Obesity and Public health

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November 2010
Definitions of obesity

• What is obesity?
  The best answer is that it is a condition in which a person has such an excess of body fat that as a result their risk of ill health is significantly increased.
A bit of etymology

• But the language here has a history which is worth a moment’s attention because it infects common understanding -

• The words ‘obese’/‘obesity’ come to English via French from the Latin, where the verb ‘obedere’ means ‘over eat’ and ‘obesitas’ means being very fat.

• These are derogatory descriptions, and the French and English terms inherit this derogatory meaning.
‘Fat’

- The English word ‘fat’ (etc.) comes from the German ‘fett’, giving English this double vocabulary ‘fat’ vs. ‘obese’.
- Until recently, ‘obese’ had a more derogatory meaning than ‘fat’ (in the 1989 Oxford English Dictionary ‘obese’ is defined as ‘very fat’), although being called ‘fat’ by someone else in public would not usually be a polite mode of address, especially for women.
- The terms are nicely combined in a 17th century Protestant denunciation of
  ‘the fatnesse of monks, and the obeseness of Abbotts’
‘Fat Jack’

• Shakespeare’s famous character Sir Jack Falstaff is ‘Fat Jack’, and turns his reputation as fat into his public role as a merry comic character, whereby his fatness remains balanced between something which enables him to play the fool and something to be laughed at by others, sometimes in ways which are distinctly critical. This combination survives in the English pantomine tradition of the pantomine ‘dame’ – a man playing a fat lady.

• But that popular tradition of the fat knight etc. does not carry over to obesity as such. Until the mid20th century use of the term ‘obese’ is largely derogatory.
Obesity, ill health and stupidity

• Sometime in the mid 20th century, physicians appropriated the terms ‘obese’ and ‘obesity’ to give them a new use, to describe those whose excess of body fat substantially increases the risk of ill-health.

• Maybe this was unavoidable; but taking a derogatory term and seeking to repackage it as a descriptive medical term is undesirable. For it is bound to be heard as a way of stigmatising those to whom the term is applied.

• It’s as if the terms ‘stupid’ and ‘stupidity’ were taken from their current derogatory use and used to describe the condition of those with some mental handicap that leaves them with a very low IQ.
Appearance and health risk

• What further complicates matters here is that people (especially women) are very sensitive about their appearance. The term ‘fat’ is still often used in a derogatory way to describe appearance.

• Given the association between the terms ‘fat’ and ‘obese’, it is not all surprising that describing someone as obese is also heard as a way of being offensively rude about their appearance.
‘Blunt talk’

- The medical use of the terms ‘obese’, ‘obesity’ is now here to stay. But those who work in this area have the difficult task of dealing with a manifestly sensitive personal subject in a language ill-suited for their needs.

- Sometimes it is said that one should just ‘call a spade a spade’ – i.e. use the language of obesity without careful explanation. But that is notoriously counterproductive; it damages the self-esteem of those who are obese and inhibits them from asking for help.
More definitions

- Often when one asks what obesity is, one finds references to
  
  - BMI (Kg/height\(^2\)) greater than 30
  - Waist-hip ratio greater than 1.0 (male), 0.85 (woman)
  - Or even –
    
    DEXA measures of body fat, which should be no more than 25% (male), 30% (female)
  
  Plainly: these are just tests, and the issue is always how close the connection is with a significant increase in risk of morbidity.
Which test is best?

• In principle the DEXA test is closest to the ‘facts’ – excess fat. But it is not easy to carry out since the equipment is sophisticated and expensive.

• The waist-hip ratio is a good indicator: it separates ‘pear-shaped’ bodies (OK) from ‘apple-shaped’ bodies (bad). The test is not difficult to practice – but it is rather intrusive.

• BMI is favoured: it is easy to carry out, and provides a reasonable indication. But there are problems – e.g. sportsmen with lots of muscle and pear-shaped women may be judged obese when they are not; and tall people can be counted non-obese when they should be. For epidemiological purposes BMI is good enough; but for clinical purposes it needs to be supplemented by other tests.
Measures of childhood obesity

• Because the physical development of children varies with age one cannot just take the BMI by itself as an indication of obesity.

• Instead a child’s BMI as measured now is used to place the child within a centile in a reference group of a similar population (e.g. UK 1990 Growth Reference Population) for which levels of overweight and obesity are taken to be determined.

• This is notoriously unsatisfactory. <add more on this>
What are the main health risks of obesity?

- Type II diabetes
- Cardio-vascular disorder
- Certain cancer
- Infertility

- Of these, diabetes is much the most serious. There are many factors that predispose to diabetes, but the evidence is that obesity increases that risk by about 3 times over the period 20-70. The risk is less for those who only mildly obese (BMI 30-35), but it increases sharply for those who are seriously obese (BMI > 35).
Male diabetes in UK
Obesity as a public health issue

• It is often said that we confront today an obesity ‘epidemic’, with levels of obesity in the UK (and USA – but not everywhere else) rising dramatically since 1980.

• But obesity is not a disease; and, in particular, it is not an infectious disease – so what has happened?

• Crudely: we eat too much high energy food and do too little physical exercise. The social and physical environment (at least in the UK and USA), it is said, has become ‘obesogenic’.

• But why is this a public health issue?
Public health and the environment

• It is instructive to compare the issue raised by our ‘obesogenic’ environments with that raised by air pollution.

• Air pollution brings with it public health issues because it causes lung disease. So should one say that our obesogenic environment is similarly ‘polluted’, albeit in a different way?

• The comparison breaks down because breathing is involuntary; one cannot help the risk of lung disease when air is polluted. But one’s levels of eating and exercise, even in an obesogenic environment, are voluntary; so there is something individuals can do to avoid obesity, and thus the associated risk of morbidity.
• Furthermore, there isn’t anything quite like clean air legislation one can introduce to clear away an obesogenic environment – one has to change the habits of individuals.

• So what is the public health rationale here? Plainly it is the traditional task of ‘health promotion’ underpinned by the aim of reducing health inequalities, or, more precisely, of aiming to provide an equal opportunities for health (which, of course, some people may choose not to adopt).

• With that aim agreed, it is then easy to see what the priorities should be -
An anti-obesity programme

- Inform and educate
- Improve the quality of common foods
- Encourage physical activity
- Initiate weight-management programmes for adults

And, most important,
- Engage early on with children

But one has to accept that nothing here is easy or quick. Once the social and physical environment has become misshapen, and people have adapted to it, change is not straightforward.
‘Healthy Weight, Healthy Lives’

• Since 2008 the UK has been running a policy programme with these aims. What have we achieved?

• Much better labelling of foods and a successful public awareness campaign. But the catering industry resists providing calorie information at restaurants etc.

• Improved formulation of popular foods by the food industry; but there’s still far too much sugar and fat in cheap food.

• Considerable efforts to improve cycling etc – but only very slow changes to roads.

• Relatively little success with adults, though trials continue.
National child measurement Programme

• The major success has been via a near-universal programme of measuring children at age 6 and 11, and providing feedback for parents.

• This seems to have provided an effective jolt to many parents. Although the feedback is confidential and follow-up is voluntary, the evidence is that parents realise that the issue is serious and that there are easy steps they can take to improve the situation of their children.

• It looks as though levels of childhood obesity are now beginning to fall back. Here are some predictions based on recent data -
UK: OTFok, 1-20 male
2000 value shown in green
UK: OTFok, 1-20 female
2000 value shown in green
UK: OTFok, 21-40 male
2000 value shown in green
UK: OTFok, 21-40 female
2000 value shown in green
UK: OTFok, 41-60 male
2000 value shown in green
UK: OTFok, 41-60 female
2000 value shown in green
UK: OTFok >60 male
2000 value shown in green
UK: OTFok >60 female
2000 value shown in green