

Obesity is a highly prevalent, chronic disease

~100 million adults have obesity in the US^{1,2,a}



By 2030, nearly **1 in 2** adults in the United States will have obesity (body mass index [BMI] \geq 30 kg/m²) and nearly **1 in 4** will have Class 2 or 3 obesity (BMI \geq 35 kg/m²)³

Did you know? People with obesity are at risk for severe symptoms of COVID-19



People with obesity are at a **higher risk of complications** from COVID-19 due to the increased risk of chronic diseases driven by obesity⁴



Based on what is currently known, the Centers for Disease Control and Prevention (CDC) has stated that people of any age with certain underlying medical conditions, including obesity (BMI \geq 30 kg/m²), are at **increased risk for severe illness** from COVID-19⁵



Much is still unknown about the relationship between obesity and the severity of illness with COVID-19. More studies are needed to define the relationship



Obesity could jeopardize the effectiveness of a COVID-19 vaccine



In multiple diseases, including hepatitis, tetanus, rabies, and influenza, research has indicated that vaccines have **reduced effectiveness** in adults with obesity⁶

- A study published in the *International Journal of Obesity* determined that vaccinated adults with obesity were **twice as likely** as vaccinated adults of healthy weight to **develop influenza**⁷
- Obesity researchers suggest that there is "little reason to believe that COVID-19 vaccines will be different"



In a review published in the journal *Vaccine*, investigators from the Mayo Clinic's Vaccine Research Group issued the followed statement⁸:

66 Obesity is a serious global problem, and the suboptimal vaccine-induced immune responses observed in the obese population cannot be ignored. \$9



Obesity is common in people hospitalized with COVID-19



A prospective cohort study of 5279 patients with COVID-19 treated at a health system in New York City showed that a BMI >40 kg/m² was one of the **top 5 strongest factors associated** with hospitalization⁹

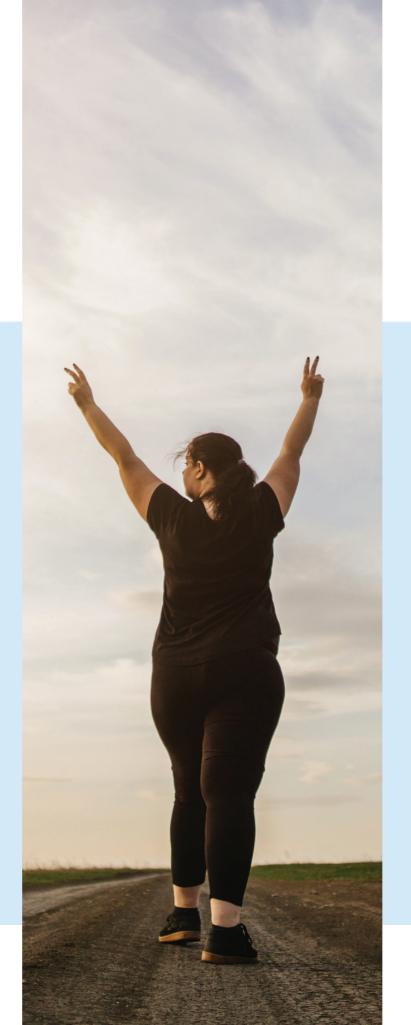


In a study of 5700 patients with COVID-19 admitted to 12 hospitals in the NYC area, the **most common underlying conditions** were hypertension, obesity (41.7%), and diabetes¹⁰



A US survey of 178 patients hospitalized with COVID-19 across 14 states found that¹¹

- ~90% of patients had one or more underlying conditions, the most common being obesity, hypertension, chronic lung disease, diabetes mellitus, and cardiovascular disease
- Obesity was the most prevalent condition among patients aged <65 years with COVID-19



Patients with obesity are more likely to be admitted to acute and critical care¹²



A retrospective study of 3615 individuals (aged <60 years) who tested positive for COVID-19 at New York University Langone Health determined that, compared with individuals with BMI <30 kg/m², individuals with BMI ≥35 kg/m² were



2.2 times more likely to be admitted to acute care (*P*<0.0001)

3.6 times more likely to be admitted to critical care (*P*<0.0001)





Obesity is a chronic disease that presents a **significant cost** (\$) burden. The added risks of COVID-19 make weight management even more important

It is vital that appropriate weight-management treatments are covered for individuals who need them.

To learn more about obesity in the workplace, go to https://www.novonordiskworks.com/.

References: 1. QuickFacts: United States. United States Census Bureau website. https://www.census.gov/quickfacts/fact/table/US#viewtop. Accessed March 24, 2020. 2. Obesity and overweight. Centers for Disease Control and Prevention website. http://www.cdc.gov/nchs/fastats/ obesity-overweight.htm. Accessed August 27, 2020. 3. Ward ZJ, Bleich SN, Cradock AL, et al. Projected U.S. state-level prevalence of adult obesity and severe obesity. N Engl J Med. 2019;381(25):2440-2450. 4. Ryan DH, Ravussin E, Heymsfield S. COVID-19 and the patient with obesity—the editors speak out. Obesity. 2020;28(5):847. 5. COVID-19: People with certain medical conditions. Centers for Disease Control and Prevention website. https://www.cdc.gov/coronavirus/2019-ncov/need-extra precautions/people-with-medical-conditions.html. Updated August 14, 2020. Accessed August 27, 2020. 6. Varney S. America's obesity epidemic threatens effectiveness of any COVID vaccine. Kaiser Health News website. https://khn.org/news/americas-obesity-epidemic-threatens-effectiveness-of-any-covid-vaccine/. Published August 6, 2020. Accessed August 21, 2021. 7. Neidich SD, Green WD, Rebeles J, et al. Increased risk of influenza among vaccinated adults who are obese. Int J Obes (Lond). 2017; 41(9):1324-1330. 8. Painter SD, Ovsyannikova IG, Poland GA. The weight of obesity on the human immune response to vaccination. Vaccine. 2015;33(36):4422-4429. 9. Petrilli CM, Jones SA, Yang J, et al. Factors associated with hospital admission and critical illness among 5279 people with coronavirus disease 2019 in New York City: prospective cohort study. BMJ. 2020;369:m1966. 10. Richardson S, Hirsch JS, Narasimhan M, Crawford JM, McGinn T, Davidson KW; and the Northwell COVID-19 Research Consortium. Presenting characteristics, comorbidities, and outcomes among 5700 patients hospitalized with COVID-19 in the New York City area. JAMA. 2020;323(20):2052-2059. 11. Garg S, Kim L, Whitaker M, et al. Hospitalization rates and characteristics of patients hospitalized with laboratory-confirmed coronavirus disease 2019 — COVID-NET, 14 states, March 1-30, 2020. MMWR Morb Mortal Wkly Rep. 2020;69(15):458-464. 12. Lighter J. Phillips M, Hochman S, et al. Obesity in patients younger than 60 years is a risk factor for COVID-19 hospital admission [letter to the editor]. Clin Infect Dis. 2020;28;71(15):896-897.

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