CLINICAL PEARL

- The identification of the novel coronavirus SARS-CoV-2 in December 2019 has led to a growing and evolving body of knowledge about the virus and the disease it causes, COVID-19. COVID-19 survivors, including individuals who initially experience a mild acute illness, often report persistent symptoms. While older patients may have an increased risk for severe disease, young survivors, including those physically fit prior to SARS-CoV-2 infection, have also reported persistent symptoms months after acute illness. The most commonly reported symptoms include fatigue, dyspnea, cough, arthralgia, and chest pain. Other reported symptoms include cognitive impairment, depression, myalgia, headache, fever, and palpitations. More serious complications appear to be less common but have been reported. These complications include myocardial inflammation, ventricular dysfunction, pulmonary function abnormalities, acute kidney injury, rash, alopecia, olfactory and gustatory dysfunction, sleep dysregulation, memory impairment and changes in mood.

Characterization of the etiology and pathophysiology of late sequelae is underway and may reflect organ damage from the acute infection phase, manifestations of a persistent hyperinflammatory state, ongoing viral activity associated with a host viral reservoir, or an inadequate antibody response. Factors in addition to acute disease that may further complicate the picture include physical deconditioning at baseline or after a long disease course, pre-COVID-19 comorbidities, and psychological sequelae following a long or difficult disease course as well as those relating to lifestyle changes due to the pandemic. Likely, the persistent sequelae of COVID-19 represent multiple syndromes resulting from distinct pathophysiological processes along the spectrum of disease.

Post-COVID-19 care centers are opening at academic medical centers in the United States, bringing together multidisciplinary teams to provide a comprehensive and coordinated treatment approach to COVID-19 aftercare. The National Institutes of Health have published interim guidelines for the medical management of COVID-19, including a section on persistent symptoms or illnesses after recovery from acute COVID-19. Multi-year studies will be crucial in elucidating longer-term sequelae. CDC continues active investigation into the full spectrum of COVID-19 to establish a more complete understanding of the natural history of SARS-CoV-2 infection and COVID-19 related illnesses, which will inform care strategies as well as the public health response to this virus.

GUIDANCE/GUIDELINES

- San Mateo County Health: Safety Recommendations For Holiday Travel - Best to avoid traveling and Recommendations For Staying Safe From COVID-19 During The Holidays – How to Gather Safely
- California Department of Public Health (CDPH): Guidance for the Prevention of COVID-19 Transmission for Gatherings and Travel Advisory to all Californians
- CDC: Celebrating Thanksgiving and Holiday Celebrations and Small Gatherings
- State of California Issues Limited Stay at Home Order to Slow Spread of COVID-19 requiring that all non-essential work and activities stop between 10 PM - 5 AM in counties in the purple tier. The order took effect on November 21 and will remain in effect until December 21, 2020.
  - California’s Limited Stay at Home Order Q&A
- California, Oregon & Washington Issue Travel Advisories recommending 14-day quarantines for inter-state and international travel and asking residents to stay local
- CDPH: Guidance for the Use of Face Coverings (updated)
- Infectious Diseases Society of America: Guidelines on the Treatment and Management of Patients with COVID-19, with revisions to the sections on lopinavir/ritonavir, tocilizumab, and remdesivir and a new recommendation on the use of bamlanivimab.
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PUBLIC HEALTH UPDATES

- American Hospital Association, American Medical Association, and American Nurses Association: open letter urging the public to scale back holiday gatherings to stop further COVID-19 spread
- CDC: COVID-19 and Cruise Ship Travel - updated page to reflect the very high level of COVID-19 risk on cruise ships (level 4).
- FDA:
  - FDA Authorizes Monoclonal Antibodies for Treatment of COVID-19
  - FDA’s Ongoing Commitment to Transparency for COVID-19 EUAs
  - EUA to permit the emergency use of baricitinib, in combination with remdesivir, for treatment of suspected or laboratory confirmed COVID-19
  - Emergency use authorization (EUA) for the first COVID-19 diagnostic test for self-testing at home
    - Lucira COVID-19 All-In-One Test Kit FAQ.

RESOURCES

- State of California Race and Ethnicity Data
- MultiState COVID-19 State and Local Policy Dashboard
- University of Washington Institute of Health Metrics and Evaluation COVID-19 Projections
- NIH Clinical Trials
  - National Institutes of Health, National Institute of Allergy and Infectious Diseases
    - A longitudinal study of COVID-19 sequelae and immunity
  - University of California, San Francisco
    - Long-term impact of infection with novel coronavirus (COVID-19) (LIINC)
- CDC MMWR Weekly COVID-19 Briefing Podcasts
- California Medical Association Virtual Grand Rounds (all recorded webinar videos)
  - Virtual Grand Rounds: COVID-19 Vaccine Update
- UCSF Medicine Grand Rounds COVID-19: Update on Vaccines and Therapeutics
- Johns Hopkins University webinar COVID-19 in the USA
- University of Nebraska Medical Center and Practice Point Communications COVID-19 and HIV: Clinical Trends and Management Considerations
- Federal Facilities Council Webinar: Heating, Ventilation, and Air Conditioning Strategies in Response to COVID-19
- Georgia Institute of Technology, Applied Bioinformatics Laboratory and Stanford University COVID-19 Event Risk Assessment Planning Tool
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ACADEMIC/RESEARCH PAPERS

- **JAMA**
  - The Challenges Ahead With Monoclonal Antibodies - From Authorization to Access
  - Delirium in Older Patients With COVID-19 Presenting to the Emergency Department
  - Older Adults and the Mental Health Effects of COVID-19
  - Diagnosis, Management, and Pathophysiology of Arterial and Venous Thrombosis in COVID-19
  - Assessment of 135 794 Pediatric Patients Tested for Severe Acute Respiratory Syndrome Coronavirus 2 Across the United States
  - Outcomes for Out-of-Hospital Cardiac Arrest in the United States During the Coronavirus Disease 2019 Pandemic
  - Outcomes of Contact Tracing in San Francisco, California—Test and Trace During Shelter-in-Place

- **medRxiv**
  - Performance characteristics of a rapid SARS-CoV-2 antigen detection assay at a public plaza testing site in San Francisco
  - SARS-CoV-2 antibody responses in children with MIS-C and mild and severe COVID-19
  - Causal Impacts of Teaching Modality on U.S. COVID-19 Spread in Fall 2020 Semester

- **Journal of Adolescent Health**
  - Evaluation of COVID-19 Testing Strategies for Repopulating College and University Campuses: A Decision Tree Analysis

- **Cell**
  - Case Study: Prolonged Infectious SARS-CoV-2 Shedding from an Asymptomatic Immunocompromised Individual with Cancer

- **Science Advances**
  - Test sensitivity is secondary to frequency and turnaround time for COVID-19 screening

- **Annals of Internal Medicine**
  - Effectiveness of Adding a Mask Recommendation to Other Public Health Measures to Prevent SARS-CoV-2 Infection in Danish Mask Wearers - A Randomized Controlled Trial

- **Nature**
  - Neighbourhood income and physical distancing during the COVID-19 pandemic in the United States
  - What the data say about asymptomatic COVID infections

- **PLOS**
  - Proportion of asymptomatic infection among COVID-19 positive persons and their transmission potential: A systematic review and meta-analysis
  - On the whereabouts of SARS-CoV-2 in the human body: A systematic review

- **Emerging Infectious Diseases**
  - COVID-19 Infection Control Measures in Long-Term Care Facility, Pennsylvania, USA
  - Sensitive Detection of SARS-CoV-2–Specific Antibodies in Dried Blood Spot Samples
  - Antibody Profiles According to Mild or Severe SARS-CoV-2 Infection, Atlanta, Georgia, USA, 2020
  - Serologic Responses in Healthy Adult with SARS-CoV-2 Reinfection, Hong Kong, August 2020
  - SARS-CoV-2 in Quarantined Domestic Cats from COVID-19 Households or Close Contacts, Hong Kong, China
  - SARS-CoV-2 Natural Transmission from Human to Cat, Belgium, March 2020
  - Effects of Cocooning on Coronavirus Disease Rates after Relaxing Social Distancing

- **Clinical Infectious Diseases**
  - COVID-19 seropositivity and asymptomatic rates in healthcare workers are associated with job function and masking
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- **The Lancet**
  - Safety and immunogenicity of ChAdOx1 nCoV-19 vaccine administered in a prime-boost regimen in young and old adults (COV002): a single-blind, randomised, controlled, phase 2/3 trial
  - SARS-CoV-2, SARS-CoV, and MERS-CoV viral load dynamics, duration of viral shedding, and infectiousness: a systematic review and meta-analysis

- **bioRxiv**
  - Intranasal fusion inhibitory lipopeptide prevents direct contact SARS-CoV-2 transmission in ferrets
  - Immunological memory to SARS-CoV-2 assessed for greater than six months after infection
  - Evolution of Antibody Immunity to SARS-CoV-2

- **Neurology**
  - A Prospective Study of Neurologic Disorders in Hospitalized COVID-19 Patients in New York City

- **American Journal of Neuroradiology**
  - Brain MR Spectroscopic Findings in 3 Consecutive Patients with COVID-19: Preliminary Observations

- **Diseases**
  - Incidence of Myocardial Injury in COVID-19-Infected Patients: A Systematic Review and Meta-Analysis

- **American Heart Association Journal**
  - Racial and Ethnic Differences in Presentation and Outcomes for Patients Hospitalized with COVID-19: Findings from the American Heart Association’s COVID-19 Cardiovascular Disease Registry

- **Annals of the American Thoracic Society**
  - Comparison of Clinical Features and Outcomes in Critically Ill Patients Hospitalized with COVID-19 versus Influenza

- **Clinical Journal of the American Society of Nephrology**
  - Acute Kidney Injury in a National Cohort of Hospitalized US Veterans with COVID-19

- **BMJ Journal**
  - A living WHO guideline on drugs for covid-19

- **American Journal of Microbiology**
  - Analysis of Measles-Mumps-Rubella (MMR) Titers of Recovered COVID-19 Patients

- **International Journal of Indoor Environment and Health**
  - Indoor transmission of SARS-CoV-2

- **MMWR**
  - The Advisory Committee on Immunization Practices’ Ethical Principles for Allocating Initial Supplies of COVID-19 Vaccine — United States, 2020
  - COVID-19 Outbreak Associated with a 10-Day Motorcycle Rally in a Neighboring State — Minnesota, August–September 2020
  - Trends in County-Level COVID-19 Incidence in Counties With and Without a Mask Mandate — Kansas, June 1–August 23, 2020
  - Characterization of COVID-19 in Assisted Living Facilities — 39 States, October 2020
  - COVID-19 Outbreak — New York City, February 29–June 1, 2020
  - COVID-19 Incidence, by Urban-Rural Classification — United States, January 22–October 31, 2020
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HOT OFF THE (LAY) PRESS

• The New York Times
  - The C.D.C. urged Americans not to travel for Thanksgiving and to consider canceling plans with relatives outside their households.
  - Despite officials’ warnings and pleas, travel over Thanksgiving is expected to hit a pandemic peak.
  - No, a Negative Coronavirus Test Does Not Mean You Can Safely Socialize
  - A quarter of a million Americans have died from the coronavirus, passing the number Dr. Anthony Fauci predicted in March, with no sure end in sight.
  - U.S. records 12 millionth case as virus surge gathers speed
  - 1 America, 1 Pandemic, 2 Realities
  - Virus Words vs. Actions
  - Small Gatherings Spread the Virus, but Are They Causing the Surge?
  - States That Imposed Few Restrictions Now Have the Worst Outbreaks
  - Virus Cases Rise, but Hazard Pay for Retail Workers Doesn’t
  - Recession With a Difference: Women Face Special Burden
  - Immunity to the Coronavirus May Last Years, New Data Hint
  - New Pfizer Results: Coronavirus Vaccine Is Safe and 95% Effective
  - Pfizer completed its coronavirus vaccine trial. It says the shots are 95 percent effective, have no serious side effects and work for older people.
  - Pfizer has asked the F.D.A. to authorize its vaccine for emergency use, potentially allowing the first Americans to get a vaccine by mid-December.
  - What We Know About AstraZeneca’s Head-Scratching Vaccine Results
  - Here’s how the U.S. government plans to distribute the first Covid-19 vaccines
  - A C.D.C. advisory group discussed which Americans should get vaccines first
  - States Vow Extra Scrutiny of Coronavirus Vaccine
  - Debatable: A shot at ending the pandemic
  - The Vaccines Will Probably Work. Making Them Fast Will Be the Hard Part.
  - Children in the U.S. may miss 9 million vaccine doses this year, a report warns
  - New York City’s school system, the nation’s largest, will close as virus cases rise. It’s a big setback to the city’s recovery.
  - Debatable: This is not going to stop the virus. Should kids have class in bars?
  - Coronavirus Briefing: France bends the curve
  - Coronavirus Briefing: Health care workers are begging: “Wear. A. Mask”
  - Coronavirus Briefing: We talk to Dr. Fauci
  - California Today: What to Know About the California Curfew
  - The F.D.A. granted emergency authorization for the Regeneron antibody treatment given to President Trump after he was diagnosed with Covid-19.
  - F.D.A. authorizes the first at-home coronavirus test.

• Lucira Health Press Release
  - Lucira Health Receives 1st FDA Authorization for COVID-19 Self-Testing At Home

• NPR/KQED
  - FDA Approves 1st At-Home Coronavirus Test
  - Americans Could See A Vaccine By Mid-December, Says Operation Warp Speed Adviser
  - Why Does Pfizer’s COVID-19 Vaccine Need To Be Kept Colder Than Antarctica?
  - Millions Of Americans Traveling For Thanksgiving, Ignoring CDC Advice
  - As U.S. Reaches 250,000 Deaths From COVID-19, A Long Winter Is Coming
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- **1,000 U.S. Hospitals Are ‘Critically’ Short On Staff — And More Expect To Be Soon**
- **COVID-19 Denial Still Rampant In Some Virus Hot Spots**
- **Tyson Managers Suspended After Allegedly Betting If Workers Would Contract COVID**
- **Mask Mandates Work To Slow Spread Of Coronavirus, Kansas Study Finds**
- **Don’t Call It a Curfew: California's New, Less Restrictive Stay-at-Home Order Still Draws Backlash**
- **This Map Shows the COVID-19 Risk for Gatherings in Each California County**

**The Washington Post**

- **Map: The coronavirus risk for a big Thanksgiving dinner in your community**
- **More than 3 million people in U.S. estimated to be contagious with the coronavirus**
- **A birthday lunch left 15 Texas relatives battling covid-19: ‘Please don’t be like my family’**
- **A traveler tested negative for covid-19 before a flight. He had the virus and infected 4 passengers.**
- **A covid-fighting tool is buried in your phone. Turn it on.**
- **These 3 tools can help you navigate quarantine and testing policies by state**

**Kaiser Family Foundation**

- **States Are Getting Ready to Distribute COVID-19 Vaccines. What Do Their Plans Tell Us So Far?**

**Politico**

- **Inoculations by December? States aren’t so sure.**

**STAT News**

- **AstraZeneca Covid-19 vaccine is 70% effective on average, early data show**

**The Los Angeles Times**

- **AstraZeneca, Oxford University say their COVID-19 vaccine is up to 90% effective**
- **Daily California coronavirus cases triple as pandemic dramatically worsens**
- **New stay-home order looms for L.A. County as COVID-19 cases soar to new highs**
- **Will California’s small businesses survive another COVID-19 surge without more help?**
- **Hospitals brace for holiday COVID surge, fearing staff shortages and burnout**

**Science Magazine**

- **Can a nose-full of chicken antibodies ward off coronavirus infections?**
- **More people are getting COVID-19 twice, suggesting immunity wanes quickly in some**

**Medpage Today**

- **COVID’s Heart Complications Modest in Large Registry**

**Medscape**

- **Phase 3 Trial Begins of COVID-19 Antibody Treatment for Immune Suppressed People**
- **Hypertension, Diabetes Increase Risk of COVID-19 Neurological Complications**

**PBS**

- **As COVID deaths soar, nursing home deaths caused by neglect surge in the shadows**

**Reuters**

- **U.S. government to send out over 7 million Abbott BinaxNOW tests this week**
- **Roche's Actemra helps the sickest COVID-19 patients, study shows**
- **Eli Lilly arthritis drug gets FDA nod for emergency use with remdesivir to treat COVID-19**
- **Modernar vaccine storage requirements enables distribution in rural America: U.S. official**
- **FDA to make emergency use authorization data public for COVID-19 vaccines**
- **U.S. hospitals to restrict Lilly COVID-19 antibody treatment due to limited supply**

**CNBC**

- **HHS launches pilot program in five states using rapid Covid test deployed by NBA**
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- **The Atlantic**
  - [Hospitals Can’t Go On Like This - Twenty-two percent of American hospitals don’t have enough workers right now.](https://www.theatlantic.com/health/archive/2020/11/what-hospitals-are-fighting-right-now/616097/)
  - [The End of the Pandemic Is Now In Sight](https://www.theatlantic.com/health/archive/2020/10/the-end-of-the-pandemic-is-now-in-sight/599745/)

- **Twin Cities Pioneer Press**
  - [900 on Mayo Clinic staff have contracted coronavirus in last two weeks](https://www.startribune.com/900-on-mayo-clinic-staff-have-contracted-coronavirus-in-last-two-weeks/590888745/)

- **The Hill**

- **Health Affairs**

- **AP News**
  - [Empty desks: Coronavirus robs US classrooms of teachers](https://www.apnews.com/article/6f50f5da51a379a52f00fefd032032fa)
  - [Cal/Osha fines Farmer John for hundreds of COVID-19 cases](https://www.apnews.com/article/7b90e259040b700203002545b4b9a349)

- **CapRadio**
  - ['We Are At The Breaking Point:' California’s Childcare Providers Sound The Alarm](https://capradio.org/articles/557669251)
  - [Filipino Population Is High-Risk For COVID-19, But Very Little Data On The Community's Outcomes Exist](https://capradio.org/articles/557669251)
  - [California Hospitals Applying Early Lessons As They Brace For A COVID-19 Surge](https://capradio.org/articles/557669251)

- **San Francisco Chronicle**
  - [Health officials’ plea: Cancel the Thanksgiving spread and stay home](https://www.sfchronicle.com/health/article/Health-officials-plea-cancel-the-Thanksgiving-14497963.php)
  - [At SFO, travelers take coronavirus risk in stride during Thanksgiving rush](https://www.sfchronicle.com/health/article/At-SFO-travelers-take-coronavirus-risk-in-stride-14497963.php)
  - [California case counts surge, prompting state and Bay Area officials to tighten coronavirus protocols](https://www.sfchronicle.com/health/article/California-case-counts-surge-prompting-state-and-Bay-14497963.php)
  - [California overnight curfew: What's allowed, and which Bay Area counties are affected](https://www.sfchronicle.com/health/article/California-overnight-curfew-What-s-allowed-and-which-Bay-14497963.php)
  - [California nursing homes see surge in coronavirus cases amid statewide spike](https://www.sfchronicle.com/health/article/California-nursing-homes-see-surge-in-coronavirus-14497963.php)
  - [Charts show how Bay Area’s current coronavirus surge is already worse than the last one](https://www.sfchronicle.com/health/article/Charts-show-how-Bay-Area-s-current-coronavirus-14497963.php)
  - [In California, science guides whether to reopen hair salons — but not always schools](https://www.sfchronicle.com/health/article/In-California-science-guides-whether-to-reopen-14497963.php)
  - [Bay Area’s soaring coronavirus cases could ‘overwhelm our local health care system,’ experts warn](https://www.sfchronicle.com/health/article/Bay-Area-s-soaring-coronavirus-cases-could-overwhelm-14497963.php)
  - [The third wave of coronavirus is washing over the Bay Area. How will we weather the storm?](https://www.sfchronicle.com/health/article/The-third-wave-of-coronavirus-is-washing-over-the-14497963.php)
  - [With move to red and purple tiers, Bay Area businesses brace for more coronavirus pain](https://www.sfchronicle.com/health/article/With-move-to-red-and-purple-tiers-Bay-Area-businesses-14497963.php)
  - [Bay Area sees racial shift in coronavirus: Positive tests down for Latinos, up for whites](https://www.sfchronicle.com/health/article/Bay-Area-sees-racial-shift-in-coronavirus-Positive-14497963.php)
  - [Face mask rules for the Bay Area: When and how to use them](https://www.sfchronicle.com/health/article/Face-mask-rules-for-the-Bay-Area-When-and-how-to-14497963.php)
  - [First rain of season unveils a new pollution problem: masks and gloves — pandemic PPE](https://www.sfchronicle.com/health/article/First-rain-of-season-unveils-a-new-pollution-problem-14497963.php)

**Epidemiology Updates**

- **US Leads the World in Confirmed COVID-19 Cases** per [Johns Hopkins University Center for Systems Science and Engineering Dashboard Website](https://www.jhu.edu/coronavirus/

- **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](https://www.cdph.ca.gov/Programs/SOPS/COVID19/COVID19Dashboard.htm) and the [NYT Map and Table](https://www.nytimes.com/interactive/2020/11/07/health/coronavirus-maps.html) (includes data by county)
  - [California COVID-19 Statewide Update](https://www.cdph.ca.gov/Programs/SOPS/COVID19/COVID19Dashboard.htm) as of November 25, 2020

- **San Mateo County COVID-19 Dashboard**

- **Santa Clara County COVID-19 Dashboard**
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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