

NSA

Obesity: Does it Matter?

Obesity: what does it represent?

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Several studies have suggested that obesity has a strong genetic component, with the estimated heritability accounting for about 50% of the variability in body mass index (but with range of 5-90%, depending on the study). Heritability for physical activity has also been estimated to be about 50% and for food intake about 15-35%. The number of genes linked to obesity has grown steadily, and by October 2003 the human obesity gene map included more than 430 genes and chromosomal regions that are associated with obesity. The human gene map for performance and health related fitness has also been growing steadily and includes over 100 genetic loci. Despite strong advocates for the genetic contribution of obesity, the recent obesity epidemic over the last 3 decades has occurred with little or no change in the gene pool. It is generally agreed that it has resulted from behavioural and lifestyle changes. For example, in the UK there has been about a 25% reduction in both walking and cycling during the last 25-30 years. In contrast, sedentary activities, such as computer use and watching TV have increased, especially in children, in whom a relationship exists between amount of TV watched and body mass index. There have also been changes in dietary habits, which have been linked to greater availability of foods, more varied food, often with a high energy density, more food outlets, and greater consumption of soft drinks. Much scientific emphasis has been placed on genetic and molecular investigations, but it seems that this avenue is unlikely to succeed in preventing obesity in the mass of the population, at least in the near future. Many believe that co-ordinated public health policies on health and food supply, aiming to alter lifestyle and behaviour, offer greater hope for a long-term solution.