

Essay

Obesity is a disease: food for thought

William Jeffcoate

The number of people in Britain who are obese (body-mass index [BMI] >30) is about 15%. This figure has doubled in the past decade, and seems to be rising progressively. It shows every sign of approaching that of North America, where obesity affects up to 40% of some populations. Such fatness is associated with increased rates of mortality and a vast, and expensive, increase in morbidity from cardiovascular, cerebrovascular, skeletal, metabolic, malignant, and other diseases. Obesity should be regarded as a disease, and one that has reached epidemic proportions. But what can be done about it, and who should be doing it?

The first fact to be grasped is that treatment of fatness does not work. Indeed, if all doctors practised evidence-based medicine, half the dieticians in any one country would be out of a job. Diets don't work, commercial clinics have rarely published unselected results, psychological therapies either do not work or are in their infancy, surgery has an appreciable mortality and has in any case been reserved for the morbidly obese (BMI >40), and 5HT-release and reuptake inhibitors have been withdrawn because of the risk of cardiac fibrosis. Only a few of the people who are advised and encouraged to lose weight will do so, and most of the successful ones will regain it within 2 years—a process that could be called (to parody Claude Bernard) the re-establishment of the *milieu postérieur*. Thus, the absence of any effective treatment may be one reason why the prevalence of fatness is increasing so rapidly in the UK. But it is not the only one.

Could it be a failure in the attitude of the public? Hardly, because this epidemic has occurred at the very time when thin-consciousness has become prevalent in the western world. Until the start of the 20th century, plumpness was regarded in our society as a sign of affluence, health, and beauty. The origins of this attitude are long-standing and date from the time when food was scarce for all our ancestors, who had to hunt or fight for

what they got. Mammalian metabolism developed mechanisms whereby spare calories could be hoarded: fat is a luxury as far as the body is concerned, and hence humankind has evolved its traditional view that plumpness is desirable. It was not by chance that it is recorded in the Old Testament that the grateful Pharaoh promised Joseph all the “*fat* of the land”, or that “The righteous shall flourish like the palm tree . . . they shall bring forth fruit in old age: they shall be *fat* and flourishing” (my italics) (Psalms XCII, 13).

That fatness was a sign of fecundity and sexual attractiveness, as well as of health and wealth, has also been abundantly illustrated by painters from Rubens (figure) to Renoir, while John Dryden in *The Maiden Queen* summarised the attitude of young women in 17th century England: “I am resolved to grow fat and look young till forty and then slip out of the world with the first wrinkle and the reputation of five and twenty”. At the same time, Shakespeare had Julius Caesar prefer to “. . . have men about me that are fat; Sleek-headed

men and such as sleep at nights”, although it could be argued that (slim) Caesar wanted fat counsellors not because they were healthy, but because they were less of a threat: “Yond Cassius has a lean and hungry look; He thinks too much: such men are dangerous”.

Plumpness was still regarded as a sign of beauty in 19th century Britain, when Walter Scott wrote in *St Roman's Well* “‘For the love of heaven,’ said her ladyship, ‘who can that comely dame be, on whom our excellent and learned Doctor looks with uncommon regard?’ ‘Fat, fair and forty,’ said Mr Winterblossom, ‘that is all I know of her—a mercantile person’”. How many surgical registrars teaching medical students about gallstones know of the origin of the phrase “fat, fair and forty”—and that the word “fair” originally meant good looking, and not blonde?

Traditionally, therefore, we have envied the affluence associated with plumpness, and those who have had the good fortune to have access to abundant food have not been particularly prone to deny themselves. Indeed, enjoyment of overeating, especially of communal overeating, is an integral part of social behaviour: we celebrate by eating large meals, and it is normal to show generosity by feeding visitors. In the same way we express



Bacchanal by Peter Paul Rubens
Pushkin Museum, Moscow

Bridgeman Art Library

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Department of Endocrinology, City Hospital, Nottingham NG5 1PB, UK (W Jeffcoate MB)

thanks with gifts of food and drink: commercial deals have their way paved with bottles of whisky at Christmas, and thousands of boxes of chocolates are presented each day to nurses in British hospitals. Such behaviour is symbolic, and derived from times of endemic starvation, even though it is now clearly atavistic—especially since the traditional attitude of westernised societies towards plump attractiveness has changed to one in which slimness is idealised. Many nurses who are given chocolates are trying hard to lose weight (but they eat them nevertheless).

The worship of the willowy supermodel has become a cult, and the parent of even the scrawniest 6-year-old girl will know that she is quite likely to come home from school announcing that she is starting a diet. Such food denial is clearly an abnormal process, and one that is in conflict with the deeply ingrained eating-oriented habits of families and societies. It is hardly surprising that eating disorders such as anorexia nervosa and bulimia cause such distress to friends and relatives. It also means that those who promote the medical desirability of weight loss have to be aware of the potentially adverse effects of what they do. While we have to examine critically the risks of obesity, we should look equally critically at the risks associated with its management—with *iatrogenic* food denial. In recommending weight loss to our patients, there is a possibility that we may sometimes do more harm than good.

The morbidity and mortality associated with obesity is undeniable, and it is accepted that weight reduction is associated with improved prognosis in people with weight-related diseases, such as diabetes and hypertension. But it does not necessarily follow that a fat, but otherwise well, person who loses weight will thereby acquire the same health expectancy as someone who was never fat in the first place. Indeed, there is evidence to the contrary. Thus, while women who are fat, fair, and forty are at increased risk of gallstones, that risk may be doubled if they go on a successful weight-reducing diet.¹ Of even greater importance is the increase in cardiovascular risk and all-cause mortality in people who lose weight,² especially in those who lose weight and then regain it:³ life expectancy is greatest in individuals whose weight is constant.⁴ Although the results of other studies have been more encouraging,⁵ these uncomfortable facts tend to receive less prominence than they should, and doctors who propound them are in danger of being condemned as heretics. Most doctors and nurses (especially *lean* doctors and nurses) believe that the main cause of fatness is uncontrolled (unrecognised or unadmitted) gluttony, even though it is unlikely that few enjoy gourmandising quite as much as Parson Woodforde:⁶

“We had a very excellent dinner, that is to say, a fine Piece of fresh Salmon with Tench and Eel, boiled Ham and Fowls, the best part of a Rump of Beef stewed, Carrots and Peas, a fore Qr. of Lamb roasted, Cucumbers and Mint Sauce, a Couple of Ducks roasted, plain and Currant Puddings. After Dinner 2 large Dishes of Strawberries, some Blanched Almonds with Raisins and Apples”.

Professionals often end up by haranguing overweight patients for their failure to be slim. Perhaps doctors are frustrated by their inability to treat obesity effectively, and derive some comfort from blaming the patient in this way, but in doing so they are blind to the experience

accumulated throughout the western world over the past 40 years. The causes, and metabolic associations, of fatness are extremely complex,^{7,8} but it is clear that in human beings, social and economic factors are equal, or even greater, determinants of fatness than inherited abnormalities of metabolism. Thus, although there is a strong linear correlation between bodyweight and socioeconomic affluence in developing societies, there is an inverse relation (at least in women) in cultures that are developed.⁸ This fact emphasises that attitudes to obesity in a population, as well as to diet (as distinct from dieting) and exercise, play an integral part in any tendency for the overall prevalence of obesity to rise. Obesity is a disease of society, and not of the individual.

Increased communal obesity is the result of increased communal affluence, and of increased communal sloth. We are no longer short of food, and the only effort required to obtain it is to get in the car and drive to the supermarket. We don't even think about the food we need: we buy on impulse and if we buy more than we need, we use the freezer in the same way that our bodies use the adipocyte. Needless to say, we are encouraged by the purveyors of food, who profit, and grow fat themselves, from our excesses. We eat more, and we take less exercise. Children in primary schools talk of diets, but they don't play skipping games as much as they used to, they don't play football in the streets, and many older children are loathe to take any form of exercise.⁹ Evenings are spent watching Australians debating love-affairs on television soaps such as *Home and Away* or *Neighbours*, and the nearest many get to exertion is vicariously, by watching *The Big Match*, or *Gladiators*, as they reach for another handful of snacks.

Thus, obesity has indeed reached epidemic proportions in our society, and it will have far-reaching consequences for the health and welfare of the people. It is a major issue of public health, which requires urgent attention—not from health-care professionals, but from politicians. The same politicians who have taken the advice of supermarket owners in restructuring the UK's health service, the same politicians who have forced councils to make ends meet by selling school playing fields, and the same politicians who finance the construction of ever more roads, should take note of what has happened in North America, and take realistic steps to stop the rot, before they end up governing a nation of couch potatoes, universally affected by blight.

References

- 1 Stampfer MJ, Maclure KM, Colditz KM, et al. Risk of symptomatic gallstones in women with severe obesity. *Am J Clin Nutr* 1992; **55**: 652–58.
- 2 Pamuk E, Williamson D, Madans J, et al. Weight loss and mortality in a national cohort of adults. *Am J Epidemiol* 1992; **136**: 686–87.
- 3 Muls E, Kempen K, Vansant G, Saris W. Is weight cycling detrimental to health? *Int J Obesity* 1995; **19** (suppl): S46–S50.
- 4 Lee IM, Paffenbarger RS Jr. Change in body weight and longevity. *JAMA* 1992; **268**: 2045–49.
- 5 Williamson D, Pamuk E, Thun M, et al. Prospective study of intentional weight loss and mortality in never smoking overweight US white women aged 40–64 years. *Am J Epidemiol* 1995; **141**: 1128–41.
- 6 Woodforde J. *The diary of a country parson 1758–1802*. Oxford: Oxford University Press, 1978. Entry for June 11, 1788.
- 7 Wilding J, Widdowson P, Williams G. Neurobiology. *Br Med Bull* 1997; **53**: 286–306.
- 8 Sobal J, Stunkard AJ. Socioeconomic status and obesity: a review of the literature. *Psychol Bull* 1989; **105**: 260–75.
- 9 Dietz WH. Prevention of childhood obesity. *Ped Clin N Am* 1986; **33**: 823–33.