



COVID-19 Digest Issue 21

September 16, 2020

CLINICAL PEARL

- **Obesity and COVID-19:** Since the pandemic began, [several studies](#) have demonstrated that many of the sickest COVID-19 patients have been obese. Several studies that adjusted for age, sex, social class, diabetes, and heart conditions, showed that an **elevated body mass index (BMI) is a strong independent risk factor for severe COVID-19 illness**. The [largest descriptive study yet of hospitalized U.S. COVID-19 patients](#), found that **77% of nearly 17,000 patients hospitalized with COVID-19 were overweight (29%) or obese (48%)**. [Another study](#) captured the rate of COVID-19 hospitalizations among more than 334,000 people in England and showed that although the rate peaked in people with a BMI of 35 or greater, it began to rise it as soon as someone tipped into the overweight category.

In recent weeks, the link between obesity and severe COVID-19 illness has come into sharper focus as large new population studies have cemented the association. A [recently-published meta-analysis](#) pooled data from multiple peer-reviewed papers capturing 399,000 patients and showed that **patients with obesity who contracted SARS-CoV-2 were 113% more likely than people of healthy weight to be hospitalized, 74% more likely to be admitted to an ICU, and 48% more likely to die**.

A constellation of physiological and social factors drives those numbers. The biology of obesity includes **impaired immunity, chronic inflammation, and a propensity to develop thrombi**, all of which can worsen COVID-19. Additionally, because obesity is often stigmatized, people with obesity may avoid medical care. People with obesity are also more likely than normal-weight people to suffer from other diseases that are independent risk factors for severe COVID-19, including heart disease, lung disease, and diabetes. They are also prone to **metabolic syndrome**. [A recent study from Tulane University](#) of 287 hospitalized COVID-19 patients found that metabolic syndrome itself substantially increases the risks of ICU admission, ventilation, and death.

There is scant data on how to treat obese COVID-19 patients. Published evidence supports **giving obese patient patients higher doses of anticoagulants, but little is known about whether and how to adjust other treatments such as remdesivir and dexamethasone**, partly because patients with obesity are often excluded from clinical trials.

GUIDELINES/GUIDANCE

- [BinaxNOWTM COVID-19 Ag Card](#) FDA guidance

RESOURCES

- California Medical Association (CMA) - [Monthly COVID-19 Virtual Grand Rounds series](#)
- UCSF Medicine Grand Rounds - [Covid-19: Current State, Falling Mortality Rates, and "AeroNabs"](#) webinar
- Stanford Department of Medicine Grand Rounds - [The Status of COVID-19 Vaccines](#) webinar
- Stanford Medicine COVID-19 [SoundCloud podcasts](#)

ACADEMIC/RESEARCH PAPERS

- *Science*
 - [Why COVID-19 is more deadly in people with obesity—even if they're young](#)





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- *JAMA*
 - [Obesity and Hypertension in the Time of COVID-19](#)
- *Obesity Reviews*
 - [Individuals with obesity and COVID-19: A global perspective on the epidemiology and biological relationships](#)
- *JAMA Internal Medicine*
 - [Regardless of Age, Obesity and Hypertension Increase Risks With COVID-19](#)
 - [Clinical Outcomes in Young US Adults Hospitalized With COVID-19](#)
- *New England Journal of Medicine*
 - [Facial Masking for Covid-19 — Potential for “Variolation” as We Await a Vaccine](#)
 - [“When Will We Have a Vaccine?” — Understanding Questions and Answers about Covid-19 Vaccination](#)
 - [Humoral Immune Response to SARS-CoV-2 in Iceland](#)
 - [Saliva or Nasopharyngeal Swab Specimens for Detection of SARS-CoV-2](#)
- *Cochrane Database of Systematic Reviews*
 - [Rapid, point-of-care antigen and molecular-based tests for diagnosis of SARS-CoV-2 infection](#)
- *Journal of Infectious Diseases*
 - [A study of universal SARS-CoV-2 RNA testing of residents and staff in a large group of care homes in South London](#)
 - [Environmental and Aerosolized SARS-CoV-2 Among Hospitalized COVID-19 Patients](#)
- *Eurosurveillance*
 - [Transmission of SARS-CoV-2 in children aged 0 to 19 years in childcare facilities and schools after their reopening in May 2020, Baden-Württemberg, Germany](#)
- *medRxiv*
 - [The timing of COVID-19 transmission](#)
- *bioRxiv*
 - [Neuroinvasion of SARS-CoV-2 in human and mouse brain](#)
- *Journal of Medical Virology*
 - [Presenting characteristics, smoking versus diabetes and outcome among patients hospitalized with COVID-19](#)
- *PLOS Medicine*
 - [Comorbidities associated with mortality in 31,461 adults with COVID-19 in the United States: A federated electronic medical record analysis](#)
- *Nature*
 - [Coronavirus reinfections: three questions scientists are asking](#)
 - [The coronavirus is mutating — does it matter?](#)
- *Nature Medicine*
 - [Ad26 vaccine protects against SARS-CoV-2 severe clinical disease in hamsters](#)
- *Nature Immunology*
 - [Broad and strong memory CD4 + and CD8 + T cells induced by SARS-CoV-2 in UK convalescent individuals following COVID-19](#)
- *Nature Communications*
 - [An alpaca nanobody neutralizes SARS-CoV-2 by blocking receptor interaction](#)
 - [Both Boceprevir and GC376 efficaciously inhibit SARS-CoV-2 by targeting its main protease](#)





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- *Genome Research*
 - [Mapping genome variation of SARS-CoV-2 worldwide highlights the impact of COVID-19 super-spreaders](#)
- *BMJ*
 - [Temporal profile and determinants of viral shedding and of viral clearance confirmation on nasopharyngeal swabs from SARS-CoV-2-positive subjects: a population-based prospective cohort study in Reggio Emilia, Italy](#)
 - [Understanding the US failure on coronavirus—an essay by Drew Altman](#)
- *Annals of Internal Medicine*
 - [Salivary Detection of COVID-19](#)
 - [Prevalence of Asymptomatic SARS-CoV-2 Infection – A Narrative Review](#)
- *Cleveland Clinic Journal of Medicine*
 - [SARS-CoV-2 and myocardial injury: Few answers, many questions](#)
- *Journal of the American College of Cardiology*
 - [Anticoagulation, Mortality, Bleeding and Pathology Among Patients Hospitalized with COVID-19: A Single Health System Study](#)
- *European Heart Journal*
 - [COVID-19 is, in the end, an endothelial disease](#)
- *Radiology Society of North America*
 - [Efficacy of Chest CT for COVID-19 Pneumonia in France](#)
- *AIDS*
 - [Coronavirus disease 2019 attack rate in HIV-infected patients and in preexposure prophylaxis users](#)
- *Environmental Research Letters*
 - [Hazardous air pollutant exposure as a contributing factor to COVID-19 mortality in the United States](#)
- *Journal of Medical Internet Research*
 - [Excess Patient Visits for Cough and Pulmonary Disease at a Large US Health System in the Months Prior to the COVID-19 Pandemic: Time-Series Analysis](#)

MMWR

- [Prevalence of Underlying Medical Conditions Among Selected Essential Critical Infrastructure Workers — Behavioral Risk Factor Surveillance System, 31 States, 2017–2018](#)
- [Delay or Avoidance of Medical Care Because of COVID-19–Related Concerns — United States, June 2020](#)
- [Community and Close Contact Exposures Associated with COVID-19 Among Symptomatic Adults ≥18 Years in 11 Outpatient Health Care Facilities — United States, July 2020](#)
- [Transmission Dynamics of COVID-19 Outbreaks Associated with Child Care Facilities — Salt Lake City, Utah, April–July 2020](#)
- [SARS-CoV-2–Associated Deaths Among Persons Aged <21 Years — United States, February 12–July 31, 2020](#)

HOT OFF THE (LAY) PRESS

- *Lily Investors*
 - [Baricitinib in Combination with Remdesivir Reduces Time to Recovery in Hospitalized Patients with COVID-19 in NIAID-Sponsored ACTT-2 Trial](#)
- *JAMA Medical News and Perspectives*
 - [COVID-19 and mRNA Vaccines—First Large Test for a New Approach](#)





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- *STAT News*
 - [Pfizer and BioNTech announce plan to expand Covid-19 vaccine trial](#)
 - [AstraZeneca resumes Covid-19 vaccine trials in the U.K.](#)
- *The New York Times*
 - [AstraZeneca Partly Resumes Coronavirus Vaccine Trial After Halting It for Safety](#)
 - [Drugmaker Pauses Covid-19 Vaccine Trial for Safety Review](#)
 - [Nine drugmakers pledge to thoroughly vet any coronavirus vaccine](#)
 - [Pharma Companies Plan Joint Pledge on Vaccine Safety](#)
 - [Vaccine Makers Keep Safety Details Quiet, Alarming Scientists](#)
 - [A push for transparency in clinical trials](#)
 - [What if We Have to Wait Years for a Coronavirus Vaccine?](#)
 - [The Virus Is a Marathon](#)
 - [Fauci Warns Coronavirus Could Disrupt Life Well Into New Year](#)
 - [The Coronavirus Is Mutating, and That's Fine \(So Far\)](#)
 - [The Virus Moves Off Campus](#)
 - [Tracking Covid at U.S. Colleges and Universities](#)
 - [See How All 50 States Are Reopening \(and Closing Again\)](#)
 - [Monitoring the Coronavirus Outbreak in Metro Areas Across the U.S.](#)
 - [Covid World Map: Tracking the Global Outbreak](#)
 - [How the Aging Immune System Makes Older People Vulnerable to Covid-19](#)
 - [How the Coronavirus Attacks the Brain](#)
 - [Coronavirus Tests Are Supposed to Be Free. The Surprise Bills Come Anyway.](#)
 - [It's Not Easy to Get a Coronavirus Test for a Child](#)
 - [Is Your State Doing Enough Coronavirus Testing?](#)
- *Reuters*
 - [U.S. to send millions of rapid COVID-19 tests to states to support school reopening, other tasks](#)
- *StarTribune*
 - [Minnesota's broad COVID-19 testing under microscope](#)
- *Health Affairs*
 - [Screening To Prevent SARS-CoV-2 Outbreaks: Saliva-Based Antigen Testing Is Better Than The PCR Swab](#)
- *The Atlantic*
 - [America Is Trapped in a Pandemic Spiral](#)
 - [What Young, Healthy People Have to Fear From COVID-19](#)
- *ProPublica*
 - [New Research Shows Disproportionate Rate of Coronavirus Deaths in Polluted Areas](#)
- *Bloomberg*
 - [Covid Is Clobbering America's Farm Workers](#)
- *NPR/KQED*
 - [Farm Workers Face Double Threat: Wildfire Smoke And COVID-19](#)
 - [NPR Poll: Financial Pain From Coronavirus Pandemic 'Much, Much Worse' Than Expected](#)
 - [Pandemic Financially Imperils Nearly Half Of American Households, Poll Finds](#)
 - [Los Angeles County Issues Guidance Discouraging Trick Or Treating This Halloween](#)
 - [The Pandemic Has Researchers Worried About Teen Suicide](#)
 - [CSU Campuses to Keep Classes Online Next Term](#)
 - [Some Hospitals Fail To Set COVID-19 Patients Apart, Putting Others At Risk](#)





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- *The Wall Street Journal*
 - [Hospitals Failed to Fully Contain Covid-19 Inside Their Walls](#)
- *MDLinx*
 - [How risky is dining out right now? Here's the research](#)
- *UCLA Newsroom*
 - [Dashboard reveals COVID-19's impact on Californians' jobs, mental health](#)
- *Nature News*
 - [The lasting misery of coronavirus long-haulers](#)
- *WBUR*
 - ['They're Not Actually Getting Better,' Says Founder Of COVID-19 Long-Haulers Support Group](#)
- *Medpage Today*
 - [New Recovery Programs Target COVID Long-Haulers](#)
- *The Mercury News*
 - [Coronavirus: California has cut three key metrics by half or more](#)
- *San Francisco Chronicle*
 - [Latinos make up 71% of coronavirus cases in largely white Marin County. Will new equity efforts help?](#)
 - [Bay Area coronavirus cases drop significantly from peak of summer surge](#)
 - [Bay Area counties are poised to reopen again. Have they learned from past mistakes?](#)
 - [Here is the reopening status for Bay Area counties under California's color-coded coronavirus system](#)
 - [Here's how many coronavirus cases have been linked with Bay Area child care centers](#)
 - [Kids and teachers showed up for first Bay Area school reopening, but class was canceled](#)
 - [How Bay Area schools plan to conduct coronavirus testing for students and staff](#)

EPIDEMIOLOGY UPDATES

- **US Leads the World in Confirmed COVID-19 Cases** per [Johns Hopkins University Center for Systems Science and Engineering Dashboard Website](#)
- **Johns Hopkins COVID-19 in the USA** – daily summary of key data on COVID-19 in the U.S.
- **California COVID-19 by the numbers** are available on the [CDPH Website](#) and the [NYT Map and Table](#) (includes data by county)
 - **California COVID-19 Statewide Update as of September 16, 2020**
- [San Mateo County COVID-19 Dashboard](#)
- [Santa Clara County COVID-19 Dashboard](#)

ADDITIONAL COVID-19 RESOURCES

- [San Mateo County COVID-19 Guidance and Resources for Clinicians and Facilities – COVID-19 Digests](#)
- [Palo Alto Online tracking the coronavirus in San Mateo and Santa Clara counties](#)
- [California COVID-19 Data and Tools](#)
- [CDPH COVID-19 Assessment and Modeling Tool](#)
- [California Department of Corrections and Rehabilitations Population COVID-19 Tracking Dashboards](#)
- [COVID-19 Nursing Home Data](#)
- [CDC Interactive Serology Dashboard for Commercial Laboratory Surveys](#)
- [CDC COVID-19 Forecasts: Deaths](#)
- [HHS Coronavirus Data Hub](#)

