Obesity in the UK

Obesity rates in the UK are the highest in Europe and have increased dramatically over the past few years to such an extent that in excess of 20% of the population are now obese and the costs to the UK economy exceed £3 billion per year. In Birmingham, over 25% of the population are obese - the third highest rate in the UK.

The high prevalence of obesity in adults within England is alarming, with national averages of over 40% of males overweight and more than 20% obese in the 16-75 year age range, while in women the averages are lower for the overweight classification but higher for obesity.

Although obesity can be tackled through increased exercise and a better diet, for those who are already obese the health consequences are severe. On average, being obese decreases life expectancy by nearly 10 years. In addition, it is associated with dramatically increased risks of developing type 2 diabetes, hypertension, coronary artery disease and hyperlipidaemia. It has also been suggested that in the not too distant future, obesity could not only become the leading cause of liver failure, but also the leading cause of cancer worldwide. Further research into these obesity-related diseases is crucial.

The causes of obesity relate to a fundamental imbalance between energy intake and energy expenditure. The World Health Organisation identified that a reduction of physical activity in combination with an increased consumption of more energy-dense, nutrient-poor foods with high levels of sugar and saturated fats, have led to obesity rates that have risen over three-fold since 1980 in some areas of North America, the United Kingdom, Eastern Europe, the Middle East, the Pacific Islands, Australasia and China.

Although the importance of exercise and a healthy diet is widely reported, further research into the forms of exercise and the types of diet that are most effective at reducing obesity is needed. Furthermore, many people do not make the necessary lifestyle changes that are needed to tackle obesity and therefore, there is an urgent need for viable interventions that can successfully influence the adoption and maintenance of physical activity and healthy eating in the general and clinical populations.

The community in which an individual lives is also important. The minority ethnic populations have a similar prevalence of obesity to the general population, however, these figures are based on Body Mass Index (BMI) calculations. For a given BMI, Asians have a greater proportion of body fat compared to other populations and this contributes to a markedly increased risk of heart disease and type 2 diabetes. This underestimation of the problem of obesity amongst certain populations requires further investigation, increasing the target population that needs intervention as well as increasing our understanding of the mechanisms that contribute to the adverse consequences of obesity in specific populations.

Finally, obesity is well-known to be a particular problem amongst children. A survey of obesity at primary school entry (ie 5 years of age) in Birmingham and the West Midlands in 2006 showed an average of over 12% overweight and around 10% obese. Levels of overweight and obese children in Birmingham as they leave primary school (11 year olds) showed that, on average across the wards, 40% of children are either overweight or obese, with up to 60% in the Edgbaston ward.

This is a particularly worrying trend as obesity in childhood tracks into adulthood with all its associated risks. It has been predicted that this is the first generation of children who are likely to die before their parents, due to the effects of obesity induced cardiovascular disease. Further research is therefore urgently needed to enhance our understanding as to the reasons why children today are facing an obesity epidemic and most importantly what can be done to stop it.

The need to enhance our understanding of the causes of obesity and to instigate meaningful and efficacious treatments is both clear and urgent. Within the West Midlands region, over 1 million adults are obese and the health and economic implications of this can not be underestimated.

© University of Birmingham 2015