

Knowledge Matters: How Obesity Impacts Your Health

What is Obesity?

Obesity is a long-term medical condition that occurs when your body's system for using and storing calories isn't working properly. It is affected by hormones, which are chemical messengers that help control mood, sleep, and metabolism. Hormones also play important roles in managing appetite and energy. These hormones send signals from the gut to the brain, and help the brain notice feelings of hunger and fullness, which helps to control appetite. When this "gut-brain axis" is out of balance, the body stores more fat than it uses. This causes weight

gain and makes weight loss and maintaining weight loss through diet and activity difficult.

Some important hormones include:

- **Insulin** signals your brain to help reduce how much you eat. In people with obesity, the body often becomes resistant to insulin, meaning it doesn't respond to insulin as well. This resistance leads to higher blood sugar and higher insulin levels. When insulin stays high for too long, it can make it easier for the body to gain and store fat, contributing to obesity.

- **Leptin** tells your brain when you are full. When you lose weight, you produce less leptin, making it difficult to maintain weight loss.
- **Ghrelin** tells your brain when it's time to eat. When you lose weight, ghrelin levels rise, making you want to eat more often.
- **Glucagon-like peptide-1 (GLP-1)** helps to reduce hunger and cravings and increase satisfaction after a meal.

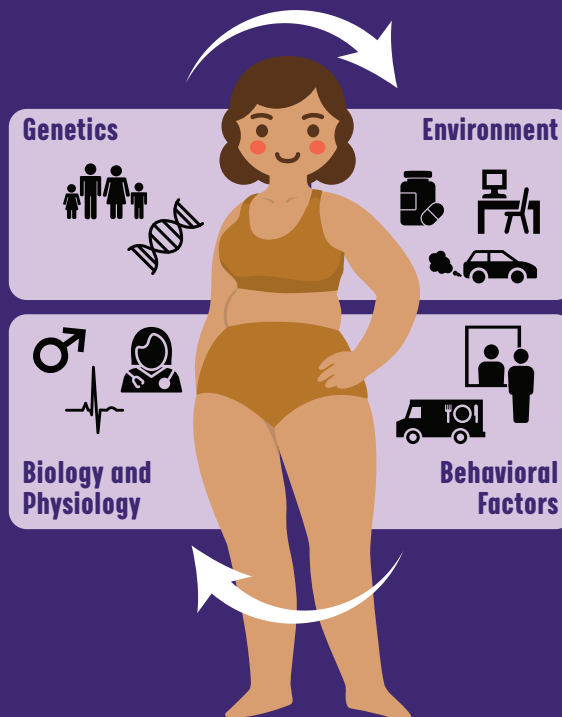
Many Factors Can Affect Your Weight

Good news: Obesity is not a failure of willpower.

Obesity is complex, and even though some eating habits are by choice, there are many other factors beyond willpower. Some of the other influences on your weight include genetics, other medical conditions/medications, environment, biology, psychology, lifestyle behaviors, cultural factors, and more.

More than 100 genes have been linked to weight gain and obesity. This is why obesity often runs in families.

Biologic factors include gender, aging, menopause, birth weight, metabolism, and other health problems.



Lack of access to healthy food and/or easy access to highly processed food, sedentary jobs, and certain medicines, can influence risk of developing obesity.

Behavioral, psychological, cultural, and lifestyle factors include chronic stress, mental conditions like depression or anxiety, emotional or disordered eating, sedentary lifestyles, internalized weight bias, and/or culturally-specific beliefs about food, body shape or size, and activity.

What You Can Do

Understanding the causes of obesity and how they may affect your health can help you better manage your weight. Being well-informed will allow you to work with a healthcare professional to determine the best treatment plan for you. Even a weight loss of 5% to 10% of your body weight

can significantly improve your heart health by reducing inflammation, improving cholesterol levels, and lowering blood pressure. Treatment plans may include lifestyle adjustments, medications, surgical options, and mental health care.

How Excess Weight Affects the Body

LUNGS

Obesity makes it harder to breathe by reducing lung space, making it difficult for the diaphragm to move, and blocking airflow. These can lead to difficulty breathing and low oxygen levels in the blood, making exercise difficult.

LIVER

The liver plays a central role in breaking down fats and sugars and is responsible for processing and storing nutrients, making it uniquely vulnerable to the effects of fat overload.

ADIPOSE TISSUE

Extra calories get changed into lipids (fats), which are stored in adipose tissue (fat cells). These cells release hormones and chemicals that can cause inflammation.

JOINTS

Excess weight puts added stress on joints and raises inflammation levels in the body.

BRAIN

Hormone signals sent from the gut affect the brain's decision to eat more or less and to increase energy when needed. GLP-1 helps reduce hunger and cravings and increases satisfaction after a meal. In obesity, these signals and the brain's response do not work properly, leading to overeating.

HEART

Excess weight puts extra strain on the heart and blood vessels, which can lead to serious heart-related problems.

PANCREAS

The pancreas helps control blood sugar by producing insulin. When insulin stays high for too long, it can make it easier for the body to gain and store fat.

INTESTINES/GI TRACT

Excess abdominal weight puts pressure on the stomach, which may force stomach acid up into the esophagus.

Obesity-related Complications

Making the connection between obesity and common health issues can help you get the right support and change the factors within your control. Being at risk of obesity or living with obesity can increase the risk of:



Depression, seeking "comfort food" when stressed, leading to a cycle of emotional eating and weight gain, having disrupted sleep or energy levels, all of which lead to more weight gain and further contributes to low mood.



Inflammation, which can cause and lead to serious health problems, including heart damage and some cancers.



High blood pressure, which can strain your heart, damage blood vessels, and raise the risk of heart attack and stroke.



Liver dysfunction, which makes blood sugar and cholesterol levels unhealthy, and increases the risk of type 2 diabetes and heart disease.



Respiratory conditions, such as sleep apnea and asthma.



Pain from joint conditions, like osteoarthritis and gout, and the stress of more weight on the knees, hips, and lower back.



Type 2 diabetes, from consistently high insulin levels.



Gastroesophageal reflux disease (GERD), which can cause heartburn, chest pain, and difficulty swallowing.

Developed by Paradigm Medical Communications, LLC in collaboration with Obesity Action Coalition and Caregiver Action Network, and supported by an independent medical education grant from Novo Nordisk.

This information is provided for educational and informational purposes only and is not intended to replace the advice of a qualified healthcare professional. ©2025 Paradigm Medical Communications, LLC.

