

The future of biopsychology- obesity

[Technology](#), [Future](#)



A person is considered obese when his or her weight is 20% or more above normal weight. The most common measure of obesity is the body mass index or BMI. A person is considered overweight if his or her BMI is between 25 and 29.9; a person is considered obese if his or her BMI is over 30. "Morbid obesity" means that a person is either 50%-100% over normal weight, more than 100 pounds over normal weight, has a BMI of 40 or higher, or is sufficiently overweight to severely interfere with health or normal function (What is Obesity? 2012).

Obesity occurs when a person consumes more calories than he or she burns. For many people this boils down to eating too much and exercising too little. But there are other factors that also play a role in obesity. People tend to gain weight as they get older, even if they don't alter their eating habits. This is because the human metabolism slows down as we age. We don't need to take in as many calories as we used to in order to maintain the same weight. Therefore, we store more of the food we take in as fat. Women tend to be overweight more often than men because men tend to burn calories at a higher rate (What is Obesity? 2012). Obesity and thinness seems to have a nature versus nurture component. If a patient's biological mother is heavy as an adult, there is approximately a 75% chance that she will be heavy. Likewise, the children of thin parents have a 75% chance of being thin (What is Obesity? 2012). This doesn't mean that the child of obese parents has to be obese, though. Many find ways to keep the weight off. Genetics are important, but lifestyle choices such as eating and exercise habits are, too. Less active people tend to require less calories than more active people; they don't need as much fuel because they're doing less work.

Physical activity also causes the body to burn calories faster on average, and decreases appetite. People exercising less is thought to be a leading cause of obesity over the last 20 years. Psychological factors also influence eating habits and obesity. Many people eat in response to negative emotions such as boredom, sadness, or anger. People who have difficulty with weight management may be facing more emotional and psychological issues; about 30% of people who seek treatment for serious weight problems have difficulties with binge eating.

During a binge-eating episode, people eat large amounts of food while feeling they can't control how much they are eating. (Obesity Facts, 2012)

Obesity can be caused by illness, though people blame more cases of obesity on illness than is actually true. Illnesses sometimes responsible for obesity include hypothyroidism (poorly acting thyroid slows metabolism), depression, and some rare diseases of the brain that can lead to overeating. Social factors, including poverty and a lower level of education, have been linked to obesity.

One reason for this may be that high-calorie processed foods cost less and are easier to find and prepare than healthier foods, such as fresh vegetables and fruits. However, the link between low socioeconomic status and obesity has not been conclusively established, and recent obesity research shows that childhood obesity, for instance, is also increasing among high-income groups. The best methods of obesity treatment are dieting and physical exercise. Obese people should adjust their diet to reduce fat and sugar consumption, and increase dietary fiber.

Anti-obesity drugs can also be effective in conjunction with a healthy diet, reducing one's appetite and/or fat absorption. Some obese people require stomach or bowel reduction surgery in order to lose weight. The smaller stomach allows them to consume less food and still feel full. Obesity is a leading worldwide cause of preventable death, and authorities view it as one of the most serious health problems of this century. While in some cultures, obesity is a sign of prosperity and childbearing, in the Western world, it is frequently viewed negatively.

While whether to consider obesity as its own separate disease is a matter of some debate, it is certainly a factor in many physical and mental ailments. Obesity is associated with angina, myocardial infarction and between 21 and 34% of ischemic heart disease, depending on which research you read. Body-mass index levels associated with obesity also double a person's risk of heart failure and deep-vein thrombosis and cause over 85% of cases of hypertension (five times the normal risk). Obesity is also associated with higher levels of LDL cholesterol and lower levels of HDL.

Obesity also has a variety of dermatological affects, including stretch marks, acanthosis nigricans, lymphedema, cellulitis, hirsutis and intertrigo (Bray, 2004). Obesity has also been shown to be linked with type 2 diabetes in 64% of cases in men and 77% of women's. Sixty percent of patients diagnosed with polycystic ovarian syndrome are obese, as are six percent of the infertile. Obesity is related to many complications in pregnancy, including hemorrhage, infection, increased hospital stays for the mother and increased NICU requirements for the infant.

Obese women are twice as likely to require a Cesarean section and are at a high risk of preterm births and low birth weight infants. Children born of obese women have a greater risk of anencephaly and spina bifida, cardiovascular anomalies, including septal anomalies, cleft lip and palate, anorectal malformation, limb reduction anomalies, and hydrocephaly (Haslam, 2005). Obese women have a nearly double risk of stroke compared to normal-weight women, while men have twice as great a chance. Those who are obese have a rate of dementia 1.5 times greater than those of normal weight. Women obese at the age of eighteen have a greater than double chance of contracting multiple sclerosis. Obesity has also been shown to cause approximately five percent of cancers, including breast, ovarian, esophageal, colorectal, liver, pancreatic, gallbladder, stomach, endometrial, cervical, prostate, kidney, non-Hodgkin's lymphoma and multiple myeloma (Bray, 2004). In addition to these physical effects, obese people are less likely to get married and make thousands less than their normal-weight counterparts, on average.

Depression is also linked to obesity, though an increase in BMI has been linked to a decrease in the risk of suicide. Several studies suggest that many physicians treat obese patients differently. In a 1969 survey of physicians, obese patients were described as "weak-willed," "ugly," "awkward," and "self-indulgent." In a more recent physician survey, one of three doctors said they respond negatively to obesity, behind three other diagnostic/social categories: drug addiction, alcoholism, and mental illness. A comparable study found that two-thirds of doctors believe obese patients lack self-control, and 39 percent feel they are lazy.

Two studies of nurses showed similar results. These attitudes carry over into the work world, where a job or a promotion is often denied simply because of how much one weighs. Obesity research and treatment is a very provocative subject. A 2011 article in the Journal of the American Medical Association proposes that states consider removing obese children above the 99th percentile from their homes. The author views temporary foster care as part of the remedy for childhood obesity by providing an environment where the children would be exposed to proper nutrition and activity levels.

During the separation period, the parents could also be educated on the best ways to assist their child in coping with their issue. Due to the relationship between obesity and low income (low income families can't easily afford nutritious food, and low earners are often distracted from their family issues, whether by a second job, or by concerns like drug or alcohol abuse) and education (low income families usually aren't as educated, which bleeds over into health issues like obesity) this solution seems severe but grounded in science.

Detractors point out that the home environment is only one contributing factor to obesity, and that a child's obesity isn't automatically considered abuse under the law. They cite studies showing that children get more of their food away from home, limiting the influence of even educated and involved parents. Also, neither the potential effectiveness of the proposal in terms of reducing obesity or the potential harm to the family unit caused by the removal have been substantiated. Psychological damage could in fact be inflicted, both to the parents and child, by causing them to feel at fault for the obesity.

This could lead to self-esteem issues, depression and more. This is without even taking into consideration the harm done by taking a child away from his or her parents, even on a temporary basis. Another treatment, as novel as the last if not as heavy-handed, is the potential for virtual-reality treatment of obesity. Virtual reality, also being used to treat psychological disorders like anxiety and addiction, allows clinicians to offer exposure therapy in the comforts of their own offices without the problems sometimes posed by actual exposure.

The benefit to the patient comes from being in a safe environment where they can let themselves connect emotionally with the treatment. Virtual reality has already been shown to induce a variety of controlled changes in the body, to include the sensation of a fake limb or an out of body experience. Researchers have even used virtual reality to give male subjects the feeling of being in a female body. From this point, it's only a small leap to giving an obese person the sensation of being in a normal-weight body.

In one experiment, scientists discovered the neural systems involved in VR improvement of body image. This, combined with an adaptation of therapy used to treat post-traumatic stress disorder, is being used to help patients identify and change habits contributing to eating disorders and obesity. The first twenty minutes of the VR sessions are used for the therapist to get an understanding of the patient's concerns and experiences related to food. The patient does most of the talking, while the therapist guides the session. The second twenty minutes are devoted to the actual VR session.

The simulation can create a number of environments, like a classroom, apartment, or pub, to recreate some of the experiences the patient detailed

<https://assignbuster.com/the-future-of-biopsychology-obesity/>

to the therapist. The simulation also includes a body-image room, where the patient can create an ideal VR body and compare it to their real one. The last twenty minutes are used to discuss the patient's VR experience. In terms of ethical considerations, the first needs to be how much the government, communities and families are obligated to ensuring obese people get the treatment they need.

It is very easy to dismiss obese people as having “ done it to themselves,” since many cases could simply be prevented by eating better and exercising more. Mental illnesses are, by and large, viewed differently by much of the public than physical ailments. A person who doubled in size due to a war injury that prevented them from exercising, for instance, would likely garner more sympathy than a person who simply doubled in size because they went to McDonald's four times a week. This, of course, influences the discussion on how much the government should be obligated to pay for medical care of the obese.

Much like the arguments against smokers being covered by public assistance against the effects of their bad habit, a case can be made for whether tax dollars should pay for an obese person's weight-reduction surgery or triple bypass. While the legitimacy of these concerns can probably never be agreed upon yet by the majority, the government's responsibility to educate people on preventative measures and healthy choices cannot be minimized, and the effects of those programs should not be overlooked.

Some scientists acknowledge the responsibility of the obese for their conditions, but believe that it should only be a treatment focus if it did not harm the patient's mental health. Those scientists also take issue with the <https://assignbuster.com/the-future-of-biopsychology-obesity/>

public opinion stigma against obese people, due to the additional burden it places on patients. In the Western world especially, obese people are often considered lazy, overeaters or both. It is not ethical to assume this is true in all cases, those researchers say, and not ethical to create policy or legislation based on those assumptions, either.

Those assumptions can only be used positively in the shaping of preventative suggestions (anyone will benefit from more exercise and better eating, obese or not, so it's acceptable to suggest them to everyone). Another consideration is what obese patients themselves consider acceptable in terms of treatment. Studies show that obese adults prefer interventions that are non-commercial, don't fall back on common stereotypes and promote lifestyle changes (health initiatives and exercise) rather than simple weight loss (dieting, bariatric surgery).

Care should be taken to ensure that treatment of obese patients does not impact their mental health negatively, by reinforcing social stigmas, negative self-image, instilling disregard for the positive social and cultural aspects of eating, disregarding the patient's privacy and personal freedom in decision-making. One model, the Nuffield Council on Bioethics stewardship model of public health, recommends public programs that do not attempt to coerce adults to lead healthy lives, minimize introduction of interventions without consent; and minimize interventions that are unduly intrusive and in conflict with personal values. The stewardship model also incorporates an intervention ladder, ranging from 'no intervention' to 'eliminating choice' altogether. Eliminating choice, under this model, would be reserved for serious public health issues, such as an infectious patient requiring

quarantine in order to ensure the safety of the general population—something obviously more serious than an obese patient. Restricting choice would take the form of removing unhealthy ingredients or foods from stores and restaurants (as in the recent limit on the size of fountain drinks in New York City).

Guiding through disincentives or incentives is on another level of the spectrum, by making it not worth a person's effort to do something, or vice versa—higher medical insurance premiums for obese people who are doing it to themselves, for example. It is a model that clearly illustrates ways in which the government can support public health without becoming overbearing and infringing on people's rights. In summary, obesity is a major public health issue with far reaching consequences to a fair majority of the population. It is detrimental to those who suffer from it, both mentally and physically.

Its physical effects are literally a head-to-toe list of increases risks of illness and injuries. Its mental effects include damage to patients' self-image, which can bleed over into how the patient deals with work, social situations, parenting and every other aspect of life. There are numerous factors involved in an obese person's condition; genetics, upbringing, cultural values and mores, living environment and socio-economics. Some people become obese due to pre-existing medical concerns, while others achieve the condition by eating the wrong things and not exercising enough.

Once they do reach an obesity-qualifying body-mass index level, they can expect (in the Western world, at least), they can be expected to be held responsible for their condition no matter how it was reached, and to be

treated differently simply because they're not at a normal weight. Treatments for obesity range from the tried-and-true to the newfangled and from therapeutic to overbearing, with varying degrees of efficacy. Some involve the government, while others simply a life coach, dietician or trainer. Opinions on how to handle obesity fall at varying points on a wide spectrum.

The most logical source of information on how obese people should be treated—obese people themselves—tend to prefer an approach that helps them change their lives as a whole in order to lose weight and prevent harmful behaviors, rather than one that consists merely of a change in diet with no measures against become obese again at a later date. The ethical concerns in treating obesity include how to best treat obesity without making the patient feel worse about their problem and how much responsibility should be borne by someone other than the obese person themselves (i. . . , the government). Future treatments for obesity may very well take a more holistic approach rather than simply tackling the separate components of diet and exercise. Scientists have taken steps toward mapping the areas of the brain involved with impulse control and self-image, and developing ways of modifying behaviors using this information may prove useful in stemming the tide. Similar discoveries may fuel new ways of educating people on how to prevent obesity in the future as well, rather than only ways of reversing it after the fact.

And of course, the more understanding we have of obesity and its causes, the more tolerant and accepting we should become as a whole towards people suffering from it.

References

1. What is Obesity? (2012) Retrieved December 7, 2012, from <http://www.webmd.com/diet/what-is-obesity>
2. Bray GA (2004). Medical consequences of obesity. *J. Clin. Endocrinol. Metab.* Haslam DW, James WP (2005). Obesity.
3. Lancet Childhood Obesity Prevention. (2012). In Root Cause. Retrieved October 14, 2012, from <http://rootcause.org/childhood-obesity-prevention>
4. Obesity Facts, Causes, Emotional Aspects and When to Seek Help. (2012).
5. In WebMD. Retrieved October 14, 2012, from <http://www.webmd.com/diet/what-is-obesity?page=2>
6. Pinel, J. P. J. (2009). *Biopsychology* (7th ed.).
7. Boston, MA: Allyn and Bacon Hahler B (June 2006). An overview of dermatological conditions commonly associated with the obese patient.
8. Arendas K, Qiu Q, Gruslin A (June 2008). " Obesity in pregnancy: pre-conceptional to postpartum consequences".
9. Calle EE, Rodriguez C, Walker-Thurmond K, Thun MJ (April 2003).
10. Overweight, obesity, and mortality from cancer in a prospectively studied cohort of U. S. adults". Relationship Between Poverty and Overweight or Obesity. Retrieved December 7, 2012, from <http://frac.org/initiatives/hunger-and-obesity/are-low-income-people-at-greater-risk-for-overweight-or-obesity/>

12. Meetoo D. The imperative of human obesity: an ethical reflection. *Br J Nurs* 2010; 19: 563-8. Nuffield Council on Bioethics. Public health: ethical issues. London: Nuffield Council on Bioethics; 2007. Available at: <http://www.nuffieldbioethics.org/public-health> (Cited 9 December 2011).