

January 28, 2021

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CLINICAL PEARLS

• According to the CDC's recently updated Interim Clinical Considerations for Use of mRNA COVID-19 Vaccines Currently Authorized in the United States, an individual should not be scheduled to receive the second dose earlier than recommended (i.e., 3 weeks after the 1st dose with the Pfizer-BioNTech vaccine and 4 weeks after the 1st dose with the Moderna vaccine). However, second doses administered within a grace period of 4 days earlier than the recommended date for the second dose are still considered valid. Doses inadvertently administered earlier than the grace period should not be repeated. The second dose should be administered as close to the recommended interval as possible. However, if it is not feasible to adhere to the recommended interval, the second dose of Pfizer-BioNTech and Moderna COVID-19 vaccines may be scheduled for administration up to 6 weeks (42 days) after the first dose. There are currently limited data on the efficacy of mRNA COVID-19 vaccines administered beyond this window. However, if the second dose is administered beyond these intervals, there is no need to restart the series.

Either of the currently authorized mRNA COVID-19 vaccines can be used when indicated; ACIP does not state a product preference. However, these mRNA COVID-19 vaccines are not interchangeable with each other or with other COVID-19 vaccine products. The safety and efficacy of a mixed-product series have not been evaluated. Both doses of the series should be completed with the same product. Every effort should be made to determine which vaccine product was received as the first dose, in order to ensure completion of the vaccine series with the same product. In exceptional situations in which the first-dose vaccine product cannot be determined or is no longer available, any available mRNA COVID-19 vaccine may be administered at a minimum interval of 28 days between doses to complete the mRNA COVID-19 vaccination series. If two doses of different mRNA COVID-19 vaccine products are administered in these situations (or inadvertently), no additional doses of either product are recommended at this time.

Infrequently, persons who have received **dermal fillers** may develop swelling at or near the site of filler injection (usually face or lips) following administration of a dose of an mRNA COVID-19 vaccine. This appears to be temporary and can resolve with medical treatment, including corticosteroid therapy. mRNA COVID-19 vaccines may be administered to persons who have received injectable dermal fillers and who have no contraindications to vaccination. No additional precautions are needed. However, these persons should be advised to contact their healthcare provider for evaluation if they develop swelling at or near the site of dermal filler following COVID-19 vaccination.

PUBLIC HEALTH UPDATES

- California Department of Public Health:
 - o Public Health Officials Lift Regional Stay at Home Order for All Regions
 - California State Epidemiologist Issues Update on Moderna COVID-19 Vaccine
- The White House: <u>National Strategy for the COVID-19 Response and Pandemic Preparedness</u>
- USDA: Cases of SARS-CoV-2 in Animals in the United States

GUIDANCE/GUIDELINE

CDC: Updated <u>Interim Clinical Considerations for Use of mRNA COVID-19 Vaccines Currently Authorized in the United States</u>





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RESOURCES

- ACIP Presentation Slides: January 27, 2021 Meeting
- IDSA COVID-19 podcast COVID-19 Diagnostic Guidelines Updates January 16, 2021
- CDC/IDSA COVID-19 Clinician Call
 - o Long COVID (with extended time for a Vaccine Q&A)
 - o Ask the Expert: Vaccine Q&A with CDC
- JAMA Network podcasts
 - o <u>Coronavirus Update With CDC Director Rochelle Walensky</u>
 - o Coronavirus Vaccine Update With Paul Offit and Robert Wachter
 - o COVID-19 Vaccine Safety-Anaphylaxis and Allergic Reactions

ACADEMIC/RESEARCH PAPERS

- JCI Insight
 - o Circulating mitochondrial DNA is an early indicator of severe illness and mortality from COVID-19
- bioRxiv
 - o SARS-CoV-2 501Y.V2 escapes neutralization by South African COVID-19 donor plasma
 - o mRNA vaccine-elicited antibodies to SARS-CoV-2 and circulating variants
 - o Neutralization of SARS-CoV-2 lineage B.1.1.7 pseudovirus by BNT162b2 vaccine-elicited human sera
 - o <u>mRNA-1273 vaccine induces neutralizing antibodies against spike mutants from global SARS-CoV-2</u> variants
- Science
 - o Plitidepsin has potent preclinical efficacy against SARS-CoV-2 by targeting the host protein eEF1A
 - o Transmission heterogeneities, kinetics, and controllability of SARS-CoV-2
- New England Journal of Medicine
 - o SARS-CoV-2 Neutralizing Antibody LY-CoV555 in Outpatients with Covid-19
- Cell Stem Cell
 - ApoE-Isoform-Dependent SARS-CoV-2 Neurotropism and Cellular Response
- Stem Cells Translation Medicine
 - o <u>Umbilical cord mesenchymal stem cells for COVID-19 acute respiratory distress syndrome: A double-blind, phase 1/2a, randomized controlled trial</u>
- Cellular and Molecular Life Sciences
 - o <u>Ultrastructural modifications induced by SARS-CoV-2 in Vero cells: a kinetic analysis of viral factory formation, viral particle morphogenesis and virion release</u>
- Immunity, Inflammation and Disease
 - o <u>Disease-duration based comparison of subsets of immune cells in SARS CoV-2 infected patients</u> presenting with mild or severe symptoms identifies prognostic markers for severity
- Nature
 - o <u>SARS-CoV-2</u> spike glycoprotein vaccine candidate <u>NVX-CoV2373</u> immunogenicity in baboons and protection in mice
 - o SARS-CoV-2 induces robust germinal center CD4 T follicular helper cell responses in rhesus macaques
 - o Bidirectional contact tracing could dramatically improve COVID-19 control
 - o Global absence and targeting of protective immune states in severe COVID-19
 - o <u>Loss of furin cleavage site attenuates SARS-CoV-2 pathogenesis</u>



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 A COVID-19 vaccine candidate using SpyCatcher multimerization of the SARS-CoV-2 spike protein receptor-binding domain induces potent neutralising antibody responses

BMJ

o <u>Effect of tocilizumab on clinical outcomes at 15 days in patients with severe or critical coronavirus</u> disease 2019: randomised controlled trial

UK NHS

o <u>Interim Position Statement: Interleukin-6 inhibitors (tocilizumab or sarilumab) for patients admitted</u> to ICU with COVID-19 pneumonia (adults)

JAMA

- o Neutralizing Monoclonal Antibody for Mild to Moderate COVID-19
- o <u>Effect of Bamlanivimab as Monotherapy or in Combination With Etesevimab on Viral Load in Patients</u> With Mild to Moderate COVID-19 – A Randomized Clinical Trial
- Allergic Reactions Including Anaphylaxis After Receipt of the First Dose of Pfizer-BioNTech COVID-19
 Vaccine
- o Presence of SARS-CoV-2 RNA in the Cornea of Viremic Patients With COVID-19
- o Prevalence of SARS-CoV-2 Infection in Children and Their Parents in Southwest Germany
- o <u>Association of Social and Economic Inequality With Coronavirus Disease 2019 Incidence and Mortality</u> Across US Counties
- o <u>Association of Intensive Care Unit Patient Load and Demand With Mortality Rates in US Department of Veterans Affairs Hospitals During the COVID-19 Pandemic</u>

Journal of Internal Medicine

Assessment of Thirty-Day Readmission Rate, Timing, Causes, and Predictors after Hospitalization with COVID-19

• Annals of Internal Medicine

- o <u>Characteristics, Outcomes, and Trends of Patients With COVID-19–Related Critical Illness at a Learning</u> Health System in the United States
- o SARS-CoV-2 Vaccines: Much Accomplished, Much to Learn
- o Attitudes Toward a Potential SARS-CoV-2 Vaccine A Survey of U.S. Adults

• Clinical Infectious Diseases

- o <u>Evaluation of SARS-CoV-2 transmission mitigation strategies on a university campus using an agent-</u>based network model
- JMIR Public Health Surveillance
 - o SARS-CoV-2 Testing Service Preferences of Adults in the United States: Discrete Choice Experiment
- Open Forum Infectious Diseases
 - o <u>Pre-Procedural SARS-CoV-2 Testing to Sustain Medically-Needed Healthcare Delivery During the</u> COVID-19 Pandemic: A Prospective, Observational Study
- American Journal of Obstetrics and Gynecology
 - o SARS-CoV-2 serology levels in pregnant women and their neonates
- The Lancet
 - Long COVID in the skin: a registry analysis of COVID-19 dermatological duration
 - o Mask-wearing and control of SARS-CoV-2 transmission in the USA: a cross-sectional study
 - o First detection of SARS-CoV-2 spike protein N501 mutation in Italy in August, 2020
- medRxiv
 - o Modeling the effectiveness of olfactory testing to limit SARS-2-CoV transmission
 - Saliva viral load is a dynamic unifying correlate of COVID-19 severity and mortality





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- o <u>Interleukin-6 Receptor Antagonists in Critically III Patients with Covid-19 Preliminary report</u>
- o <u>REACT-1 round 8 interim report: SARS-CoV-2 prevalence during the initial stages of the third national lockdown in England</u>
- Emerging Infectious Diseases
 - o <u>Prevalence of SARS-CoV-2 Antibodies in First Responders and Public Safety Personnel, New York City,</u> New York, USA, May–July 2020
 - o <u>Symptom Profiles and Progression in Hospitalized and Nonhospitalized Patients with Coronavirus</u> Disease, Colorado, USA, 2020
 - Characteristics and Timing of Initial Virus Shedding in Severe Acute Respiratory Syndrome Coronavirus
 Utah, USA
 - o <u>Rapid Transmission of Severe Acute Respiratory Syndrome Coronavirus 2 in Detention Facility,</u> Louisiana, USA, May–June, 2020
 - o SARS-CoV-2 Infections among Recent Organ Recipients, March–May 2020, United States
 - COVID-19 Infection Control Measures in Long-Term Care Facility, Pennsylvania, USA
 - o SARS-CoV-2 Infection and Mitigation Efforts among Office Workers, Washington, DC, USA
 - o <u>Childcare Exposure to Severe Acute Respiratory Syndrome Coronavirus 2 for 4-Year-Old Presymptomatic Child, South Korea</u>
 - o COVID-19 and Infant Hospitalizations for Seasonal Respiratory Virus Infections, New Zealand, 2020
 - o <u>Excess Deaths during Influenza and Coronavirus Disease and Infection-Fatality Rate for Severe Acute</u> <u>Respiratory Syndrome Coronavirus 2, the Netherlands</u>
 - o COVID-19 and Fatal Sepsis Caused by Hypervirulent Klebsiella pneumoniae, Japan, 2020
 - o Prevalence of SARS-CoV-2—Specific Antibodies, Japan, June 2020
 - o <u>Strand-Specific Reverse Transcription PCR for Detection of Replicating SARS-CoV-2</u>
 - o Early Transmission Dynamics, Spread, and Genomic Characterization of SARS-CoV-2 in Panama
 - Intrauterine Transmission of SARS-CoV-2
 - o Evidence of SARS-CoV-2 RNA in an Oropharyngeal Swab Specimen, Milan, Italy, Early December 2019
 - Universal Admission Screening for SARS-CoV-2 Infections among Hospitalized Patients, Switzerland,
 2020
 - o <u>Effects of Social Distancing Measures during the First Epidemic Wave of Severe Acute Respiratory</u> Syndrome Infection, Greece
 - o Severe Acute Respiratory Syndrome Coronavirus 2 Outbreak Related to a Nightclub, Germany, 2020
 - o SARS-CoV-2 Transmission between Mink (Neovison vison) and Humans, Denmark
 - o Protective Immunity and Persistent Lung Sequelae in Domestic Cats after SARS-CoV-2 Infection
 - o Local Transmission of SARS-CoV-2 Lineage B.1.1.7, Brazil, December 2020
- PNAS
 - o Reductions in 2020 US life expectancy due to COVID-19 and the disproportionate impact on the Black and Latino populations
- American Journal of Public Health
 - o COVID-19 Among African Americans: An Action Plan for Mitigating Disparities
- Clinical Microbiology and Infection
 - o Antibiotic prescribing in patients with COVID-19: rapid review and meta-analysis

MMWR

 Allergic Reactions Including Anaphylaxis After Receipt of the First Dose of Moderna COVID-19 Vaccine — United States, December 21, 2020—January 10, 2021





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- Implementation and Evolution of Mitigation Measures, Testing, and Contact Tracing in the National Football League, August 9–November 21, 2020
- <u>COVID-19 Case Investigation and Contact Tracing Efforts from Health Departments United States, June 25—</u> July 24, 2020
- <u>COVID-19 Cases and Transmission in 17 K–12 Schools Wood County, Wisconsin, August 31–November 29, 2020</u>

HOT OFF THE (LAY) PRESS

- The Washington Post
 - o CDC says 2nd coronavirus vaccine shot may be scheduled up to 6 weeks later
- AP News
 - o States report vaccine shortages and cancel appointments
 - o Biden to reinstate COVID-19 travel rules, add South Africa
 - o Panel: China, WHO should have acted quicker to stop pandemic
- New York Times
 - o Covid-19 Live Updates: First Case of Brazil-Based Virus Variant Found in U.S.
 - o Biden Unveils a National Pandemic Response That Trump Resisted
 - o <u>President Biden signed executive orders aimed at combating Covid-19, including quarantine rules for</u> international travelers and new mask mandates.
 - o <u>Biden administration nears a deal for enough shots to vaccinate 300 million Americans by the end of</u> summer
 - o Pfizer will ship fewer vaccine vials after successfully lobbying the U.S. government to count and pay for "extra" doses found in the vials.
 - o Pfizer Will Ship Fewer Vaccine Vials to Account for 'Extra' Doses
 - o Moderna says its vaccine provokes a weaker response against the South African variant.
 - o New Pandemic Plight: Hospitals Are Running Out of Vaccines
 - o How West Virginia Became a U.S. Leader in Vaccine Rollout
 - A glimmer of hope in the U.K.: Nearly 5 million have received vaccine shots
 - o Why Vaccines Alone Will Not End the Pandemic
 - o New coronavirus variants could challenge vaccine efforts
 - o Variants halt travel worldwide
 - o Inside the B.1.1.7 Coronavirus Variant
 - o As Virus Grows Stealthier, Vaccine Makers Reconsider Battle Plans
 - o <u>Do Curfews Slow the</u> Coronavirus?
 - o Could a Smell Test Screen People for Covid?
 - o <u>C.D.C.</u> officials urged a return to classroom instruction as soon as possible, citing evidence showing it is safe with the right health protocols.
 - o Amid One Pandemic, Students Train for the Next
 - o New California Variant May Be Driving Virus Surge There, Study Suggests
 - o 'We Are Forced to Live in These Conditions': In Los Angeles, Virus Ravages Overcrowded Homes
- JAMA Medical News and Perspectives
 - o Helping People Who Are Homeless Stay Healthy During the Pandemic
- The Hill
 - o COVID-19 testing capacity strained as localities struggle with vaccine staffing



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COVID-19 Digest Issue 40

- Modern Healthcare
 - COVID test pooling hampered by high positivity rates and logistical hurdles
- NPR
 - o Current, Deadly U.S. Coronavirus Surge Has Peaked, Researchers Say
 - o Moderna And Pfizer Need To Nearly Double COVID-19 Vaccine Deliveries To Meet Goals
- Merck Press Release
 - o <u>Merck Discontinues Development of SARS-CoV-2/COVID-19 Vaccine Candidates; Continues</u>
 Development of Two Investigational Therapeutic Candidates
- STAT News
 - o <u>In a major setback, Merck to stop developing its two Covid-19 vaccines and focus on therapies</u>
 - o <u>Pfizer-BioNTech Covid-19 vaccine works just as well against variant first detected in U.K., study</u> indicates
 - o Moderna's vaccine is less potent against one coronavirus variant but still protective, company says
 - o What we now know and don't know about the coronavirus variants
 - o A gout drug shows promise for Covid-19, but skeptics worry about trusting science by press release
- Montreal Heart Institute Press Release
 - o Colchicine reduces the risk of COVID-19-related complications
- Eli Lily Press Release
 - o <u>Lilly's neutralizing antibody bamlanivimab (LY-CoV555) prevented COVID-19 at nursing homes in the</u> <u>BLAZE-2 trial, reducing risk by up to 80 percent for residents</u>
- Moderna Press Release
 - o <u>Moderna COVID-19 Vaccine Retains Neutralizing Activity Against Emerging Variants First Identified in the U.K. and the Republic of South Africa</u>
- The New Yorker
 - o The New COVID Variant Sends Britain into a Crisis
 - o Has the Pandemic Transformed the Office Forever?
- Nature News
 - o Rogue antibodies could be driving severe COVID-19
- Science News
 - o <u>Vaccine 2.0: Moderna and other companies plan tweaks that would protect against new coronavirus mutations</u>
 - o Monoclonal antibodies can prevent COVID-19—but successful vaccines complicate their future
 - o Monoclonal antibodies protect against COVID-19 in a second study
 - Many scientists citing two scandalous COVID-19 papers ignore their retractions
 - o Media outlets inconsistently mention uncertain status of COVID-19 preprints
- Reuters
 - Special Report: How U.S. CDC missed chances to spot COVID's silent spread
- UC Davis News/UC Davis LIVE Program about COVID-19 vaccines podcast
 - o Get COVID-19 Vaccine As Soon As You're Allowed, Experts Urge
- KQED
 - o California Debates Speed vs. Equity in Vaccine Distribution Plan
 - o California's Clearest COVID-19 Vaccine Appointment Dashboard Is Run by Volunteers
 - o San Jose Hospital Has Vaccine Doses Withheld After Breaking Eligibility Rules
- Capradio
 - o State Activates MyTurn Vaccine Clearinghouse Website



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COVID-19 Digest Issue 40

- CalMatters
 - o Inside California's major shift in vaccine strategy
- Los Angeles Times
 - o California sees record-breaking COVID-19 deaths, a lagging indicator of winter surge.
 - Eight more L.A. County children contract COVID-related MIS-C, bringing total to 62
 - o 'Need a lot of both.' Will California's vaccine ramp-up squeeze out COVID-19 testing?
 - o California will prioritize COVID-19 vaccine by age, not occupation, in next rounds
 - o Newsom's abrupt COVID-19 reopening brings high risks for California, but also potential economic rewards
- San Francisco Chronicle
 - o Newsom reopens California most counties go to 'purple' tier. Here's what it means
 - o <u>California says it's safe to use huge lot of Moderna vaccines paused after allergic reactions</u>
 - o California says vaccinating everyone over 65 could take four months
 - o To simplify vaccine rollout, California considers an age-based system
 - o These Bay Area counties are now tracking their COVID vaccine rollouts online
 - o Google seeks to help COVID-19 vaccination efforts
 - o Coronavirus variants will prolong the pandemic. But here's how it will end
 - o How the Bay Area coronavirus variant differs from those in U.K., South Africa and Brazil

EPIDEMIOLOGY UPDATES

- CDC COVID Data Tracker
 - o United States COVID-19 Cases and Deaths by State
 - o COVID-19 Vaccinations in the United States
- 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 <u>CDPH Website</u> and the <u>NYT Map and Table</u> (includes data by county)
 - o California COVID-19 Statewide Update as of January 28, 2021
- 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
- CDC Interactive Serology Dashboard for Commercial Laboratory Surveys
- HHS Coronavirus Data Hub
- COVID-19 Nursing Home Data
- CDC COVID-19 Forecasts: Deaths
- <u>Children and COVID-19: State-Level Data Report</u>

