The Dangers of COVID-19 Have Increased the Importance of Managing Obesity

Obesity is a highly prevalent, chronic disease

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

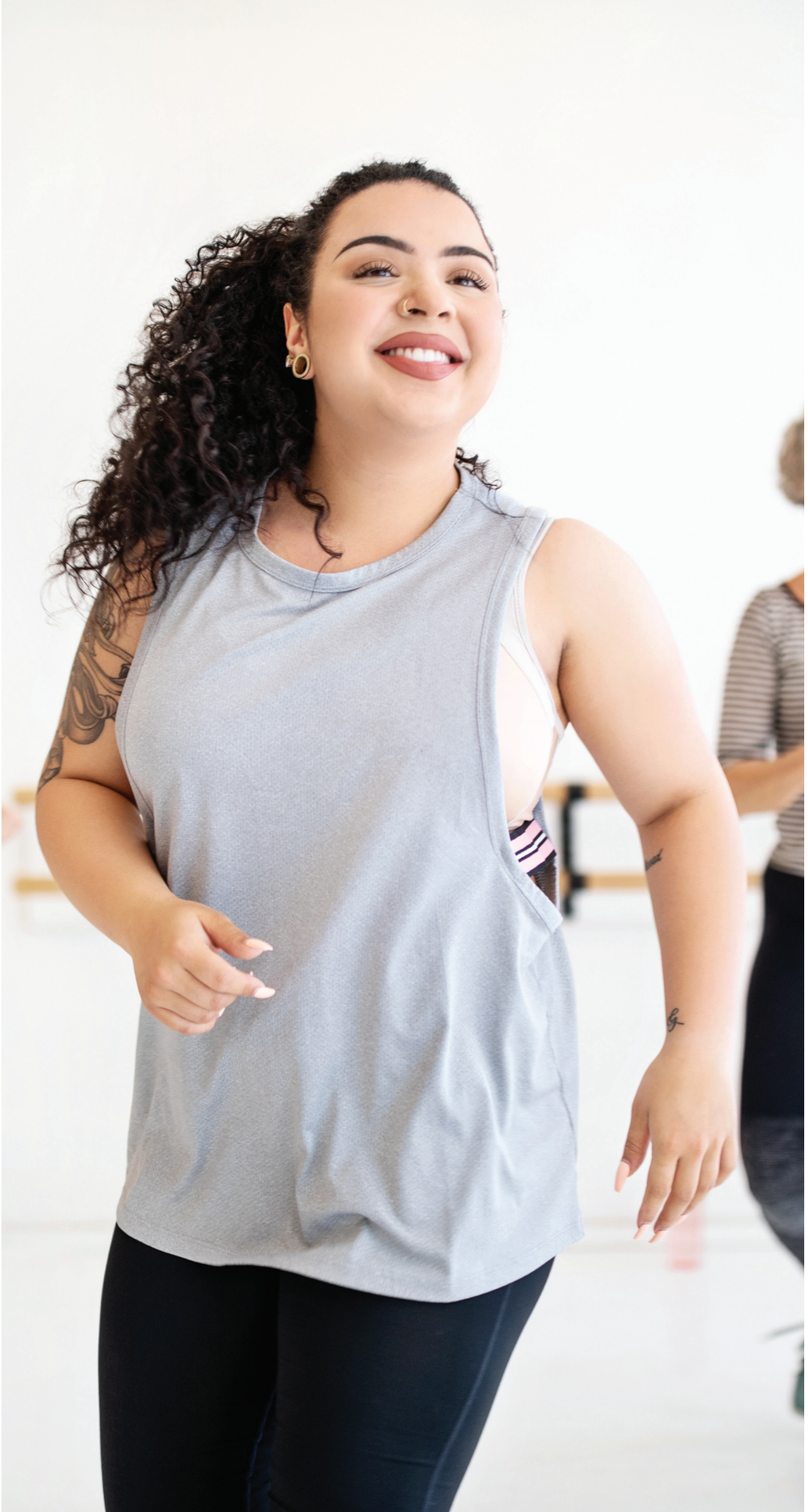
Did you know? People with obesity are at risk for severe symptoms of COVID-19

People with obesity are at a **higher risk of complications** from COVID-19 due to the increased risk of chronic diseases driven by obesity[4]

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 ≥30 kg/m^2), are at **increased risk for severe illness** from COVID-19[5]

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

[a]Adults aged ≥20 years.



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 obesity[6]

- 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"[6]

In a review published in the journal *Vaccine*, investigators from the Mayo Clinic's Vaccine Research Group issued the followed statement[8]:

> *"Obesity is a serious global problem, and the suboptimal vaccine-induced immune responses observed in the obese population cannot be ignored."*

novo nordisk®

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/m^2 was one of the **top 5 strongest factors associated** with hospitalization[9]

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 diabetes[10]

A US survey of 178 patients hospitalized with COVID-19 across 14 states found that[11]

- **~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 care[12]

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/m^2, individuals with BMI ≥35 kg/m^2 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)

novo nordisk®

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.