# Tackling obesity: the big challenge

#### Geof Rayner PhD

Visiting Research Fellow at City University London, London, Advisor to the UK Chief Scientist's Foresight Obesity Project Advisor to the UK government and to international health bodies on public health **Email:** Geof@Rayner.uk.com

Keywords: obesity, nutrition, diet, culture, public health

Obesity has risen rapidly in parts of Europe, following the USA. Now classified as a disease by the World Health Organisation, this article argues that the problem has roots in profound societal transitions in the sphere of diet, the physical environment and culture. It was once considered that the countries of the Mediterranean basin had the best diet in Europe and were therefore more protected against diet-related chronic diseases. In fact child obesity is higher in Mediterranean countries, including Malta, than most other European countries and very much higher than the Baltic states, which have always been considered to have a poor diet. It is argued that the consequences for society are profound and that an equally profound policy strategy is called for.

### Introduction

Why is obesity a problem? For whom? Where did it come from? These outwardly simple questions can be addressed to a seemingly straightforward topic; after all obesity is the result of energy imbalance: eating too much and doing too little. This article will argue that in fact the causes of obesity are far more complex, being rooted in an immense, if recent, process of societal change. Obesity is now a major problem for Europe, not only for countries highly influenced by the 'Americanised' diet and lifestyle, but for countries once noted for healthy diets, such as the countries of the Mediterranean basin, including Malta, which today has one of the highest rates of child obesity.

It is argued here that in order to understand obesity, we have to comprehend three major societal transitions, those occurring in diet, the physical environment and culture. While there are many opportunities for health professionals to take action at the individual and community level, the evidence suggests that halting, let alone reversing, obesity will require a society-wide set of measures.

### Discussion

Half a century ago, in the years following World War II, millions of Europeans went hungry and obesity as a medical condition appeared little more than a curiosity. These events framed the determination to rebuild agriculture (albeit in different ways) often with large subsidies and create a favourable environment for agri-business.<sup>1-3</sup> Even just a decade ago, with most of Europe more than adequately fed and EU farming policy consuming almost half of the EU budget, the average politician might have remarked that obesity was an irrelevance. To find a comparable society suffering from obesity meant travelling to the USA.

Until just two decades ago it might still have been argued that Europe was immune to the rising obesity but today it is obvious - the use of the eyes alone provides the evidence -that Europe is steadily succumbing to rising obesity trends and the factors which many think drive such trends: the 'Americanisation' of diet and society: the rise and rise of car culture and other technical 'advances', including screen based entertainment targeted at children, which marginalise daily physical activity; the over-consumption of food accompanied by its unprecedented, plentiful availability; the culture of clever and constant food advertising; the shift from meal-time eating to permanent 'grazing'; the replacement of water by sugary soft drinks; the rising influence of large commercial concerns framing what is available and what sells; and more. 4-7

Copious evidence now exists that both adults and children are affected by rising weight. In Europe much attention has been given to the UK. The UK - with almost twothirds of the adult population overweight - is now one of the leading countries for population weight gain, although there is still considerable variation in trends across Europe.<sup>8</sup> Most worryingly, the biggest national weight increases among children have been in countries of the Mediterranean basin, such as Greece and Spain, previously justly celebrated for their Mediterranean diets, high in vegetables, pulses and unrefined carbohydrates, culturally close to the land.<sup>9</sup> Among these, Malta, the smallest EU country, appears to have perhaps the largest problem. According to data drawn from the 34 (primarily European) participating countries of the 2001–2002 Health Behaviour in School-Aged Children Study, the two countries with the highest prevalence of overweight (preobese + obese) and obese youth were Malta (25.4% and 7.9%) and the United States (25.1% and 6.8%).<sup>10</sup> In contrast the two countries with the lowest prevalence were the small Baltic states of Lithuania (5.1% and 0.4%) and Latvia (5.9% and 0.5%) - countries of short summers and long winters and not usually known for healthy diets.

Why has this come about? And why are some countries apparently more vulnerable than others? There are some

common elements which might explain the growing trend although there is still considerable variation from country to country in the range of determinants. Given that the culture of the Mediterranean diet no longer appears to provide protection. an explanation must be sought in factors outside this. In comparing Malta with Lithuania, for example, questions might be asked about how far young people have changed their diet, to what degree youngsters in the country engage in active physical activity or the degree to which the way of life encourages everyday activity in contrast with a passive, screen-based culture. Although much of the obesity scientific literature attempts to separate the separate factors a more satisfactory approach might be to consider how factors combine.

Although obesity is highly complex, there are some core truths on which thinking can be developed:

- Obesity is now a world-wide phenomenon but it is concentrated in some parts of Europe rather than others, and there is a particularly worrying acceleration of rates among children.<sup>11</sup>
- Obesity is known to lead to medical problems, long documented although only formally classified by WHO in 1997.<sup>12</sup>
- There are serious and rising social and financial burdens stemming both directly and indirectly from obesity. <sup>13</sup>
- Obesity is linked to either accelerated or caused by - other societal trends and risks, such as changed food production, motorised transportation and work-home and lifestyle patterns. <sup>12,14-16</sup>
- Policy-makers have been slow to recognise the seriousness of the issue, which suggests the health community has been slow or ineffective in its advocacy work or that the evidence is not easily translatable into policy or that the tackling of obesity lacks political champions. <sup>17,18</sup>
- Remedies based upon individual action alone, from diet plans, drugs, surgery or stigma, have limited effectiveness in population terms and often come at high cost.
- There is a powerful temptation in government to limit actions to a choicebased, personalisation approach; in part because this style of intervention is

aligned to the commercial sector's own customer-management and marketing methods but also because a cross-society approach appears so big in conception that it appears too high risk. <sup>19,20</sup>

- Despite some welcome initiatives, <sup>21</sup> there are, as yet, no comprehensive structures or set of policy models for *what really to do about obesity*. We are generally still at the 'talking stage' of policy, albeit with some specific initiatives in different parts of Europe, rather than well into implementation.
- Food companies are not adequately changing their behaviour in response to the request to do so by the World Health Organisation under its Global Strategy on Diet, Physical Activity and Health. On the contrary, there is evidence that the big food companies are for the most part unconcerned.<sup>19</sup>
- Part of the difficulty in generating effective policy is having a policy package which will deliver a corrective population-wide shift. <sup>8,22,23</sup>

Among the conceptual models around obesity, the insightfully-termed Nutrition Transition<sup>24-26</sup> appears the strongest. It has emerged as a central focus of research and policy thinking in the developing world and within the World Health Organization. Despite its strong merits it deserves to be conceptually unbundled. The Nutrition Transition is not one process but, in our opinion, three transitions of:

- Diet;
- Management of, and human interface with, the physical environment; and
- Culture.

These three transitions overlap, combine and amplify each to the other. There is little chance of any obesity policy being effective unless all three domains are tackled. Policy interventions should be judged from the perspective of these transitions, rather than in some isolated or disconnected way which has the potential allure of inoffensiveness or apparently quick results. At its simplest level, anti-obesity strategy will have to tackle diet and physical (in)activity. If the scientific endeavour focuses on unravelling their complex interplay what is often missed out is the role of the third transition, the cultural dimension that bonds diet and physical activity. 20,27

## The role of health professions

In an ideal world, health considerations would apply to all governmental policy making; in fact, health considerations are usually the least important factors in determining policy. A more likely candidate for determining the shape of obesity policy is cost. For example in the US the Surgeon General notes that obesity is currently costing up to 6% of healthcare budgets, a figure now exceeding \$100 billion.<sup>28</sup> In the US obesity is predicted to soon overtake the toll of tobacco.<sup>29</sup> In Europe the cost of obesity is now being counted and projections are being formulated. <sup>30</sup> Cost considerations do not explain however the appeal to policy-makers of taking a sciencebased, though in fact medicalised route of individualised treatment, through drugs, therapy, and at the most extreme, bariatric surgery.

Even if government is committed to more radical action, dealing with obesity is difficult for a variety of reasons: the drivers of obesity, as noted, are profoundly wedded to processes of societal change which are now seemingly embedded. Thus, failure to act at an early stage has already produced immense and undesirable consequences since obesity is profoundly difficult to reverse as young people move into adulthood. Hence, as the numbers grow obesity is being socially 'normalised'- even as the trends accelerate and the evidence grows.

As ever in health matters, hope is placed in the accumulation of evidence about 'what works'. However the few intervention trials in prevention of obesity which focus on children or schools (in Crete, Agita Sao Paulo, Singapore, Minnesota)<sup>8</sup> give little ground for optimism. It has been suggested that strategies like Epode in France, a 'national to local' model giving an important role to local mayors, or the community development approaches in Australia may in some instances be halting obesity, but there is little indication

- although full evaluations have yet to appear - that they are reversing its impact. Although there is a literature of action on different factors such as price, marketing, education, supply, <sup>31</sup> no mass societal policy intervention has taken a 'full spectrum' approach. <sup>32</sup> Most policy overviews suggest that efforts to combat the epidemic have to be society-wide, extensive and deep.<sup>8,33</sup> In any terms, refurbishment of health promotion and health development is required, demanding significant alteration of supply chains, product marketing, the constituents of daily existence, indeed whole cultures.

If obesity prevention becomes a genuine policy, engaged with and delivered across government, society and commerce, its accomplishment will require a major paradigm shift, based on principles designed to: <sup>34-36</sup>

- take a whole system rather than partial approach.
- reshape not just the physical and dietary environment but also the social and cultural environments.
- adopt a long-term strategy by asking what an anti-obesogenic environment might look like and then draw out the policy changes needed to deliver it.
- recognise the fundamental nature of the challenge posed and give due political priority to building alliances that could

overcome the obesogenic social forces (as was done for tobacco in a long 50year process).

- reformulate the roles of government, markets and consumers to shift them away from reinforcing obesity.
- deliver a situation where prevention is the norm, where victim-blaming is unacceptable but responsibility not avoided.
- engage multi-sector, multi-agency action within and beyond the public health professional discourse.

#### Conclusion

It has been argued that obesity is emerging as a major disease in Europe and that its determinants are rooted in societal change. Gaining weight might not be perceived an just an individualised pathology or even an pathology at all; indeed it could be described as a normal response to an environment which supplies the wrong foods too cheaply and which encourages people to do physically less.

Consequently, while the role of professions in preventing and mitigating the impact of obesity does need consideration, the major response of the health professions must be that of policy advocacy: promoting policy change and promoting social debate on the way forward. The rapid and continuous upward trend in prevalence, it has been argued, demands governmental action. Nevertheless while actions should be led from the higher reaches of government, this policy should also be 'owned' by the population, and particularly young people. In this regard the promotion of a healthy, active society and the building of cultural resistance to obesity requires a long term vision which demands resources, financial and political. Only if obesity is seen as a shared societal problem - 'everyone's business' -and not merely the 'fault' of the people most affected, can an overall response be formulated which acts to break down policy blockages and the refusal to appreciate the nature and the seriousness of the threat.

### References

- 1. Brandt K. The Reconstruction of World Agriculture. London, George Allen & Unwin; 1945.
- 2. Dunman J.Agriculture: Capitalist and Socialist. London, Lawrence & Wishart; 1975.
- Body R. Agriculture: The Triumph and the Shame. London, Temple Smith; 1982.
- Schlosser E. Fast Food Nation. New York, Houghton Mifflin; 2001.
- Brownell K D and K B Horgen Food Fight. New York, McGraw-Hill; 2003.
- 6. Critser G. Fatland: How Americans became the Fattest people in the World. London, Penguin; 2003.
- Kuchler F, Golan E. Is there a role for government in reducing the prevalence of overweight and obesity? Choices Magazine 2004.
- Lobstein T, Baur L *et al.* Obesity in children and young people: a crisis in public health. A report to the World Health Organisation. Obesity Reviews 2004: 5(1).
- 9. Robertson A, Tirado C *et al.* Food and health in Europe: a new basis for action. Copenhagen, World Health Organisation Regional Office for Europe. 2004.
- 10. Janssen I, Katzmarzyk PT, *et al.* (2005). Comparison of overweight and obesity prevalence in school-aged youth from 34 countries and their relationships with physical activity and dietary patterns. Obesity Reviews 2005 6(2):123-132.
- 11. Department of Health Factsheet on Obesity for Health Challenge England. 277472/F 1p 1k Oct 06 (FMP). London, Department of Health: 2006:4.
- 12. WHO. Obesity: preventing and managing the global epidemic. Report of a WHO Consultation. WHO Technical Series 894. WHO Technical Series. Geneva, World Health Organisation 2000.
- 13. Wanless D. Securing Our Future Health: Taking a Long-Term View. London, H M Treasury; 2002.
- Peña M, Bacallao J. Obesity and Poverty: a new public health challenge. Washington DC: Washington DC, Pan American Health Organisation of the WHO (PAHO) 2000.

- 15. Health Committee of the House of Commons. Obesity. Third Report of Session 2003-04, HC 23-1, volume 1. London, The Stationery Office 2004.
- 16. James W P T, Rigby N, *et al.* The obesity epidemic, metabolic syndrome and future prevention strategies. European Journal Cardiovascular Prevention and Rehabilitation 2004:11(1): 3-8.
- 17. Jain A. Treating obesity in individuals and populations. British Medical Journal: 2005: 331:1387-90.
- Lancet, T. (2006). The Catastrophic Failures of Public Health. The Lancet 2006: 363(9411): 745.
- 19. Lang T, Rayner G et al. The Food Industry, Diet, Physical Activity and Health: a review of reported commitments and practice of 25 of the world's largest food companies, measured against the goals of the World Health Organisation Global Strategy on Diet, Physical Activity and Health. London, City University Centre for Food Policy 2006.
- Rayner G, Hawkes C, et al. Trade liberalisation and the diet and nutrition transition: a public health response. Health Promotion International 2007 (in press).
- 21. Byrné D. EU and the obesity epidemic. Eurohealth 2003: 9(1): 16-17.
- Swinburn B. Egger G. Preventive strategies against weight gain and obesity. Obesity Reviews 2002:3:289–301.
- Swinburn B, Gill T, et al. Obesity prevention: a proposed framework for translating evidence into action. Obesity Reviews 2005: 6: 23-33.
- 24. Popkin BM. An overview on the nutrition transition and its health implications: the Bellagio meeting. Public Health Nutrition 2002:5 (1A):93-103.
- Popkin BM. (2003). The nutrition transition in the developing world. Development Policy Review 2003: 21:581-97.
- 26. Popkin B, Nielsen SJ. The Sweetening of the World's Diet. Obesity Research 2003: 11(11): 1-8.

- 27. Lang T , G. Rayner G. Obesity: a growing issue for European policy? Journal of European Social Policy 2005: 15(4):301-27.
- 28. U.S. Department of Health and Human Services. The Surgeon General's Call to Action to Prevent and Decrease Overweight and Obesity, 2001. Washington DC, US Department of Health and Human Services Public Health Service.
- 29. Sturm R. The effects of obesity, smoking, and drinking on medical problems and costs. Health Affairs 2002:21(2): 245-53.
- Rayner G, Rayner M. Fat is an economic issue: combatting chronic diseases in Europe. Eurohealth 2003 9(1): 17-20.
- Oxford Health Alliance Working Group. Economic consequences of chronic diseases and the economic rationale for public and private intervention. Oxford, Oxford Health Alliance 2005.
- 32. Prättälä R, Roos G, *et al.* Food and nutrition policies and interventions. Reducing Inequalities in Health: A European Perspective. J. Mackenbach and M. Bakker. London, Routledge: 2002: 104-24.
- Summerbell C D, Waters E, et al. Interventions for preventing obesity in children. Cochrane Reviews Review Manager 2005: 4.2.3(Issue 3).
- 34. Paulus I. The search for pure food. Oxford, Martin Robertson; 1974.
- Porter D. Health, Civilisation and the State. A History of Public Health from Ancient to Modern Times. London, Routledge; 1998.
- 36. Kumanyika SR, Jeffery RW et al. Public health approaches to the prevention of obesity. Working group of the International Obesity Task Force. Obesity Prevention: the case for action. International Journal of Obesity 2002:26: 425-436.