Should health policy focus on physical activity rather than obesity?

Richard Weiler and colleagues argue that losing weight is not essential to get benefit from physical activity, but **Timothy Gill and colleagues** believe that tackling all the causes of obesity is essential to improve public health

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Diabetes consensus panel calls for action on obesity, diet, and exercise (*BMJ* 2010;340:c2670)

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YES

Physical inactivity is one of the greatest health threats facing developed nations today. In his last annual report England's chief medical officer acknowledged that the benefits of regular physical activity on health, longevity, and well being "easily surpass the effectiveness of any drugs or other medical treatment."[1]

When activity is measured objectively with accelerometers, 95% of the population in England[2] and the United States[3] did not meet the admittedly modest recommended amounts of weekly physical activity to confer important health benefits (30 minutes' moderate to vigorous physical activity on at least five days a week or equivalent[4 5]). This is alarming given that numerous authoritative sources, including a systematic review[6] and consensus statements from the International Association for the Study of Obesity[7] and the British Association for Sport and Exercise Sciences,[8] have all concluded that meeting these targets is not enough to prevent obesity and that even more exercise is needed to stop weight regain in obese people who have lost large amounts of weight. Thus a focus on obesity rather than numerous other benefits of physical activity could misinform and discourage many people from exercise.

Risks of physical inactivity

Physical inactivity is an important cause of numerous diseases.[9] Good quality evidence from large cohort studies confirms that physical inactivity rather than obesity is the causal factor for cardiovascular disease, coronary heart disease, type 2 diabetes, mental health illness, reduced quality of life, dyslipidaemias, hypertension, arrhythmias, increased inflammatory markers, myocardial infarction, dementia, stroke, cancer, fatigue, osteoporosis, fractures, falls, and ultimately death.[4 5 10]

Increases in physical activity can both treat and prevent these unwanted conditions. A synthesis of systematic reviews and meta-analyses concluded that physically active people are at about half the risk of developing coronary heart disease compared with those with a sedentary lifestyle and that regular physical activity is associated with reduced risk of diabetes, obesity, osteoporosis, and colon cancer and improved mental health.[11]

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WHERE DO YOU STAND ON THE ISSUE?
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NO

Physical inactivity is a major contributor to the global burden of disease, being associated with a range of negative consequences for health, including cardiovascular disease, type 2 diabetes, reduced functional capacity, and poorer mental health.[1] Clearly the promotion of both increased physical activity and reduced inactivity must be important elements of any public health programme. However, a strategy that targets physical inactivity but ignores the problem of obesity is unlikely to bring overall improvements in health. We consider that such an approach is flawed.

Diet and health

High population prevalence of physical inactivity is just one marker of a society's overall obesogenic lifestyle, which comprises a broad set of inappropriate environmental and behavioural patterns. A wide range of evidence from epidemiology, case-control studies, and clinical trials has identified poor quality nutrition (encompassing such elements as an increased intake of energy dense nutrient poor foods and sweetened drinks, low dietary fibre intake, and large portion sizes) as another major contributor to the development of obesity and other health problems such as dental caries, hypertension, and various cancers.[2] As a consequence, any approach that overlooks these profound influences of diet on health and risk of chronic disease (including those that are independent of obesity) is likely to be counterproductive.

Overweight and obesity have serious immediate health consequences for both the individual and the broader community,[3 4] and these need to be tackled decisively. These health risks accrue from very early in life and, if obesity is persistent, are associated with more severe chronic disease and early death.[5 6] On its own, improving physical activity will have little impact on reducing overall levels of already established obesity.[7] And, while some of the health consequences of overweight and

Fitness versus fatness

A recent meta-analysis suggests that cardiorespiratory fitness, which is developed and maintained by regular physical activity, is a better predictor of mortality than obesity.[9]

Evidence from Scotland analysing the medical records of 13 726 people (6102 men) shows that even when body mass index is taken into account, all types of physical activity are linked to reduced mortality.[12] Data from 40 842 men and 12 943 women participating in the Aerobics Center Longitudinal Study showed that if everyone had a moderate level of cardiorespiratory fitness, overall mortality would be reduced by about 17%, whereas if no one was obese the mutually adjusted reduction would be only 2-3%.[13] Sui and colleagues found that cardiorespiratory fitness was far more important than high body mass index, percentage body fat, or high waist circumference as a determinant of mortality in a cohort of 2603 people aged 60 or older.[14] This report is important because it is one of the few in which fitness was measured objectively by a maximal exercise test and fatness was assessed by laboratory measurements of percentage body fat and waist circumference.

Obesity treatment

Because physical activity is associated with improved risk factors for disease even if no weight is lost, a focus on weight loss is largely misleading.[10] In addition, drugs and bariatric surgery, which are becoming common options to deal with obesity,[15] have serious risks.[16 17] The broader long term benefits of these treatments are currently limited or non-existent,[18] and they certainly do not have the multiple collateral health benefits of physical activity.[19]

Health policy strategy

The 2007 Foresight report suggested that since the 1980s in the UK we have become less active because of our environment.[20] Review evidence suggests characteristics of the built environment strongly influence physical activity.[21] Fortunately, there are many opportunities to change built environments. Community patterns of land use and transportation infrastructure that support walking and cycling to nearby destinations are strongly related to physical activity.[22] Environmental interventions to increase access to physical activity suggest that creating or improving access to places for physical activity can result in a 25% increase in the number of people who are active at least three times a week.[23]

Conclusion

Obesity is one of many symptoms of poor lifestyle associated with morbidity and mortality. These undesirable health risks can be greatly reduced by physical activity leading to improved fitness, even in the absence of weight loss.

"Physical inactivity is the only risk factor for chronic disease that has an adult population prevalence of 95%"

The public welfare burden of physical activity in England is immense, with the annual estimated cost of physical inactivity £8.2bn (€9.5bn; $12bn) in 2002, whereas treatment of obesity related comorbidities is estimated at £4.2bn.[1] Physical inactivity is the only risk factor for chronic disease that has an adult population prevalence of 95%.[2 3] If health policy, modern medicine, and healthcare professionals focus on fighting physical inactivity we will no longer need to concentrate on the negative societal stigma of obesity.

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obesity in adults, such as type 2 diabetes and cardiovascular disease, can be ameliorated by high levels of physical activity, they are not completely removed or reversed.[8]

For all these reasons, people who are obese need access to high quality treatment services provided by well trained professionals, with the aim of treating both the obesity and the related morbidities. Although the evidence on what is effective in treating obesity is still emerging,[9 10] effective management is impeded because services in primary, secondary, and tertiary care are often under-resourced, relatively uncoordinated with other parts of the health system, and have long waiting lists. The almost inevitable result of a reduced focus on obesity is that services do not reach a large proportion of the people who most need them.

Social attitudes

Another concern with ignoring overweight to focus solely on physical activity is that it may reinforce the pervasive negative view that obesity cannot be prevented or managed and suggest that promoting physical activity is more successful. However, this is a misreading of the literature. Although previous programmes to prevent or manage obesity at the individual or population level have had limited success in terms of body mass index, recent small group and community based lifestyle programmes seem to be more effective at reducing weight and associated illness.[9-12] Efforts to increase physical activity have also had limited effect. A Cochrane review of health promotion programmes to improve physical activity found that most had only moderate success.[13] Such programmes have tended to focus on improving leisure time physical activity or sport, which often make a minor contribution to overall physical activity levels and energy expenditure.[14] Indeed, there is some evidence from cross sectional and clinical trial data that people taking part in exercise programmes reduce physical activity at other times of the day or even increase dietary intake.[15 16]

"On its own, improving physical activity will have little impact on reducing overall levels of already established obesity"

A focus on reducing obesity through a broad range of actions is likely to be more effective in preventing chronic disease and produce larger population health gains than an approach that solely focuses on inactivity. To achieve these outcomes a broad portfolio of strategies is required. Such initiatives must include efforts to improve physical activity in addition to diet and other behavioural issues, but also require greater attention to the pervasive structural, economic, and social factors that influence our ability to change behaviours favourably.[2 17] Programmes should include improved urban planning (for example, cycle lanes, more accessible and affordable public transport, increased access to green space), decreased dependence on motor vehicles, and changes in local food production, national food distribution cost structures, and food pricing strategies.[18] A public health agenda that is narrowed to focus on promoting physical activity is unlikely to deliver on all these issues.

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