

INVESTMENT IN RESEARCH SAVES LIVES AND MONEY

Obesity

Obesity is a serious medical condition that occurs when a person's weight is higher than what is considered healthy for someone of their height.¹ It is a complex disease that can cause complications such as high blood pressure, heart disease, diabetes, high cholesterol, cancer, and sleep disorders.² Resulting from a combination of inherited, environmental, and/or physical factors, obesity is increasingly common in the United States. Research has revealed insights into what causes and effects obesity, and is helping to inform ways to prevent and treat it.

TODAY

More than **39.8%** of adults and **18.5%** of children and young adults in the U.S. are obese.^{3,4}

The association between obesity prevalence and educational attainment is **complicated** and often differs by sex and race.⁴

Obesity-related conditions are some of the **leading causes** of preventable, premature death, including heart disease, stroke, type 2 diabetes, and certain types of cancer.⁴

Research Delivers Solutions

With obesity rates increasing in the U.S., researchers are continuing to explore possible new treatments and prevention options. As of October 2019, there were **3,815 active or recruiting clinical trials** exploring the effect of individualized medications, sleep restriction, and gut microbiomes on obesity prevention and treatment.⁸

There are several ways a person can develop obesity over time. Though there is no single genetic cause of obesity, since 2006 researchers have discovered more than **50 genes** associated with obesity risk.⁹ A 2019 study found that changes in **gut bacteria** can contribute to the development of obesity, as well as obesity-related metabolic disorders, like type 2 diabetes.¹⁰ **Environmental and behavioral factors** affecting obesity include climate, diet, level of physical activity, alcohol consumption, and lack of sleep. A recent study found that changing these environmental and behavioral factors can decrease the risk of obesity predicted by genetics.¹¹

Treatment of obesity can include medication, behavioral intervention, and/or surgery: Prior to 2012, there were limited drug treatment options for obesity. Since then, researchers have discovered **four new medications** (lorcaserin, phentermine, naltrexone, and liraglutide) which encourage weight loss, reduce food intake, and lower blood pressure.¹² A 2019 study found that **smartphone-based treatment (SMART)** may be just as effective as more intensive group-based behavioral options, offering a low-cost method for weight loss treatment.¹³ Surgery is sometimes pursued if drug and behavioral therapies to treat obesity are unsuccessful. Bariatric surgery is one type of weight reduction surgery for the treatment of obesity. A 2017 study, however, found that **endoscopic sleeve gastroplasty (ESG)**, an outpatient procedure that reduces stomach size, could be an equally effective, less invasive alternative to traditional bariatric surgery.¹⁴

COST

The annual health care costs of obesity-related illnesses total approximately

\$109.2 billion,

almost 21% of annual medical spending in the US.⁵

Workers in the U.S. who are obese and have other chronic health conditions miss approximately

450 million

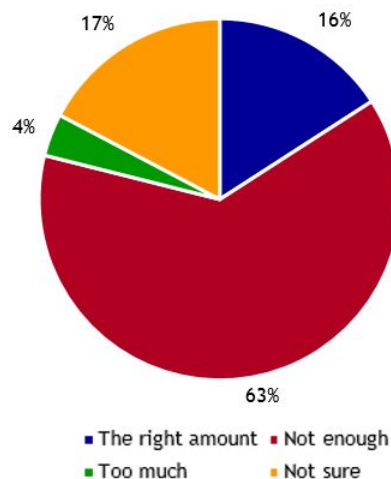
additional days of work each year compared with healthy workers, resulting in more than

\$153 billion

in lost productivity every year.⁶

Obese individuals are more likely to experience worksite injuries than non-obese workers.⁷

The U.S. spends about 5 cents of each health dollar on research to prevent, cure and treat disease and disability. Do you think that this is too much, the right amount or not enough?



Source: A Research!America poll of U.S. adults conducted in partnership with Zogby Analytics in January 2019

Obesity

Then. Now. Imagine.

THEN

Before the 21st century, most of the research on obesity risk factors focused on an individual's behavior.¹⁵

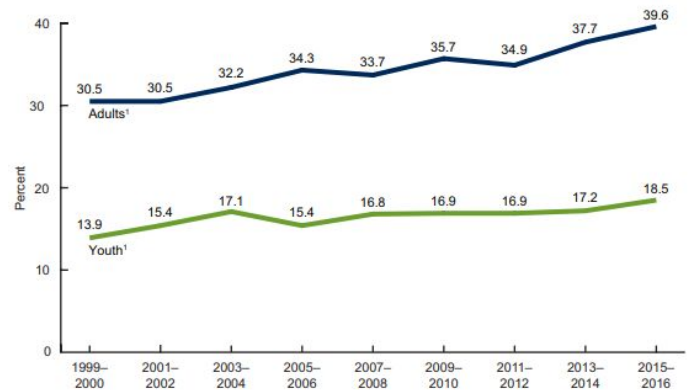
NOW

Ground-breaking research has been conducted on the role of gut bacteria and how it can affect obesity, energy metabolism, and digestion, pointing to promising therapeutic avenues for obesity and disease.¹⁵

IMAGINE

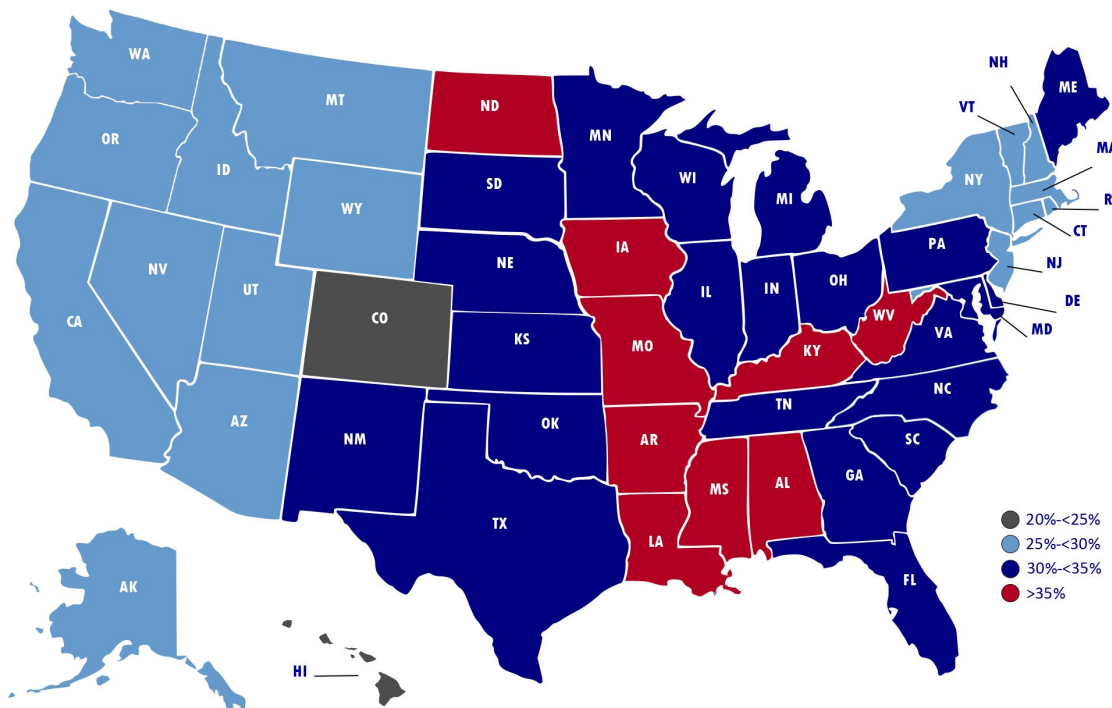
A world without obesity.

Trends in obesity prevalence among U.S. adults and youth, 1999–2016



SOURCE: "NCHS, National Health and Nutrition Examination Survey, United States, 1999–2016." Centers for Disease Control and Prevention.

Prevalence of Obesity Among U.S. Adults in 2018



SOURCE: "Behavioral Risk Factor Surveillance System" — United States, 2018. Centers for Disease Control and Prevention.

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