

Prevention of weight gain requires measures that reach the entire population

## A global obesity industry

In 2005, when I started out as a PhD research fellow in the field of obesity, ambitions were set high. Norway, and subsequently the world, would be helped to lose weight. Thus far, success remains elusive. Globally, a total of 1.46 billion people are overweight (BMI > 25 kg/m<sup>2</sup>) and 500 million suffer from obesity (BMI > 30) (1). Children are also affected. In Norway, one in every five eight-year-olds are overweight or obese (2). Weight gain has an impact on workplaces, schools, doctors' surgeries and health expenditure. The prevalence of type 2 diabetes, cardiovascular diseases, cancer and depression is increasing, to mention but a few diseases.

We now know that the difficulty of treating obesity is linked to physiological changes that follow after weight loss. Overweight persons who lose weight have a reduction in their metabolism which is greater than expected from the changes in body weight and body composition. In addition, there is an increased craving for energy-rich foods and a decrease in the sensation of satiety (3). These changes manifest themselves in a complex interplay between the central nervous system and peripheral signal substances such as the fatty-tissue hormone leptin, and explain why most people who lose weight, subsequently regain the weight they had lost. This also implies that the key instrument to counter the obesity epidemic must be primary prevention.

The main problem, however, is not found in physiology or genes, but in the constant access to energy-rich foods and the effective marketing that in combination promote an energy intake which is chronically too high compared with energy expenditure. Weight gain is a normal response – it does, after all, occur in quite a few of us – in a toxic environment (4). Therefore, the poor solution which is offered today, namely making prevention of weight gain mostly a personal responsibility, is no longer adequate. It is obvious that everyone can influence what he or she eats and how much exercise to undertake. But it is naive to believe that the majority of the population will change their lifestyle habits as long as nothing is done about the source of the problem. The solution must, by necessity, consist of macro-level measures that change the environment and make it easier to live a calorically well-balanced life.

The passive solution which has been proposed by the coalition government in the UK, where I currently live, is so-called «nudging». This consists of minor, behaviour-modulating interventions which are intended to «nudge» the population towards making healthier choices (5). Examples include placing vegetables closer to the check-out in supermarkets, serving smaller portion sizes, and making stairways more accessible. Such measures may have some effect, and are politically acceptable since they do not inherently require governmental regulation. The problem is that such behavioural «nudges» are not enough to induce sufficient behaviour change in the desired direction in the population, since we are constantly being influenced in the wrong direction by advertising and other marketing strategies (5).

New regulations and legislation that will make healthy food cheaper and unhealthy food more costly are now required. The regulation of tobacco products has undoubtedly produced health benefits in the population, and similar benefits can probably be achieved from an increased regulation of food products. Some people will, as a matter of principle, be sceptical towards regulating where and when specific food products can be sold. Most would

agree, however, that we should restrict access to sugar-based soft drinks in primary schools. Moreover, one may ask whether the food industry should be allowed to advertise unhealthy foods at the same time as the authorities recommend that we should eat less of the very same foods. In this context, Norway has contributed to the international efforts by its initiative to restrict marketing of unhealthy food to children (6). Denmark has introduced a tax on foods that contain more than 2.3 per cent saturated fat. In Hungary, taxes are imposed on foods that are high in fat, sugar and salt. More stringent regulations of food products are already underway. The question is where the line should be drawn.

The responsibility for developing healthier foods, providing better information about food contents and restricting marketing that targets vulnerable groups cannot be left to the food industry. The tobacco industry cynically opposed regulation of its products for decades, and the same tendency can now be observed in the food industry (7). One of the strategies involves claiming that it has not been sufficiently proven that a certain food causes a certain disease. Indeed, we are unlikely to see a randomised trial that shows that a specific diet leads to fewer deaths than another. But we nevertheless have a lot of knowledge about the foods that have a positive effect on health and body weight (8). We know that increased taxation of unhealthy foods will generate funds which can be spent on health promoting strategies, such as subsidising healthy foods. We know that such fiscal measures, as well as regulation of marketing, improved labelling of foods, interventions in schools and increased awareness of the health gains from physical activity are among the interventions that are likely to be most cost-effective and provide the most immediate results (9). We know enough to do something.

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