Chapter 5

Case study – Obesity

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Introduction

5.1 The prevalence of obesity has increased dramatically over the past few decades in the UK and in many other countries, and being overweight or obese is a risk factor for several other health conditions. In this chapter we discuss the public health issues raised by obesity and outline the complex range of factors contributing to the prevalence of obesity.[1] We comment on relevant ethical issues, considering in particular whether people are able to make genuine choices about the types of food they eat and the amount of physical activity they take, and how environmental and other constraints impact upon those choices. The focus of this chapter is on the roles and responsibilities of various agents including: individuals; the government; industries such as those that produce, market and sell food and drinks; and industries involved in the designing of buildings, towns and transport networks. Consideration is also given to protecting vulnerable groups, especially children.

Obesity: impact upon health, prevalence and causes

5.2 There are several definitions of 'obese'. The Royal Society suggests that a person who is obese has an "excess of body fat that imparts a health risk."[2] Although this is a useful conceptual definition, it is of more limited use in practical terms. A widely accepted, although not uncontested,[3] definition is that of the World Health Organization (WHO), based on 'body mass index' (BMI), which is a measure of weight relative to height (see Box 5.1).

Box 5.1: The body mass index (BMI) measurement

BMI = weight (in kilograms) divided by height (in metres) squared

$$= \frac{\text{weight(kg)}}{\text{height(m)}^2}$$

WHO definitions for adults [4]

Underweight	BMI < 18.5
Normal range	BMI = 18.5 to 24.9
Overweight	BMI ≥ 25
Obese	BMI ≥ 30

BMI should only be considered as an approximate guide to overweight and obesity because it may not correspond to the same level of fat in different individuals. For example, differences in distribution of fat around the body, higher or lower than average amounts of muscle, and ethnic differences may mean that people with the same BMI have different levels of fat, and this may affect the associated health risks.

Effects of obesity on health

5.3 There is evidence from epidemiological research that obesity is an important risk factor for a wide range of chronic diseases, including type 2 diabetes, hypertension, coronary heart disease,

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[1] We note that there is a spectrum between being slightly overweight and being obese. Generally speaking, the more overweight a person is, the higher are the health risks from the range of conditions outlined in this chapter.

[2] Royal Society (2006) *Report of Royal Society Policy Seminar on the Scientific Understanding of Obesity* (London: The Royal Society).

[3] We acknowledge that there are difficulties with the BMI measurement (see Box 5.1), but because it is in such wide current use, we adopt it as the current, if imperfect, operational scale. We note that other measures, including those of central adiposity, may in future prove more valuable in predicting health risks associated with obesity.

[4] World Health Organization, *BMI Classification*, available at: http://www.who.int/bmi/index.jsp?introPage=intro_3.html.

stroke, osteoarthritis, some cancers, respiratory dysfunction, liver dysfunction, gall-bladder diseases and metabolic syndrome.[5] As with any epidemiological correlation, separating the effects on health of obesity from the associated effects of other factors such as lack of physical exercise and poor nutrition is not straightforward.[6] Nevertheless, globally, being either overweight or obese has been estimated to be the seventh most significant risk factor for mortality and the eighth most significant risk factor for disease.[7] As an example, it has been estimated that 30,000 deaths a year in England are attributable to obesity and that deaths linked to obesity shorten life by an average of nine years.[8]

Prevalence of obesity

5.4 Obesity is increasingly common in developed countries (see Box 5.2).[9] The prevalence of obesity in children under eleven years old in England increased from 9.9% in 1995 to 13.7% in 2003.[10] Generally, prevalence in England has trebled since the 1980s,[11] to 23% of both men and women in 2004.[12] Similar trends have occurred in Scotland and Northern Ireland, where the proportion of adults who were obese in 2003 was 24% in both countries.[13] The prevalence in Wales is lower, at 18%.[14] According to research commissioned by the Department of Health for England it is predicted that, if current trends continue unchanged, in 2010 the proportion of adults in England who are obese would reach approximately 30%.[15] Although there are some exceptions, there are general patterns of obesity across wealth and social groups in developed and developing countries: in developed countries, obesity is more prevalent among people in lower socio-economic groups, whereas in developing countries it is more common in higher socio-economic groups (see also Boxes 5.5 and 5.6).

Understanding the causes of obesity

5.5 Although it may seem at first that individuals are exclusively responsible for their own food intake and exercise levels, and consequently their weight, closer analysis reveals that this is too simplistic, as a complex mix of factors contribute to weight gain. Understanding the causes of

[5] See, for example, National Audit Office (2001) *Tackling Obesity in England* (London: The Stationery Office); Hu G, Tuomilehto J, Silventoinen K *et al*. (2005) The effects of physical activity and body mass index on cardiovascular, cancer and all-cause mortality among 47,212 middle-aged Finnish men and women *Int J Obes* **29**: 894–902; Calle EE, Thun MJ, Petrelli JM, Rodriguez C and Heath CW (1999) Body-mass index and mortality in a prospective cohort of US adults *N Engl J Med* **341**: 1097–105.

[6] Hu G, Tuomilehto J, Silventoinen K, Barengo N and Jousilahti P (2004) Joint effects of physical activity, body mass index, waist circumference and waist-to-hip ratio with the risk of cardiovascular disease among middle-aged Finnish men and women *Eur Heart J* **25**: 2212–9.

[7] The risk factors for mortality are (in order, starting with the highest risk and listing those higher than overweight and obesity): high blood pressure, smoking, high cholesterol, child underweight for age, unsafe sex, low fruit and vegetable intake. The risk factors for disease burden are (in order, starting with the highest risk and listing those higher than overweight and obesity): child underweight for age, high blood pressure, unsafe sex, smoking, alcohol use, high cholesterol, unsafe water, sanitation and hygiene. See Lopez AD, Mathers CD, Ezzati M, Jamison DT and Murray CJL (2006) Global and regional burden of disease and risk factors, 2001: systematic analysis of population health data *Lancet* **367**: 1747–57.

[8] National Audit Office (2001) *Tackling Obesity in England* (London: The Stationery Office), p.1.

[9] *Ibid*.

[10] Figures are only available for children from 1995. Department of Health, *Obesity*, available at: http://www.dh.gov.uk/en/Policyandguidance/Healthandsocialcaretopics/Obesity/index.htm.

[11] *Ibid*.

[12] NHS (2005) *Health Survey for England 2004: The Health of Minority Ethnic Groups – headline tables*, available at: http://www.ic.nhs.uk/webfiles/publications/hlthsvyeng2004ethnic/HealthSurveyForEngland161205_PDF%20.pdf.

[13] Sprosten K and Shelton N (Editors) (2005) *The Scottish Health Survey 2003 Volume 2: Adults* (Scottish Executive); Department of Health, Social Services and Public Safety (2007) *Northern Ireland Health and Social Wellbeing Survey 2005/06 Topline Results*, available at: http://www.dhsspsni.gov.uk/hwb_topline_bulletin.pdf.
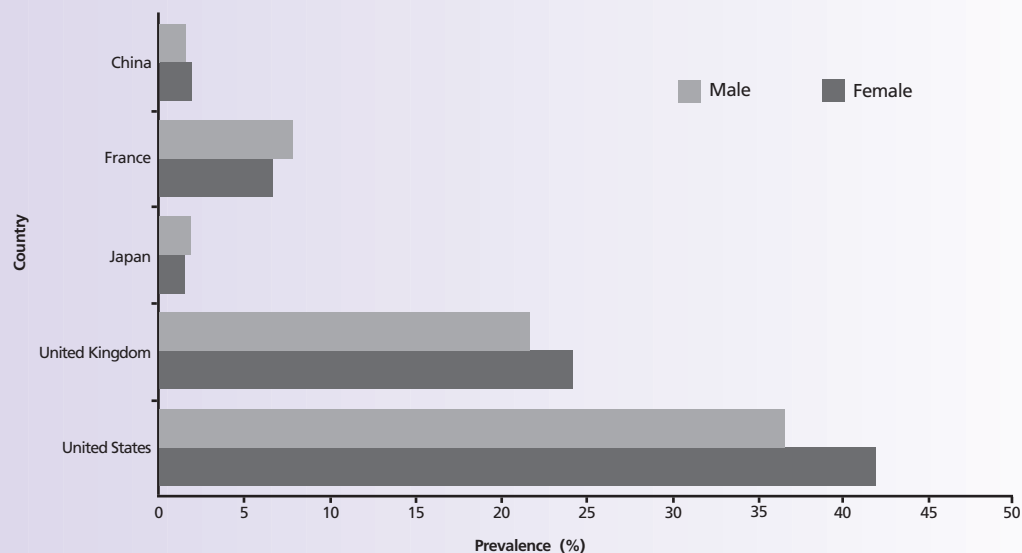
[14] Health of Wales Information Service (2006) *Welsh Health Survey 2004/05*, available at: http://www.wales.nhs.uk/newsitem.cfm?contentid=5137.

[15] Zaninotto P, Wardle H, Stamatakis E, Mindell J and Head J (2006) *Forecasting Obesity to 2010*, available at: http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsStatistics/DH_4138630.

> **Box 5.2: The prevalence of obesity in the UK and internationally**
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> The UK currently has the highest prevalence of obesity within Europe (23%), with France having the lowest (7%). The USA has the highest prevalence of obesity of any country in the developed world (39%), although some Polynesian islands such as Samoa have an even higher prevalence (48%).
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> Projections from WHO indicate that globally in 2005 approximately 1.6 billion adults (age 15+) were overweight and at least 400 million were obese. WHO predicts that by 2015 approximately 2.3 billion adults will be overweight and more than 700 million will be obese. Current figures indicate that, globally, at least 20 million children under the age of five are overweight.[16]
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> **Prevalence of obesity in the adult populations of selected countries (2005)***
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>
> *Source: World Health Organization *Global InfoBase Online*, available at: http://www.who.int/infobase/comparestart.aspx. Reproduced with permission. Prevalences are age-standardised estimates by country for ages 15+ years.

obesity is important for policy and practice aimed at preventing or alleviating excess weight gain, and for examining the ethical issues involved. Understanding the extent to which individuals are able to make genuine choices is also important for discussion of the rights and responsibilities of individuals, industries and the state.

5.6 When more energy is consumed than expended, the excess energy is laid down as fat, and if this process continues over a period of time, the result is an increase in BMI. Although this describes simply the process at the individual level, it is important for public health policy to identify the interventions that might be most effective in preventing or treating obesity at the population level. Yet the underlying factors that contribute to the increase in obesity at the population level are not well understood. Is the root of the problem people eating too much, not using up enough energy or a complex mixture of both? Below, we explore some of the changes relating to food and activity that have occurred in recent years. Additionally, what is the influence of genetics? The speed with which the prevalence of obesity has increased is often thought to show that heritable factors are not relevant. However, studies have indicated that genetic makeup could contribute significantly to the differences in BMI between different individuals.[17] Changing societal and environmental factors, such as availability of food and changes in diet (see below), may have different effects on different individuals depending on their genetic make up.

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[16] See Box 5.1 for definitions used by WHO. World Health Organization (2006) *Factsheet: Obesity and overweight*, available at: http://www.who.int/mediacentre/factsheets/fs311/en/index.html.

[17] Farooqi IS and O'Rahilly S (2007) Genetic factors in human obesity *Obes Rev* **8** (Suppl. 1): 37–40.

5.7 On the intake side of the energy equation (how much energy is consumed compared with how much is expended), there are several (not mutually exclusive) hypotheses to explain what might have changed in the past few decades:[18]

■ The energy density of food has increased, and this 'short-circuits' normal satiety mechanisms.

■ Food, especially food high in fat and sugar, has become cheaper and more available, so people have more opportunity to eat, and this overcomes the normal balance of appetite and satiety.

■ There has been an increase in the range and number of 'fast food' outlets. Food of this type is therefore more readily available for consumption instead of, or in addition to, meals cooked at home.

■ Food has become more varied, so a wider range of flavours and sensory experiences is likely to lead to greater food intake. Furthermore, the sensory stimuli from salt and sugar contribute to the mechanisms that control appetite; in other words, they make food more palatable and therefore people eat more.

■ People are eating more processed food and are eating out more, and hence have less awareness of their nutrient intake. Processed food and food in restaurants may often have higher fat and sugar content than that prepared in the home.

■ Processed food is often low in protein and it is thought that the body may regulate protein intake more precisely than fat and carbohydrate. In attempting to increase protein intake, excess carbohydrate and fat is taken in as a side effect. Protein is recognised to induce a greater sense of satiety than fat or carbohydrate, and therefore a diet low in protein may lead to a person consuming more in order to achieve satiety.

■ Portion sizes have increased.[19]

■ Home life has changed, and there is some evidence that working parents are less likely to cook more traditional, balanced meals. One reason for this is that many people, especially women, are under greater time constraints than they used to be. Additionally, there has been a loss of cooking skills.[20]

■ Energy-dense foods are heavily advertised and marketed, especially to children.

5.8 On the expenditure side of the equation there are similarly several factors that contribute to what have increasingly been called 'obesogenic' environments that are less conducive to energy expenditure:

■ Patterns and modes of transport have changed, for example, from foot or bicycle to car or other forms of motorised transport. Many planning decisions have resulted in increased use of private vehicles and increased distances from homes to schools, shops, leisure facilities and workplaces, making it difficult to walk or cycle. At the same time, underinvestment in public transport and cycle lanes has discouraged walking or cycling.

■ Manual labour has largely been replaced by sedentary jobs and by mechanisation.

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[18] For a discussion of some other possible contributing factors to the increase in obesity, see Keith SW, Redden DT, Katzmarzyk PT et al. (2006) Putative contributors to the secular increase in obesity: exploring the roads less travelled *Int J Obes* **30**: 1585–94.

[19] Prentice AM (2001) Overeating: the health risks *Obes Res* **9**: 234S–8S.

[20] One study in the USA has indicated that a child is more likely to be overweight if his/her mother worked more hours per week over the child's life. This trend appeared to particularly affect mothers with higher socio-economic status whose work intensity is particularly disadvantageous for their children's overweight status. Anderson PM, Butcher KF and Levine PB (2003) Maternal employment and overweight children *J Health Econ* **22**: 477–504.

- Parental concerns about the safety of children have led to reductions in outdoor play and walking or cycling to school.

- Public and private buildings often include more lifts, moving walkways and escalators.

- Labour-saving devices in the home have reduced energy expenditure. Central heating encourages people to be less active in the home and may mean that people expend less energy keeping warm.[21]

- Television, computers and other forms of sedentary entertainment have largely replaced active play among children and teenagers.

5.9 As we have described, obesity is likely to result from a complex mix of causes and the available evidence does not reveal their relative importance at a population level.[22] Likewise, evidence for the efficacy and cost effectiveness of interventions to prevent or treat obesity is very incomplete. There are a limited number of pharmaceutical treatments available to assist people to lose weight. However, these often have side effects and effectiveness is varied. Developing improved pharmaceutical treatments for obesity is an active area of research. Additionally, certain surgical procedures have successfully helped some people to lose weight, although again these often involve considerable risks to the individual concerned.

5.10 Incomplete evidence for the effectiveness of policy options should not be used by industry and government as an excuse for inaction (see paragraphs 3.37–3.38, also paragraph 3.17). We present below a discussion of the responsibilities of various parties and make recommendations for policy that would be desirable under our ethical framework (see Chapters 2 and 3).

The challenge of reducing obesity

5.11 Because of the many factors involved, there is no single 'magic bullet' to reduce obesity, and effective strategies are likely to incorporate many small changes implemented over a long time period by many different agencies. For example, the National Institute for Health and Clinical Excellence (NICE), in a series of recommendations about how to prevent, identify, assess and manage overweight and obesity, targeted the NHS, local authorities and partners, early years settings, schools, workplaces, self-help, commercial and community settings.[23] Given that the prevalence of obesity is expected to rise in the next few years, to bring about any large reduction in mean BMI might require very coercive measures that are unlikely to be politically acceptable. Thus, there is a risk that strategies that could potentially achieve a small decrease in obesity (or even a decrease in the rate of increase of obesity), and therefore benefit some people, might not be implemented by governments. An additional difficulty is that changes are likely to take many years to produce results because food and physical activity habits are deeply ingrained in social and individual patterns of behaviour.[24] People's behaviours may, at least in part, be dependent on the built environment and other factors

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[21] Keith SW, Redden DT, Katzmarzyk PT *et al*. (2006) Putative contributors to the secular increase in obesity: exploring the roads less travelled *Int J Obes* **30**: 1585–94.

[22] Even the basic question of whether energy intake has gone up or expenditure gone down in recent decades is unresolved. At face value, the National Diet and Nutrition Survey indicates that energy intake for men has gone down over the past 15 years, although analysis of under-reporting shows that obese people under-report consumption by over 30% and lean people under-report by about 20%. This could arise for a variety of reasons, for instance because people fail to report snacks (e.g. biscuits and cakes) eaten between meals as part of their daily intake. See Office for National Statistics, Medical Research Council Human Nutrition Research and Food Standards Agency (2004) *The National Diet and Nutrition Survey: Adults aged 19 to 64 years Volume 5: Summary Report*, available at: http://www.food.gov.uk/multimedia/pdfs/ndns5full.pdf.

[23] National Institute for Health and Clinical Excellence (2006) *Obesity: The prevention, identification, assessment and management of overweight and obesity in adults and children*, available at: http://www.nice.org.uk/guidance/CG43#summary.

[24] Although we note that the contemporary rise in obesity has been remarkably rapid. It appears that changes in habits or diet that increase obesity are easier to bring about than those aimed at reducing obesity.

that are only likely to be changed slowly. For individuals, it also takes time to actively reduce obesity. For the government, policies with potential long-term benefits are difficult to reconcile with short-term priorities, but they should not be ignored.

5.12 The notion of individual choice, responsibility and autonomy is especially difficult to apply in relation to obesity. There are barriers for people wishing to achieve behaviour change, as we discuss in paragraphs 3.35–3.36. People's personal behaviour 'choices' are to a substantial degree shaped by their environment, which in turn is heavily influenced by local authorities and national government, industry and others (see paragraphs 1.4, 3.20–3.21). Therefore, policies based on education, information and individual choice alone are not likely to succeed either in reducing inequalities or in reducing prevalence of obesity in the population as a whole. With regard to implementing policies that aim to target interventions to treat or prevent obesity deliberately at specific groups, policy makers would need to be sensitive to the risk of stigmatisation, or of excluding those whose health is at risk, but who lie outside the target groups (see paragraphs 3.29–3.34). For these reasons, the strategies we recommend below are based on the roles and responsibilities in relation to food and the environment that we think various different parties should take based on our ethical framework (see Chapters 2 and 3). They include measures that are aimed both at helping people to make healthier choices and at changing the factors in our environment that contribute to obesity at the population level.

Roles of different parties in reducing obesity

5.13 Many parties could take some responsibility for responding to the problem of obesity, including central and local government, institutions such as schools and employers, charities and the voluntary sector, the corporate sector, and families and individual citizens. Several respondents to the consultation expressed strong views on whether such agents should intervene on the issue of food selection, for example, as illustrated by the following:

"Choosing food is one of the most personal choices. Attempting to justify political intervention into this area of personal choice is wrong. A person's lifestyle is their own, and in a truly free society, individuals should be free to choose what experts may think of as a wrong choice. It is not the place of government or indeed health officials to pronounce on lifestyle choices." *Anon*

"Why would anyone think that attempts to influence people's eating habits were *particularly* intrusive? If we confine ourselves to the promotion of healthy eating, and (potentially) to legislation aimed at food manufacturers to design and market their products responsibly, I don't think there are any special sensitivities connected with food to be taken into account." *Dr Peter Lucas*

5.14 We highlighted in Chapter 2 the reasons why the Working Party regards making genuine choices as an integral part of living a meaningful and autonomous life (see paragraphs 2.19, 3.20–3.21). However, we have also noted powerful constraints on choice, imposed by the environment in which people (have to) live (see paragraph 1.4). The interactions between individuals and their environment are therefore such that the government acts as a *facilitator* of choices: for example, urban planning policies may encourage or discourage walking or cycling, and regulations imposed on food and drinks industries might influence the availability of foods with different nutritional profiles. However, while government policies establish the 'playing field', responsibilities of the food and drink industries involved in producing, marketing and selling products go further than simply complying with mandatory regulations.

Role of the food and drink industries – corporate social responsibility

5.15 Consumers' choices of food and drink are at least partly driven by the products available and the way they are promoted, priced and distributed. Consultation responses included the following observations on the responsibilities of corporations:

> "We feel that manufacturers who produce foods high in salt, fat, sugar and also those who produce tobacco and alcohol should be fully responsible for any harm caused from the use of their products." *British Association for the Study of Community Dentistry*

> "Food industry should price healthy options more competitively and provide clear labelling." *PR Myles*

5.16 Although the regulation of industry can be necessary, much can be achieved through industry self-regulation. There are several examples where voluntary commitments may lead to healthier choices being offered to consumers. For example, although there has been criticism of the speed of implementation, the Food and Drink Federation has pledged that its members would reduce levels of fat, salt and sugar in their products.[25] Some major UK retailers made a commitment early in 2007 to stop adding trans-fats to their own-brand products to help cut rates of heart disease and obesity.[26] Such initiatives form an important part of corporate social responsibility and are to be encouraged.

5.17 We noted in Chapter 2, however, that it is not always clear whether corporate social responsibility initiatives are driven by governance or marketing aims, as some companies may simply seek to establish themselves as providers of healthier food because they perceive an associated market advantage (see paragraphs 2.47–2.50). It might be considered naïve, therefore, to appeal to corporate social responsibility as, ultimately, companies are concerned primarily with maximising returns. We make three observations in this respect. First, in practice what matters is whether healthier foods are available. If companies are offering this for 'the wrong reasons', namely for purely economic ones, a more healthy option has nevertheless been made available. Secondly, in seeking market advantages through being known as a provider of healthier food, companies might also contribute to a shift in attitudes, and more people may become aware of the importance of a healthy and balanced diet. Lastly, there are concerns that industry will generally be reluctant to adopt corporate social responsibility because this might have negative effect on their returns. Although major returns are made on unhealthy foods, it is not necessarily true that healthier options will always be less economically attractive. Hence, drawing on our discussion, it is reasonable to appeal to industries to explore as creatively as possible the options of improving the nutritional values of foods.

5.18 We focus below on two specific examples: the promotion to children of foods and drinks high in fat, salt and sugar, which raises important ethical issues because children constitute an especially vulnerable group (see Chapter 2); and the labelling and composition of food. We then consider issues about corporate social responsibility as it relates to the food industry more generally. We have identified the implementation of information and education strategies, and the avoidance, where possible, of coercive measures, as being important overarching themes in good public health policy (see Chapters 2 and 3). In policy terms, initiatives in these two areas are of further significance because their influence is designed to be primarily *preventative* rather than *curative*. Although limited at this time, there is some evidence to suggest that initiatives to prevent obesity are effective and may also be cost-effective.[27]

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[25] See Food and Drink Federation, *Policy Position on Reformulation*, available at: http://www.fdf.org.uk/keyissues.aspx?issue=558; see also BBC News (2004) *Firms to cut salt in sliced bread*, 1 July, available at: http://news.bbc.co.uk/1/hi/health/3855807.stm.

[26] British Retail Consortium (2007) Press release: BRC Retailers' Action on Fats Cuts through Legislative Impotence, 31 Jan, available at: http://www.brc.org.uk/details04.asp?id=1081&kCat=&kData=1.

[27] Brown T, Kelly S and Summerbell C (2007) Prevention of obesity: a review of interventions *Obes Rev* **8** (Suppl. 1): 127–30; National Institute for Health and Clinical Excellence (2006) *Obesity: The prevention, identification, assessment and management of overweight and obesity in adults and children*, Section 6: Health economics, pp.773–81.

Food advertising to children

5.19 Advertising food and drink products to children raises the fundamental issue of whether it should be acceptable at all for companies to try to influence the diets of vulnerable groups, and whether restrictions on the industry are justified. In 2003, the Food Standards Agency (FSA) published a review of research examining the way foods are promoted to children and the effects that this promotion has on children's preferences and behaviour. The *Review of Research on the Effects of Food Promotion to Children* (more commonly known as the Hastings Review) concluded that food advertising had some effect which, although small, operates both on choice of food category and on brand selection.[28]

5.20 Reviewers commissioned by the Food Advertising Unit[29] disputed the robustness of the evidence used in the Hastings Review and argued that it paid insufficient attention to the extent to which children's diets are influenced by other factors such as the home environment, school and peers.[30] The Food Advertising Unit reports were subsequently rejected by the FSA after further review processes.[31] There followed further publications on the subject[32] and debate in the media.

5.21 In 2007, the communications regulatory authority, Ofcom[33], introduced restrictions on television advertising of food and drink products high in fat, salt[34] and sugar (HFSS), so as to reduce children's exposure to these advertisements.[35] The new measures included a ban on HFSS food and drink advertisements in and around all children's programmes and during programmes that attract a significantly higher than average proportion of viewers under the age of 16 years. Some health campaigners and lobby groups thought that the restrictions were insufficient, and argued for a 9.00 p.m. watershed, before which the advertising of HFSS foods should be prohibited.[36] Conversely, some representatives of the food, advertising and broadcasting industries stated that the restrictions were too stringent.[37] In April 2007 the Committee for

[28] Hastings G, Stead M, McDermott L *et al.* (2003) *Review of Research on the Effects of Food Promotion to Children* (Food Standards Agency), available at: http://www.food.gov.uk/multimedia/pdfs/foodpromotiontochildren1.pdf.

[29] The Food Advertising Unit was set up under the auspices of the Advertising Association, see http://www.fau.org.uk. The Advertising Association is a trade federation representing the advertising and promotional marketing industries. It is a non-profit-making company, funded by a combination of subscriptions, donations and revenue-raising activities.

[30] Paliwoda S and Crawford I (2003) *An Analysis of the Hastings Review: "The Effects of Food Promotion on Children"*, available at: http://www.fau.org.uk/hastings_review_analysis_dec03.pdf; Young B (2003) *Advertising and Food Choice in Children: A Review of the Literature* (Food Advertising Unit), available at: http://www.fau.org.uk/brian_youngliteraturereview.pdf.

[31] Food Standards Agency (2003) *Outcome of academic seminar to review recent research on food promotion and children*, available at: http://www.food.gov.uk/multimedia/webpage/academicreview; Food Standards Agency, *Outcome of the review exercise on the Paliwoda and Crawford paper: An Analysis of the Hastings Review: "The Effects of Food Promotion on Children"*, available at: http://www.food.gov.uk/multimedia/pdfs/paliwodacritique.pdf.

[32] See World Health Organization (2006) *Marketing of Food and Non-alcoholic Beverages to Children: Report of a WHO Forum and Technical Meeting* (Oslo, Norway, 2–5 May 2006), available at: http://www.who.int/dietphysicalactivity/publications/Oslo%20meeting%20layout%2027%20NOVEMBER.pdf; World Health Organization Europe (2006) *WHO European Ministerial Conference on Counteracting Obesity* (Istanbul, Turkey, 15–17 November 2006), available at: http://www.euro.who.int/Document/E89567.pdf.

[33] The Office of Communications (Ofcom) is the independent regulator and competition authority for the UK communications industries. Its remit includes television, radio, telecommunications and wireless communications services.

[34] Some of the foods included in the restrictions are high in salt, which is an issue for dietary health separate from obesity.

[35] Ofcom (17 November 2006) Press Release: *New restrictions on the television advertising of food and drink products to children*, available at: http://www.ofcom.org.uk/media/news/2006/11/nr_20061117; Ofcom (22 February 2007) Press Release: *Ofcom publishes final Statement on the television advertising of food and drink products to children*, available at: http://www.ofcom.org.uk/media/news/2007/02/nr_20070222. Previously, televised children's food advertisements had been dominated by foods considered to be, or classified as, 'unhealthy', including certain breakfast cereals, confectionery, savoury snacks, soft drinks and food from fast-food outlets. Hastings G, Stead M and McDermott L (2003) *Review of Research on the Effects of Food Promotion to Children* (Food Standards Agency), available at: http://www.food.gov.uk/multimedia/pdfs/foodpromotiontochildren1.pdf.

[36] See BBC News (2006) *Junk Food Ad Crackdown Announced*, 17 November, available at: http://news.bbc.co.uk/1/hi/health/6154600.stm; National Heart Forum (2006) *Initial Response to OFCOM Announcement on Restrictions of Junk Food Advertising to Children*, available at: http://www.heartforum.org.uk/News_Media_pressreleases_PressRelease_OFCOM.aspx.

[37] Food Advertising Unit, The Advertising Association (2006) *FAU Position on Final Ofcom Consultation: Food and drink advertising to children – extension to under 16s*, available at: http://www.fau.org.uk/FAU_response_to_final_Ofcom_consultation__22.12.06_.pdf.

Advertising Practice announced restrictions, but not a ban, on food and drink advertising to children in non-broadcast media, for example print and press adverts, posters and cinema commercials, as a response "to public concern about rising levels of childhood obesity".[38]

5.22 The example of food advertising to children illustrates that the judgement about a proportionate level of action cannot be determined in a formulaic way. Whether to intervene is a complex decision, not least because the evidence base is incomplete. However, evidence shows that children's early diet affects their health later in life, and that obesity in childhood is strongly associated with obesity in adulthood.[39] Additionally, we consider that children are especially vulnerable because they are more susceptible to external influences, including marketing by industry, and they have limited control and ability to make genuine choices.[40] Children need special protection from harm. Parental influence is central, but other parties have an ethical duty to support parents. Many food and drink companies have established principles of corporate social responsibility. These should be reviewed to ensure that they include appropriate provisions for the protection of children.

5.23 Due to the special vulnerability of children it would be desirable not to advertise to children foods high in fat, salt and sugar by any medium, including on the Internet.[41] The stewardship-guided state should aim to protect children from harm and provide an environment in which they can lead healthy lives. An example of the way in which the state might intervene includes regulation of the promotion of unhealthy foods and drinks to children, if industry fails to adequately regulate itself. A study in Australia published in 2006 suggested that this may be a particularly cost-effective way of reducing obesity in children.[42] We note that, in May 2007, the European Commission published a White Paper entitled *A Strategy for Europe on Nutrition, Overweight and Obesity-related Health Issues*[43], which included details of a best practice model for self-regulation of food advertising for children (see Appendix 4). **Following the planned review of the EU Strategy on obesity in 2010, the European Commission should consider whether there are cases in which self-regulation of food advertising for children has proved unsatisfactory and whether more binding regulation across the EU is required.**

Labelling and composition of food

5.24 Our second example of where we think industry should take a more active role than it has done so far is that of food labelling. There is a strong case for clear labelling of food so that people know what they are choosing. Readily understandable food labelling might also exert consumer pressure on manufacturers and shops to produce and stock foods or 'varieties' that are less unhealthy. There is currently no agreement by the food industry in the UK on appropriate, 'at a glance' front-of-pack labelling for the nutritional composition of food sold in shops. Two different strategies were introduced in 2005–6, though the evidence to date is inconclusive about which scheme is likely to be more effective (see Box 5.3). Additionally, there are no agreed standards or any requirements of an equivalent kind for catered food.

5.25 The stewardship model emphasises providing conditions that make it easy for people to lead healthy lives, paying special attention to vulnerable people and reducing causes of ill health

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[38] Committee for Advertising Practice (2007) *New food rules for non-broadcast ads*, available at: http://www.cap.org.uk/cap/news_events/news/2007/New+food+rules+for+nonbroadcast+ads.htm.

[39] Deckelbaum RJ and Williams CL (2001) Childhood Obesity: The health issue *Obesity Research* **9**: S239–43.

[40] American Academy of Pediatrics Committee on Communications (2006) Children, adolescents, and advertising *Pediatrics* **118**: 2563–9.

[41] Some food manufacturers have been accused of irresponsible advertising to children on the Internet: see examples of the criticism in press reports, e.g. Wallop H (2007) Junk food makers reach children on internet *Telegraph*, 2 August, available at: http://www.telegraph.co.uk/news/main.jhtml?xml=/news/2007/08/01/njunk101.xml.

[42] Victorian Department of Human Services (2006) *ACE-Obesity Assessing Cost-effectiveness of obesity interventions in children and adolescents* Summary of Results (Victorian Government Department of Human Services), available at: http://www.health.vic.gov.au/healthpromotion/quality/ace_obesity.htm.

[43] Available at: http://ec.europa.eu/health/ph_determinants/life_style/nutrition/documents/nutrition_wp_en.pdf.

> ### Box 5.3: Food labelling initiatives
>
> Two types of food labelling system have been introduced on the packaging of some processed foods in the UK.
>
> **'Traffic light' labelling**
>
> Backed by the Food Standards Agency (an independent Government agency) the traffic light system uses a label with coloured panels that indicate the levels of fat, saturated fat, sugars and salt in 100 grams of the food (green, amber and red are used for low, medium and high), and showing the amounts of each that are present in a typical portion or serving (the size of which is assessed by the manufacturer). Several supermarkets and manufacturers are already voluntarily using this system of labelling, including Sainsbury's and Waitrose.
>
> **Guideline Daily Amounts (GDAs)**
>
> Several food manufacturers and retailers backed by the Food and Drink Federation (including Tesco and Kellogg's) have introduced a system called Guideline Daily Amounts (GDAs) labelling. The labels show percentages of GDAs of sugar, salt, fat and calories per serving. This system has been criticised for being more difficult to understand than the traffic light system, for example by the National Heart Forum.[44] The companies behind the GDA system claim that their labels are more helpful to consumers than the traffic light system.

through appropriate regulations (paragraph 2.44). In view of this and our observations on corporate social responsibility (paragraphs 2.47–2.50), we consider that **businesses, including the food industry, have an ethical duty to help individuals to make healthier choices. The food and drink industries should therefore review both the composition of products that they manufacture and the way they are marketed and sold. Where the market fails to uphold its responsibility, for instance in failing to provide universal, readily understandable front-of-pack nutrition labelling or in the marketing of food more generally, regulation by the government is ethically justifiable.** Several different models of providing labelling information have been introduced since 2000. It is premature to judge which of these is most effective in enabling consumers to make appropriately informed decisions. We note that the FSA has commissioned a study[45] to investigate if front-of-pack labels contribute to healthier choices being made and, if so, which elements of the various schemes are the most effective. **When the Food Standards Agency (FSA) has reviewed its commissioned study on the effectiveness of labelling schemes, and the findings have been peer reviewed, they should form the basis for adoption by the food industry of the most effective scheme. If, however, the food industry does not accept the scheme, it would be appropriate for the UK Government to pursue legislation (if appropriate, at the European level). As we have noted elsewhere, such information-based schemes could increase health inequalities, and this should be monitored.**

Role of government and public services

5.26 In liberal market economies there is strong pressure for industries to be only lightly regulated. This is often supported by an interpretation of the supply and demand principle that means that industries should be free to produce what people 'want' (because then both the population and the commercial sector are satisfied). However, in our discussions of individual choice, above and in Chapters 2 and 3, we have already noted that the concept is problematic, and that the government has an important facilitatory role through the policies and laws it puts in place. For example, governments can, through trade arrangements, influence the pricing of different types of food commodity.

5.27 The stewardship model developed in Chapter 2 could support an argument for state intervention on several grounds. We focus on four: promoting healthy living through enabling choice and behaviour change initiatives; strategies for reducing inequalities; interventions for protecting vulnerable groups; and interventions for protecting others from harm. We then discuss the role of government in the provision of obesity-related healthcare.

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[44] National Heart Forum (8 February 2006) *New food industry health labelling seriously flawed*, available at: http://www.heartforum.org.uk/news_media_pressreleases_archive_foodindustryhealthlabelling.aspx.

[45] Food Standards Agency (2007) Press release: *Front of pack labelling research project moves forward*, 9 July, available at: http://www.food.gov.uk/news/pressreleases/2007/jul/frontpackresearchpress.

Promoting healthy living through enabling choice and behaviour change initiatives

5.28 Under the stewardship framework, public health strategies should "aim to ensure that it is easy for people to lead a healthy life" and promote health "by programmes to help people overcome addictions and other unhealthy behaviours" (paragraphs 2.41–2.44). Therefore, government has a role in ensuring that healthy options are available to people, and in encouraging the uptake of health-promoting behaviours.

5.29 Examples of strategies that enable people to make healthier choices include the building of cycle lanes and providing children and adults with the knowledge and information needed to enable them to make well-informed choices about the food they purchase or eat and the amount of physical activity they take. As we discussed above (paragraph 5.8), many people's energy expenditure levels have changed in recent decades in developed countries. There are a range of measures that could be taken by government to enable people to increase their energy expenditure levels where there are currently barriers to them doing so. For example, planning regulations, either imposed by central government or decided by local government, could take into consideration factors such as segregating walking and cycling routes from heavy traffic, or maintaining public parks and children's playgrounds. More restrictive or mandatory measures have also been suggested, for example banning cars from city centres, compulsory physical education in schools and car exclusion zones around schools. Several examples are given in Box 5.4.

Box 5.4: Examples of initiatives for increasing physical activity[46]

■ Walking school 'buses' (in which a group of children, accompanied by an adult, walk to school), or cycle 'trains' (a similar principle but using cycles) are used in several countries.[47]

■ Cities including Bristol have introduced 'home zones', which are residential areas where pedestrians take priority over traffic, and feature trees, benches and play areas.[48]

■ In Drachten, the Netherlands, traffic lights and road signs at junctions were removed and the roads merged with sidewalks, so that motorists, pedestrians, cyclists and even skateboarders all share the space. This is claimed to have led to more walking and cycling.[49]

■ In 2001 at its headquarters in Brentford, west London, pharmaceutical company GlaxoSmithKline implemented a cycling strategy. The company provided secure parking facilities for 300 bikes and showers and lockers resulted in the number of registered cyclists rising from 50 to 400, representing 13% of the staff on site, with an average daily journey of 14 miles.[50]

■ Since 1977 the city of Groningen has had an integrated policy for town and traffic planning aimed at reducing car traffic while enhancing accessibility and the use of public transport and walking and cycling. City planning requires new residential or office buildings to be built close to the existing city, and restricts the car parking space available for these new developments. There are extensive car-free zones in the city centre, while facilities for bicycles have been extended. In 1990 the modal transport-to-work split was 17% walking, 48% bicycle use, 5% public transport and 30% car use.[51]

■ Some schools have encouraged walking and cycling by regulating the motorised 'school run'. North Yorkshire introduced walking zones with a boundary line set up at five minutes' walk from the school gates, measured by the pupils. Within this boundary parents, children and staff are encouraged to walk. In one school the number of cars outside the school gate dropped from 60 to six when the five minute zone was launched.[52]

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[46] See also National Heart Forum, in partnership with Living Streets and CABE (2007) *Building Health Creating and Enhancing Places for Healthy, Active Lives: What needs to be done?*, available at: http://www.heartforum.org.uk/downloads/BuildingHealth_Main.pdf.

[47] See Friends of the Earth (2000) *The Walking Bus: A safe way for children to walk to school*, available at: http://www.foe.co.uk/resource/factsheets/walking_bus.pdf.

[48] See Glaskin M (2004) Innovation: The end of the white line *The Sunday Times*, 22 August, available at: http://driving.timesonline.co.uk/tol/life_and_style/driving/article472085.ece; Sustrans, Home Zones, available at: http://www.sustrans.org.uk/default.asp?sID=1095412985125.

[49] Glaskin M (2004) Innovation: The end of the white line *The Sunday Times*, 22 August, available at: http://driving.timesonline.co.uk/tol/life_and_style/driving/article472085.ece; *Traffic Solutions*, available at: http://www.smallingerland.nl/index.cfm?sid=175.

[50] Commission for Architecture and the Built Environment (2006) *Physical Activity and the Built Environment*, available at: http://www.cabe.org.uk/AssetLibrary/8954.pdf.

[51] European Academy of the Urban Environment, *Groningen: Integrated town planning and traffic policy*, available at: http://www.eaue.de/winuwd/95.htm.

[52] Teachernet, *Five Minute Walking Zone*, available at: http://www.teachernet.gov.uk/CaseStudies/casestudy.cfm?id=346.

5.30 Although there is considerable enthusiasm for many of these strategies there is little robust evidence about their effectiveness at increasing physical activity or reducing obesity levels. However, they may bring other benefits (such as other health benefits, including improved mental health, reductions in accidents or air pollution or more opportunities for socialisation) and there is little evidence that they create significant harms or curtailments of individual liberties. In general the population accepts some restrictions on individual or corporate freedoms for the public good in terms of traffic and town planning restrictions and of compulsory standards in schools. Many of these restrictions are subject to democratic inputs through parliament, local government and other local bodies such as boards of governors in schools (see also Box 3.3). Drawing on our discussion of consent and procedural justice arrangements, we do not believe there are ethical objections to such strategies. However, the state should ensure that their implementation is monitored for effectiveness and potential harms such as more pedestrian or cycle injuries, stigmatisation of sedentary people, or increases in socio-economic, ethnic or gender inequalities.

5.31 There is a range of strategies, including those that are considered 'social marketing', that can be successfully used by governments to try to promote behaviour change and improve the health of the population (see paragraph 3.36). However, potential problems with policies that aim to do this should be considered when making policy. First, it might be argued that specific campaigns encouraging people to lose weight could both be seen as undue 'nannying'[53] and also result in stigmatising obese and overweight people. Secondly, not all interventions that come under the term 'social marketing' are effective (and cost-effective) ways of changing behaviour.[54] For example, reviews of attempts to encourage people out of cars and into walking and cycling have shown that publicity campaigns have had little effect on health (although some highly targeted interventions have been effective in increasing walking and cycling among motivated groups).[55] Lastly, and perhaps most importantly, policy makers need to consider the potential consequences of policy decisions on health inequalities. Promoting behaviour change can be incompatible with reducing health inequalities; for example the Government's campaign to encourage people to eat five portions of fruit and vegetables per day[56] or encouraging leisure time physical activity through gym membership, may benefit certain groups more than others and thus contribute to an increase in health inequalities (see paragraph 5.34). Such measures may nonetheless be desirable if complemented by alternative policies that seek to benefit those groups that are disadvantaged.

5.32 Overall, we consider that there is more that could be done in the design of urban environments and buildings to reduce the obesogenic nature of the environment and increase the opportunities for people to increase their energy expenditure with ease. **Planning decisions by central and local government should include the objective of encouraging people to be physically active. This may entail some restrictions of people's freedoms, for instance to drive anywhere they wish to, but these restrictions would be justified in terms of public health benefits.**

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[53] Although, we note that it is widely accepted that the government has a 'nannying' role whenever it structures our choices in some way, for example when deciding whether or not to provide infrastructure (see also paragraph 8.17). For a discussion of how government interventions in public health are variously seen as 'nanny statism' or stewardship, see Jochelson K (2005) *Nanny or Steward? The role of government in public health* (London: The King's Fund).

[54] For example, see McDermott L, Stead M, Gordon R, Angus K and Hastings G (2006) *A Review of the Effectiveness of Social Marketing: Nutrition Interventions* (Institute for Social Marketing), available at: http://www.nsms.org.uk/images/CoreFiles/NSMC-R2_nutritioninterventions.pdf; see Gordon R, McDermott L, Stead M, Angus K and Hastings G (2006) *A Review of the Effectiveness of Social Marketing: Physical Activity Interventions* (Institute for Social Marketing), available at: http://www.nsms.org.uk/images/CoreFiles/NSMC-R1_Physical_Activity.pdf.

[55] Ogilvie D, Egan M, Hamilton V and Petticrew M (2004) Promoting walking and cycling as an alternative to using cars: systematic review *Br Med J* **329**: 763; Ogilvie D, Foster CE, Rothnie H *et al*. (2007) Interventions to promote walking: systematic review *Br Med J* **334**: 1204 and 1173.

[56] NHS, *5 A DAY*, available at: http://www.5aday.nhs.uk/.

5.33 **The training of architects and town planners should include measures for increasing people's physical activity through the design of buildings and public spaces. This can be viewed as analogous to the recent incorporation of the study of energy efficiency and sustainability of buildings. The recommendation is directed to those who design training programmes, including the Architects Registration Board, the Royal Institute of British Architects and the Royal Town Planning Institute. Planning regulations by local planning authorities should set requirements in this area.**

Strategies for reducing inequalities

5.34 In our stewardship model we suggest that public health policies should aim to eliminate or reduce health inequalities (paragraphs 2.41–2.44). In general in developed countries, obesity is more prevalent in lower income and lower socio-economic groups and in certain ethnic minorities (see Boxes 5.5 and 5.6). A prioritarian approach to reducing obesity might be considered on the basis of reducing inequalities in health (paragraph 2.31). An example would be planning decisions that improve access to sports facilities or shops/markets that sell fresh fruit and vegetables, or the distribution of food vouchers to people of lower socio-economic status. However, although such targeted interventions could benefit people who might not gain from population-wide initiatives, care would be required to avoid actual or perceived stigma that may result from singling out particular social groups in this way.

Box 5.5: The socio-economic pattern of obesity

Rates of obesity tend to rise in association with increasing social disadvantage in developed countries, although the pattern is considerably more marked among women than men. For example, in women, rates of overweight and obesity in England show a consistent rise with increasing social disadvantage, from 19% in the 'managerial and professional' group to 29% in the 'routine and semi-routine' group. For men, the differences in the rates of obesity between different groups are less marked.[57]

Rates of formal, leisure-time physical activity are lower in lower socio-economic status groups. Nevertheless, on average, people in these groups engage in more domestic and work-related physical activity, and in childhood they are more physically active in everyday activities such as walking to school and unstructured play, so that total physical activity levels may differ less across social groups.[58]

Box 5.6: Patterns of obesity and levels of physical activity among different minority ethnic groups in the UK

The prevalence of obesity varies between different ethnic groups in the UK, and within ethnic groups there is large variation between the sexes. As we have said, 23% of men and of women in the general population in England are obese. However, men from most minority ethnic groups have markedly lower obesity prevalence rates, with the exception of Black Caribbean (25%) and Irish (27%) men. Women from several minority ethnic groups also have lower obesity prevalence rates than the general population, with the exception of Black Caribbean (32%), Black African (39%) and Pakistani (28%) women. Low prevalence of obesity is found among Bangladeshi men (6%), and Chinese men (6%) and women (8%).[59]

It is reported that many South Asian individuals who have been resident in the UK for a long time seem to adopt a 'British type' diet, with an increase in fat consumption.[60] Levels of physical activity also vary between different minority ethnic groups, particularly among women. For example, in England, participation in a high level of physical activity[61] ranges from approximately one third of Irish and Black Caribbean individuals compared with 37% of men and 25% of women in the general population. Lowest participation rates in physical activity are reported by Bangladeshi and Pakistani women at less than 15%.[62]

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[57] Sprosten K and Primatesta P (2004) *Health Survey for England 2003 Volume 2: Risk factors for cardiovascular disease* (National Statistics), Section 6, available at: http://www.dh.gov.uk/assetRoot/04/09/89/11/04098911.pdf.

[58] Sprosten K and Primatesta P (Editors) (2004) *Health Survey for England 2003 Volume 2: Risk factors for cardiovascular disease* (National Statistics), available at: http://www.dh.gov.uk/assetRoot/04/09/89/11/04098911.pdf; Bromley C, Sprosten K and Shelton N (Editors) (2005) *The Scottish Health Survey 2003 Volume 3: Children* (Scottish Executive); Bromley C, Sprosten K and Shelton N (Editors) (2005) *The Scottish Health Survey 2003 Volume 2: Adults* (Scottish Executive); Macintyre S and Mutrie N (2004) Socio-economic differences in cardiovascular disease and physical activity: stereotypes and reality *J R Soc Health* **124**: 66–9.

[59] All figures from NHS (2005) *Health Survey for England 2004: The Health of Minority Ethnic Groups – headline tables*, available at: http://www.ic.nhs.uk/webfiles/publications/hlthsvyeng2004ethnic/HealthSurveyForEngland161205_PDF%20.pdf.

[60] Williams R, Bush H, Lean M, Anderson A and Bradby H (1998) Food choice and culture in a cosmopolitan city: South Asians, Italians and other Glaswegians, in *The Nation's Diet: The social science of food choice* Murcott A (Editor) (London: Longman), pp.267–84.

[61] A 'high' activity level is defined as achieving the government recommendations of participating in activity of moderate to vigorous intensity for at least 30 minutes on five or more days a week on average.

[62] All figures from NHS (2005) *Health Survey for England 2004: The Health of Minority Ethnic Groups – headline tables*, available at: http://www.ic.nhs.uk/webfiles/publications/hlthsvyeng2004ethnic/HealthSurveyForEngland161205_PDF%20.pdf.

Interventions for protecting vulnerable groups

5.35 The increase in the prevalence of obesity among children is a particular concern, invoking from the stewardship model the principle of providing special care for the vulnerable (paragraphs 2.41–2.44). In July 2004, the Government set itself a public service agreement (PSA) target specifically on obesity – "halting the year-on-year rise in obesity among children aged under eleven by 2010 in the context of a broader strategy to tackle obesity in the population as a whole".[63] Much attention has been focused on the role of schools, as education plays a central role in providing individuals with the capacity to choose healthy behaviours. Schools are only part of a bigger picture. It is unreasonable to expect interventions in schools alone to be sufficient to reduce the prevalence of obesity, given the vast array of other influences experienced by children. However, school communities do provide an important means of influencing many of the socio-cultural factors that have a lasting impact on both food choices and exercise habits. They have a prominent role in the community, are a source of support for parents and families, and can produce community change in environments, knowledge and behaviour. For these reasons, it is appropriate for schools to seek to influence positively the food and exercise habits of children. Recognition of this was evident from many responses to the consultation, of which these are examples:

> "...schools should be responsible for promoting healthy eating habits and physical activity in children. School-food providers should provide healthy food choices to children." *PR Myles*

> "State schools are a direct agency of the government, and are charged with direct resonsibility for promoting the wellbeing of children. It is appropriate that schools should both disseminate information about healthy eating and exercise, and reinforce these messages through their own provision of foods, and by ensuring that exercise is a fundamental part of the curriculum." *British Medical Association*

5.36 **The stewardship model's emphasis on circumstances that help people to lead healthy lives, especially if they are in vulnerable positions** (paragraphs 2.41–2.44), **leads to an ethical justification for the state to intervene in schools to achieve a more positive culture towards food, cooking and physical activity.** As in many other areas of public health policy, the only way of establishing whether a new policy is likely to lead to improved health is by trialling it. **Because the need being addressed is an important one, it is desirable to explore the potential of promising policies, even if evidence for their effectiveness is incomplete.** In addition, changes in attitudes and culture towards food and physical activity are likely to take a long time. For example, the effectiveness of recent initiatives to introduce healthier meals and free fruit and vegetables in schools needs to be evaluated over many years.[64] Although short-term targets may be useful as milestones for monitoring progress, care is required not to measure success by reference to short-term targets alone. **The UK Government departments responsible for food, health and education should develop long-term strategies for schools with the aim of preventing obesity, and changing food and exercise culture, accompanied by monitoring and follow up.**

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[63] Department of Health, *Obesity PSA Target*, available at: http://www.dh.gov.uk/en/Policyandguidance/Healthandsocialcaretopics/Obesity/DH_4133951. As this Report went to press, the Government announced a new PSA target to reduce the proportion of overweight and obese children to 2000 levels by 2020, see Department of Health (2007) *Long-term ambition on obesity*, available at: http://www.dh.gov.uk/en/Policyandguidance/Healthandsocialcaretopics/Obesity/DH_079307.

[64] These programmes, introduced over the past few years, have not yet been shown to result in long-term dietary changes or health benefits, although some researchers have observed evidence of increased knowledge of healthy eating, particularly in children from deprived areas. Some commentators hope that there will be longer-term impacts on children who are exposed to the free fruit and vegetables scheme for a longer period of time, and in the context of a whole-school policy designed to promote healthy eating. See Ransley JK, Greenwood DC, Cade JE *et al.* (2007) Does the school fruit and vegetable scheme improve children's diet? A non-randomised controlled trial *J Epidemiol Community Health* **61**: 699–703; Schagen S, Blenkinsop S, Schagen I *et al.* (2005) *Evaluation of the School Fruit and Vegetable Pilot Scheme: Final Report* (London: Big Lottery Fund).

5.37 In 2006, the Department of Health for England concluded that there were no existing comprehensive and reliable data at local level on child obesity to inform local planning and targeting of resources and interventions, and to enable tracking of progress against the PSA target (see paragraph 5.35). As a result, primary care trusts (and also local health authorities elsewhere) have been made responsible for measuring the height and weight of children in maintained schools at age four to five years and age ten to eleven years.[65] Although in its early stages, there is evidence that some children, and possibly in particular those who are overweight or obese, are declining to participate in the weighing and measuring programmes that are being implemented.[66]

5.38 **Data on the prevalence of obesity are a crucial part of understanding trends and the impact of interventions. Weighing and measuring young children is ethically justifiable, provided the data are anonymised and collected in a sensitive way. The collection of the data on obesity in children should be managed in a way that minimises the risks of stigmatisation, for instance by encompassing it within a broader programme of health checks. The UK health departments should give consideration to how this could be best realised in practice.**

Interventions for protecting others against harm

5.39 The classical harm principle (paragraph 2.14) could be invoked to justify severe interventions where children become obese as a direct result of their parents' preferences for food and exercise. The justification would rest on the special vulnerability of children and on the need to reduce the risks of ill health that people, in this case parents, impose upon others (see paragraphs 2.41–2.44). We note that if parents were to severely harm the health of their children, for example by underfeeding them, action would be taken by social services and they could be charged with neglect. There have now been at least a few cases in the UK where issues of neglect were raised in relation to a child who became severely obese.[67] **In general, direct regulation of food provided to children in the home would be disproportionate, as any health benefits achieved would be outweighed by the value of private and family life** (see also paragraph 6.15)**. However, where severe obesity is caused by overfeeding by parents or guardians, child protection issues would be raised if the child was at risk of significant harm to health.**[68] High-profile cases of families with severely obese children have led to debate about whether it is appropriate for authorities to intervene in such situations. **The Secretary of State for Children, Schools and Families, with the advice of the Office of the Children's Commissioner, should develop criteria for deciding when interventions, such as removing a child from their home, would be appropriate under the Government's *Every Child Matters* approach.**[69]

Consideration of obesity-related treatments and costs to the NHS

5.40 We have suggested elsewhere that the NHS is an important part of the UK's public health system, and that the provision of a healthcare system such as this fulfils an important part of the stewardship function of the state (paragraph 1.11). Treating obesity and obesity-related

[65] Department of Health *Guidance for Measuring Childhood Obesity*, available at: http://www.dh.gov.uk/en/Policyandguidance/Healthandsocialcaretopics/Obesity/DH_4134095; NHS National Services Scotland (2006) *Childhood Obesity – Statistics and Information*, available at: http://www.isdscotland.org/isd/3640.html.

[66] Crowther R, Dinsdale H, Rutter H and Kyffin R (2006) *Analysis of the National Childhood Obesity Database 2005–06* (NHS), available at: http://www.apho.org.uk/apho/publications/childhoodobesity.pdf.

[67] See, for example, BBC News (2007) *Child obesity 'a form of neglect'*, 14 June, available at: http://news.bbc.co.uk/1/hi/health/6749037.stm.

[68] The fact that state intervention in home life is generally considered a last resort in a liberal state may in part explain why the focus of much government action (whether on eating or exercise habits) is often directed towards the school rather than home environment.

[69] *Every Child Matters* is the Government's approach to the well-being of children and young people from birth to age 19.

illnesses accounts for a large and increasing part of NHS expenditure (see Box 5.7). A significant number of respondents to our consultation expressed strong views about the way in which obesity should be considered in the context of limited resources within the NHS:

"It is acceptable for those who allow themselves to become so obese to the point where they are placing such a burden on their skeleton and organs … should contribute more into the system. They are responsible for their own state of health, and others who maintain their health reasonably should not share the costs." *Ms Magda Taylor*

"The ethos of the NHS is that services are based on need and are free at the point of delivery. […] There are many factors, for example obesity, over indulgence in alcohol, dangerous sports, which can result in the need for NHS input. To decide who 'deserves' treatment and who does not is against the ethos of the NHS and would require considerable investment in determining the rights and wrongs of each case." *Anon.*

"We do not believe that it is acceptable to make NHS services dependent on individuals losing weight, for two reasons: first, the degree of control that individuals have (given their individual histories, their socio-economic situation, and their genetics) is not clear and probably much less than is often assumed; and second, in a society where there are so many ways in which individuals are encouraged to become obese (advertising; food industry products) it is then unfair to penalise those affected by these encouragements." *Ethox Centre, Division of Public Health and Primary Care, University of Oxford*

Box 5.7: Economic factors

The rising prevalence of obesity has several economic consequences including: the treatment of obesity itself and its direct consequences; social care costs; and higher levels of sickness and absence from work. It is difficult to make precise or comprehensive estimates of the costs but it has been estimated that they amount to many billions of pounds per year in the UK.[70]

As an example, in the 2004 Wanless report to the Treasury, the direct cost of treating obesity was estimated at £9.4 million in England in 1998, and the cost of treating diseases attributable to obesity was £470 million. It was predicted that if present trends continue, by 2010 the annual cost to the economy would be £3.6 billion.[71]

In terms of total costs to the economy as a result of obesity, the House of Commons Select Committee on Health estimated that this amounted to between £3.3–3.7 billion in England in 2002.[72] Of this, approximately £1 billion was accounted for by the direct costs of treating obesity and its consequences (2.5% of net NHS expenditure in 2001–02). The remainder was attributed to loss of earnings (including 45,000 lost working years due to premature death and nearly 16 million lost working days because of sickness attributable to obesity). These very large contemporaneous costs of obesity are offset by reduced demands on expenditure such as pensions, as a result of shortened lifespans.

5.41 We have noted that the healthcare system in the UK is organised on a principle of community in which people are treated according to need (see paragraphs 1.11, 2.39). For such a system to be sustainable without increasing contributions, all members of the population need, to the greatest extent possible, to minimise relying on its resources. It may therefore be legitimate for the state to consider measures that ensure the sustainability of the NHS. One way of justifying this might be to appeal to a notion of community (paragraph 2.34) which is sensitive to the opportunity costs of expenditure on 'unnecessary' or avoidable treatment. Hence, it might be legitimate to appeal to individuals to change behaviours that have a significant financial cost to the public healthcare system. However, in our view any considerations about making treatment for obese people conditional on behaviour change

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[70] McCormick B and Stone I (2007) Economic costs of obesity and the case for government intervention *Obes Rev* **8** (Suppl. 1): 161–4.

[71] Wanless D (2004) *Securing Good Health for the Whole Population* (London: HM Treasury), Chapter 4: Case Studies, available at: http://www.hm-treasury.gov.uk/media/B/4/Wanless04_ch4.pdf.

[72] It is expected that these figures are likely to underestimate the true costs to the economy. House of Commons Health Committee (2004) *Obesity*, Annex 1, available at:
http://www.publications.parliament.uk/pa/cm200304/cmselect/cmhealth/23/23.pdf.

do not fall within the remit of public health, but rather each case needs to be assessed in its clinical context.

5.42 Obesity has complex causes. It is usually not easy to determine to what extent a person's weight is under their own control, and to what extent it is influenced by factors, such as their environment, that make it difficult to exercise or eat healthily. There is a significant risk of stigmatisation and unfair 'victim-blaming', where already-disadvantaged people are held unduly responsible for their poor health state. Any policies that single out obese people could also substantially undermine the concept of solidarity and the value of community, as people might come to regard each other merely as self-interested competitors for scarce resources. **It would not generally be appropriate for NHS treatment of health problems associated with obesity to be denied to people simply on the basis of their obesity. However, appeals to change behaviour before or subsequent to an intervention could be justified, provided that the change would enhance the effectiveness of the medical intervention, and people were offered help to do this.** On the whole, although the case of obesity raises some valid considerations about making the most efficient use of resources at the point of providing treatment, and although difficult decisions have to be made in allocating necessarily limited resources, in terms of public health policy the focus of efforts should be on *avoiding* the need for treatment in the first place. This is a fairer approach, and seems likely to be more promising in economic terms.

Role of civil society and individuals

5.43 We recognise that institutions of civil society such as charitable and community groups take valuable action through local initiatives to promote healthy eating or exercise, for example through organising or lobbying for sports clubs, cycle tracks or pedestrian areas. Such organisations can be very effective in facilitating governments to implement public health measures. For example, they might commission research, lobby the government and raise public awareness. These activities help to give governments the public mandate and therefore the political will to act.

5.44 Lastly, although this chapter focuses on public health measures that are designed to operate at the population level, we note that it would be wrong to ignore the contribution of people's individual behaviour in strategies seeking to prevent obesity. While the organised efforts of society can seek to generate an environment that promotes, as far as possible, opportunities for exercise and healthy food, these interventions are unlikely to 'engineer away' obesity completely without efforts by people to manage their weight, including taking up the opportunities provided.

Summary

5.45 There are complex causes for the rise of obesity worldwide. Although some of the contributing factors have been identified, their relative importance is unclear. In general terms, obesity is the result of many changes in our environment that make it easier to consume a large amount of calorie-rich food while expending little energy. Obesity is a risk factor for many chronic health conditions, such as diabetes and heart disease.

5.46 We have considered several salient policy issues in this chapter and emphasised throughout that the complex and multi-factorial causes of obesity mean that no single policy option will act as a 'magic bullet' to reduce the rising incidence of obesity. There is a role to be played by many agents, including central government, local government, industries that manufacture, market and sell food and drinks, public transport agencies, architects and building designers, clinicians and medical advisers, catering outlets, media businesses, institutions of civil society, parents and schools, and, last but not least, individuals. We

commented on the importance of corporate social responsibility and concluded that where industry fails to satisfy reasonable expectations by a stewardship-guided state, regulation is ethically justifiable within the stewardship model set out in Chapter 2. We noted that it is necessary to consider the potential effects on social inequalities of any policy options under consideration.