

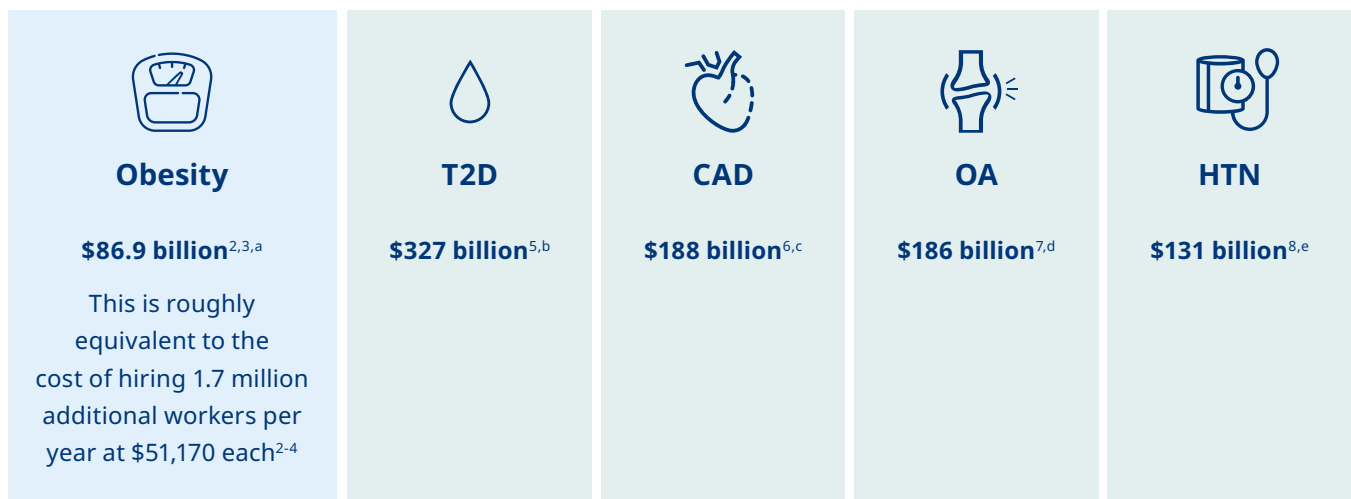
The Economic Impact of Obesity on Your Organization



Obesity Is Common and, Along With Its Comorbidities, Costly for Your Organization

Regardless of industry or occupation, obesity can affect the workforce.¹

- Nearly one-third, or ~40,110,000, full-time employees have obesity



Obesity is a costly disease that may contribute to the costs of other chronic conditions.⁹

CAD=coronary artery disease; HTN=hypertension; OA=osteoarthritis; T2D=type 2 diabetes.

^aAggregate cost of obesity among full-time employees in the United States, according to data from a 2006 survey, adjusted to 2019 inflation rates.

^bIncludes direct medical costs and the costs of lost productivity (2017).

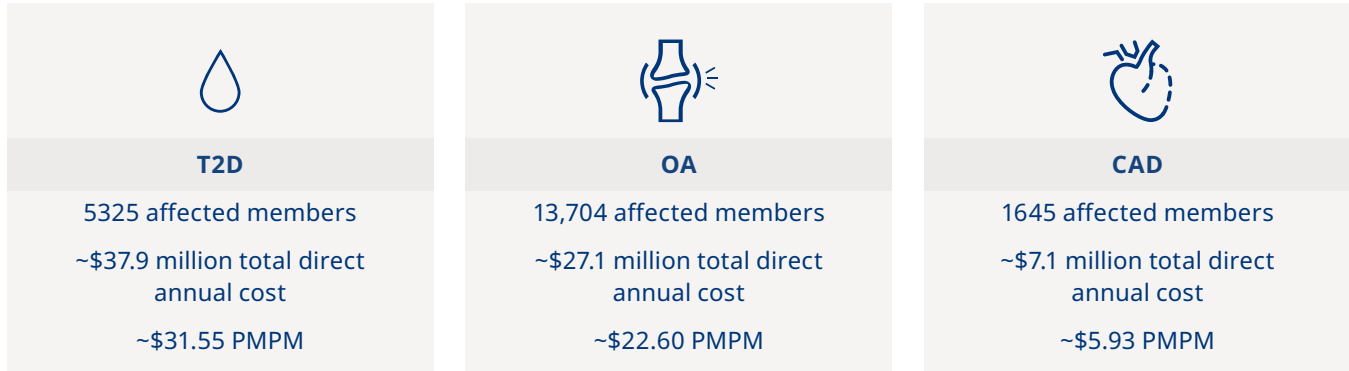
^cIncludes direct (medical) and indirect costs of coronary artery disease (2017).

^dAggregate medical expenditures, including out-of-pocket costs (1996-2005; 2007 dollars).

^eHealthcare costs only (2003-2014, averaged).

Impact of Direct Medical Costs of Obesity for Health Plans

Direct medical costs of obesity-related complications in a hypothetical health plan of 100,000 members ^{10,11,a:}



PMPM=per-member per-month.

^a Costs shown are direct medical costs associated with treating specific overweight- and obesity-related comorbidities PMPM in 2016.

Over 10 years, an employee with a body mass index (BMI) ≥ 40 kg/m² can expect to incur a total economic burden nearly 3 times higher than an employee with a BMI 30 kg/m²–34.9 kg/m²¹²

Obesity is also associated with high indirect costs for employers.



Short-term disability¹³

- Employees with obesity-related complications are nearly **2x as likely** to file short-term disability claims^a



Absenteeism²

- Obesity-related absenteeism can cost US employers **\$12.8 billion** annually



Workers' compensation¹⁴

- In a 3-year study of workers' compensation claims, claims were **160% higher** for employees with obesity (BMI ≥ 30 kg/m²) compared with those who have normal weight (BMI 18.5 kg/m²–25 kg/m²)^b



Presenteeism²

- Presenteeism in the workplace has been shown to be the **single largest cost driver** associated with obesity, regardless of BMI



Productivity¹⁵

- Increasing BMI is associated with **impaired work productivity** and indirect costs^c

^aData from a retrospective analysis of a large, national employer database from 2006-2008 (n=89,097).¹³

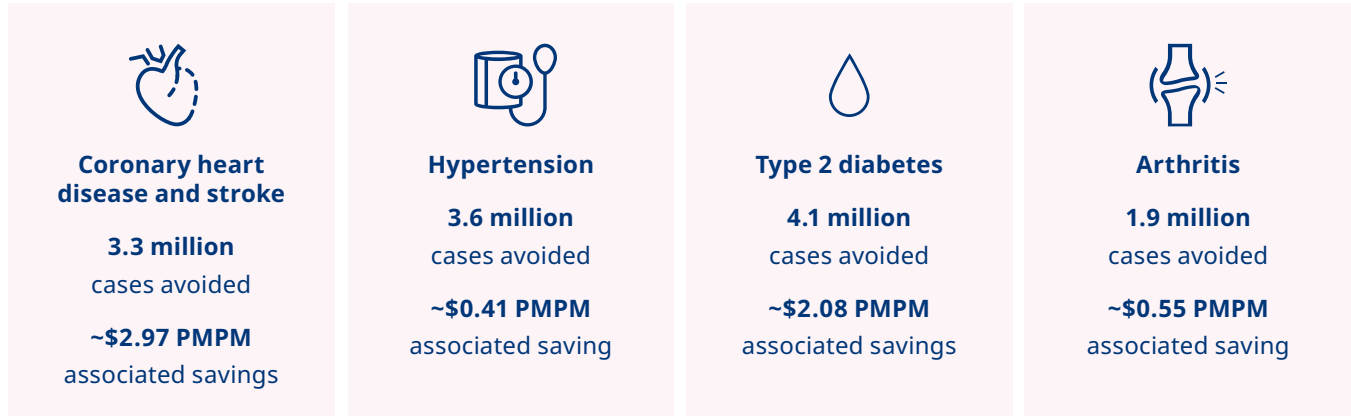
^bStudy specific to the Louisiana Workers' Compensation Corporation Claims Payment Database for open claims. Study included ~2300 injured employees filing workers' compensation claims.¹⁴

^cStudy effects were not uniform, with notable differences emerging, based on participant's respective occupation.¹⁵

Helping Your Employees With Their Weight-Loss Journey May Be Beneficial to Your Bottom Line

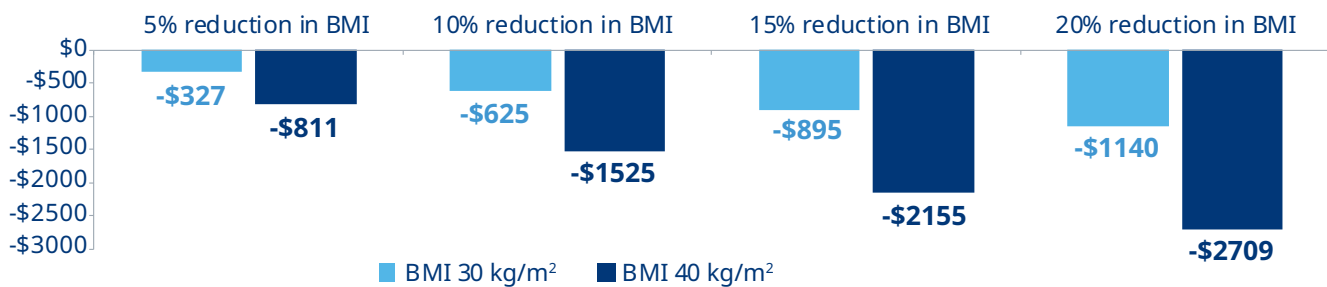
Studies indicate that a 5% to 10% weight loss can help curb the economic impact of costly comorbidities.^{16,17}

Estimated impact per each case avoided in the United States over 10 years if average adult BMI was reduced by 5%^{17,18,a:}



Predicted annual cost savings for patients with baseline BMI values of 30 kg/m² and 40 kg/m² ^{3,19,b,c}

Aggregated medical costs include inpatient, outpatient, prescription drugs, dental, vision, home and healthcare services, and medical equipment.



- A 20% reduction in BMI can lead to nearly double the cost savings compared with a 10% reduction in BMI

The economic benefits of sustained weight loss are contingent upon the appropriate weight-management approach being available for all obesity classes.

^aFrom a medical expenditure model using data collected over a 10-year time period, which estimated the impact of weight loss on the incidence of several types of weight-related comorbidities and the associated cost savings.¹⁷

^bCosts were calculated in 2010 US\$ and adjusted for inflation in 2021.

^cThis study assessed costs using a 2 part model that estimates the probability of having medical expenditures and the amount of medical expenditures conditional on having any. The study used data from 2000-2010 waves of the Medical Expenditure Panel Survey (MEPS).¹⁹

Does Your Health Plan Include AOMs as a Treatment Option for Obesity?

Obesity management warrants a stepwise approach: AHA/ACC/TOS guidelines^{20,a}

Treatment	BMI Category (kg/m ²)				
	25-26.9	27-29.9	30-34.9	35-39.9	≥40
Diet, physical activity, and behavior therapy	Yes, with comorbidities	Yes	Yes	Yes	Yes
Pharmacotherapy		Yes, with comorbidities	Yes	Yes	Yes
Surgery				Yes, with comorbidities	Yes

ACC=American College of Cardiology; AHA=American Heart Association; TOS=The Obesity Society.

^aYes alone means that the treatment is indicated regardless of presence or absence of comorbidities. The solid arrow signifies the point at which treatment is initiated.²⁰

The fastest growing classifications of obesity between 1998-2018 were Class II (35 kg/m² – 39.9 kg/m²) and Class III (≥40 kg/m²).²¹

- Between 2011 and 2018, the percentage of adults in the United States with Class II obesity increased 19% and Class III obesity increased 25%, while Class I obesity (30 kg/m² – 34.9 kg/m²) increased 7%.²¹

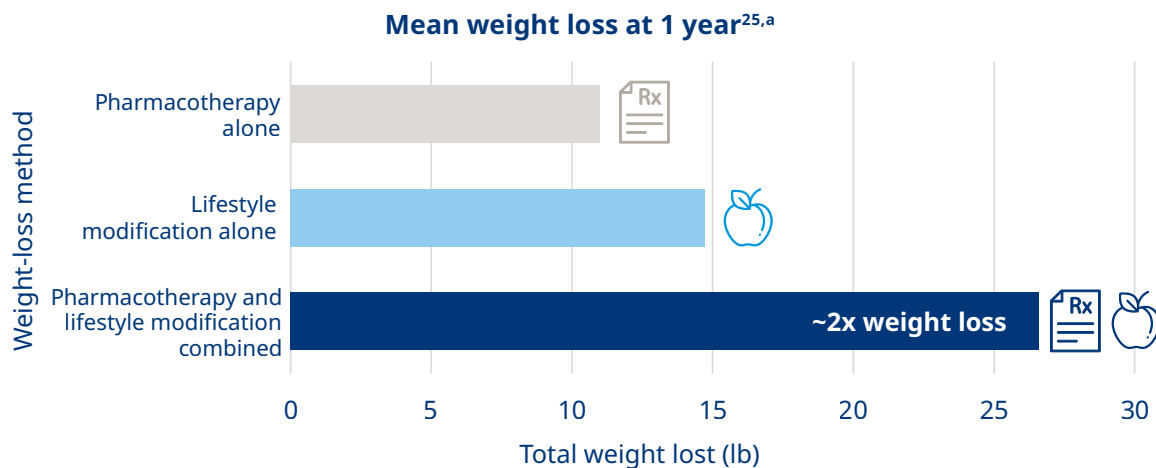
Per AHA/ACC/TOS guidelines, weight loss for people with Class II/III obesity may require medical intervention, like pharmacotherapy, or surgery for appropriate patients, in addition lifestyle modifications.²⁰

Adding Anti-Obesity Medications (AOMs) to a Comprehensive Weight-Management Program May Help Appropriate Patients With Obesity Lose Weight

Sixty-seven percent of large employers offer wellness programs that incorporate employee benefits related to diet and exercise, spending an average of \$6 million on these programs annually^{22,23}; however, employees may not be benefiting as much as employers believe.²⁴

- According to an online survey of 3000 people with obesity, only 17% of employees with obesity viewed wellness programs as beneficial, compared with 72% of employers²⁴
- Corporate wellness programs are considered a solution for improving employee health and well-being, but are not meeting the needs of every person with obesity²⁴

Adding AOMs to a comprehensive weight management program may help appropriate patients with obesity lose weight.²⁵



^aAccording to a study of 224 men and women aged 18 to 65 years with BMI of 30 kg/m² to 45 kg/m² who were randomly assigned to receive pharmacotherapy (sibutramine) alone, lifestyle-modification counseling, or pharmacotherapy with lifestyle-modification counseling (combined therapy).²⁵

- It is critical to offer various options to your employees with obesity, as one specific strategy will not address the needs of everyone with obesity in your organization

Members who have better control of their obesity may mean fewer direct and indirect costs incurred from pricy comorbidities, employee absenteeism, etc.^{16,26}

Most importantly, make sure you are communicating benefits to employees so that they can take advantage of your programs.

- Even though all employers in one study reported providing coverage for weight management, including prescription weight-loss medications, only 13% of employees with obesity were aware that this benefit was being offered²⁴

References: **1.** Summary Health Statistics: National Health Interview Survey, 2018: Table A-15a. Centers for Disease Control and Prevention website. Accessed August 10, 2022. https://ftp.cdc.gov/pub/Health_Statistics/NCHS/NHIS/SHS/2018_SHS_Table_A-15.pdf **2.** Finkelstein EA, daCosta DiBonaventura M, Burgess SM, Hale BC. The costs of obesity in the workplace. *J Occup Environ Med.* 2010;52(10):971-976. **3.** CPI Inflation calculator. US Bureau of Labor Statistics. Accessed August 11, 2022. https://www.bls.gov/data/inflation_calculator.htm **4.** Doyle A. Average salary information for U.S. workers. The Balance Careers website. Updated March 23, 2021. Accessed August 11, 2022. <https://www.thebalancecareers.com/averagesalary-information-for-us-workers-2060808> **5.** Statistics about diabetes. American Diabetes Association website. Accessed August 11, 2022. <https://www.diabetes.org/resources/statistics/statistics-about-diabetes> **6.** American Heart Association, American Stroke Association. Cardiovascular disease: a costly burden for America. Projections through 2035. Accessed August 11, 2022. <https://www.heart.org/-/media/files/get-involved/advocacy/burden-report-consumer-report.pdf?la=en> **7.** Kotlarz H, Gunnarsson CL, Fang H, Rizzo JA. Insurer and out-of-pocket costs of osteoarthritis in the US. *Arthritis Rheum.* 2009;60(12):3546-3553. **8.** Kirkland EB, Heincelman M, Bishu KG, et al. Trends in healthcare expenditures among US adults with hypertension: national estimates: 2003-2014. *J Am Heart Assoc.* 2018;7(11):e008731. **9.** Mocarski M, Tian Y, Smolarz BG, McAna J, Crawford A. Use of International Classification of Diseases, Ninth Revision codes for obesity: trends in the United States from an electronic health record-derived database. *Popul Health Manag.* 2018;21(3):222-230. **10.** Waters H, Graf M. America's obesity crisis: the health and economic costs of excess weight. Published October 2018. Accessed August 11, 2022 <https://milkeninstitute.org/sites/default/files/reports-pdf/Mi-Americas-Obesity-Crisis-WEB.pdf> **11.** Table 1: Population by Age and Sex: 2016. United States Census Bureau. Accessed August 11, 2022. https://www2.census.gov/programs-surveys/demo/tables/age-and-sex/2016/age-sex-composition/2016gender_table1.xls **12.** Su W, Huang J, Chen F, et al. Modeling the clinical and economic implications of obesity using microsimulation. *J Med Econ.* 2015;18(11):886-897. **13.** Van Nuys K, Globe D, Ng-Mak D, Cheung H, Sullivan J, Goldman D. The association between employee obesity and employer costs: evidence from a panel of U.S. employers. *Am J Health Promot.* 2014;28(5):277-285. **14.** Tao X, Su P, Yuspeh L, Lavin RA, Kalia-Satwah N, Bernacki EJ. Is obesity associated with adverse workers' compensation claims outcomes? *J Occup Environ Med.* 2016;58(9):880-884. **15.** Kudel I, Huang JC, Ganguly R. Impact of obesity on work productivity in different US occupations: analysis of the National Health and Wellness Survey 2014 to 2015. *J Occup Environ Med.* 2018;60(1):6-11. **16.** Garvey WT, Mechanick JI, Brett EM, et al; Reviewers of the AACE/ACE Obesity Clinical Practice Guidelines. American Association of Clinical Endocrinologists and American College of Endocrinology comprehensive clinical practice guidelines for medical care of patients with obesity. *Endocr Pract.* 2016;22(suppl 3):1-203. **17.** Levi J, Segal LM, St Laurent R, Lang A, Rayburn J. F as in fat: how obesity threatens America's future. Published September 2012. Accessed August 11, 2022. <https://www.rwjf.org/en/library/research/2012/09/f-as-in-fat--how-obesity-threatens-america-s-future-2012.html> **18.** Data on file. Novo Nordisk Inc.; Plainsboro, NJ. **19.** Cawley J, Biener A, Meyerhoefer C, et al. Direct medical costs of obesity in the United States and the most populous states. *J Manag Care Spec Pharm.* 2021;27(3):356-366. **20.** Jensen MD, Ryan DH, Apovian CM, et al; American College of Cardiology/American Heart Association Task Force on Practice Guidelines; The Obesity Society. 2013 AHA/ACC/TOS guideline for the management of overweight and obesity in adults: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines and The Obesity Society. *Circulation.* 2014;24(25 suppl 2):S102-S138. **21.** National Center for Health Statistics. Health, United States, 2019 [supplement]. Centers for Disease Control and Prevention website. <https://www.cdc.gov/nchs/data/hus/2019/026-508.pdf>. Accessed August 11, 2022. **22.** Employer Research Findings: Workforce Obesity Awareness and Benefits Coverage in a COVID-19 Environment. Arthur J. Gallagher and Co. Summer 2020. **23.** Miller S. Employers enhance well-being benefits for a post-pandemic workforce. SHRM website. Published June 16, 2021. Accessed August 10, 2022. <https://www.shrm.org/resourcesandtools/hr-topics/benefits/pages/employers-enhance-well-being-benefits-for-a-post-pandemic-workforce.aspx> **24.** Jinnett K, Kyle T, Parry T, Stevenin B, Ramasamy A; ACTION Steering Group. Insights into the role of employers supporting obesity management in people with obesity: results of the national ACTION study. *Popul Health Manag.* 2019;22(4):308-314. **25.** Wadden TA, Berkowitz RI, Womble LG, et al. Randomized trial of lifestyle modification and pharmacotherapy for obesity. *N Engl J Med.* 2005;353(20):2111-2120. **26.** Ramasamy A, Laliberté F, Aktavoukian SA, et al. Direct and indirect cost of obesity among the privately insured in the United States: a focus on the impact by type of industry. *J Occup Environ Med.* 2019;61(11):877-886.