



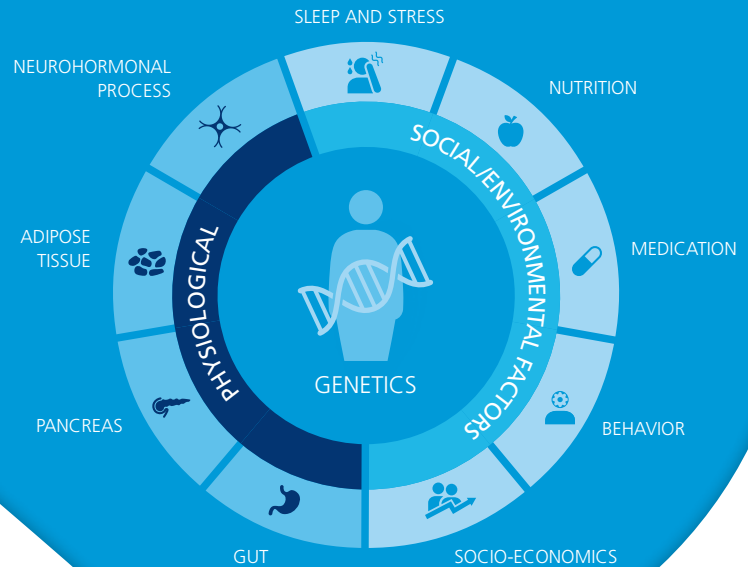
OBESITY IS A CHRONIC DISEASE

Obesity is a chronic disease, with multiple pathophysiological determinants, that requires multidisciplinary, long-term management

Obesity is defined as abnormal or excessive fat accumulation that may impair health.¹ It leads to anatomic (e.g. osteoarthritis, sleep apnea) and metabolic (e.g. the impact of body fat mass on insulin resistance and progression to T2DM and CVD) impairments in body function²

Body weight regulation is complex, influenced by genetics, physiology and the environment (Figure 1)³⁻⁵

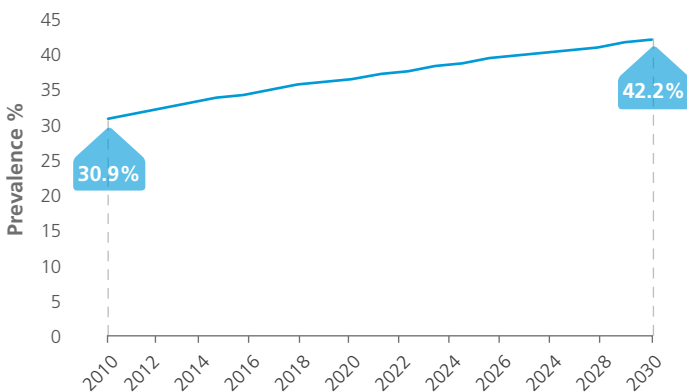
Figure 1: Obesity is a complex multifactorial disease³⁻⁵



Professional associations (the American Medical Association, the American Association of Clinical Endocrinologists, the Obesity Society) recognize obesity as a global health challenge that requires a chronic disease management model^{2,6-8}

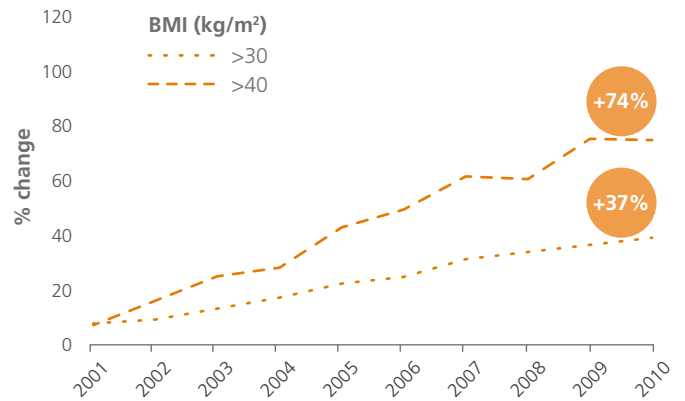
Obesity is increasing in prevalence and severity^{9,10}

Figure 2: Estimated obesity prevalence among US adults, 2010–2030⁹



Notes: For BMI ≥ 30 kg/m² based on Behavioral Risk Factor Surveillance System (BRFSS) data; based on the current linear trend, prevalence could reach 51%.

Figure 3: Prevalence of higher BMI categories is increasing faster than the prevalence of lower BMI categories¹⁰



Note: Based on BRFSS data.

Abbreviations: BMI, body mass index; BRFSS, Behavioral Risk Factor Surveillance System; CVD, cardiovascular disease; GLP-1, glucagon-like peptide-1; T2DM, type 2 diabetes mellitus.

Biological mechanisms undermine weight loss effects and promote weight regain in individuals attempting even modest weight loss^{11,12}

Weight loss through dieting increases levels of hunger hormone (ghrelin) and reduces levels of hormones that drive weight loss (e.g. PYY, OXM, GLP-1, leptin, and others)^{11,12}

Figure 4: Physiological factors driving weight regain after weight loss through dieting¹¹

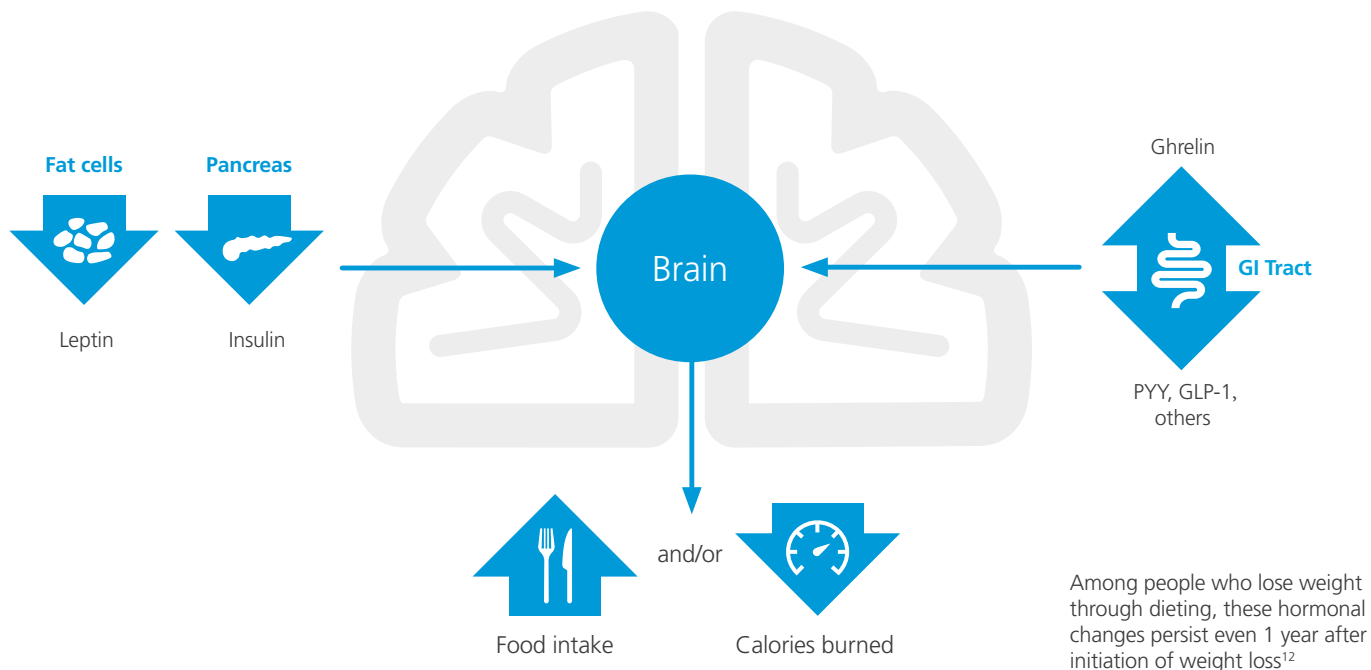
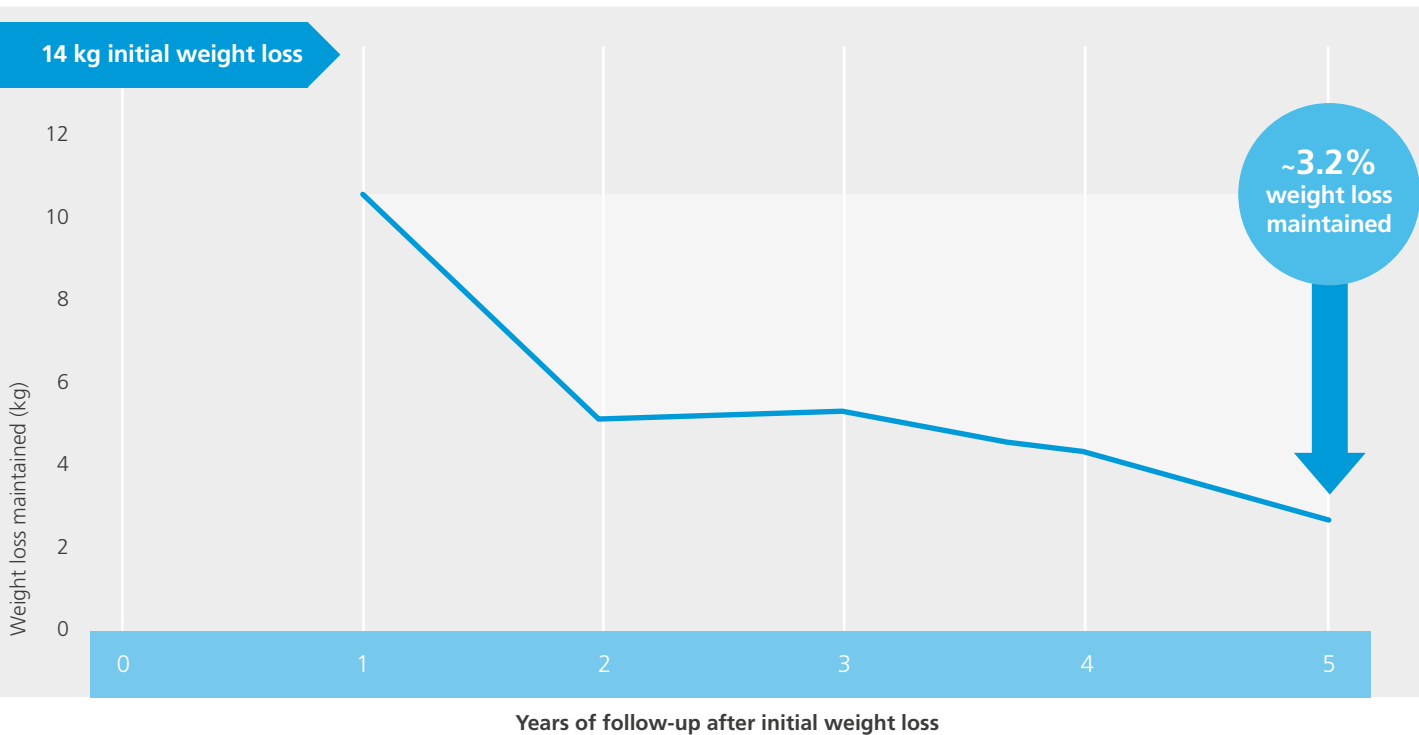
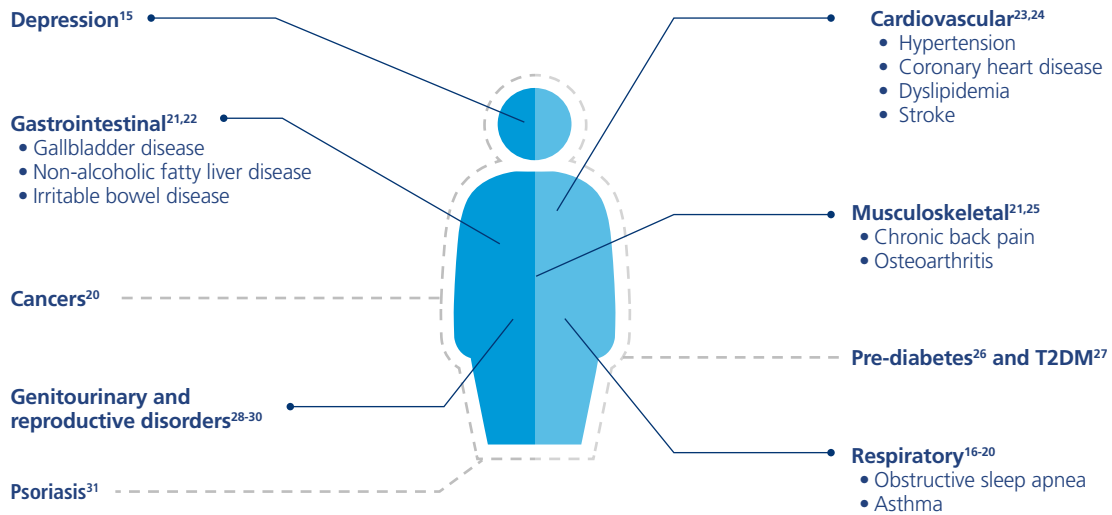


Figure 5: Weight reduction maintained over 5 years among people who achieved an initial weight loss of 14 kg after completing short-term, structured weight loss programs¹³



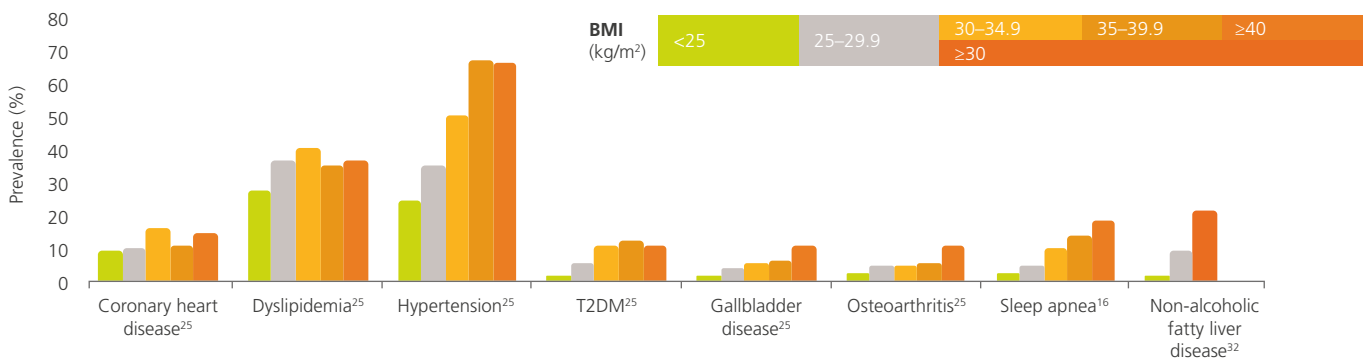
Abbreviations: GI, gastrointestinal; GLP-1, glucagon-like peptide-1; OXM, oxyntomodulin; PYY, peptide YY.

Obesity is associated with many conditions and comorbidities,¹⁴ including:



The prevalence of obesity-related comorbidities generally increases with BMI^{16,25,32}

Figure 6: Prevalence of obesity-related comorbidities by BMI^{16,25,32}



46% of individuals with Class I/II obesity have ≥5 comorbidities³³
 55% with Class III obesity

With an economic burden of \$1.42 trillion annually in the US,³⁴ obesity is one of the top 10 most expensive chronic diseases for healthcare payers, as are obesity-related diseases, such as CVD, T2DM, and cancers³⁵

The economic burden of obesity in the US is estimated at \$1.42 trillion, or 8.2% of GDP³⁴

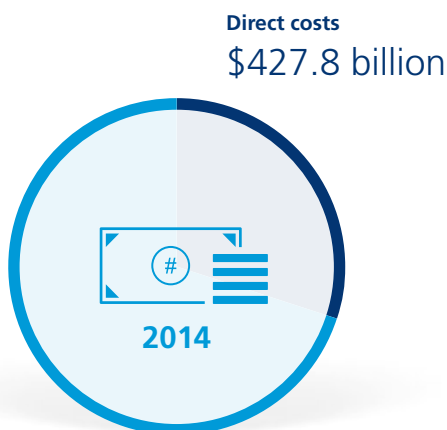
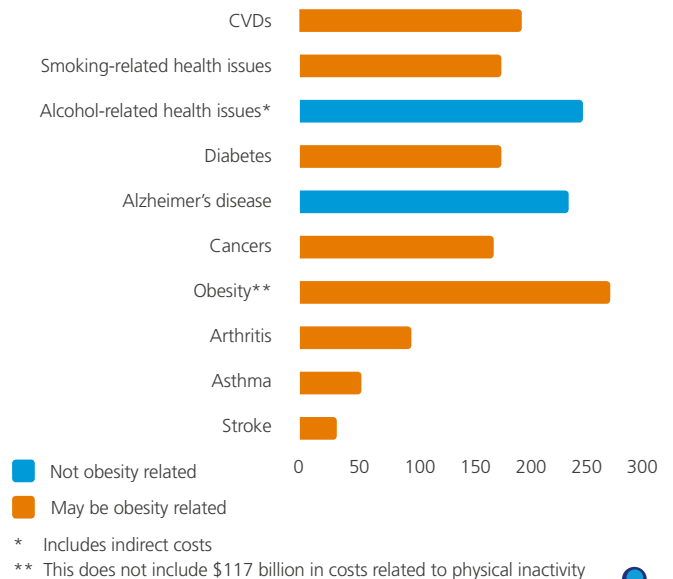


Figure 7: Centers for Disease Control (CDC) most expensive diseases for US payers (direct healthcare costs, \$ billion)³⁵



Abbreviations: BMI, body mass index; CVD, cardiovascular disease; GDP, gross domestic product; T2DM, type 2 diabetes mellitus.

Healthcare costs rise rapidly with BMI in the range of Class II and Class III obesity (BMI >35 kg/m²)³⁶

Figure 8: Obesity-related healthcare costs rise exponentially with BMI >35 kg/m² ^{36,37}

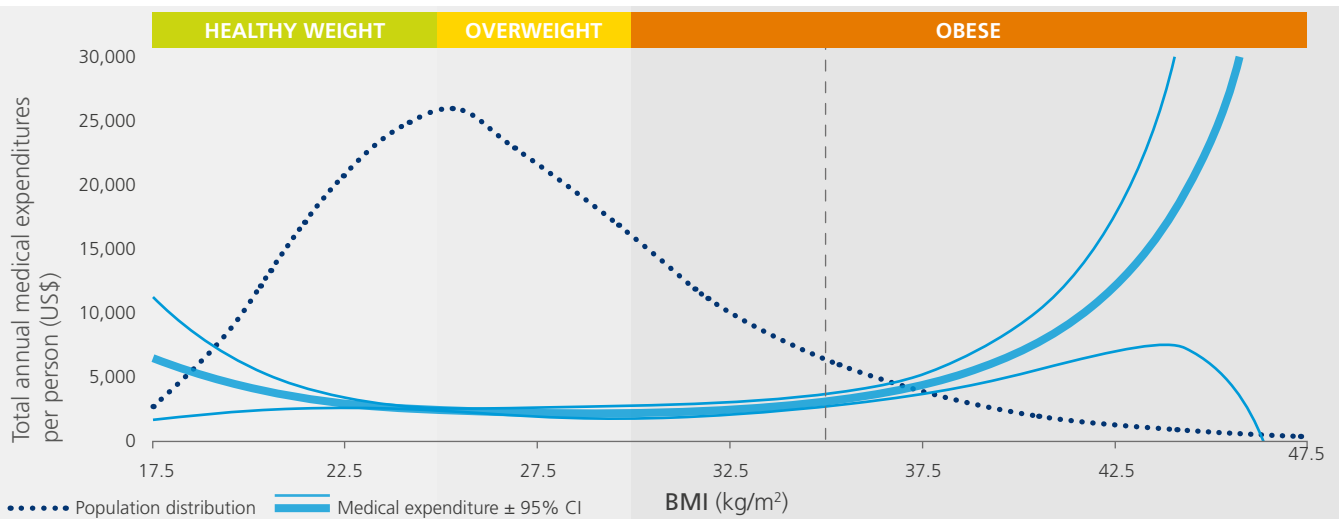


Figure 9: Physician visit and outpatient costs, inpatient costs, and spending on prescription drugs are higher among individuals with obesity vs normal-weight individuals³⁸

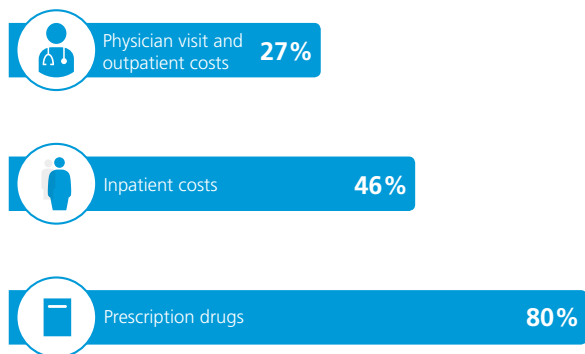
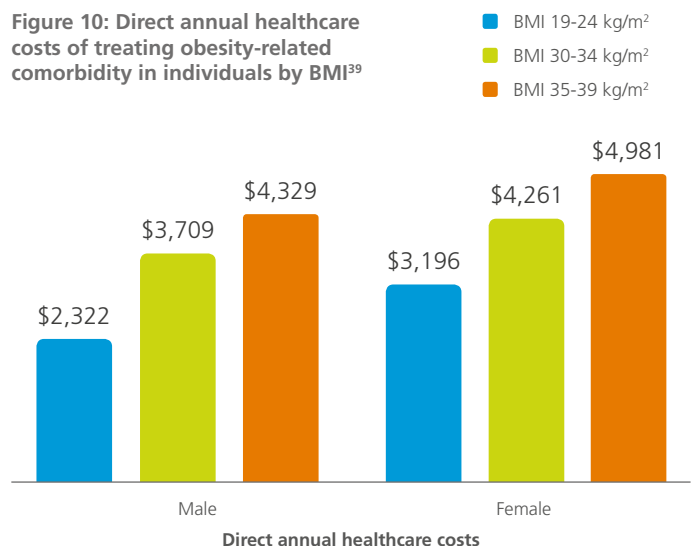


Figure 10: Direct annual healthcare costs of treating obesity-related comorbidity in individuals by BMI³⁹



In the US, obesity is associated with indirect costs of \$988 billion from premature mortality, disability, workers' compensation, insurance claims, and work absenteeism or presenteeism^{34,40-42}

Overall lost work time associated with obesity includes:⁴⁰

- Presenteeism 5.1 days
- Absenteeism 3.1 days

Figure 11: Per-employee annual sick leave and short-term disability costs in a study of US workers⁴¹

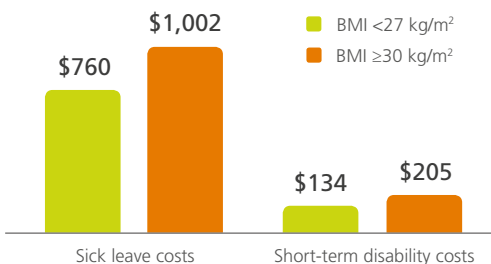


Figure 12: Annual workers' compensation claims per 100 full-time employees⁴²



Abbreviations: BMI, body mass index; CVD, cardiovascular disease; GDP, gross domestic product; T2DM, type 2 diabetes mellitus.

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