Should obesity be recognised as a disease

John P H Wilding,1 professor of medicine and honorary consultant physician, Vicki Mooney,2 executive director, Richard Pile,3 general practitioner

1Obesity and Endocrinology Research, Institute of Ageing and Chronic Disease, University of Liverpool, Liverpool, UK

2European Coalition for People living with Obesity, European Association for the Study of Obesity, Teddington, UK

3St Albans, UK

Correspondence to: J P H Wilding [J.P.H.Wilding@liverpool.ac.uk](mailto:J.P.H.Wilding@liverpool.ac.uk), R Pile richard.pile@nhs.net

Yes—John P H Wilding and Vicki Mooney

Excess accumulation of body fat (obesity) develops because of abnormal biological regulation of energy balance, has multiple complications, and should be considered a disease. The Oxford Dictionary defines disease as “a disorder of structure or function . . . especially one that produces specific symptoms . . . and is not simply a direct result of physical injury.”1 Obesity, in which excess body fat has accumulated to such an extent that health may be adversely affected, meets that definition, and the World Health Organization has considered it a disease since 1936.2

Obesity has rapidly increased in prevalence and now affects 29% of the population in England.3 Metabolic complications include type 2 diabetes, fatty liver disease, and hormone dependent cancers; mechanical complications of joint pain, arthritis, increased obstetric risk, and sleep apnoea are common, and obesity may adversely affect mental health, partly because of stigmatisation.3 Genetic and environmental factors contribute to its aetiology and influence the underlying biology of weight regulation, the sites of fat storage, and the risk of complications.4

Genetics

Studies in twins show that 40-70% of the variability in weight is inherited. More than 200 gene variations influence weight, and those that increase weight are more common in people with severe obesity5 and less likely to be found in people who are thin.6 Most of these genes, including those with variants that cause early onset obesity, are expressed in the brain and involved in appetite regulation.7 Fat distribution, which contributes to risk of metabolic complications, is influenced by genes mostly expressed in adipose tissue.8 Thus body weight, fat distribution, and risk of complications are strongly influenced by biology—it is not an individual’s fault if they develop obesity.

Environment

The recent rapid increase in obesity is not due to genetics but to an altered environment (food availability and cost, physical environment, and social factors). Strong links exist with social deprivation; some environments are more obesogenic than others, but again we should not blame individuals.9

Despite these facts, the prevalent view is that obesity is self inflicted and that it is entirely the individual’s responsibility to do something about it. Healthcare professionals seem ill informed on the complexity of obesity and what patients with obesity want. In a study of attitudes to obesity in 11 countries 71% of 2800 healthcare professionals thought that patients did not want to discuss their obesity, whereas only 7% of 14 500 people with obesity agreed.10

Recognising obesity as a chronic disease with severe complications rather than a lifestyle choice should help reduce the stigma and discrimination experienced by many people with obesity. Instead of discouraging them from seeking treatment it should give them permission to do so.

Does considering obesity a disease remove personal responsibility? Many other chronic diseases (for example, type 1 diabetes) require people to take personal action to manage their condition, and people who do so have better outcomes. The same should be considered for obesity. The stigmatisation of obesity leaves patients fearful of discussing their weight, and they turn to fad diets or non-prescription medication because they assume that their obesity is solely their responsibility. Unfortunately, patients delay discussing their obesity with their general practitioner by an average of six years10; this is perhaps because of the common misconception that “eat less and move more” will cure obesity and that this will be their prescription.

Some argue that obesity is a risk factor rather than a disease and that labelling a high proportion of the population as having a disease may overwhelm health services with demands for treatment. However, many other diseases (such as hypertension and type 2 diabetes) are also very common, and infectious diseases may affect high proportions of the population during epidemics, but this does not mean they are not diseases and do not require intervention.

Another problem is that a definition of obesity based on body mass index may lead to some apparently healthy people being considered to have the disease. However, most people with obesity will eventually develop complications.11 People with obesity but without complications (stage 0 obesity12) could be considered as not having disease. This more nuanced approach is already acknowledged in WHO’s definition. But unless we accept that obesity is a disease, ineffective approaches based on the fallacy that people with obesity just have to try harder will persist.

No—Richard Pile

I once met a patient whose body mass index had clearly been above 30 for some time. He bounded into my room, opening with: “Good morning, doc. As you can see, I have been entirely successful in my pre-emptive strike against anorexia!” He did not consider himself to have a disease. However, the Royal College of Physicians (RCP) believes that obesity must be recognised as a chronic disease for the problem to be tackled successfully.13 In fact, adopting this approach could actually result in worse outcomes for individuals and society.

We can all agree that obesity is the endpoint of a multifactorial process, has an associated stigma, and is potentially catastrophic for individuals and society. The prevalence of obesity in the UK is expected to rise to 35% in England by 2030.14

The Oxford dictionary definition of disease1 as a disorder of structure or function is so vague that we can classify almost anything as a disease. The question is not whether we can, but whether we should, and to what end.

The medical tradition is to diagnose, legitimise, and write a guideline. The RCP believes that this is the missing piece in the jigsaw puzzle of tackling obesity effectively, recommending this approach without any supporting evidence. The recommendations imply that current NHS and public health strategies are doomed to failure without classifying obesity as a disease and present a vision of obese people hearing the announcement that obesity is a disease on the radio, getting up off the couch, and heading out of the door for a brisk walk. It suggests health professionals will slap themselves on the forehead in a eureka moment, shouting: “This changes everything.”

Not harmless

If labelling obesity as a disease was harmless then it wouldn’t really matter. But self determination is vital when it comes to individuals taking control of their lives and making the best decisions for themselves. Labelling obesity as a disease risks reducing autonomy, disempowering and robbing people of the intrinsic motivation that is such an important enabler of change. It encourages fatalism, promoting the fallacy that genetics are destiny. I don’t need to quote randomised controlled trials and systematic reviews here because I have seen it the mindset of patients every day for almost two decades in general practice. There is an important difference psychologically between having a risk factor that you have some responsibility for and control over and having a disease that someone else is responsible for treating.

Speaking of treatment, consider the motivation behind this campaigning. Making obesity a disease may not benefit patients, but it will benefit healthcare providers and the pharmaceutical industry when health insurance and clinical guidelines promote treatment with drugs and surgery. Is it really right to label over one quarter of our adult population as having a disease, in the same way that everyone older than 70 is now considered to have hypercholesterolaemia

Social origins

While self determination is key in enabling change, we should acknowledge that the origins of obesity for most people are social, and so too is the solution. Education, support, and action should be provided through community champions in places offering healthcare, education, work, and others. If people meet, shop, cook, eat, and engage in activities together the end result will be improved wellbeing. Reducing obesity will be a consequential beneficial side effect.

Classifying obesity as a disease is neither essential nor beneficial. It’s much more complicated than that.

Competing interests: All authors have read and understood BMJ policy on declaration of interests and have the following interests to declare.

JPHW

1. Consultancy (contracted via and paid to my employer): Astellas, AstraZeneca, Boehringer Ingelheim, Janssen Pharmaceutals, Lilly, Napp, Novo Nordisk, Mundipharma, Sanofi, and Wilmington Healthcare.

2. Institutional research grant support: AstraZeneca and Novo Nordisk

3. Paid editorial work: Diabetic Medicine (Associate Editor) and Springer Nature.

4. Honoraria / lecture fees: AstraZeneca, Boehringer Ingelheim, Lilly, Napp, Medscape, Mundipharma, Sanofi and Takeda; support to attend conferences from AstraZeneca, Napp, and Novo Nordisk.

5. I am president elect of the World Obesity Federation, sit on RCP advisory group on nutrition, weight and health and a member of the Rank Prize Funds Nutrition Committee (all unpaid). I am national lead for the Metabolic and Endocrine Speciality Group of the NIHR Clinical Research Network (CRN). I am a member of the Association for the Study of Obesity, Diabetes UK, EASD, ADA and the Society for Endocrinology.

VM

I am a paid consultant for the European Coalition for People living with Obesity (ECPO).

I have received honoraria from EASO, Novo Nordisk, Novartis, and Johnson & Johnson for moderating and speaking roles as a patient.Provenance and peer review: Commissioned; externally peer reviewed.

<eref>1 Lexico. Definition of disease in English. Oxford Dictionaries. <https://www.lexico.com/en/definition/disease></eref>

<bok>2 World Health Organization. *Obesity—preventing and managing the global epidemic.* WHO, 1998.</bok>

<eref>3 NHS Digital. Statistics on obesity, physical activity and diet, England, 2019. <https://digital.nhs.uk/data-and-information/publications/statistical/statistics-on-obesity-physical-activity-and-diet/statistics-on-obesity-physical-activity-and-diet-england-2019/part-3-adult-obesity></eref>

<jrn>4 Bray GA, Kim KK, Wilding JPH; World Obesity Federation. Obesity: a chronic relapsing progressive disease process. A position statement of the World Obesity Federation. *Obes Rev* 2017;18:715-23. [PubMed](https://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=28489290&dopt=Abstract) [doi:10.1111/obr.12551](https://doi.org/10.1111/obr.12551)</jrn>

<jrn>5 Allison DB, Kaprio J, Korkeila M, Koskenvuo M, Neale MC, Hayakawa K. The heritability of body mass index among an international sample of monozygotic twins reared apart. *Int J Obes Relat Metab Disord* 1996;20:501-6. [PubMed](https://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=8782724&dopt=Abstract)</jrn>

<jrn>6 Riveros-McKay F, Mistry V, Bounds R, et al; Understanding Society Scientific Group. Genetic architecture of human thinness compared to severe obesity. *PLoS Genet* 2019;15:e1007603. [PubMed](https://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=30677029&dopt=Abstract) [doi:10.1371/journal.pgen.1007603](https://doi.org/10.1371/journal.pgen.1007603)</jrn>

<jrn>7 Farooqi SI. Genetic, molecular and physiological mechanisms involved in human obesity: Society for Endocrinology medal lecture 2012. *Clin Endocrinol (Oxf)* 2015;82:23-8. [PubMed](https://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=25130716&dopt=Abstract) [doi:10.1111/cen.12588](https://doi.org/10.1111/cen.12588)</jrn>

<jrn>8 Loos RJF. The genetics of adiposity. *Curr Opin Genet Dev* 2018;50:86-95. [PubMed](https://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=29529423&dopt=Abstract) [doi:10.1016/j.gde.2018.02.009](https://doi.org/10.1016/j.gde.2018.02.009)</jrn>

<jrn>9 Blüher M. Obesity: global epidemiology and pathogenesis. *Nat Rev Endocrinol* 2019;15:288-98. [PubMed](https://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=30814686&dopt=Abstract) [doi:10.1038/s41574-019-0176-8](https://doi.org/10.1038/s41574-019-0176-8)</jrn>

<jrn>10 Caterson ID, Alfadda AA, Auerbach P, et al. Gaps to bridge: misalignment between perception, reality and actions in obesity. *Diabetes Obes Metab* 2019. [Epub ahead of print]. [doi:10.1111/dom.13752](https://doi.org/10.1111/dom.13752). [PubMed](https://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=31032548&dopt=Abstract)</jrn>

<jrn>11 Caleyachetty R, Thomas GN, Toulis KA, et al. Metabolically healthy obese and incident cardiovascular disease events among 3.5 million men and women. *J Am Coll Cardiol* 2017;70:1429-37. [PubMed](https://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=28911506&dopt=Abstract) [doi:10.1016/j.jacc.2017.07.763](https://doi.org/10.1016/j.jacc.2017.07.763)</jrn>

<jrn>12 Sharma AM, Kushner RF. A proposed clinical staging system for obesity. *Int J Obes (Lond)* 2009;33:289-95. [PubMed](https://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=19188927&dopt=Abstract) [doi:10.1038/ijo.2009.2](https://doi.org/10.1038/ijo.2009.2)</jrn>

<eref>13 Royal College of Physicians. Obesity should be recognised as a disease. Presented to RCP Council 17 July 2018. 2018. <https://www.rcplondon.ac.uk/news/rcp-calls-obesity-be-recognised-disease></eref>

<eref>14 Organisation for Economic Co-operation and Development. Health at a glance 2017. <https://www.oecd-ilibrary.org/social-issues-migration-health/health-at-a-glance-2017_health_glance-2017-en></eref>