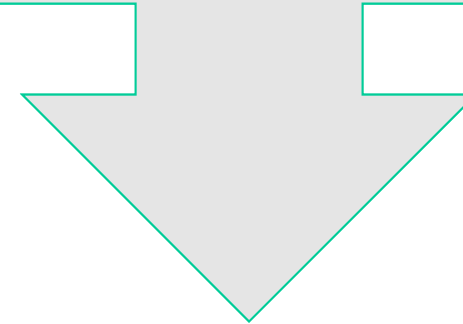


Reality

Consumers not informed or did not prioritise health when choosing food; industry had incentives to mobilise demand for popular, cheap items

Expectation

That economies would gain through a market-oriented food sector & healthier population



Reality

While some consumers became healthier, inequalities increased and the cost of diet-related disease soared

Hawkes (2012). BMJ 344: 27-29

**A failure of
personal
responsibility
- or victim of an
irresponsible
market ?**



Understanding human behaviour

Reflective behaviour

- Driven by decision-making
- Values the future
- Slow
- Requires high cognitive capacity ('willpower')



Understanding human behaviour

Reflective behaviour

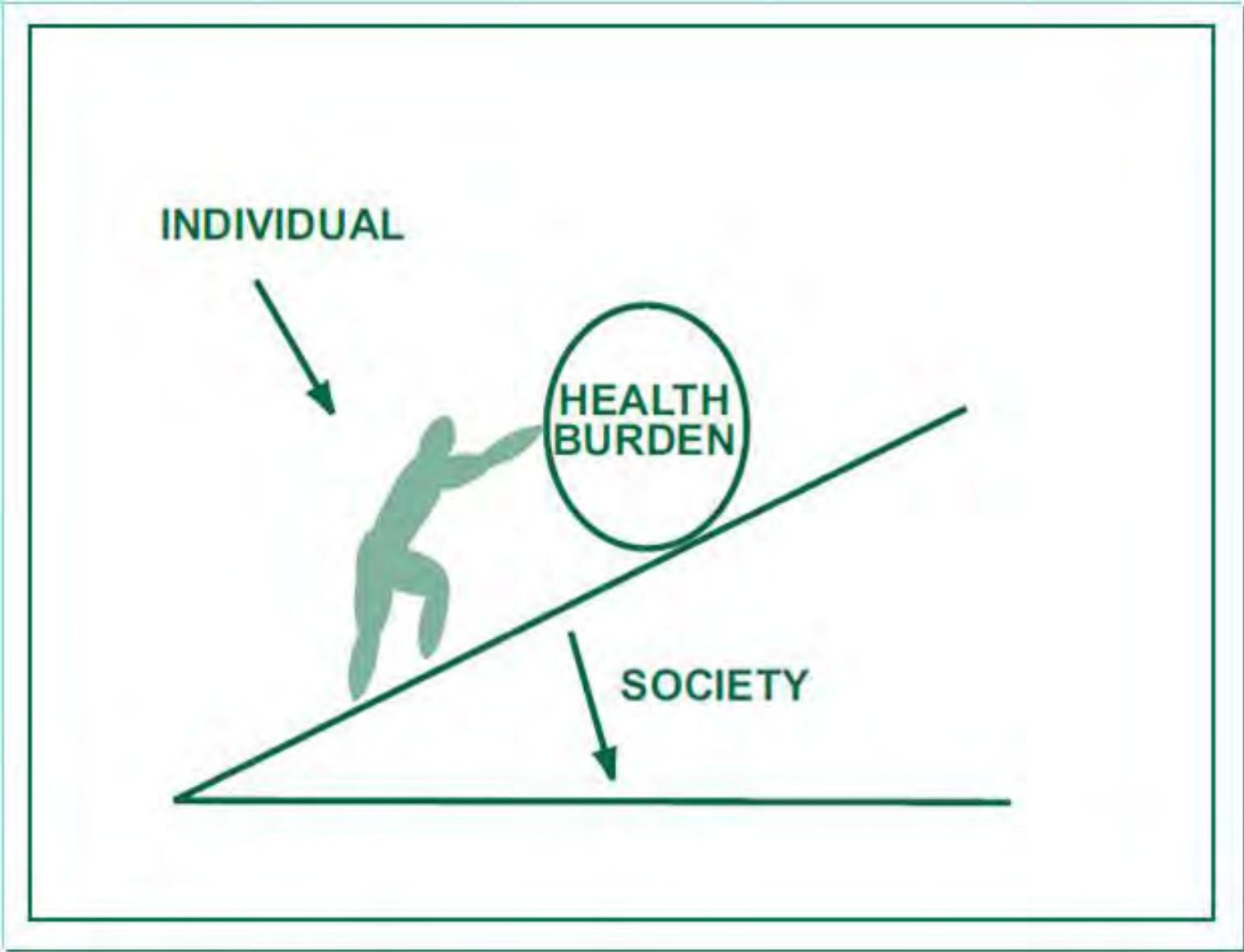
- Driven by decision-making
- Values the future
- Slow
- Requires high cognitive capacity

Impulsive behaviour

- Immediate perceptual benefit
- Future not represented
- Fast
- Minimal cognitive processing

'Fundamental attribution error'

Individual or Societal Responsibility?



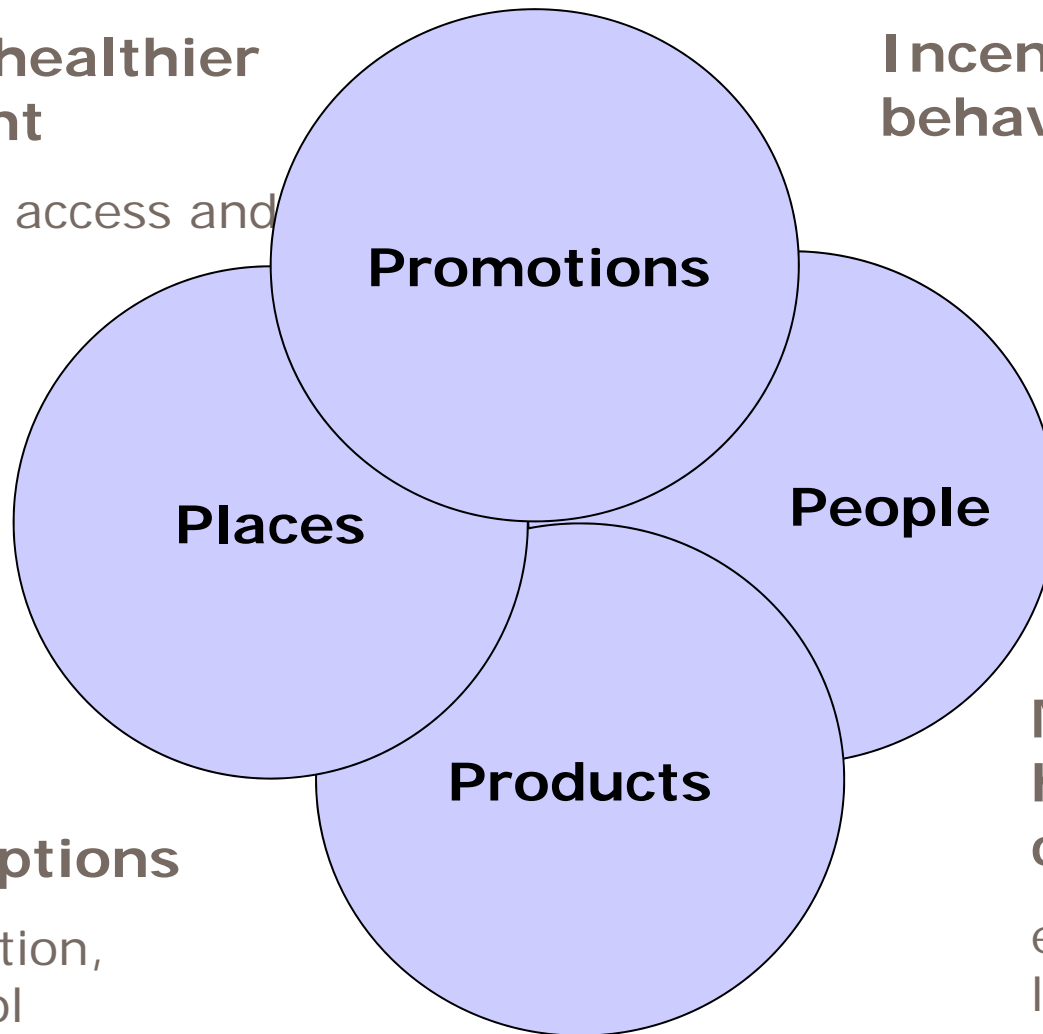
A public health approach to change dietary behaviours

Creating a healthier environment

eg. improving access and availability

Incentivising behaviour change

eg. controls on marketing, incentivising healthier choices



Providing healthier options

eg. reformulation, portion control

Making healthier choices easier

eg. campaigns, labelling

Improving knowledge and motivation to choose a healthier diet

60 active minutes

Do your kids get theirs everyday?

[Visit 60 active minutes](#)



5 A DAY

Giving them their 5 portions of fruit or veg a day is easier than you think.

[Visit 5 A DAY](#)



meal time

Why it's important to make time for 3 regular meals.

[Visit meal time](#)



up & about

Why kids shouldn't veg out and how to get them out and about.

[Visit up and about](#)



snack check

How to reduce unhealthy snacking.

[Visit snack check](#)



me size meals

How to make sure kids eat the right sized portions for their age.

[Visit me size meals](#)



cut back fat

Easy ways to lower the fat in your family's diet.

[Visit cut back fat](#)



sugar swaps

Simple ways to help kids eat less sugar.

[Visit sugar swaps](#)



'Nudging' Altering choice architecture through changes in the environment to prompt healthier behaviour

Judging nudging: can nudging improve population health?

Nudging has captured the imagination of the public, researchers, and policy makers as a way of changing behaviour, with the UK and US governments embracing it.

Theresa Marteau and colleagues ask whether it stands up to scientific scrutiny

If people didn't smoke, drink less, etc. healthier. What is nudging?

Nudging is not new. It builds on nudgeholical.



Richard H. Thaler
Cass R. Sunstein

Nudge



Improving Decisions
About Health, Wealth,
and Happiness

Marteau, Ogilvie, Roland, Suhrcke, Kelly BMJ 2011

A conceptual and empirical scoping review of choice architecture interventions

Intervention

Interventions that involve altering the properties or placement of objects or stimuli within micro-environments with the intention of eliciting health-enhancing behaviours

Outcomes

Four key health-related behaviours: diet, physical activity, tobacco, alcohol

[Populations, Interventions, Comparison, Study design not pre-specified]

Methods

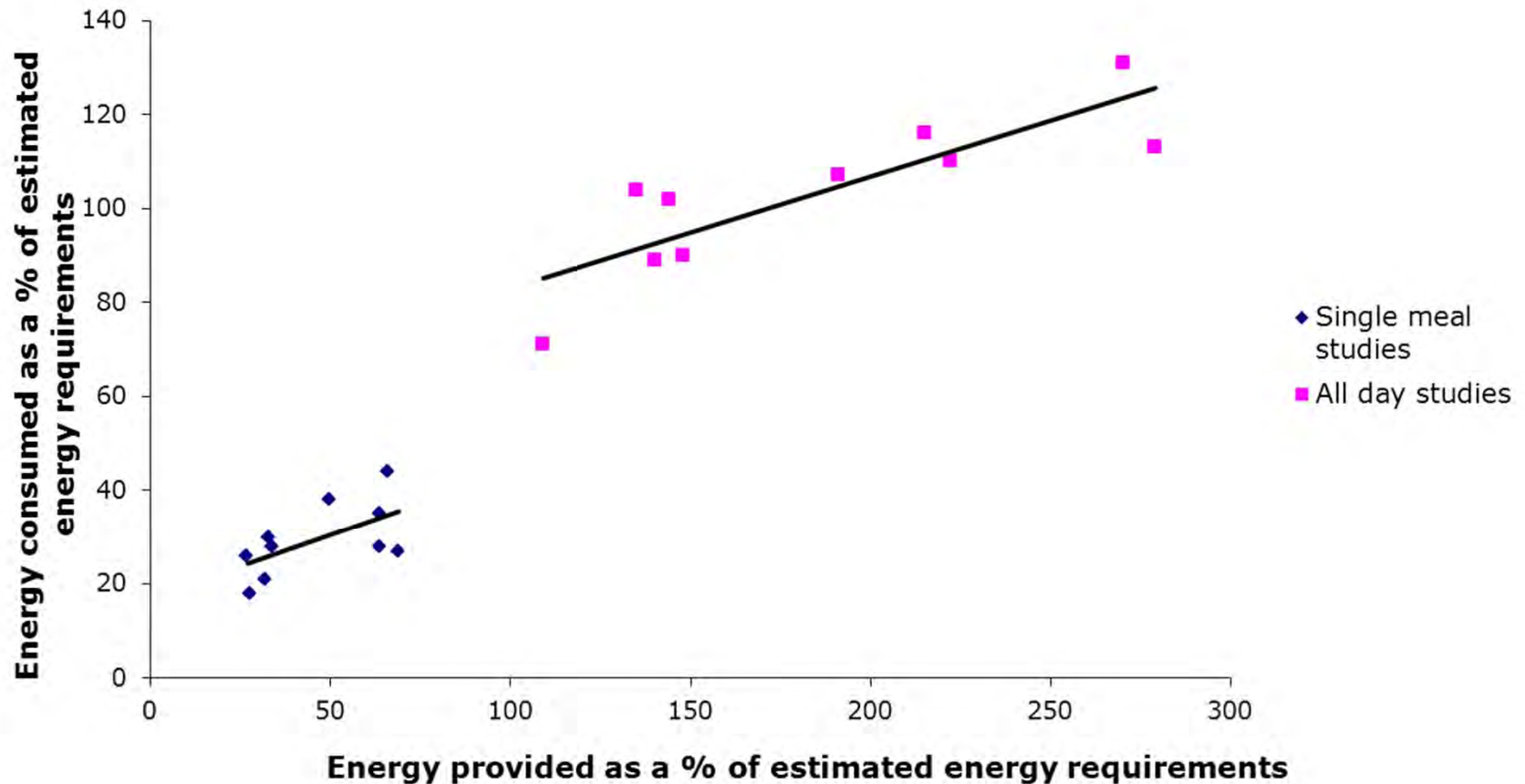
804,919 unique records were retrieved
Text-mining and automated learning software used to prioritise records for screening

Manually screened 54,000, 346 included

- Diet	70%
- PA	19%
- Alcohol	7.3%
- Tobacco	3.4%

40% of all studies involve point of choice labelling or prompting studies

Increasing portion size increases energy intake



For every 2.5MJ provided, an estimated extra 0.7MJ are consumed

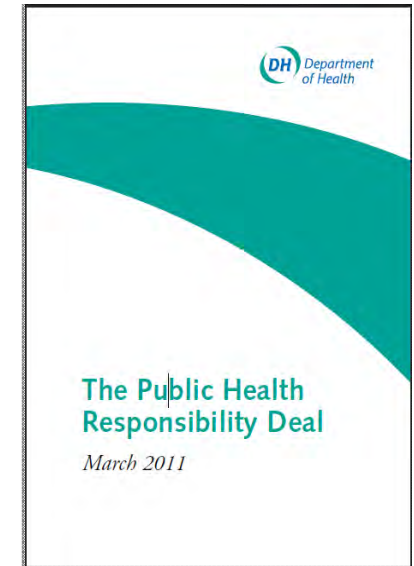
For every 2.5MJ provided, an estimated extra 0.6MJ are consumed

Help or hindrance?



The Responsibility Deal

- To create an environment that supports people to make informed, balanced choices and to help them lead healthier lives.
- **Opportunity** for business and other organisations to make a positive contribution by shaping the environment to make healthier choices easier choices
- The Responsibility Deal is a **voluntary** partnership between business, government and wider stakeholders.
- Over 400 organisations have already signed up.



Food Network – Collective pledges

F1 - Out of home calorie labelling

F2 - Salt reduction

F3 – Removal of artificial trans fats

F4 - Calorie reduction

F5 - Salt reduction for caterers

F6 – Fruits and vegetables



6" LOW FAT SUBS	
VEGGIE DELITE*	203 calories
Turkey Breast*	256 calories
Hani*	259 calories
Turkey Breast* & Hani*	267 calories
Beef	272 calories
Chicken Breast	298 calories
SUBWAY CLUB*	299 calories
Sweet Onion Chicken Teriyaki	352 calories



F1 – Out of home calorie labelling

“We will provide calorie information for food and non alcoholic drink for our customers in out of home settings from 1 September 2011 in accordance with the principles for calorie labelling agreed by the Responsibility Deal.”

45 signatories

By the end of 2011, 5,000 high street outlets were displaying calories; this will have risen to around 9,000 by the end of 2012.



The Harvester

MRC | Medical Research Council



The Camden Food Company



The Co-Operative

F2 and F5 - Salt reduction

F1: We commit to the salt targets for the end of 2012 agreed by the Responsibility Deal, which collectively will deliver a further 15% reduction on 2010 targets.

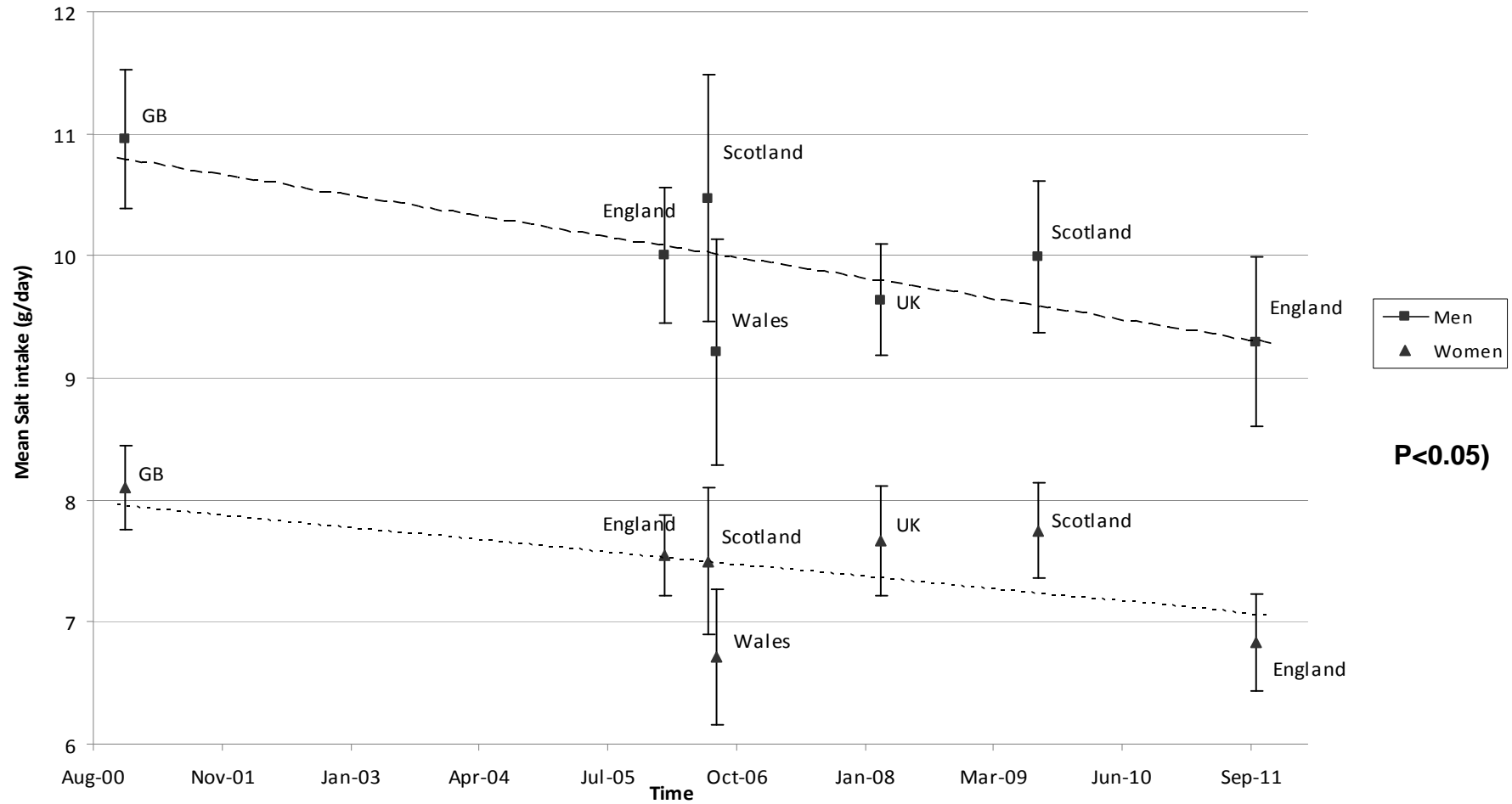
F2: Additional pledges for caterers

a) kitchen practices: salt availability, chef training, cooking practice

b) reformulation of products as purchased by the customer: focusing on highest salt and/or most popular items

c) procurement: at least 50% of products to meet 2012 targets

Reformulation has been central to the reduction in salt intake

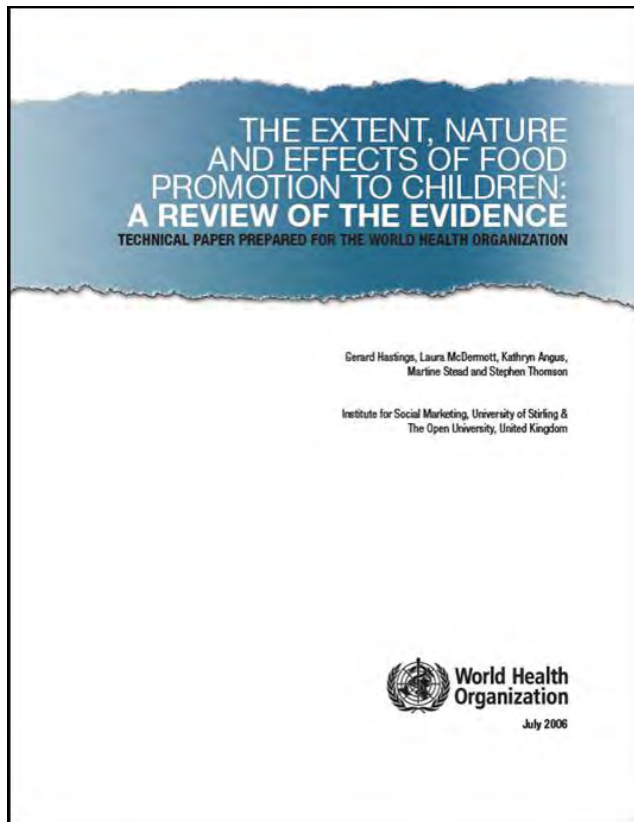


^aThe mean and 95% confidence limits for each point are as calculated according to the protocol in place at the time. Different methods of assessment of completeness of 24 hour urine collections may contribute slightly (1-3%) to the decrease from 2006 to 2011. These differences fall within the 95% confidence limits for each point. The slope of the trend is not substantially affected by these differences.

Making fruit & vegetables more accessible



Food Promotions



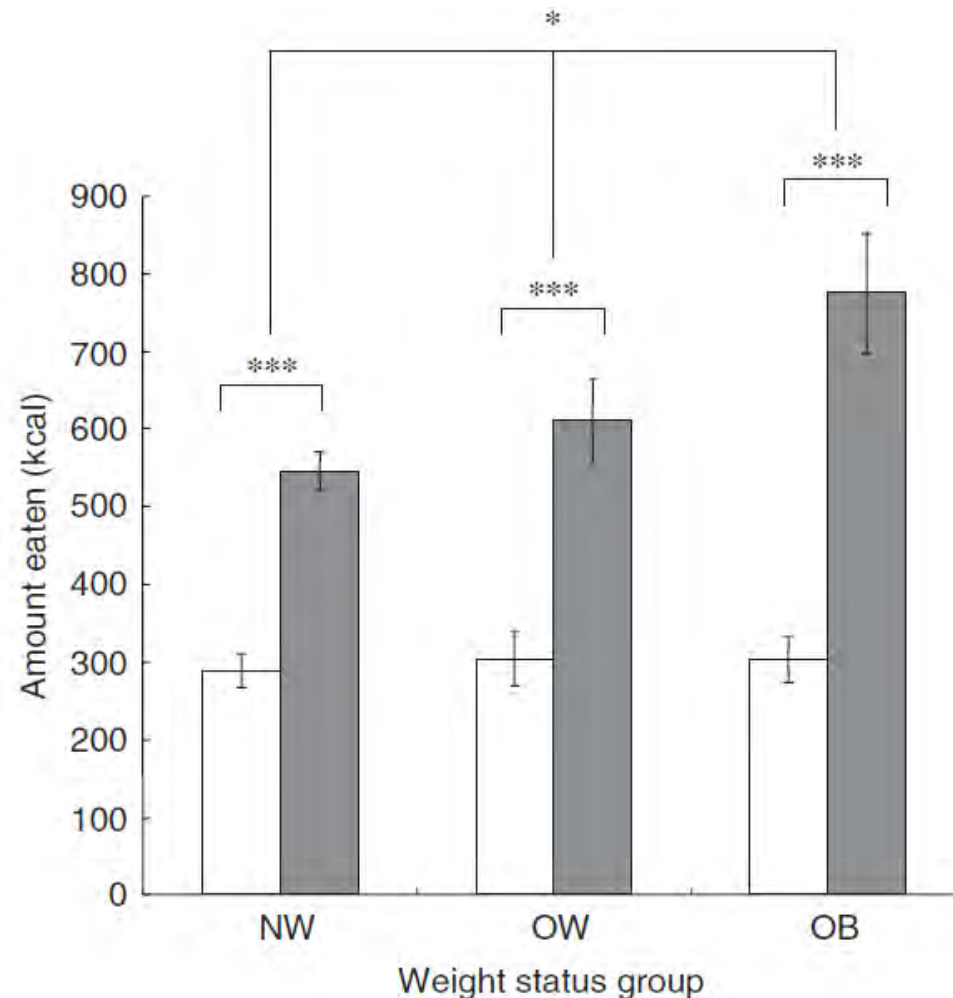
- **Food promotion is predominantly unhealthy** (studies consistently find that 70-90 % advertised foods are unhealthy)
- **Marketing directly influences diet and dietary determinants** (preference, knowledge, purchase, consumption, health outcomes)

Experimental research to study the impact of advertising on food choices beginning to emerge

Food marketing to children increases energy intake, especially among the obese

Exposure to food advertisements increased subsequent energy intake in all children

The increase was greater in obese children (155%) and the overweight children (101%) than the NW children (89%).



Nuffield ladder of interventions



Eliminate choice: regulate to eliminate choice entirely

Restrict choice: regulate to restrict the options available to people

Guide choice through disincentives: use financial or other disincentives to guide people not to pursue certain activities

Guide choice through incentives: use financial or other incentives to guide people to pursue certain activities

Guide choice through changing the default: make 'healthier' choices the default option for people

Enable choice: enable people to change their behaviours

Provide information: inform and educate people

Do nothing or simply monitor the current situation

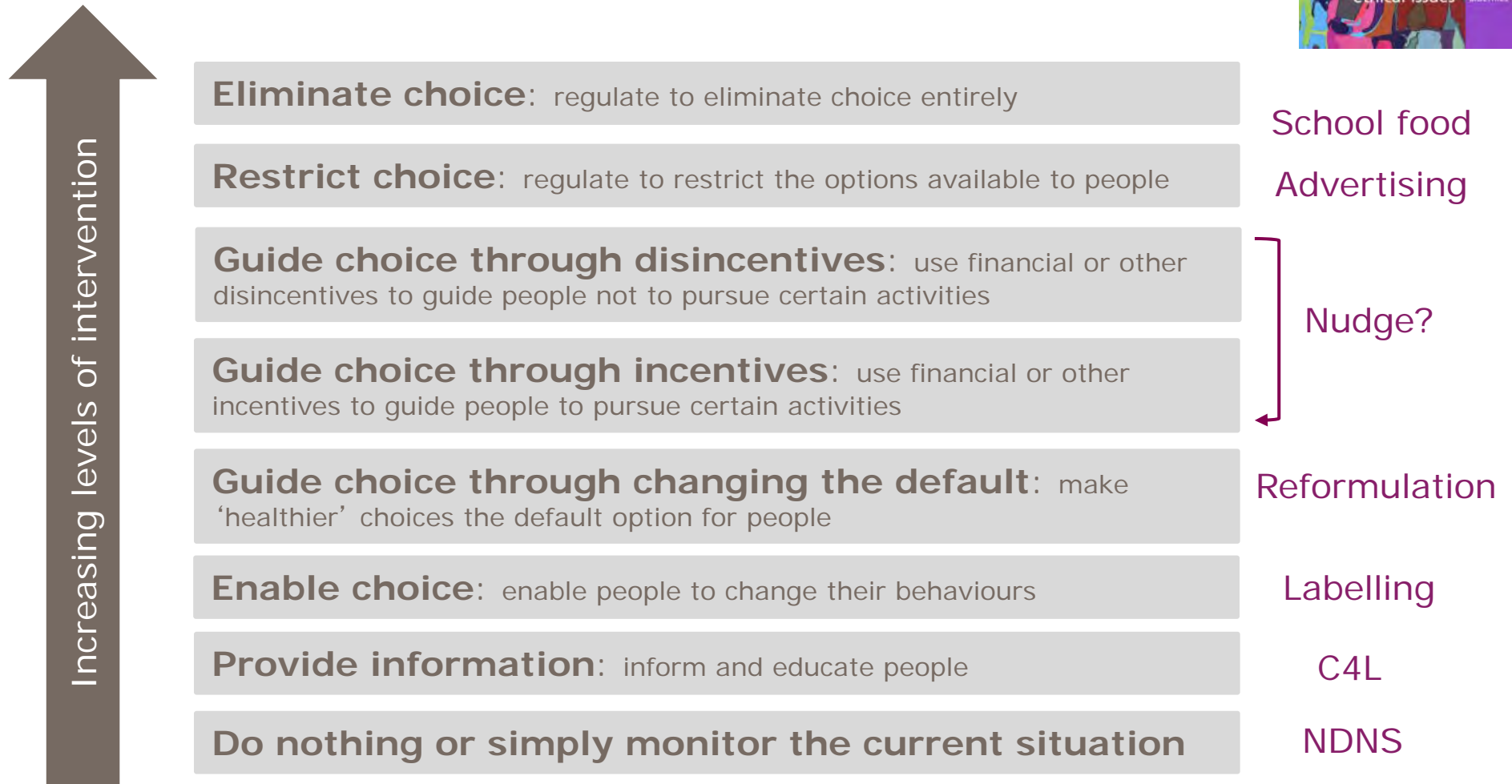
Step 8: Eliminate Choice

Mandatory nutritional standards for food in schools

includes ban on sugar-sweetened beverages, confectionery and savoury snacks high in fat or salt



Who high should public policy go to change dietary behaviour?



Improving diet needs coordinated action

- International agencies
- National governments
- Local communities
- Scientists
- Food industry
- Employers
- Schools
- Parents
- Individuals





Changing dietary habits means intervening in a complex system

