

Understanding the causes of obesity



For many years, professional medical organizations have classified obesity as a chronic disease risk factor similar to elevated blood cholesterol or blood pressure. The emerging obesity pandemic and accompanying health consequences led The Obesity Society to publish a position paper in 2008, defining obesity as a noncommunicable chronic disease in itself. And, although the debate continues, over the last decade, multiple credible scientific organizations have argued that obesity should be treated as a chronic disease rather than simply a risk factor. In 2018, The Obesity Society published an updated position statement re-affirming the importance of defining obesity as a chronic disease.¹

Consequences of overweight and obesity in adults*

The more a person's weight increases, the more difficult it can be to stay healthy. Many adults are overweight to the degree that it increases their risk of health problems, worsens existing health problems and impairs their quality of life.

Excess body fat can:

- Put a strain on the heart and increase the risk of heart disease
- Increase blood pressure and the risk of stroke
- Increase the body's resistance to insulin — insulin resistance can lead to the development of type 2 diabetes and the metabolic syndrome; the metabolic syndrome is a condition that puts a person at risk for heart disease and stroke
- Raise blood cholesterol and triglycerides
- Lead to shortness of breath and fatigue — this may be the first sign of strain on the body from excess fat
- Put extra burden on the back and joints — excess weight is like carrying a heavy suitcase all the time
- Aggravate arthritis and gout, making even simple movements painful
- Increase the risk of certain types of cancer
- Increase the risk of gallstones
- Lead to complications following surgery — wounds don't heal as fast and infection is more common for individuals who are overweight

Possible causes of overweight and obesity — genetic vs. environmental factors

The prevention and treatment of overweight have generally been disappointing because the understanding of how and why it develops is complex and incomplete. Both environmental and genetic factors contribute to a person's weight and can complicate efforts to lose or maintain it.

Is overweight simply a disorder that results from a lifestyle that includes eating too much or exercising too little or both? There is no question that these factors are associated with gaining weight, but these factors alone do not fully explain overweight.

Environmental factors

It is a fact that many people, especially those living in industrialized countries, become overweight. Changes in what foods are available and how much lifestyle physical activity occurs have presented people with new challenges to a healthy lifestyle. The term "obesogenic environment"² is commonly used to describe this type of setting, where access to healthy, affordable food is limited, opportunities for safe physical activity are scarce and laws or regulations that support a healthy lifestyle are lacking. For example, many worksites lack healthy food options for employees and often provide unhealthy foods at work meetings.

What other environmental factors influence body weight?

In industrialized countries, such as Canada, the United Kingdom and the United States, studies have shown that the risk of gaining weight is greatest for people with low incomes, less education and heavy alcohol use. People who get married or stop smoking are also more likely to gain weight.

Genetic factors*

Obesity is known to be a family trait. However, family members share not only genes, but also eating and exercise habits, a cultural background and other aspects of lifestyle and environment. Scientific studies have helped separate the influence of genetic and environmental factors on overweight.

Studies on body composition (the proportion of lean-to-fat tissue in the body) found that adopted children had a body composition similar to that of their biological parents rather than that of their adoptive parents.

Studies of twins have also helped to separate the influence of genetic and environmental factors on body fat. Identical twins (siblings who develop from a single fertilized egg that splits into two embryos) share the same genes, while fraternal twins (siblings who are born at the same time but develop from two separate fertilized eggs) share only half their genes. For twins reared in similar environments, fraternal twins had greater differences in body fat than identical twins. For fraternal and identical twins

reared apart, differences in body fat were influenced more by genetic factors than by their non-shared environments.

Although it is not clear exactly how much genetic factors predict overweight, perhaps at least one-third of the influence is genetically controlled. Some people are born with a predisposition to overweight, which is readily nourished by a high-fat, high-energy intake (calorie), low-activity lifestyle. The global rate of obesity increased more than twofold between 1990 and 2022. It is unlikely our genes could have changed significantly during that period of time. It is also disturbing that the increase in overweight in industrialized countries has been accompanied by parallel trends in children and teenagers.

New language related to obesity³

The complex nature of weight gain has led to a misunderstanding of the causes of obesity and a tendency to wrongly place all of the blame on the person for their condition. People with excess weight are often labeled as lazy or low in willpower. More appropriate and respectful language, also known as “people-first” language related to obesity, has recently been introduced to help prevent the stigma of obesity. This type of language emphasizes that people are not defined by their health condition; it is just one of many characteristics that they have. When communicating with your coworkers and others, avoid labels such as “obese,” “fat,” “morbidly obese,” “struggling with weight,” etc. Instead say, people with excess weight, high body mass index (BMI), people with obesity, people living with obesity, etc.



Activity: What could you do to reduce the stigma of obesity?

A few ideas are given below. Be creative and come up with more ideas to implement at your workplace and in your community.

- **Individuals:** Spread awareness about the chronic disease of obesity and challenge the misconceptions related to obesity. Use people-first language.
- **Managers:** Create a survey to identify and discuss challenges and knowledge gaps in the workplace related to overweight and obesity. Create a plan for addressing issues and needs.

My ideas to reduce the stigma of excess weight:

Raise awareness:

Challenge misconceptions:

Use people-first language:

References:

1. Jastreboff, Ania M., et al. “Obesity as a Disease: The Obesity Society 2018 Position Statement.” *Obesity*, vol. 27, 2019, pp. 7-9.
2. World Health Organization. “Obesity and Overweight.” 2024. <https://www.who.int>.
3. World Obesity. “Weight Stigma.” 2022. <https://www.worldobesity.org>.

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