



COVID-19 Digest Issue 76

April 21, 2022

CLINICAL PEARL

- **Anosmia may be due to COVID-19 inflammation and not SARS-CoV-2 itself**
[According to a postmortem study published in JAMA Neurology](#), focal COVID-related inflammation, rather than the virus itself, may cause the early symptom of loss of smell which is often seen with COVID-19. Johns Hopkins researchers led the multicenter study, which involved examining the olfactory bulb at the base of the brain of 23 deceased COVID-19 patients and 14 matched controls who died of other causes from Apr 7, 2020, to Sep 11, 2021. The researchers used light and electron microscopy to look for any SARS-CoV-2 genetic material, assess cell structures and characteristics, as well as the blood vessels and neurons within them. They also measured the number of axons in the neurons, which inform sensory perception and movement. Information about sense of smell and taste was derived from the medical records of three patients and from family interviews for the remainder. Three of the 23 COVID-19 patients completely lost their sense of smell, 4 had an impaired ability to smell, and 2 lost both smell and taste. No controls lost either smell or taste. The deceased COVID-19 patients had more severe vascular injury and far fewer axons in the olfactory bulb—particularly those with diminished or total loss of smell, suggesting that these effects are linked to SARS-CoV-2 infection. Despite the nerve and vascular damage seen in the deceased COVID-19 patients, most had no detectable SARS-CoV-2 virus particles in the olfactory bulb. **These findings suggest that SARS-CoV-2 infection of the olfactory epithelium leads to inflammation, which in turn, damages the neurons, reduces the numbers of axons available to send signals to the brain, and results in the olfactory bulb becoming dysfunctional.**
In a [related JAMA Neurology audio interview](#), Dr. Ho, one of the study researchers said that long-term loss of smell occurs in about 1% of people and may be preventable. “If inflammation is the major cause of the injury in olfactory structures, it is possible that we may be able to use anti-inflammatory agents as the treatment.”

PUBLIC HEALTH UPDATES

- [FDA Authorizes First COVID-19 Diagnostic Test Using Breath Samples](#)
- [FDA updates Sotrovimab emergency use authorization](#)
- [New York State Department of Health Announces Emergence of Recently Identified, Highly Contagious Omicron Subvariants in New York and Urges Continued Vigilance Against COVID-19](#)
- European Centre for Disease Prevention and Control: [ECDC and EMA issue advice on fourth doses of mRNA COVID-19 vaccines](#)
- WHO [Statement on the eleventh meeting of the International Health Regulations \(2005\) Emergency Committee regarding the coronavirus disease \(COVID-19\) pandemic](#)

RESOURCES

- CDC/IDSA COVID-19 Clinician Call: [All About Paxlovid; Plus Variants Update](#)
- Kaiser Family Foundation [COVID-19 Vaccine Monitor: Views On The Pandemic At Two Years](#)
- US Government Accountability Office Spotlight: [Long COVID](#)
- Center for Infectious Disease Research and Policy (CIDRAP) Osterholm Update:
 - [Episode 98: A Stay-Tuned Moment](#)
 - [Episode 99: A Time for Humility](#)
- The Washington Post: [Tracking U.S. covid-19 cases, deaths and other metrics by state](#)





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ACADEMIC/RESEARCH PAPERS

- *New England Journal of Medicine*
 - [Protection by a Fourth Dose of BNT162b2 against Omicron in Israel](#)
 - [Fourth Dose of BNT162b2 mRNA Covid-19 Vaccine in a Nationwide Setting](#)
 - [BNT162b2 Protection against the Omicron Variant in Children and Adolescents](#)
 - [Effect of Early Treatment with Ivermectin among Patients with Covid-19](#)
 - [Early Outpatient Treatment for Covid-19 with Convalescent Plasma](#)
 - [Pulse Oximetry for Monitoring Patients with Covid-19 at Home — A Pragmatic, Randomized Trial](#)
- *Emerging Infectious Diseases*
 - [Effectiveness of BNT162b2 Vaccine Booster against SARS-CoV-2 Infection and Breakthrough Complications, Israel](#)
 - [Serum Neutralization of SARS-CoV-2 Omicron BA.1 and BA.2 after BNT162b2 Booster Vaccination](#)
 - [Recombinant BA.1/BA.2 SARS-CoV-2 Virus in Arriving Travelers, Hong Kong, February 2022](#)
 - [Secondary Attack Rate, Transmission and Incubation Periods, and Serial Interval of SARS-CoV-2 Omicron Variant, Spain](#)
 - [Introduction and Rapid Spread of SARS-CoV-2 Omicron Variant and Dynamics of BA.1 and BA.1.1 Sublineages, Finland, December 2021](#)
 - [Detecting SARS-CoV-2 Omicron B.1.1.529 Variant in Wastewater Samples by Using Nanopore Sequencing](#)
 - [SARS-CoV-2 Wastewater Surveillance for Public Health Action](#)
 - [Introduction and Rapid Spread of SARS-CoV-2 Omicron Variant and Dynamics of BA.1 and BA.1.1 Sublineages, Finland, December 2021](#)
- *Nature*
 - [Course of post COVID-19 disease symptoms over time in the ComPaRe long COVID prospective e-cohort](#)
 - [Safety, tolerability and viral kinetics during SARS-CoV-2 human challenge in young adults](#)
- *The Lancet*
 - [Estimating global, regional, and national daily and cumulative infections with SARS-CoV-2 through Nov 14, 2021: a statistical analysis](#)
 - [How to interpret the total number of SARS-CoV-2 infections](#)
 - [Effectiveness of CoronaVac, ChAdOx1 nCoV-19, BNT162b2, and Ad26.COVS2 among individuals with previous SARS-CoV-2 infection in Brazil: a test-negative, case-control study](#)
 - [Risk of SARS-CoV-2 reinfection and COVID-19 hospitalisation in individuals with natural and hybrid immunity: a retrospective, total population cohort study in Sweden](#)
- *medRxiv*
 - [SARS-CoV-2 infection in Africa: A systematic review and meta-analysis of standardised seroprevalence studies, from January 2020 to December 2021](#)
- *JAMA*
 - [Short-term Adverse Events After the Third Dose of the BNT162b2 mRNA COVID-19 Vaccine in Adults 60 Years or Older](#)
 - [Assessment of Awake Prone Positioning in Hospitalized Adults With COVID-19 - A Nonrandomized Controlled Trial](#)





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- [Antibiotic Prescriptions Associated With COVID-19 Outpatient Visits Among Medicare Beneficiaries, April 2020 to April 2021](#)
- [Fluvoxamine for Outpatient Management of COVID-19 to Prevent Hospitalization - A Systematic Review and Meta-analysis](#)
- [Implementation of Clinical Practice Guidelines for Hospitalized Patients With COVID-19 in Academic Medical Centers](#)
- [Association of COVID-19 Vaccination During Early Pregnancy With Risk of Congenital Fetal Anomalies](#)
- [Association of Psychiatric Disorders With Incidence of SARS-CoV-2 Breakthrough Infection Among Vaccinated Adults](#)
- [Acute Upper Airway Disease in Children With the Omicron \(B.1.1.529\) Variant of SARS-CoV-2—A Report From the US National COVID Cohort Collaborative](#)
- [Changes in Life Expectancy Between 2019 and 2020 in the US and 21 Peer Countries](#)
- [Postmortem Assessment of Olfactory Tissue Degeneration and Microvasculopathy in Patients With COVID-19](#)
- [Association of Subcutaneous or Intravenous Administration of Casirivimab and Imdevimab Monoclonal Antibodies With Clinical Outcomes in Adults With COVID-19](#)
- [In-Hospital Mortality Disparities Among American Indian and Alaska Native, Black, and White Patients With COVID-19](#)
- *BMJ*
 - [Occupation and COVID-19 diagnosis, hospitalisation and ICU admission among foreign-born and Swedish-born employees: a register-based study](#)
 - [Risks of deep vein thrombosis, pulmonary embolism, and bleeding after covid-19: nationwide self-controlled cases series and matched cohort study](#)
 - [Thromboembolism and bleeding after covid-19](#)
- *PLOS*
 - [Effect of common maintenance drugs on the risk and severity of COVID-19 in elderly patients](#)
- *American Journal of Infection Control*
 - [Reported exposure trends among healthcare personnel COVID-19 cases, USA, March 2020–March 2021](#)
- *Open Forum Infectious Diseases*
 - [SARS-CoV-2 mRNA vaccine effectiveness in healthcare workers by dosing interval and time since vaccination: test negative design, British Columbia, Canada](#)
 - [EFFECTIVENESS OF CASIRIVIMAB-IMDEVIMAB MONOCLONAL ANTIBODY TREATMENT AMONG HIGH-RISK PATIENTS WITH SARS-CoV-2 B.1.617.2 \(COVID-19 DELTA VARIANT\) INFECTION](#)
 - [Rheumatic symptoms following COVID-19: a chronic post COVID-19 condition](#)
- *The Journal of Infectious Diseases*
 - [Global Prevalence of Post COVID-19 Condition or Long COVID: A Meta-Analysis and Systematic Review](#)
- *Pediatrics*
 - [United States Preterm Birth Rate and COVID-19](#)
- *Journal of General Internal Medicine*
 - [Patterns of Potential Moral Injury in Post-9/11 Combat Veterans and COVID-19 Healthcare Workers](#)
- *Circulation*
 - [Prevalence, Characteristics, and Outcomes of COVID-19–Associated Acute Myocarditis](#)
- *Medical Virology*
 - [Muscle dysfunction in the long coronavirus disease 2019 syndrome: Pathogenesis and clinical approach](#)





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- *Canadian Medical Association Journal*
 - [Predictors of severe illness in children with multisystem inflammatory syndrome after SARS-CoV-2 infection: a multicentre cohort study](#)
 - [Household transmission of SARS-CoV-2 from unvaccinated asymptomatic and symptomatic household members with confirmed SARS-CoV-2 infection: an antibody-surveillance study](#)
- *Canada Federal, Provincial and Territorial Forum of Ministers Responsible for Seniors*
 - [Social Isolation Among Older Adults During the Pandemic](#)

MMWR

- [Hospitalizations of Children Aged 5–11 Years with Laboratory-Confirmed COVID-19 — COVID-NET, 14 States, March 2020–February 2022](#)
- [COVID-19 Mortality and Vaccine Coverage — Hong Kong Special Administrative Region, China, January 6, 2022–March 21, 2022](#)
- [Effectiveness of COVID-19 mRNA Vaccination in Preventing COVID-19–Associated Hospitalization Among Adults with Previous SARS-CoV-2 Infection — United States, June 2021–February 2022](#)
- [Cardiac Complications After SARS-CoV-2 Infection and mRNA COVID-19 Vaccination — PCORnet, United States, January 2021–January 2022](#)
- [Notes from the Field: SARS-CoV-2 Omicron Variant Infection in 10 Persons Within 90 Days of Previous SARS-CoV-2 Delta Variant Infection — Four States, October 2021–January 2022](#)
- [Perceived Racism and Demographic, Mental Health, and Behavioral Characteristics Among High School Students During the COVID-19 Pandemic — Adolescent Behaviors and Experiences Survey, United States, January–June 2021](#)
- [Disruptions to School and Home Life Among High School Students During the COVID-19 Pandemic — Adolescent Behaviors and Experiences Survey, United States, January–June 2021](#)

HOT OFF THE (LAY) PRESS

- *New York Times*
 - [The Biden administration says it may appeal a ruling that voided a mask mandate on public transport.](#)
 - [President Biden said it's up to individuals whether to wear masks, as a ruling striking down mandates on public transport sowed confusion.](#)
 - [A federal judge struck down the U.S. mask mandate for airplanes, airports and public transit, ruling the C.D.C. exceeded its authority.](#)
 - [The four largest U.S. airlines dropped their mask requirements for domestic flights after a judge struck down the federal mandate.](#)
 - [California Delays K-12 Vaccine Mandate](#)
 - [Is Another Covid Surge Coming to California?](#)
 - [The F.D.A. authorizes first COVID breath tests](#)
 - [Philadelphia announced that it would reinstate an indoor mask mandate next week, becoming the first major U.S. city to do so this spring.](#)
 - [A New COVID-19 Mystery](#)
 - [Shanghai's Unsparing Lockdown](#)
 - [Covid's terrible toll on people with diabetes](#)
- *NPR News*
 - [Justice Department might appeal the mask ruling if the CDC says they're still needed](#)





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- *Bloomberg*
 - [Pfizer's \\$5 Billion Bill for Covid Pills to Take Big Bite from New Pandemic Funds](#)
- *The Guardian*
 - [Shanghai to ease lockdown despite surge in Covid cases](#)
- *Reuters*
 - [Western diplomats ask China not to separate COVID-positive children from parents](#)
- *ABC News*
 - [COVID-19 cases rising in Northeast, partly fueled by BA.2, experts say](#)
- *AP News*
 - [COVID spending bill stalls in Senate as GOP, Dems stalemate](#)
 - [GOP blocks Senate COVID bill, demands votes on immigration](#)
- *Kaiser Health News*
 - [Attendance Plummetts at LA Covid Vaccination Events](#)
- *Pfizer Press Releases*
 - [Pfizer and BioNTech Announce Data Demonstrating High Immune Response Following a Booster Dose of their COVID-19 Vaccine in Children 5 Through 11 Years of Age](#)
- *Moderna News*
 - [MODERNA ANNOUNCES CLINICAL UPDATE ON BIVALENT COVID-19 BOOSTER PLATFORM](#)
- *EurekaAlert!*
 - [People at risk of future heart disease and stroke may be at greater risk for severe COVID-19](#)
 - [Data from investigational COVID-19 antiviral drug molnupiravir suggest better outcomes for most COVID-related symptoms than placebo](#)
 - [New analysis of investigational COVID antiviral drug molnupiravir shows it appears to clear virus equally well in immunocompromised patients and those who are immunocompetent](#)
 - [New virology data shows the investigational COVID antiviral drug molnupiravir eliminates actively infectious SARS-CoV-2 virus by day 3 of starting therapy](#)
- *San Francisco Chronicle*
 - [Uber and Lyft have dropped their mask mandates](#)
 - [Airlines begin dropping mask mandates after federal judge strikes down requirement](#)
 - [COVID-19 vaccine mandate for California schools delayed until 2023](#)
 - [When are COVID experts getting their second booster shots? Here's what 6 from the Bay Area said](#)

EPIDEMIOLOGY UPDATES

- [CDC COVID Data Tracker](#)
 - [Variant Proportions](#)
 - [Wastewater Surveillance](#)
 - [COVID-19 Vaccinations in the United States](#)
- [Johns Hopkins COVID-19 in the USA](#) – daily summary of key data on COVID-19 in the U.S.
- [American Academy of Pediatrics Children and COVID-19: State Level Data Report](#) – *new data!*
- [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 April 21, 2022
- [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](#)
- [Covid-WEB \(Wastewater Epidemiology for the Bay Area\)](#)
- [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](#)

