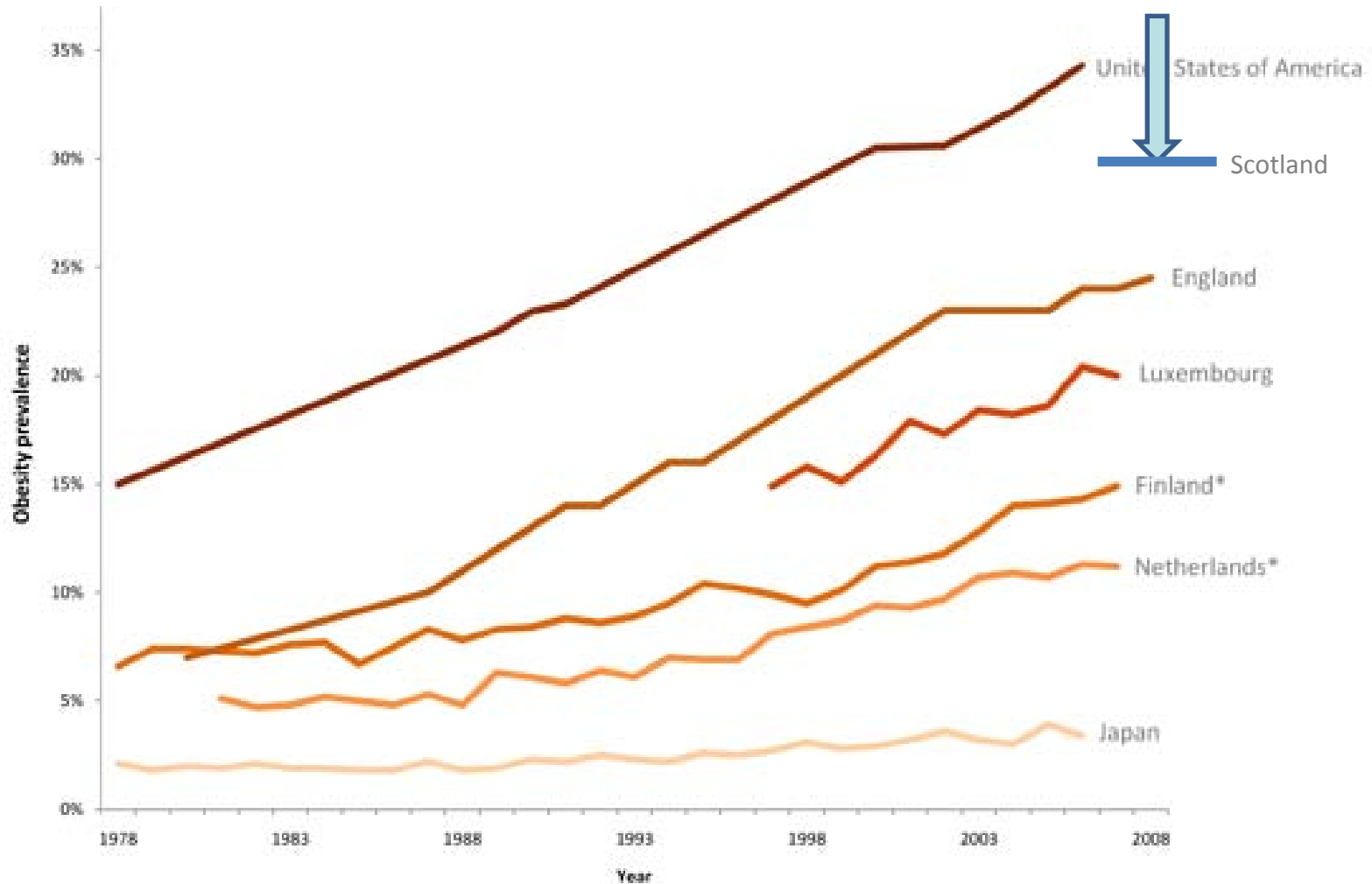


A public health perspective on the importance of good nutrition within and beyond school

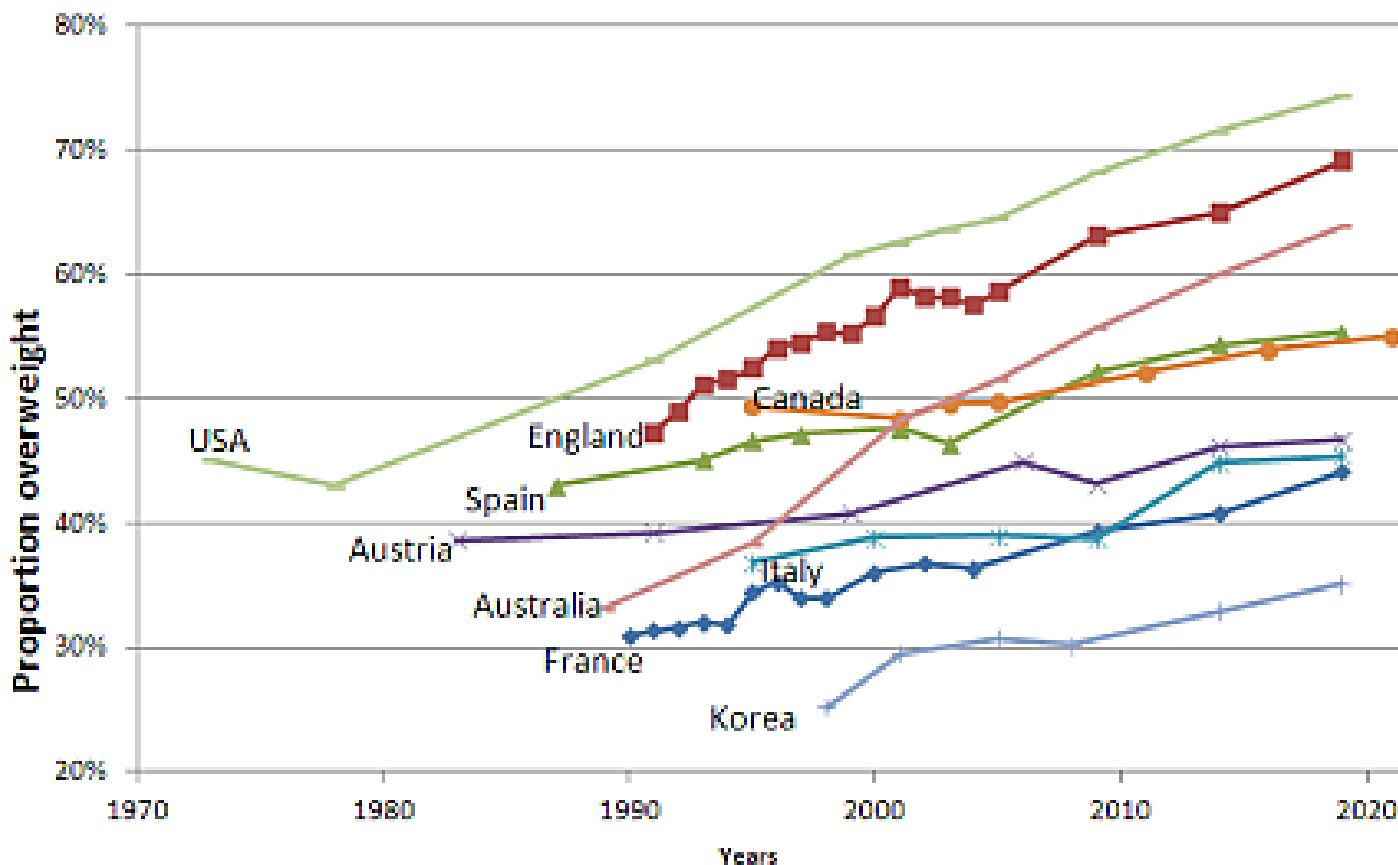
Linda de Caestecker
Director of Public Health

Trends: international



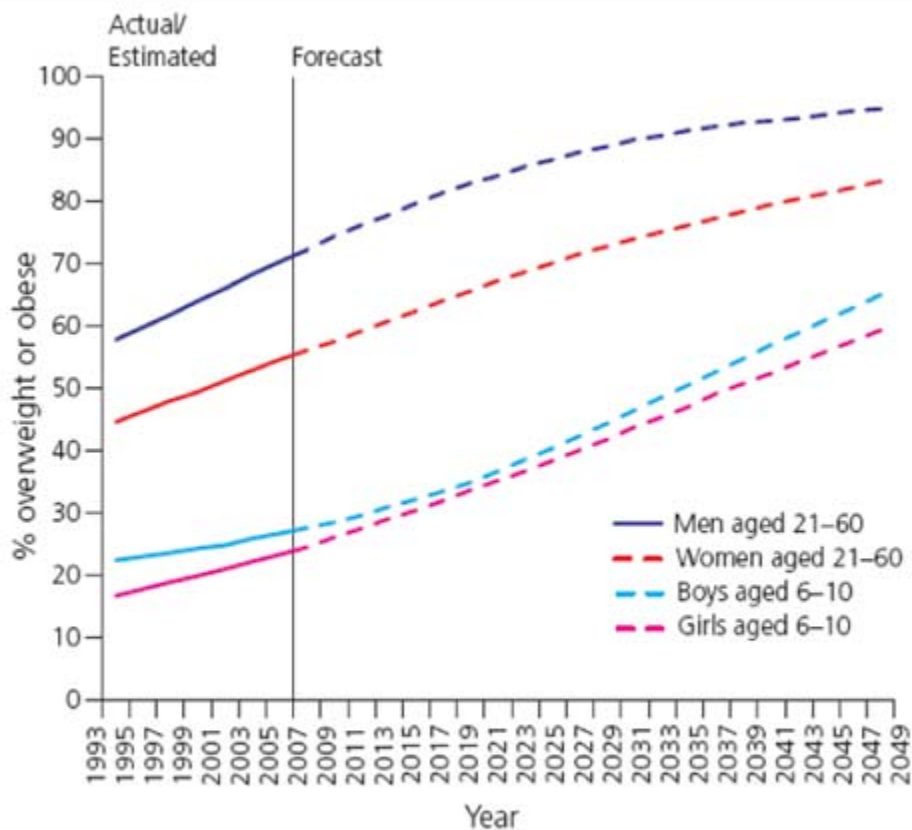
Trends: international

Past and projected future overweight rates in selected OECD countries



BMI status (National BMI percentiles) ^b	Age			Total
	2-6	7-11	12-15	
	%	%	%	%
Boys				
Overweight (including obese) ^d				
1998	29.1	27.3	26.9	27.8
2003	30	33.1	34.1	32.4
2008	25.9	43.4	38.2	36.1
2009r	23.1	33.2	33.2	30
2010	27.5	33	32.7	31.1
Girls				
Overweight (including obese) ^d				
1998	26.4	27.3	31.6	28.3
2003	27	28.2	31.8	28.9
2008	26	23.1	32.1	26.9
2009r	24.5	27.3	32	27.8
2010	24.7	28.1	34.3	28.5
All children				
Overweight (including obese) ^d				
1998	27.8	27.3	29.2	28
2003	28.5	30.7	33	30.7
2008	26	33.9	35.1	31.7
2009r	23.8	30.2	32.6	28.9
2010	26	30.6	33.4	29.9

Forecast: UK



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

What will happen if we do nothing?

SCOTLAND NOW (SHS 2008)

- 27% of adults obese – 65% overweight
- 15% of children (aged 2-10) obese - 32% overweight
- NHS cost O&O = £312M (~5% budget)
- Cost to wider economy is £0.5-1.2BN

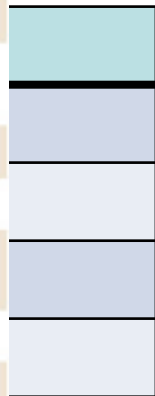
2050 (Foresight UK)

- Based on current trends 60% men, 50% women and 25% children will be obese
- 9 in 10 adults will be overweight or obese if we carry on as we are
- Cost to the NHS forecast to more than double
- Cost to the wider economy predicted to rise to £50 billion per year

why obesity matters

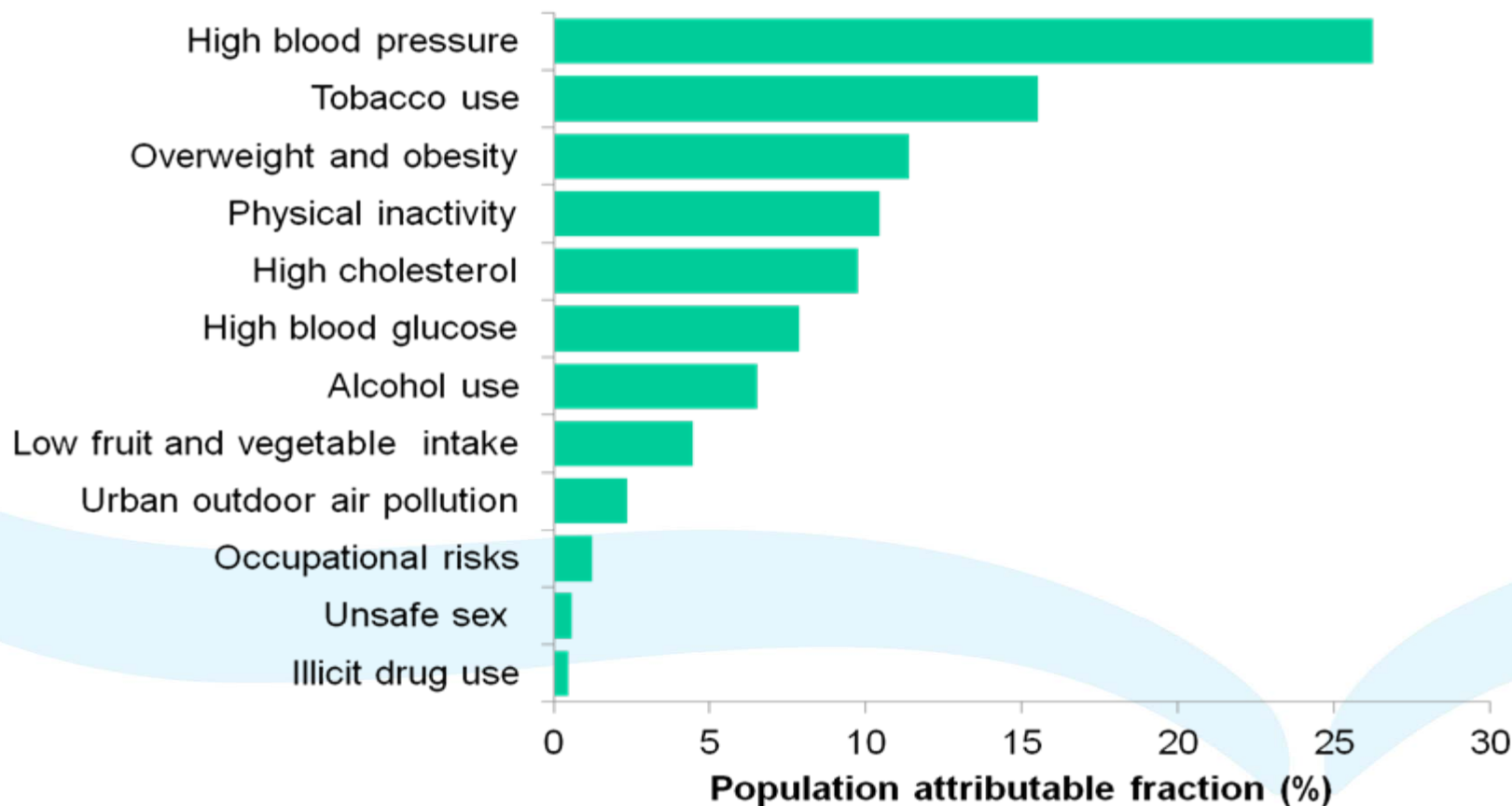
Medscape®		www.medscape.com		
Type of cancer	Relative risk* with BMI of 25–30 kg/m ²	Relative risk* with BMI of ≥ 30 kg/m ²	PAF (%) for US population [‡]	PAF (%) for EU population [§]
Colorectal (men)	1.5	2.0	35.4	27.5
Colorectal (women)	1.2	1.5	20.8	14.2
Female breast (postmenopausal)	1.3	1.5	22.6	16.7
Endometrial	2.0	3.5	56.8	45.2
Kidney (renal-cell)	1.5	2.5	42.5	31.1
Oesophageal (adenocarcinoma)	2.0	3.0	52.4	42.7
Pancreatic	1.3	1.7	26.9	19.3
Liver	ND	1.5–4.0	ND	ND
Gallbladder	1.5	2.0	35.5	27.1
Gastric cardia (adenocarcinoma)	1.5	2.0	35.5	27.1

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Relative risks associated with overweight and obesity, and the percentage of cases attributable to overweight and obesity in the United States (US) and the European Union (EU). *Relative risk estimates are summarized from the literature cited in the main text. [‡]Data on prevalence of overweight and obesity are from the National Health and Nutrition Examination Survey (1999–2000)²⁰⁵ for men and women from the United States aged from 50–69 years. [§]Data on prevalence of overweight and obesity are from a range of sources²⁰⁶ for adult men and women residing in 15 European countries in the 1980s and 1990s. ^{||}PAFs were not estimated because the magnitude of the relative risks across studies are not sufficiently consistent. BMI, body mass index; ND, not determined; PAF, population attributable fraction (BOX 3).

Obesity in context: top 12 risk factors for mortality



Source: World Health Organization, 2004

Health consequences of childhood obesity

- Mainly sub-clinical coronary artery disease and atherosclerosis
- Increased BMI associated with-CVD risk factors: BP, lipid profiles, changes in left ventricular mass, hyperinsulinaemia
- Also increased or worsening asthma, foot structure and function problems, type 1 and type 2 diabetes
- Psycho-social – low self esteem, particularly girls
- Tracking of obesity into adulthood

Drivers

HUMAN BIOLOGY

- Genetics
- Early life experiences: 50% obese children at age 6 remain obese

CULTURE / INDIVIDUAL PSYCHOLOGY

- Habituated unhealthy behaviours, especially when common
- Obesity and overweight are becoming 'normal'

FOOD ENVIRONMENT

- Availability of convenience foods
- High in saturated fat, salt and sugar

PHYSICAL ENVIRONMENT

- Increasingly sedentary lives
- Decline in walking & other physical activity

Adolescent eating patterns

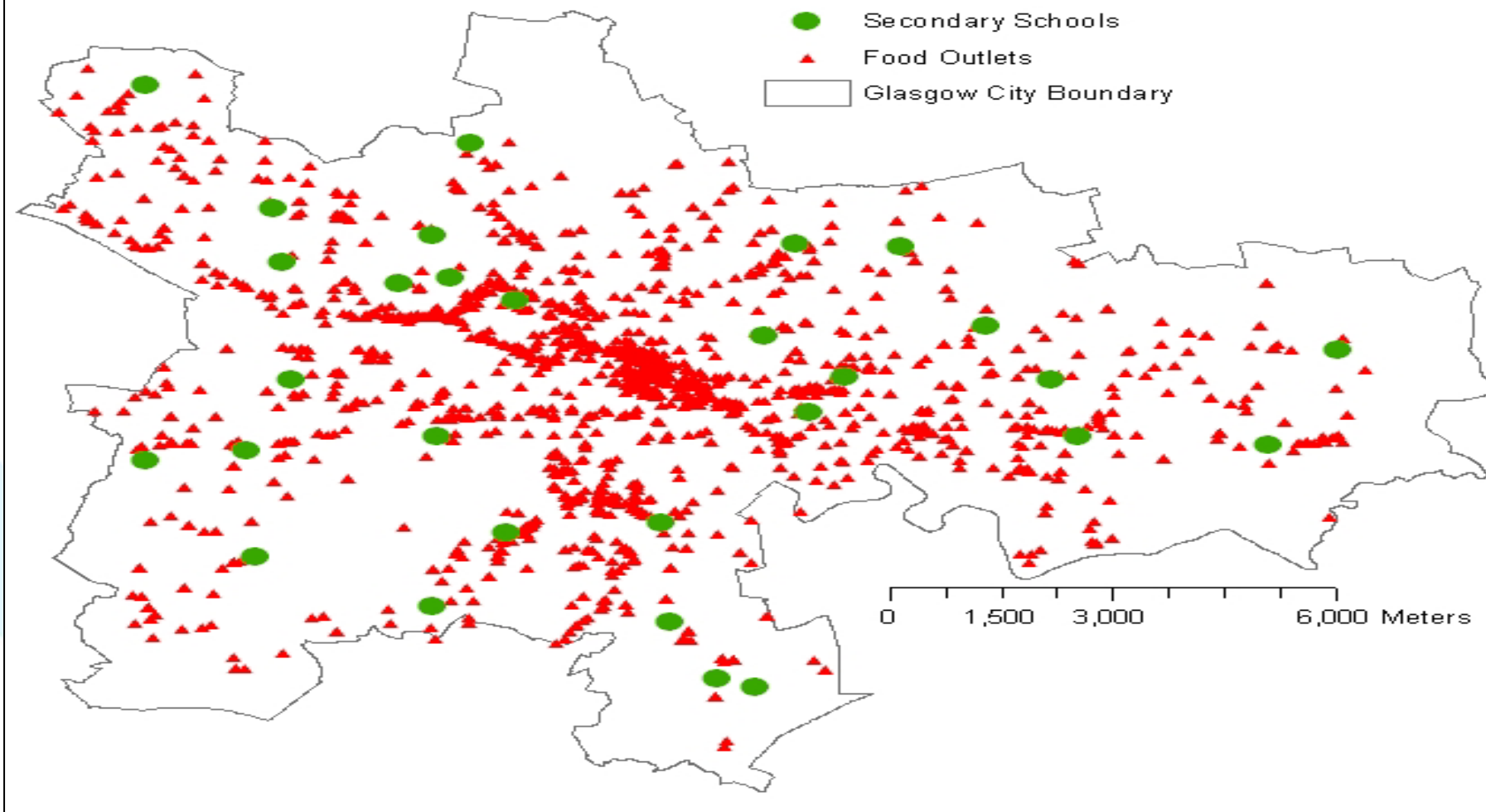
- 12-15 year olds in Scotland consumed less than half of the daily recommended intake of fruit and vegetables
- 12% of children and young people aged 2-15 met the recommended daily intake of five or more portions

(Source: Scottish Health Survey 2010)

Teenagers and diet

- Time of independence from parents and making their own decisions
- May make decisions in response to peer pressure or defiance
- Opportunity to encourage good food choices

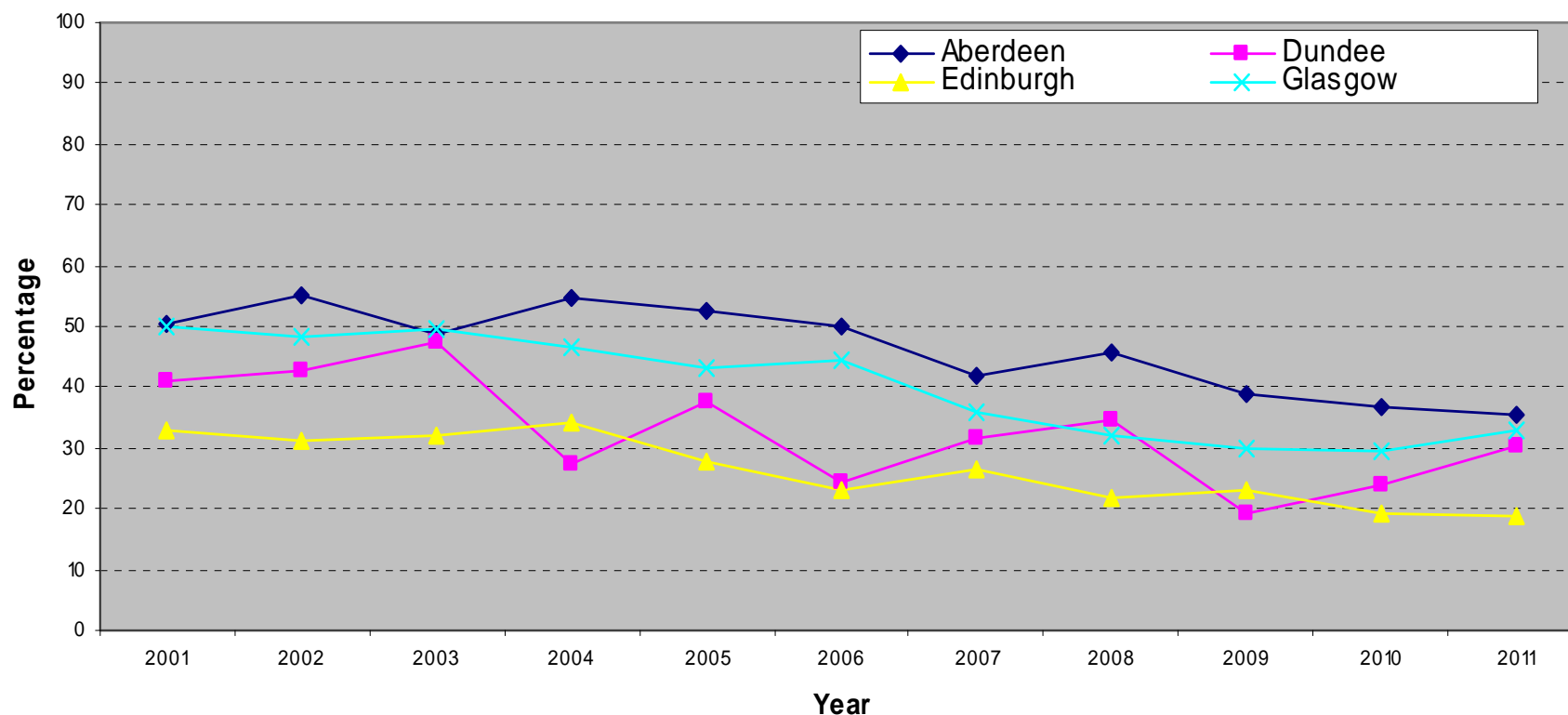
Secondary Schools & food outlets in Glasgow



Secondary school meal uptake

Percentage of secondary pupils taking school meals (2001-2011)

Source: School Meals in Scotland 2011



Evidence on risk factors for obesity from WHO

Evidence	Decreased risk of obesity	No relationship	Increased risk of obesity
Convincing	Regular physical activity High dietary fibre		Sedentary lifestyles High intake of energy dense micronutrient poor foods
Probable	Home and school environments that support healthy food choices for children Breastfeeding		Heavy marketing of energy dense foods and fast food outlets
Possible	Low glycaemic index foods	Protein content of the diet	Large portion sizes High proportion of food prepared outside the home
Insufficient	Increased eating frequency		alcohol

Evidence for obesity prevention (Nice Guidelines 2006)

- There is evidence that ‘upstream’ activities in the broad context of food policy, transport policy and urban planning are necessary to reverse the obesity epidemic (tackling the ‘obesogenic environment’)
- There is a substantial body of evidence available to suggest that traditional health education techniques are ineffective in preventing obesity
- There is some evidence that pre-school interventions to improve diet or increase physical activity can be effective, but the evidence is weak and the effect small
- The evidence to support ‘whole school approaches’ and ‘multi-component’ interventions is equivocal with some studies showing small positive effects and others showing no effect

- There is some evidence that school meals policy could be a useful locus for intervention, but that there is a current decreasing trend in school meal uptake in favour of cheaper ‘fast food’ options out with the school gates
- There is some limited evidence that interventions by health care professionals may have a role in the prevention of obesity, but this is largely based on studies in adults
- Interventions in the wider community have some evidence of positive effect, including measures to encourage active transport and public transport (e.g. enhancing urban space for walking and cycling, reducing road space for cars, increasing subsidies for public transport and addressing safety concerns)
- Health-orientated urban planning and architecture out with the field of transport is also said to assist in reducing the ‘obesogenic environment’, such as housing built with high connectivity and building design that prioritises stairs and public transport use

Healthy Eating in Schools

A guide to implementing the nutritional requirements for food and drink in schools (Scotland) regulations 2008



HEALTHY

SCHOOLS

NUTRITION

Hungry for Success – Further Food for Thought



A Report on the Implementation of Hungry for Success: A Whole School Approach to School Meals in Scotland
January 2008

HMIe
Improving Scottish education

Preventing Overweight and Obesity in Scotland

A Route Map Towards Healthy Weight

Growing a Healthier Glasgow

A report and recommendations of the Glasgow Health Commission



curriculum for excellence
building the curriculum 3
a framework for learning and teaching



RESPONSIBLE CITIZENS

EFFECTIVE CONTRIBUTIONS

SUCCESSFUL LEARNERS

CONFIDENT INDIVIDUALS



Annual Report of the
CHIEF MEDICAL OFFICER



health
IN SCOTLAND
2010
YEARS FOR
HEALTH



The Schools (Health Promotion and Nutrition) (Scotland) Act 2007

- Places health promotion at the heart of school activities
- Ensures that food and drink served in schools meets nutritional requirements specified by the Scottish Ministers by regulations
- Ensures local authorities promote the uptake and benefits of school meals and, in particular, free school meals
- Reduces the stigma associated with free school meals by requiring local authorities to protect the identity of those eligible for free school meals

Preventing obesity route map

We will encourage the uptake of balanced and nutritious schools meals across all age groups by...

- Supporting schools to make remaining in school for lunch more attractive to secondary school pupils through a range of innovative approaches
- Exploring measures to restrict access by children to nutritionally inappropriate meals and high energy and energy-dense foods from businesses located in the vicinity of schools
- Facilitating collaborations between schools and local food outlets to promote appealing, affordable lower energy and less energy-dense options for pupils who choose to leave school for lunch

Haringey council

- Six times the number of fast food outlets in poorest areas
- Higher levels of childhood obesity
- Proposes using planning powers to curb fast food outlets in poorest areas
- Will ban new takeaways within 400 metres of schools youth clubs or parks

“Labour will exercise licensing powers to tackle overprovision of fast food outlets, betting shops, off-sales, and the early opening of licensed premises.”

Glasgow Labour Manifesto commitment

In conclusion

- Poor nutrition is a continuing public health challenge in the Scottish population
- Scotland has one of the highest rates of child obesity & overweight in the world (20-25% - and rises through school years)
- Increased consumption of food outside the home is a recognised driver of the epidemic
- Although school meal standards have improved, uptake is declining in secondary schools
- Our priority should be to have comprehensive planning, policy and initiatives to reduce calorific intake and increase physical activity