

Inequalities in food and nutrition: challenging 'lifestyles'.

Elizabeth Dowler
Martin Caraher
Paul Lincoln

This chapter examines work on inequalities in food and nutrition in the UK since the late 1990s, looking at how problems have been constructed and measured, responses by government and civil society, and future challenges. It begins by summarising data on social inequalities in food and nutritional intakes and outcomes, focusing largely on income and occupationally based inequalities, and outlines why these outcomes are thought to occur. The relationship with health, and particularly health inequalities, is briefly discussed. The location of the Acheson Inquiry within the food and nutrition policy context of the time, and developments since, are discussed in terms of their potential effectiveness and relevance to reducing inequalities. The chapter concludes with an outline of contemporary anxieties and activities in relation to inequalities in food and nutrition.

Inequalities in food and nutrition

It has long been recognised that food patterns, nutrient intakes and physical outcomes of growth and attained body size, vary by indicators of social and economic conditions. People who are better off are more likely to eat healthier diets than those who are poorer, though the size of differences between classes varies by country (Roos et al, 2000; Dowler, 2001; Drewnowski and Specter, 2004) and may be attenuating over time (Crotty and Germov, 2004).

In the UK, differentials in household or individual dietary patterns, nutrient intake and blood levels, by various socio-economic indicators have been observed in the annual national surveys of household intakes (published by MAFF until 2000, now by DEFRA), and in regular national surveys of individual

intakes (Gregory et al, 1995; Finch, 1998; Gregory, 2000; Hoare et al, 2004). Intakes of vitamins, minerals, and dietary fibre, and consumption of vegetables and (especially) fruit, are much lower (and for nutrients, further below Reference Nutrient Intakes) and consumption of white bread, processed meats and sugar are higher, in households whose members are poorer than in those who are more affluent (Leather, 1996; Dowler et al, 2001a). (The further a group's nutrient intake is from the reference level, the more likely it is that some members of the group have inadequate intakes which contribute to poor functioning and ill-health.) The differentials are true for all age groups and geographical regions, and, in contrast to other rich industrialised country experience, worsened during the 1980s and 1990s. They are particularly marked when intakes and food patterns are compared by household income, economic activity (employed versus unemployed/receiving state benefits) or household composition (DEFRA, 2006; Wrieden et al, 2006). Lone parent households, and those with two or more adults and children, which in the UK are more likely to be poor, are also more likely to have lower micro-nutrient intakes (DEFRA, 2006). In other words, nutritional inequalities in the UK were more often found to be associated with poverty and deprivation than with social class defined by occupational group or educational status. There are also differentials by minority ethnic group status, but in the main these are more likely to be associated with material and social conditions than with cultural practice.

One problem with using national survey data to look at inequalities is the small sample size for households in poor material circumstances; this is being addressed through a national survey of nutrition and diet in low-income households to be published in 2007 by the Food Standards Agency. Considerable detail about household income and other social circumstances will be available, as well as nutritional data from members of the same household. This survey will provide data to be used alongside standard representative national surveillance data to investigate more fully the nature of nutritional inequalities. Such quantitative data can be complemented by qualitative data rich in insight

on cultural practice, beliefs and behavioural dynamics (for example, Dobson et al, 1994; Christie et al, 2002). Smaller scale quantitative and qualitative surveys have hitherto been the primary source of understanding how people manage on low incomes, in terms of practice and consequence. For instance, a survey of lone parent households' diets, carried out in the early 1990s when such households' incomes were particularly likely to be low, showed that those in receipt of state benefits for more than a year, especially those repaying rent or fuel arrears (not uncommon), had half the nutrient intakes of parents not living in such circumstances. Parents' intakes of key micronutrients were well below reference levels, although their children's intakes were less affected (Dowler et al, 2001a). Their dietary patterns were characteristically monotonous and with little commodity variety: people mostly ate from a small range of foods or composite dishes. Such findings point up the realities of living on low income for long periods and the effect on food expenditure, and were independent of other socio-demographic indicators, including smoking and self-defined ethnic group.

As well as food patterns and nutrient intakes, nutritional outcome indicators of body size are strongly socially patterned: women and, increasingly, men and children, from lower socio-economic groups are more likely to be obese or overweight, or (in children) thin and short for age (Gregory et al, 2000; Wardle et al, 2002; Drewnowski and Specter, 2004; HC, 2004; Hoare et al, 2004). As is common knowledge, levels of overweight and obesity, defined by Body Mass Index (BMI) are in general increasing across Europe and elsewhere (Lobstein and Frelut, 2003). Rates in the UK have risen by almost 400% over 25 years: in England, 22% of men and 23% of women were classified as obese in 2002, with 43% and 34% of men and women overweight. Similarly, in Scotland, 22% of men and 26% of women were obese in 2003, and 65% of men and 60% of women overweight (SE, 2005). Nearly two million schoolchildren in the UK are overweight, of whom about 700,000 are obese (Jackson-Leach and Lobstein, 2006), and rates in Scotland are worse than in the rest of the UK¹.

However, the relationship between rising overweight/obesity levels and socio-economic status is not simple: the size of differentials depends which social indicators are used (whether household income, social class, receipt of means tested benefits or area deprivation scores), and the relationship between socioeconomic conditions of childhood and development of obesity over time is probably important too (Okasha et al, 2003). Nonetheless, there is emerging evidence that income or area deprivation – material circumstances – are critically important. Stamatakis et al (2005) found that household income, rather than a binary occupation based indicator (manual vs non-manual), predicted childhood obesity; Kinra et al (2000) showed enumeration district deprivation scores were inversely associated with obesity, and independently predicted BMI at age 7 years (Kinra et al, 2005).

Kinra's studies, among others, indicates the importance of both household socioeconomic status and the wider social and economic environment for children. A number of studies demonstrate this ecological effect for adults too: obesity measured by BMI was independently related to the degree of income inequality at state level in the US (Diez-Roux et al, 2000), and even at country level (Pickett et al, 2005). Looking specifically at abdominal obesity, which has more profound implications for morbidity and mortality, Ellaway et al (1997) and Kahn et al (1998) found a similar area effect in Scotland and the US respectively: in other words, those living in areas of greater socio-economic deprivation were not only more likely to gain weight, they were more likely to gain weight around their middles, particularly men. This effect was independent of other factors such as age, smoking behaviour and individual level deprivation. There are also racial or ethnic differences: in the US, people classified as African American or Hispanics have higher rates of obesity (Kumanyika, 2005), and in the UK, people of South Asian origin tend to have a more central fat distribution.

Food, nutrition and health

Patterns of food usage and specific nutrient intakes play a critical role in mediating health outcomes (Davey Smith and Brunner, 1997; James et al, 1997; Dowler et al, 2001a; Key et al, 2004), a role which is now more widely recognised in public and policy discourse (Acheson, 1998; Lang and Rayner, 2001; WHO/FAO, 2003). The general health benefits of a diet rich in fruits and vegetables (including pulses) have been known for centuries, but now, epidemiological and biochemical evidence have demonstrated that the more fruit and vegetables people eat, the lower their risk of cardiovascular disease (CVD), non-insulin dependent diabetes (NIDDM) and various cancers (Joffe and Robertson, 2001; Pomerleau et al, 2003; WHO/FAO, 2003). Recent calculations in the European Union showed that low fruit and vegetable consumption probably contributed 4.4%, and being overweight or obese added a further 7.8%, to the estimated burden of disease for member states; these two together exceeded the impact of tobacco and alcohol (Pomerleau et al, 2003).

Fruit and vegetable consumption is also a marker for other dietary characteristics thought desirable from a health perspective: those who eat large amounts are also more likely to have high intakes of dietary fibre, low intakes of dietary fats, especially saturated fats, and to eat a varied diet. These patterns are known to reduce disease risk: for instance, about a third of cancers are thought to be diet related. The epidemiological importance of food intake patterns per se, rather than just individual nutrients, is being increasingly recognised, both because of the biochemical complexity of whole foods and their effects, and the realities of people's responses to health messages (Bazzano, 2005). In epidemiological research, however, indicators of dietary patterns are in fact still fairly crude (Jacques and Tucker, 2001); most surveys simply characterise fruit and vegetable consumption as 'high' or 'low', often in relation to the population mean, and usually find that lower socio-economic groups are more likely to be in the 'low' group. In practice, though, many populations as a whole consume less fruit and vegetables than thought desirable ; it is not only those who are poor who eat insufficient for health.

Obesity also has a direct, independent link to CVD, NIDDM, high blood pressure and some cancers, as well as other conditions such as osteoporosis, particularly where weight gain is abdominal (NAO, 2001; HC, 2004). In the UK, there are now more than two million diabetics (projected to rise to three million by 2010) and increasing insulin resistance, particularly in children, among whom NIDDM is rising (HC, 2004). Obese adults have a nine-year reduction in life expectancy, particularly those with central obesity and/or who also smoke – which is also highly socially patterned (see Spencer, chapter 9) (HC, 2004). Unsurprisingly, there is also considerable social and psychological stigma to being obese, especially for children. However, the economic implications of obesity are the main reason for current government anxieties. In the UK, in terms of NHS costs and loss of earnings, obesity costs are estimated as between £3.3 and £3.7 billion; if overweight is included, costs are £6.6-7.4 billion (HC, 2004). These figures of course exclude the personal distress from sickness, incapacity, loss of employment and esteem, and general misery. Such costs, which are more difficult to estimate, are much more likely to accrue to poorer people.

Understanding causes and mechanisms

There is a long history of health and other professionals describing the dietary practices of working or manual class people as unhealthy or inadequate because of nutritional or housekeeping ignorance or illiteracy, and of generally undesirable habits (people ‘do not spend money wisely and do not know how to shop, budget and cook healthy food’). In part this practice derives from assumptions which elide ‘social class’, as representing people’s identities, cultural realities and lived, daily experiences, with ‘socio-economic status’, representing a statistical grouping of specific measurable indices (Crotty, 2005, p244; see also Williams et al, chapter 4). These indices include household income,

receipt of means tested benefit, area level composite deprivation scores, education or occupation – used variously in the studies referred to earlier. They are probably not simply interchangeable in their explanatory power, since their relationship with food purchasing patterns or nutritional outcomes may differ (Dowler, 2001; Turrell et al, 2002), as the literature briefly cited demonstrates. However, in the absence of fuller models of understanding, indices of socio-economic wellbeing are used in epidemiological manipulation of data on measurable ‘inputs’, ‘intermediary determinants’ and ‘outcomes’; the latter being, in the present instance, nutrient intakes, dietary patterns or obesity.

It is in fact quite a challenge to disentangle the relationships between the foods people choose to eat (and why, how, where and with whom they eat it), and their personal social and economic circumstances, as well as the major drivers of food culture and consumption choices in contemporary societies. Figure 1, which has been used in various forms for about a decade, is an attempt to map out, from the household perspective, the potential important determinants of what foods are bought and consumed; socio-economic circumstances at individual, household or area level clearly condition many of these determinants. [Figure 1 near here] Not illustrated but critically shaping and driving food choice are the major trends in the food system: market globalisation with power concentration²; increasing availability and promotion of highly processed and ready-prepared foods and meals; state withdrawal from food in social policy, in school meal services and standards and in welfare; loss of local food economies and increasing dominance of supermarkets; and the growth of food marketing, particularly to children and young people (Nestle, 2002; Lang and Heasman, 2004). Recent work evaluating a decade of Scottish food policy highlighted the difficulty of establishing the role these major trends play in determining food choice; whether they are also exacerbating social and economic inequalities in diet or diminishing them is hotly debated (Lang et al, 2006).

Of course, class as in cultural or ethnic identity play some part in food commodity choices and

patterns of using food (Lupton, 1996; Murcott, 2002), but even these differences are becoming harder to characterise consistently as societies become both more eclectic and more homogenous in practice. For instance, some 75% of food sales in the UK are from four major retailers (Tesco, Sainsbury, Asda-Walmart and Morrisons), who also sell increasing amounts of cook-chill 'ready-made' meals: composite dishes which represent a variety of cuisines and tastes. Whether poorer people buy more 'ready-meals' than do richer is a moot point; they certainly buy different convenience foods, and may be more likely to buy the familiar which can be divided into predictable portions. Trying new dishes, particularly those which rely on home cooking where outcomes can be unpredictable, is not a sensible strategy for those on a tight budget with no room for experimentation or failure. Health outcomes such as heart disease, diabetes, high blood pressure or cancers probably play some part in people's day to day food decisions, but in poorer households, particularly those where money is scarce, may well be less immediate than pleasing the family or friends, perhaps being able to eat relatively quickly or not being hungry. There has also been continuous anxiety from policy makers and professionals over the loss of cooking skills (Nestle, 2002; Lang and Heasman, 2004 among many); this concern often focuses on the needs of lower socio-economic groups, whose abilities are thought to be especially important (Wrieden et al, 2007). In fact, the evidence on socio-economic differentials is equivocal (Caraher et al, 1999) and some dispute whether there has been such a loss of cooking skills, not least because of the difficulties in defining and measuring practice (Short, 2006).

Caraher M and Reynolds J. (2005) Lessons for home economics pedagogy and practice. *Journal of the Home Economics Institute of Australia*, 12, (2), 2-15

What is less tangible are the social norms and expectations of peer groups and society in general, and the factors which shape and change them. The rise in obesity and its potential costs to society have sharpened the debate on the role of TV and other advertising on food purchasing, particularly that geared to children. Evidence of a damaging effect has recently emerged (Hastings, 2003;

Ofcom, 2004; Caraher et al, 2006), since many argue that the majority of advertising promotes food which is more likely to be highly processed and unhealthy (EHN, 2005). This in particular is argued to contribute to the general rise in obesity in adults and children, through encouraging increased consumption of energy dense foods high in saturated fat and sugar, particularly 'fast foods', along with less physical activity and low fruit and vegetable intake (Prentice and Jebb, 2003; Drewnowski and Specter, 2004; Astrup et al, 2006). The social distribution of obesity may also be a product of early life experience compounded by subsequent material and social conditions: hence the importance of a lifecourse approach and early intervention (National Heart Forum 2003). Whether poorer people watch more commercial television, are less active, or live where there are more likely to be fast food shops, is debatable (Dowler, 2001; Prentice and Jebb, 2003; Cummins and Macintyre, 2005; Sturm and Datar, 2005), but their lower fruit and vegetable intake is a consistent finding (Blanchette and Brug, 2005; Sturm and Datar, 2005). As Lobstein and Frelut put it:

Poor maternal and foetal nourishment and a low level of breastfeeding may lead to rapid weight gain in an infant's early months, predisposing to shorter stature and central adiposity. The dynamics are compounded by a childhood diet based on energy-dense foods and a low intake of fruit and vegetables, and an urban culture with lower levels of physical activity. (Lobstein and Frelut, 2003: 199)

Much of the research in the 1980s and 1990s on why people on low incomes or in areas of deprivation bought the food they did pointed to the importance of material and structural issues of how much money people had, what food was available and at what cost in the shops that people used (often subsumed under the term 'access'), as well as skills, taste and cultural aspects (e.g. Caraher et al, 1998). More recent, questionnaire based research examining low income households' thinking and priorities about food choice has found these latter factors, along with 'beliefs' (often

subsumed under the term 'attitudes') to be rated by respondents as more important than commodity availability or physical access to large supermarkets (for instance, Dibsdall et al, 2003; White et al, 2004). These apparent differences may be as much a reflection of methodology as of a fundamental reality, in that the characteristics of the physical and social environment in which people live or work play a critical role in shaping and framing the largely unconscious, everyday practices of food purchase and consumption, so that 'availability and access' are not 'perceived', whether the type and location of shops and markets, or the provision in schools or workplace canteens.

The Acheson Inquiry, in reflecting the then current research on the importance of availability, affordability and access, thus departed from previous explanations for why poor people ate badly located in behaviour and taste. This focus has spawned a research agenda since the publication, in that the UK Economic and Social Research Council and government has funded retail mapping³, and the salience of the notion of 'food deserts' has been widely debated (Wrigley, 2002). Cummins and Macintyre (2005) argue that evidence for availability and price being worse in areas where poorer people live is not found in Glasgow or Brisbane, and two quasi experimental studies (Wrigley et al, 2003 and Cummins et al, 2004, cited in Cummins and Macintyre, 2005) suggest that access to a reasonable range of cheaper fruit and vegetables via a new large supermarket does not radically change purchasing patterns or intakes in low income households. (However, this research, unlike that of Morris and his colleagues (2000; 2005) does not explore the relationship of food prices to actual income, or to that which is available for food expenditure in the participating households.

Qualitative research in the Glasgow study highlighted local people's antipathy to the supermarket advent). White et al (2004), in a detailed study of Newcastle's food shopping, found that retail related factors were not important predictors of food patterns for the majority of the population, who shopped at larger supermarkets where the range of 'healthier' food, including quality fruit and vegetables, was better than in smaller 'convenience' stores. But there were some areas of the city where it was hard

to obtain reasonably priced fresh fruit and vegetables in local shops. This findings is echoed in other studies: Dowler et al (2001b) showed marked variation in availability and price of fruit and vegetables in an area of deprivation in the West Midlands, and others have shown the prices of basic food commodities to be higher in shops where poorer people live than in large supermarkets, which are often located for car users (as was the case in White et al).

For those on low incomes, where basic expenditures such as rent, fuel and water absorb a high proportion of outgoings – costs which have risen faster than the retail price index in recent years, and which may vary around the country, unlike income from benefits, pensions or the minimum wage – the cost of food relative to other essentials can be very critical in determining purchasing patterns (Dowler, 2003). Households may have very little flexibility in how they prioritise expenditures: compulsory deductions of arrears, fines or worse, for defaulting on paying bills or rent mean that food often represents the only flexible budget item (Dobson et al, 1994; Dowler et al 2001). Qualitative research shows people economize either by buying cheaper or different items (no fruit, fewer vegetables, cheaper processed meats, filling instant foods), or by omitting meals altogether (relying on sandwiches, breakfast cereals, or nothing). Over the last two decades the poorest communities have also faced multiple deprivations of unemployment and inadequate housing, despite regeneration initiatives, along with withdrawal of basic services and amenities such as banks and food retailers. Travel costs to reach supermarkets (where prices may be lower than local shops) can mean economising on 'luxury' items such as fruit.

In the UK, the term 'food poverty' has increasingly been used by academics and policy makers to describe these circumstances: where households or individuals are 'unable to acquire or consume adequate quality or sufficient quantity of food in socially acceptable ways, or the uncertainty that one will be able to do so' (Riches, 1996, cited in Dowler et al, 2001a, p 2). The assumption is that

material conditions rather than intransigence are key. Few studies to date have been able to differentiate short and long term impacts of low incomes or living in areas of deprivation on food patterns and nutrient intakes (Dowler, 2001a is an exception). The Department of Work and Pensions is attempting to monitor long term poverty and its effects, and the forthcoming Food Standards Agency funded survey should provide useful data. Research using a budget standards approach has demonstrated that UK families with dependent children (Parker et al, 1998), young single men paid at or below the minimum wage (Morris et al, 2000), and older people living on state pensions (Morris et al, 2005), have insufficient money to meet basic needs for healthy living.

The definition of food poverty also recognises social acceptability: food as an expression of identity and ability to provide for the family – issues not readily assessed in epidemiological surveys or national surveillance. If you have to eat in a day centre⁴ or shop in a unappealing discount store, or if your local shops are inadequately stocked with poor quality or more expensive food, or your children cannot have a packed lunch similar to that of their friends, you are not living in ways deemed normal by the rest of society, whatever your nutrient intake. In Eire the National Anti-Poverty Strategy uses normative expectations of foods and meals (rather than nutrients) as part of its measure of 'consistent' poverty⁵, combining a relative income measure with a composite deprivation index of eight items, three of which relate to food: having a meal with meat, fish or chicken every second day; having a roast or its equivalent once a week; not having gone without a substantial meal in last two weeks. These indices are similar to the consensually defined necessities of the Poverty and Social Exclusion Surveys (discussed in Dowler, 2003). People do not have to use or consume these things, but they should be able to do so – they should have the resources (money, time) and access to express normative choices. Whether or not the term 'food poverty' is used, the fact that there are people living in material circumstances which make it very difficult to purchase or obtain the food they

need for healthy living is an important one, and potentially sidesteps debates about whether or not people *choose* to eat in ways which are not conducive to health, in the shorter and longer term.

There has been a growth in using participative research methods, particularly by local authorities and civil society, which gives voice to the wider perceptions of those living in conditions of deprivation, both in analysing the problem and pointing to solutions. These methods also enable the particular combinations of factors in a given place or set of social circumstances to be established and inform local response, particularly to inequalities⁶. Such approaches may be of variable quality, but they can also sometimes be very creative in methodological approach and intersectoral involvement (Johnson and Webster, 2000).

Policy responses to food and nutrition inequalities in the UK

Inequalities in food and nutritional status have long been acknowledged in the UK, although contributory factors have mostly been seen as an aspect of 'lifestyle' – a failing in household management and individual choice. The alternative has also been argued, that nutritional inequalities represent the outcome of a set of structural problems: individuals or households lack access to or control over resources, or opportunities to secure a reasonable livelihood; they live (or work) in places where food conducive to health is not readily available at affordable prices, but where cheap, filling food that does not conform to nutritional guidelines for health is widely available; they are bombarded with advertising for the latter rather than the former. As a result they find it very difficult to purchase a healthy diet. These distinctions are crucial for policy response. If 'lifestyle choices' are at fault, the role of the state at national or local level is to offer corrective information and skills delivery to enable appropriate choice, and market liberalization to allow such choice efficient expression. Where people

make 'wrong choices', better ways of providing information and/or skills is needed. If structural problems are key, the state's responsibility is one of regulating access to and control over food (including the role of multinationals in food procurement and distribution) and other resources, such as jobs, wages, and income levels. The Acheson Inquiry largely took the second view: that structural issues of access and income levels were crucial to reducing inequalities in food and nutrition. However, despite some promising early initiatives, such as free fruit in schools and the introduction of a minimum wage, much of the intervention since has focused on local projects and promotional schemes, characterised by downstream, modest short-term investments. The drift back to 'lifestyle choices' is all too apparent.

The Acheson Inquiry built on several years' work by civil society campaigning and advocacy groups and some academic research, as well as the work of a small Low Income and Diet Project Team (under the previous Conservative Government's Nutrition Task Force) (Dowler et al, 2001a). The report of this Project Team, despite a remit to identify examples of good practice in local initiatives and projects, had addressed structural and material issues as well, such as changes in food retailing (but not the adequacy of benefit levels, which was specifically excluded, see Leather, 1992), and the responsibilities of local and national government (DH, 1996). It called for a national network of local initiatives on food and low income, and creation of local public/private sector food partnerships, especially in areas of multiple disadvantage, to regenerate local food economies. The former happened under the aegis of Sustain's Food Poverty project⁷ and the latter has slowly developed in one or two places⁸. As it happened, Acheson himself chaired one of the meetings promoting the Project Team's recommendations, held within weeks of the Labour election landslide in May 1997, at which the then new Secretary of State for Public Health, Tessa Jowell, was present. Perhaps as a result, food access was mentioned as an issue in the early public health White Paper (DH, 1999a); it

was certainly highlighted in the Acheson Inquiry report (Acheson, 1998), along with two other national level issues, in its recommendations:

- increase availability and accessibility of an adequate and affordable diet, and specifically, policies to ensure adequate retail provision of food to those who are disadvantaged;
- review the Common Agricultural Policy (CAP)'s impact on inequalities in health;
- strengthen the CAP Surplus Food Scheme to improve the nutritional position of the less well off.

Other indirect food recommendations addressed social security benefits, transport and breastfeeding (the latter is addressed in chapter 5).

There was no co-ordinated policy response to nutrition and food inequalities. The newly created Social Exclusion Unit (SEU) reported on problems in the retail sector in deprived areas in a consultation document which contained useful recommendations about community based retailing and small businesses strategies (DH, 1999b). However, little central government activity followed, and no mechanism was ever set up to coordinate activity. A subsequent SEU report (2001) set quantified targets for improving the most deprived neighbourhoods in England (with similar publications for Scotland and Wales) but access to shops or appropriate food had largely disappeared from the national regeneration agenda. As mentioned above, there has been investment in research on physical and, to some extent, economic, access to healthy food, particularly fresh fruit and vegetables; the equivocal results seem not to have engendered government response. There were some elements of addressing access in the DH '5 A Day' programme, but this was probably more due to the approach of professionals on the ground than as a result of policy to improve access. There have been a few initiatives on social and retail planning, and rather more on attempting to change consumer demand, so that, for instance, local shops where poorer people live will stock 'healthier' food ranges in response (Caraher, 2005). More effective public health solutions probably lie in addressing the 'upstream' structural issues, rather than in trying

to influence individual 'attitudes'. There are few nutrition policies which explicitly address reduction of inequalities (this issue is discussed in Lang et al, 2006); more usually, interventions have simply been targeted at areas of deprivation, in the hope that this will capture low socio-economic households groups and improve their nutritional circumstances. The effectiveness and merits of a universalist, population approach, as opposed to a selectivist or targeted one to meet the needs of particular groups is debated in the public health literature, and some of the issues apply when targeting is by socio-economic status (Prättälä et al, 2002).

The Acheson Inquiry was concerned with England and Wales; in Scotland, the adoption of the Scottish Diet Action Plan in 1996 built on a clear statement of inequalities in outcomes reflecting unequal access, availability and behavioural demand (The Scottish Office, 1994). There was a call to remove 'barriers' to healthy eating for people on low incomes. In practice, as a recent evaluation has shown, there has been no reduction in nutritional inequalities (and in fact no improvement in average intakes); the reasons for such a policy failure are complex but include a loss of focus which permitted too many disparate initiatives (Lang et al, 2006). In Wales, an initiative on Food and Wellbeing was launched in 2003; this also included statements about access and the need to address the role of the food industry (FSAW, 2003). Most activity to date has been project based; a mid-term evaluation is currently underway.

The 'School Fruit Scheme' was gradually rolled out across England, with a parallel scheme in Scotland, and entitled all four to six year old children in Local Education Authority maintained infant, primary and special schools to a free piece of fruit (and now vegetables) each school day because 'For too many families, access to healthy food is limited, especially in some low income areas where affordable fruit and vegetables can be hard to find.' (DH, 2002, p1). Early evaluation has emphasised successes in terms of process and results⁹. School breakfast initiatives in England, Scotland and

Wales have also been promoted and partially funded by central government, at least initially, some of which were framed in terms of access problems, although probably more from recognition of household or parental failure to provide food early in the day. Free fruit and vegetables schemes are now funded from the New Opportunities Fund, the largest of the lottery good cause distributors.

A main focus for government activity has been the development of a wide range of local food initiatives and projects, which sometimes give immediate, short-term benefits but often fail to address fundamental issues (Dowler and Caraher, 2003) and which lack a comprehensive, competent strategic base. From 2000, government national responses to nutrition inequalities coalesced in the health sector around the '5 A Day'¹⁰ (fruit and vegetable) programme and the National School Fruit Scheme (DH, 2002). However, despite the rhetoric, one could argue that both were designed more to address general low fruit and vegetable intakes, rather than inequalities. The community based '5 A Day' work was largely project structured and was generally located in areas of deprivation, but whether the benefits significantly accrued to poorer households and their members is questionable. There is also evidence that as the current policy agenda has switched to addressing obesity, particularly in children, continual support for fruit and vegetable promotion is less secure. The inequalities dimension to obesity is acknowledged but not often explicitly addressed except under individual aspects of 'lifestyle'.

Most projects, rather than tackling the determinants of inequalities, focus on skills of cooking, household management or occasionally, growing, (McGlone et al, 1999; Caraher and Dowler, in press). There has been a great fashion for 'food co-operatives' to address 'access' issues, but encouraging people who live on very low incomes, who are often time poor (because they are lone parents) or unskilled, to source fresh produce locally and then manage distribution and recovery of financial outlay through volunteer systems is hardly a plausible sustainable solution to the

fundamental challenges of contemporary food retailing and local regeneration¹¹. Indeed, some argue that regeneration in practice now more often means support for fast food outlets, 'gastro-pubs' and gambling. The emphasis could thus be seen as helping those who are poor to help themselves to tackle the inequalities which professionals find challenging. Of course there are some good local examples of imaginative, coordinated activities which build on local people's identification of needs and where solutions attempt to address both structural issues and personal skills and desire for celebration of food cultures, but these are rare in a field where projects come and go with funding and the current policy agenda.

Those working on local projects in fact often struggle with a shifting policy context for their work: NHS reforms, National Service Frameworks for prevention and care, the National Cancer Plan, and health inequalities, many of which focus more on secondary than primary prevention. The recent location of decision making and money at local levels (through Primary Care Trusts and local authority structures such as Local Strategic Partnerships and Local Area Agreements) means that food and community development can lose out to government 'must do' acute service priorities such as reducing waiting lists (Caraher and Dowler, in press), not least because the food projects lack designated funding. The UK Chief Medical Officer warned of the diversion of public health budgets to clinical targets, with concomitant loss of small-scale local projects and their skills, in his 2006 Report. Targeting by deprivation area is a common practice (see Carpenter, this volume), but implementation has been patchy, not well supported and left to mix of local funding mechanisms, which means many ground-level staff operate on short contracts. Furthermore, not all people on lower incomes live in areas of deprivation (Joshi et al, 2000). A major funding source in the late 1990s and early 2000s was the Community Fund, sourced from the National Lottery; the Big Lottery Fund was formed from the merger of the Community Fund and the New Opportunities Fund. It currently distributes around £600 million annually (half the 'good cause' funding from the National Lottery). The Big Lottery Fund is

now a major player in funding health, education and environmental projects, with emphasis on tackling disadvantage and working through voluntary groups supporting community improvement. This arguably represents a move from state welfare funding as part of a public health agenda to one based on charity and a philosophical move from rights to benevolence.

Reform of the Welfare Food Scheme to re-emerge as Healthy Start in 2004 has switched a food related income transfer programme into a potentially more restrictive nutrition intervention programme, and subsumed welfare under the Department of Health, with links into Sure Start local programmes and now Children's Centres. School meals have also been a growing focus for anxieties and somewhat piecemeal solutions (Gustafsson, 2002). The recent government attention to school meal quality, sourcing and quantity, has little explicit focus on inequalities (Morgan, in press). Indeed, the likelihood is that parental costs will increase with quality improvement, which will make further demands on low income households. The eligibility for free school meals has narrowed and become more complicated with the advent of Child Tax Credit: many children who live in poor households do not qualify, and 25% of those who are eligible fail to do so because of stigma and other reasons (Dowler et al, 2001; Riley, 2005). Again, there is a shifting of responsibility for feeding poorer children from the state to low income parents, who usually have little control over what is offered, at what price and under what circumstances, in schools. The result is often that children bring unhealthy packed lunches or spend their limited 'dinner money' on cheap fast foods such as chips, which are readily available just outside the school gates. Campaigns for universal free primary school meals, such as that in Scotland, can draw on the example of Hull city council, where school meal take-up doubled over two years and pupil learning capacity improved as a result of healthier intakes.¹²

The CAP's impact on health and nutrition has largely been addressed by European alliances (e.g. Schäfer Elinder, 2003; Robertson et al, 2004) or civil society organisations (e.g. Sustain, 2002), who work hard to keep public health on the discussions agenda, with some academic research support. However, the current discussions on CAP reform do not start until 2008, with implementation in 2013, and the key UK government document (HM Treasury/ DEFRA, 2005) makes no mention of health at all, let alone inequalities. The UK lead on health inequalities during its 2005 presidency of the EU and raised salient issues including the role of diet¹³. In 2006, the EU will produce a green paper on nutrition, building on work from a forum of partners including the food and marketing industries and civil society groups (such as the National Heart Forum), some of whom focus on inequalities issues.

The effects of the CAP Surplus Food Scheme are poorly understood and publicised (Lang, 2002; Sustain et al, 2002). One long-criticised effect of the CAP is overproduction of subsidised foods; the Scheme redistributes easily stored foods (such as butter, canned meat) to those who are less well off, but does not cover fresh produce such as fruit and vegetables, whose surpluses are routinely destroyed (Lobstein and Longfield, 1999; Robertson et al, 2004). The subsidies also, it is argued, maintain food prices higher than they need be, which affects poorer people more than richer, since the former spend a higher proportion of their income on food.

Present and future realities?

Two major reviews by Wanless (2002; 2004) for the Treasury of the social and economic costs of ignoring health impact of current trends were significant for their espousal of the role of food and nutrition in contributing to health inequalities. Problem statements from the late 1990s therefore gained a degree of credibility and urgency, but the challenges remain the identification, establishment

and co-ordination of appropriate policy response, and recognising 'food' within the experience and definitions of poverty. The 2004 England White Paper *Choosing Health: making healthy choices easier* (DH, 2004) in pushing an individualization agenda for food relegated the state's role, apart from the residual responsibility for welfare food provision, to one of changing individual perceptions and practice so people assume more responsibility for their own lifestyles and thus food choice. The White Paper signalled powerful potential policy shifts, towards social marketing and partnership working with the food and marketing industries in particular, whose impact on inequalities is very unclear. The source of sufficient, appropriate funding is critical, as will be the 'upstream: downstream' balance of policy focus. Will 'poor food' still turn out to be 'poor people's' responsibility (Food Ethics Council, 2005)?

Interest in public health nutrition across government has been galvanised by the potential costs of the obesity 'crisis'¹⁴, but the extent to which obesity will derail the wider agenda, and particularly attempts to address inequalities, is unclear. The recent DH *Food and Health Action Plan* (2005), however, potentially represents a competent policy framework and has an upstream systematic strategy for improving public health nutrition in England, although it has no explicit inequalities focus. The Scottish Executive's acceptance of the upstream, structural recommendations, including the need to build inequalities into targets, in the recent report evaluating a decade of nutrition policy, is similarly promising (Lang et al, 2006), although in neither country are signals always translated into coherent policy activity. The *Food and Health Plan* includes a comprehensive approach to reshaping the food economy and culture through social marketing, front-of-pack 'consumer friendly' food labelling, restrictions on food marketing to children, encouraging processed food reformulation, school meal standards, public food procurement and moves to reform the CAP on a health agenda.

The *Food and Health Plan* has yet to be fully funded and implemented, and the extent to which government will regulate the food and marketing industries and champion these issues in Europe is unknown. The Food Standards Agency was charged with leading on food labelling, food marketing to children and food reformulation, starting with salt reductions. Despite some successes, their experience with supporting research on clearer product labelling, for instance, has been mixed: consumer and public interest groups favour a colour-coded 'traffic-light' system, whereas some key food companies reject it as too simple¹⁵. The UK government has not yet regulated labelling (an EU competency) but may push to do so; it has recently announced regulation of TV marketing of foods high in fat, sugar and salt particularly to children (a 9 pm food marketing watershed is still under debate). But the *Food and Health Plan* is a whole population approach; the possibilities for reducing nutrition and on health inequalities is unclear, not least since there are few good practice examples of government addressing structural issues to reduce food inequalities. Public procurement for school meals led by Scotland and Wales are important potential models and drivers for change.

Conclusions

This chapter has outlined the continuing inequalities in food patterns and nutrient intakes in the UK, and summarised current research which contributes to understanding why these inequalities persist. Space has precluded discussion of the wider environmental challenges of retail and planning demands, the impacts of food system globalisation (both on commodity availability and cost, and on advertising) and regulatory mechanisms at national, regional and global levels (see Lang and Heasman, 2004; Nestle, 2002; Lang et al, 2006). The responses by government at national levels has tended to focus on 'lifestyle' changes, on the model of a responsibility partnership between the state and individuals: that people should be facilitated to choose food which contributes to their

health. However, for many people, choice is proscribed by factors outside their control. Furthermore, attempts to change deeply imbedded social behavioural patterns by using negative language of 'barriers', which often reinforce hierarchical social distinctions of 'taste', are less likely to succeed than those which embrace people's own aspirations and desires, and actively engage in enabling their achievement.

Serious response to the structural dimensions of the food system which are beyond consumer control at national government level was mooted in the late 1990s and features to some extent in the 2005 *Food and Health Action Plan*. 'Food labelling', partial response to the 1980s privatisation of school food provision, and recent restrictions on TV advertising are evidence of the beginnings of an engagement at population level to change food culture and economy, but the food industry sector is largely seen as benign partner rather having responsibility for causing as well as curing the problem, particularly in England. Increasingly, the state actively engages with the food industry in its widest aspects, to achieve 'better behaviour', particularly among those on low incomes. The extent to which the current raft of changes will address health inequalities in food and nutrition is unknown and as yet unmonitored. More imaginative approaches have been taken at local authority levels, to try and at reduce the constraints of availability and affordability for good food for all; but even these have yet to be mainstreamed or shown to make substantial, measurable difference to food outcomes.

The food civil society lobby in the UK has grown in strength and effectiveness, contributing to raising issues about rights and entitlement to food (Riches, 2003) as a public health good, instead of merely a focus for benevolence or private activity as a 'lifestyle' choice. Tackling inequalities in food and nutrition requires serious 'upstream' intervention, but the complexities of both the food system, and people's engagement with it (which figure 1 simplifies) require imaginative and courageous cross-

sectoral working. Only thus can all citizens – and those without even that label and associated rights – be enabled to enjoy food conducive to health living in all its aspects.

References

Acheson, D. (1998) *Independent inquiry into inequalities in health*. London: Department of Health.

Astrup, A., Bovy, M.W.L., Nackenhors, K. and Popova, A.E. (2006) 'Food for thought or thought for food? – A stakeholder dialogue around the role of the snacking industry in addressing the obesity epidemic', *obesity reviews*, vol 7, pp303-12.

Bassano, L.A. (2005) *Dietary intake of fruit and vegetables and risk of diabetes mellitus and cardiovascular diseases*, background paper for joint FAO/WHO Workshop on Fruit and Vegetables for Health, Kobe: Japan.

Blanchette, L. and Brug, J. (2005) 'Determinants of fruit and vegetable consumption among 6-12 - year-old children and effective interventions to increase consumption', *Journal of Human Nutrition & Dietetics*, vol 18, pp 431-43.

Caraher, M. (2005) 'Food policy and regeneration: food for thought', *Local Work: Voice. Centre for Local Economic Strategies*, vol 64, pp 1-4.

Caraher, M., Dixon, P., Lang, T., Carr-Hill, R. (1998) 'Barriers to accessing healthy foods: differentials by gender, social class, income and mode of transport', *Health Education Journal*, vol 57, no 3, pp 191-201.

Caraher, M. and Dowler, E. (in press) 'Food projects in London: Lessons for policy and practice', *Health Education Journal*.

Caraher, M., Lang, T., Dixon, P. and Carr-Hill, R. (1999) 'The state of cooking in England: The relationship of cooking skills to food choice', *British Food Journal*, vol 101, no 8, pp 590-609.

Caraher, M., Landon, J. and Dalmeny, K. (2006) 'Television advertising and children: lessons from policy development', *Public Health Nutrition*, vol 9, no 5, pp 596-605.

Christie, I., Harrison, M., Hitchman, C., Lang, T. (2002) *Inconvenience food – the struggle to eat well on a low income*, London: Demos.

Crotty, P. and Germov, J. (2004) 'Food and class', in J. Germov and L. Williams (eds) *A Sociology of Food and Nutrition: The Social Appetite* (2nd edn), Victoria, Australia: Oxford University Press, pp 241-62.

Cummins, S. and Macintyre, S. (2005) 'Food environments and obesity – neighbourhood or nation?', *International Journal of Epidemiology*, vol 35, pp 100-4.

DH (Department of Health) (1994) *Eat Well! Action Plan from the Nutrition Task Force to achieve the Health of the Nation targets on diet and nutrition*, London: Department of Health.

DH (1996) *Low Income, Food, Nutrition and Health: Strategies for Improvement*. A Report from the Low Income Project Team to the Nutrition Task Force, London: Department of Health.

DH (1999a) *Saving Lives: Our Healthier Nation*, White Paper July 1999. Cm 4386 London: The Stationery Office.

DH (1999b) *Improving Shopping Access*, Policy Action Team 13, London: Department of Health.

DH (2002) *The National School Fruit Scheme*, London: Department of Health.

DH (2004) *Choosing Health: Making healthy choices easier*, London: Department of Health.

DH (2005) *Choosing a better diet: a food and health action plan*, London: Department of Health.

Dibsdall, L.A., Lambert, N., Bobbin, R.F. and Frewer, L.J. (2003) 'Low income consumers' attitudes and behaviours towards access, affordability and motivation to eat fruit and vegetables', *Public Health Nutrition*, vol 6, no 2, pp 159-68.

Diez-Roux, A.V., Link, B.G. and Northridge, M.E. (2000) 'A multilevel analysis of income inequality and cardiovascular disease risk factors', *Social Science & Medicine*, vol 50, pp 673-87.

Dobson, B., Beardsworth, A., Keil, T. and Walker, R. (1994) *Diet, Choice and Poverty: social, cultural and nutritional aspects of food consumption among low income families*, London: Family Policy Studies Centre for the Joseph Rowntree Foundation.

Dowler, E. (2001) 'Inequalities in diet and physical activity in Europe', *Public Health Nutrition*, vol 4, no 2B, pp 701-9.

Dowler, E. (2003) 'Food and Poverty in Britain: Rights and Responsibilities' in E. Dowler and C. Jones
Finer (eds) *The Welfare of Food: rights and responsibilities in a changing world*, Oxford: Blackwell
Publishing, pp 140-59.

Dowler, E. and Turner, S. with Dobson, B. (2001a) *Poverty bites: food, health and poor families*,
London: Child Poverty Action Group.

Dowler, E., Blair, A., Rex, D., Donkin, A. and Grundy, C. (2001b) *Mapping access to healthy food in
Sandwell*, Report to the Health Action Zone, available from: [http://www.rrt-
pct.org.uk/healthy_living/SANDWELL.PDF](http://www.rrt-pct.org.uk/healthy_living/SANDWELL.PDF).

Dowler, E. and Caraher, M. (2003) 'Local Food Projects: the New Philanthropy?' *Political Quarterly*,
vol 74, no 1, pp 57-65.

Drewnowski, A. and Specter, S.E. (2004) 'Poverty and obesity: the role of energy density and energy
costs'. *American Journal of Clinical Nutrition*, vol 79, pp 6-16.

Ellaway, A., Anderson, A. and Macintyre, S. (1997) 'Does area of residence affect body size and
shape?', *International Journal of Obesity*, vol 21, pp 304-8.

EHN (European Heart Network) (2005) *The marketing of unhealthy food to children in Europe*,
<http://www.ehnheart.org/> or <http://www.heartforum.org.uk/>

Friends of the Earth (2005) *Good Neighbours? Community Impact of Supermarkets*, London: Friends of the Earth.

Finch, S. (1998) *National diet and nutrition survey people aged 65 years and over. Vol. 1 Report of the diet and nutrition survey*, London: The Stationery Office.

Food Ethics Council (2005) *Getting personal: shifting responsibilities for dietary health*, Brighton:

Food Ethics Council, obtainable from <http://foodethicscouncil.org/>

FSA(W) (Food Standards Agency Wales) (2003) *Food and Well Being: Reducing Inequalities through a nutrition strategy for Wales*, Cardiff: Food Standards Agency.

Gregory J.R., et al. (1995) *National Diet and Nutrition Survey: children aged 1.5 to 4.5 years*, London: H.M. Stationery Office.

Gregory, J.R. (2000) *National Diet and Nutrition Survey: young people aged 4-18 years Vol. 1 Report of the diet and nutrition survey*, London: The Stationery Office.

Gustafsson, U. (2002) 'School Meals Policy: The Problem with Governing Children' *Social Policy and Administration*, vol 36, no 6, pp 685-97.

Hastings, G., Stead, M. et al, (2003) *Review of Research on the Effects of Food Promotion to Children*, Report prepared for the Food Standards Agency, Glasgow: Centre for Social Marketing.

HM Treasury and DEFRA (Department for Environment, Food and Rural Affairs) (2005) *A Vision for Common Agricultural Policy*, London: The Stationery Office.

Hoare, J., et al. (2004) *National Diet and Nutrition Survey: Adults Aged 19 to 64 Years: volume 5: summary report*, London: TSO.

HC (House of Commons Health Committee) (2004) *Obesity. Third report of Session 2003-4. Volume 1*, HC 23-1, London: TSO.

Jackson-Leach, R. and Lobstein, T. (2006) 'Estimated burden of paediatric obesity and co-morbidities in Europe. Part 1. The increase in the prevalence of child obesity in Europe is itself increasing', *International Journal of Pediatric Obesity*, vol 1, no 1, pp 26-32.

Joffe, M. and Robertson, A. (2001) 'The potential contribution of increased vegetable and fruit consumption to health gain in the European Union', *Public Health Nutrition*, vol 4, no 4, pp 893-901.

Johnson, V. and Webster, J. (2000) '*Reaching the parts ...*' *Community Mapping: Working together to tackle social exclusion and food poverty*, London: Sustain; the Alliance for Better Food and Farming.

Joshi, H., Wiggins, R.D., Bartley, M., Mitchell, R., Gleave, S. and Lynch, K. (2000) 'Putting health inequalities on the map: does where you live matter, and why?' in H. Graham (ed.) *Understanding Health Inequalities*, Buckingham: Open University Press, pp 143-155.

Kahn, H.S., Tatham, L.M., Pamuk, E.R. and Heath, C.W.Jr. (1998) 'Are geographic regions with high income inequality associated with risk of abdominal weight gain?' *Social Science & Medicine*, vol 47, pp 1-6.

Kinra, S., Nelder, R.P. and Lewendon, G.J. (2000) 'Deprivation and childhood obesity: a cross sectional study of 20,973 children in Plymouth, United Kingdom', *Journal of Epidemiology and Community Health*, vol 54, pp 456-60.

Kinra, S., Baumer, J.H. and Davey Smith, G. (2005) 'Early growth and childhood obesity: a historical cohort study', *Archives of Disease in Childhood*, vol 90, pp 1122-27.

Kumanyika, S. (2005) 'Obesity, Health Disparities and Prevention Paradigms: Hard Questions and Hard Choices', *Preventing Chronic Disease*, vol 2 no 4, Epub 2005 Sep 15, [public domain journal online at www.cdc.gov/pcd/ accessed 21.08.06].

Lang, T. (2002) 'Making healthy food a factor in CAP reform', *European Public Health Alliance Food and Agriculture Update* 63: <http://www.ephha.org/r/17> (accessed 21.08.06)

Lang, T. and Heasman, M. (2004) *Food Wars*, London: Earthscan.

Lang, T., Dowler, E. and Hunter, D. (2006) *Review of the Scottish Diet Action Plan: progress and impacts 1996-2005*, Edinburgh: NHS Health Scotland. see: www.healthscotland.com/understanding/evaluation/policy-reviews/review-diet-action.aspx

Leather, S. (1992) 'Less Money, Less Choice: poverty and diet in the UK today', in: National Consumer Council (ed.) *Your Food: Whose Choice?*, London: HMSO, pp 72-94.

Lobstein, T. and Frelut, M.-L. (2003) 'Prevalence of overweight among children in Europe', *obesity reviews*, vol 4, pp 195-200.

Lobstein, T. and Longfield, J. (1999) *Improving diet and health through European Union food policies*, London: Health Education Authority.

Lupton, D. (1996) *Food, the Body and the Self*, London: Sage

McGlone, P., Dobson, B., Dowler, E. and Nelson, M. (1999) *Food projects and how they work*, York: York Publishing for the Joseph Rowntree Foundation.

Morgan, K. (in press) 'School food and the public domain: the politics of the public plate', *Political Quarterly*.

Morris, J., Donkin, A., Wonderling, D., Wilkinson, P. and Dowler, E. (2000) 'A minimum income for healthy living', *Journal of Epidemiology and Community Health*, vol 54, pp 885-9.

Morris, J., Dangour, A., Deeming, C., Fletcher, A. and Wilkinson, P. (2005) *Minimum income for health living: older people*, London: Age Concern England.

Murcott, A. (2002) 'Nutrition and inequalities: a note on sociological approaches', *European Journal of Public Health*, vol 12, pp 203-7.

NAO (National Audit Office) (2001) *Tackling Obesity in England, HC220*, London: The Stationery Office.

National Heart Forum (2003) *A Lifecourse Approach to Coronary Heart Disease Prevention: Scientific And Policy Review*, London: National Heart Forum.

Nestle, M. (2002) *Food Politics: how the food industry influences nutrition and health*, Berkeley: University of California Press.

Ofcom, (2004) *Childhood Obesity – Food Advertising in Context: children’s food choices, parents’ understanding and influence, and the role of food promotion*, Ofcom available from: http://www.ofcom.org.uk/research/tv/reports/food_ads.

Okasha, M., McCarron, P., McEwen, J., Durnin, J. and Davey Smith, G. (2003) ‘Childhood social class and adulthood obesity: findings from the Glasgow Alumni Cohort’, *Journal of Epidemiology and Community Health*, vol 57, pp 508-9.

Parker, H. with Nelson, M., Oldfield, N., Dallison, J., Hutton, S., Paterakis, S., Sutherland, H. and Thirlwart, M. (1998) *Low Cost but Acceptable: a minimum income standard for the UK*, Bristol: the Policy Press and Zacchaeus Trust for the Family Budget Unit.

Pickett, K.E., Kelly, S., Brunner, E., Lobstein, T. and Wilkinson, R.G. (2005) ‘Wider income gaps, wider waistbands? An ecological study of obesity and income inequality’, *Journal of Epidemiology and Community Health*, vol 59, pp 670-4.

Pomerleau, J., McKee, M., Lobstein, T. and Knai, C. (2003) ‘The burden of disease attributable to nutrition in Europe’, *Public Health Nutrition*, vol 6, no 5, pp 453-61.

Prättälä, R., Roos, G., Hulshof, K. and Sihto, M. (2002) 'Food and nutrition policies and interventions', in J. Mackenbach and M. Bakker (eds) *Reducing Inequalities in Health: A European Perspective*, London: Routledge, pp 104-24.

Prentice, A.M. and Jebb, S.A. (2003) 'Fast foods, energy density and obesity: a possible mechanistic link', *obesity reviews*, vol 4, pp 187-94.

Press, V. and Mwatsama, M. (2004) *Nutrition and Health Toolkit*, London: National Heart Forum.

www.heartforum.org.uk/Publications_NHFreports_NutritionToolkit.aspx

Riches, G. (2003) 'Food Banks and Food Security: Welfare Reform, Human Rights and Social Policy. Lessons from Canada?' in E. Dowler and C. Jones Finer (eds) *The Welfare of Food: rights and responsibilities in a changing world*, Oxford: Blackwell Publishing, pp 91-105.

Riley, A. (2005) *School Meals: factsheet*, London: Child Poverty Action Group. available from <http://www.cpag.org.uk/> follow links to campaigns.

Robertson, A., Tirado, C., Lobstein, T., Jermini, M., Knai, C., Jensen, J.H., Ferro-Luzzi, A. and James, W.P.T. (2004) *Food and Health in Europe: a new basis for action*, Copenhagen: WHO Regional Publications, European Series no 96.

Roos, G., Prättälä, R. et al (1999) *Disparities in food habits: review of research in 15 European Countries*, Helsinki: National Public Health Institute.

Schäfer Elinder, L., Jossens, L., Raw, M., Andreasson, S. and Lang, T. (2003) *Public health aspects of the EU Common Agricultural Policy: Developments and recommendations for change in four sectors: Fruit and vegetables, dairy, wine and tobacco*, Stockholm: National Institute of Public Health.

SE (Scottish Executive) (2005) *The Scottish Health Survey 2003*, Edinburgh: Scottish Executive.

Short, F. (2006) *Kitchen Secrets: the Meaning of Cooking in Everyday Life*, Oxford: Berg.

SOE (Social Exclusion Unit) (2001) *The New Commitment to Neighbourhood Renewal: National Strategy Action Plan*, London: H.M. Stationery Office.

Stamatakis, E., Primatesta, P., Chinn, S., Rona, R. and Flascetti, E. (2005) 'Overweight and obesity trends from 1974-2003 in English children: what is the role of socioeconomic factors?', *Archives of the Diseases of Childhood*, vol 90, pp 999-1004.

Sturm, R. and Datar, A. (2005) 'Body Mass Index in Elementary School Children, Metropolitan Area Food Prices and Food Outlet Density', *Public Health*, vol 119, pp 1059-68.

Sustain and the UK Food Group (2002) *The CAP doesn't fit: Sustain and UK Food Group recommendations for reform of the Common Agricultural Policy*, London: Sustain.

The Scottish Office (1994) *The Scottish Diet. Report of the Scottish Health Service Advisory Council Working Group on the Scottish Diet chaired by Philip James*, Edinburgh: The Scottish Office.

Turrell, G., Hewitt, B., Patterson, C. and Oldenburg, B. (2002) 'Measuring socio-economic position in dietary research: is choice of socio-economic indicator important?' *Public Health Nutrition*, vol 6, no 2, pp 191-200.

Wang, Y. and Lobstein, T. (2006) 'Worldwide trends in childhood overweight and obesity', *International Journal of Pediatric Obesity*, vol 1, no 1, pp 11-25.

Wanless, D. (2002) *Securing Our Future Health: Taking A Long-Term View*, London: H.M. Treasury.

Wanless, D. (2004) *Securing Good Health for the Whole Population*, London: H.M. Treasury.

Wardle, J., Waller, J. and Jarvis, M.J. (2002) 'Sex differences in the association of socioeconomic status with obesity', *American Journal of Public Health*, vol 92, pp 1299-304.

White, M., Bunting, J., Williams, E., Raybould, S., Adamson, A. and Mathers, J.C. (2004) *Do 'food deserts' exist? A multi-level, geographical analysis of the relationship between retail food access, socio-economic position and dietary intake*, London: Food Standards Agency.

WHO/FAO (2003) *Diet, Nutrition and the Prevention of Chronic Diseases: Report of a Joint WHO/FAO Expert Consultation*, WHO Technical Report Series: Technical Report 916, Geneva: WHO / Rome: FAO.

Wrieden, W.L., Barton, K.L., Armstrong, J., McNeill, 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 Scotland.

Wrieden, W.L., Anderson, A.S., Longbottom, P.J., Valentine, K., Stead, M., Caraher, M., Lang, T., Gray, B., Dowler, E. (2007) 'The impact of a community-based food skills intervention on cooking confidence, food preparation methods and dietary choices – and exploratory trial', *Public Health Nutrition*, vol 10, no 2, pp203-211.

Wrigley, N. (2002) 'Food Deserts' in British Cities: Policy Context and Research Priorities', *Urban Studies*, vol 39, no 11, pp 2020-2024.

¹ Scottish Health Statistics: website of Information and Statistics Division (ISD) Scotland.

http://www.isdscotland.org/isd/info3.jsp?pContentID=3640&p_applic=CCC&p_service=Content.show&

² See Food Ethics Council publications May-July 2005: *Power in the Food System*.

<http://www.foodethicscouncil.org/node/103>

³ e.g. the Food Standards Agency commissioned White et al (2004) to examine the realities of 'food deserts' in Newcastle, and the Food Standards Agency Scotland commissioned Dawson, Sparks, et al (<http://www.csrs.ac.uk/fsa.htm>) to map food access throughout Scotland. DH has also funded 'food access' work.

⁴ In 2005 2,000 tonnes of food was redistributed through community food network of 300 organisations to 12,000 disadvantaged people each day in 34 cities and towns across the UK.

<http://fareshare.org.uk/about/index.html>

⁵ <http://www.socialinclusion.ie/poverty.html>

⁶ For examples, see Sustain food poverty database http://www.sustainweb.org/poverty_index.asp; Scottish Community Diet Project <http://www.dietproject.org.uk/>; Nutrition network Wales www.nutritionnetworkwales.org.uk.

⁷ http://www.sustainweb.org/poverty_index.asp

⁸ e.g. Sandwell West Midlands food policy: www.rrt-pct.org.uk/healthy_living/food-policy.htm; Greenwich Food Policy: www.greenwich.gov.uk/Greenwich/CommunityLiving/HealthFood/FoodNutrition/FoodPolicy.htm; Brighton and Hove food strategy: www.bhfood.org.uk/

⁹ see for England: <http://www.nfer.ac.uk/research-areas/pims-data/outlines/further-evaluation-of-the-school.cfm>; Scotland: <http://www.scotland.gov.uk/Publications/2005/12/21110322/03222>; Northern Ireland: <http://www.investingforhealthni.gov.uk/fruit.asp>

¹⁰ <http://www.5aday.nhs.uk/> and <http://www.dh.gov.uk/PolicyAndGuidance/HealthAndSocialCareTopics/FiveADay/fs/en>

¹¹ At the time of writing, a third Competition Commission Inquiry into the Grocery Market is underway.

¹² At the time of writing, Hull City Council has reversed a recent decision to stop funding free universal primary school meals until the end of the pilot scheme in April 2007:

<http://education.guardian.co.uk/schoolmeals/story/0,,1826071,00.html>.

¹³ <http://www.dh.gov.uk/PolicyAndGuidance/International/EuropeanUnion/EUPresidency2005/fs/en> follow the links to Tackling Inequalities in Health programme

¹⁴ For instance, the Department of Trade and Industry commissioned Foresight to look more closely at the possible consequences of the obesity epidemic over the next 50 years.

¹⁵ <http://www.eatwell.gov.uk/foodlabels/trafficlights/>