

COVID-19 Digest Issue 18

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CLINICAL PEARL

• COVID-19 and anosmia: Temporary loss of smell, or anosmia, is the main neurological symptom and one of the earliest and most commonly reported indicators of COVID-19. A majority of COVID-19 patients experience some level of anosmia, most often temporary. Studies suggest it better predicts the disease than other well-known symptoms such as fever and cough, but the underlying mechanisms for loss of smell in patients with COVID-19 have been unclear. Analyses of electronic health records indicate that COVID-19 patients are 27 times more likely to have smell loss but are only around 2.2 to 2.6 times more likely to have fever, cough or respiratory difficulty, compared to patients without COVID-19.

Some studies have hinted that anosmia in COVID-19 differs from anosmia caused by other viral infections, including by other coronaviruses. For example, COVID-19 patients typically recover their sense of smell over the course of weeks—much faster than the months it can take to recover from anosmia caused by a subset of viral infections known to directly damage olfactory sensory neurons. In addition, many viruses cause temporary loss of smell by triggering upper respiratory issues such as stuffy nose. Some COVID-19 patients, however, experience anosmia without any nasal obstruction.

A recent report in <u>Science Advances</u> suggests that olfactory sensory neurons do not express the gene that encodes the ACE2 receptor protein, which SARS-CoV-2 uses to enter human cells. Instead, ACE2 is expressed in cells that provide metabolic and structural support to olfactory sensory neurons, as well as certain populations of stem cells and blood vessel cells. It therefore appears that <u>the novel coronavirus changes the sense of smell in patients not by directly infecting olfactory sensory neurons but by affecting the function of supporting cells in the olfactory epithelium. This implies that in most cases, SARS-CoV-2 infection is unlikely to permanently damage olfactory neural circuits and lead to persistent anosmia.</u>

PUBLIC HEALTH UPDATE

• FDA Issues Emergency Use Authorization to Yale School of Public Health for SalivaDirect, Which Uses a New Method of Saliva Sample Processing

RESOURCES

- UCSF Collaborative to Advise on Re-opening Education Safely (CARES) Webinars:
 - O What We Know about Children and COVID-19 Transmission
 - o Considerations for Preparing for In-Person Learning during COVID-19
 - o Supporting Children during Remote Learning with an Emphasis on Equity and Mental Health

ACADEMIC/RESEARCH PAPERS

- JAMA Internal Medicine
 - Evaluating the Association of Clinical Characteristics With Neutralizing Antibody Levels in Patients
 Who Have Recovered From Mild COVID-19 in Shanghai, China
 - Neutralizing Antibodies Against SARS-CoV-2—Important Questions, Unclear Answers
 - Filtration Efficiency of Hospital Face Mask Alternatives Available for Use During the COVID-19
 Pandemic
- Journal of General Internal Medicine

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 Masks Do More Than Protect Others During COVID-19: Reducing the Inoculum of SARS-CoV-2 to Protect the Wearer

- Public Health England
 - Excess Weight and COVID-19: Insights from new evidence
- Annals of Internal Medicine
 - Obesity and Mortality Among Patients Diagnosed With COVID-19: Results From an Integrated Health
 Care Organization
 - Body Mass Index and Risk for Intubation or Death in SARS-CoV-2 Infection: A Retrospective Cohort Study
 - o Cardiac Endotheliitis and Multisystem Inflammatory Syndrome After COVID-19
- Nature Medicine
 - o <u>Peripheral immunophenotypes in children with multisystem inflammatory syndrome associated with SARS-CoV-2 infection</u>
- medRxiv
 - o Viable SARS-CoV-2 in the air of a hospital room with COVID-19 patients
 - o <u>Mechanistic Transmission Modeling of COVID-19 on the Diamond Princess Cruise Ship Demonstrates</u> the Importance of Aerosol Transmission
 - o Influenza Vaccination and COVID19 Mortality in the USA
 - Inactivated trivalent influenza vaccine is associated with lower mortality among Covid-19 patients in Brazil
 - Stepwise School Opening Online and Off-line and an Impact on the Epidemiology of COVID-19 in the Pediatric Population
- The Lancet
 - Determining the optimal strategy for reopening schools, the impact of test and trace interventions, and the risk of occurrence of a second COVID-19 epidemic wave in the UK: a modelling study
 - o Finding a path to reopen schools during the COVID-19 pandemic
- Clinical Infectious Diseases
 - Methylprednisolone as Adjunctive Therapy for Patients Hospitalized With COVID-19 (Metcovid): A Randomised, Double-Blind, Phase IIb, Placebo-Controlled Trial
 - o <u>Epidemiology of invasive pulmonary aspergillosis among COVID-19 intubated patients: a prospective study</u>
- The American Journal of Cardiology
 - Meta-analysis of Effectiveness of Statins in Patients with Severe COVID-19
- BMJ Journal
 - o Management of post-acute covid-19 in primary care
 - o Covid-19: Study reveals six clusters of symptoms that could be used as a clinical prediction tool
- Annals of Emergency Medicine
 - Development and validation of the quick COVID-19 severity index (qCSI): a prognostic tool for early clinical decompensation
 - Quick COVID-19 Severity Index (qCSI) Calculator
- PLOS One
 - Development and validation of a model for individualized prediction of hospitalization risk in 4,536 patients with COVID-19
 - Cleveland Clinic Predict Hospitalization Risk for COVID-19 Positive
- Science
 - Selective and cross-reactive SARS-CoV-2 T cell epitopes in unexposed humans





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- Low-cost measurement of facemask efficacy for filtering expelled droplets during speech
- New England Journal of Medicine
 - o The Covid-19 Pandemic and the Incidence of Acute Myocardial Infarction
 - COVID-19 in Persons Living with HIV What Do We Know Today?
- Obstetrics & Gynecology
 - o Rates of Maternal and Perinatal Mortality and Vertical Transmission in Pregnancies Complicated by Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-Co-V-2) Infection: A Systematic Review
- JAMA
 - o Evaluation for SARS-CoV-2 in Breast Milk From 18 Infected Women
 - o Outcomes Associated With Use of a Kinin B2 Receptor Antagonist Among Patients With COVID-19
 - o Presence of Genetic Variants Among Young Men With Severe COVID-19
 - o Assessment of SARS-CoV-2 Transmission on an International Flight and Among a Tourist Group
 - SARS-CoV-2 Infection Among Community Health Workers in India Before and After Use of Face Shields
 - Effect of Remdesivir vs Standard Care on Clinical Status at 11 Days in Patients With Moderate COVID-19 - A Randomized Clinical Trial
 - o Efficacy of Remdesivir in COVID-19
- JAMA Surgery
 - o Extracorporeal Membrane Oxygenation for Patients With COVID-19 in Severe Respiratory Failure

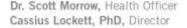
MMWR

- Racial and Ethnic Disparities Among COVID-19 Cases in Workplace Outbreaks by Industry Sector Utah,
 March 6–June 5, 2020
- <u>Limited Secondary Transmission of SARS-CoV-2 in Child Care Programs</u> Rhode Island, June 1—July 31, 2020
- COVID-19–Associated Multisystem Inflammatory Syndrome in Children United States, March–July 2020
- Mass Testing for SARS-CoV-2 in 16 Prisons and Jails Six Jurisdictions, United States, April—May 2020
- Notes from the Field: COVID-19 Prevention Practices in State Prisons Puerto Rico, 2020

HOT OFF THE (LAY) PRESS

- Yale News
 - Quick and affordable saliva-based COVID-19 test developed by Yale scientists receives FDA Emergency Use Authorization
- Bloomberg
 - o <u>States Hit Supply Limitations as They Plan to Expand Virus Tests</u>
 - o Most Americans Won't Be Able to Get a Coronavirus Vaccine Until Well Into 2021
- The Wall Street Journal
 - What Derailed America's Covid Testing: Three Lost Weeks
 - o What to Do If Your Child May Have Been Exposed to Covid-19
- California Health Report
 - o Pandemic Pushes Parents Of Kids With Special Needs To Breaking Point
- The New York Times
 - o Families Priced Out of 'Learning Pods' Seek Alternatives
 - o Outbreaks Drive U.N.C. Chapel Hill Online After a Week of Classes
 - Can Los Angeles Schools Test 700,000 Students and 75,000 Employees? That's the Plan







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- As U.S. Schools Move to Reopen Despite Covid-19, Teachers Threaten to Strike
- o Obesity Raises the Risk of Death From Covid-19 Among Men
- o What if 'Herd Immunity' Is Closer Than Scientists Thought?
- o Is Herd Immunity Ahead of Schedule?
- The Atlantic
 - Long-Haulers Are Redefining COVID-19
- AP News
 - o Trail of bubbles leads scientists to new coronavirus clue
- The Washington Post
 - Forty percent of people with coronavirus infections have no symptoms. Might they be the key to ending the pandemic?
 - o These are the top coronavirus vaccines to watch
 - o WHO warns young people are emerging as main spreaders of the coronavirus
 - o Georgia school with photos of packed hallways will curb in-person classes after coronavirus outbreak
- The Hill
 - o WHO: Coronavirus unaffected by seasonal changes
- Medpage Today
 - o Dangerous Oleander Extract Not a COVID-19 Cure
- The Los Angeles Times
 - o How many people really wear masks? We counted. It wasn't pretty
 - More California counties make state coronavirus watchlist as Santa Cruz is removed
- SFiST
 - o <u>It Took Three Months For The Bay Area to Reach 25,000 COVID Cases, and Six Weeks For That</u> Number To Triple

EPIDEMIOLOGY UPDATES

- US Leads the World in Confirmed COVID-19 Cases per Johns Hopkins University Center for Systems Science and Engineering Dashboard Website
- 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)
 - California COVID-19 Statewide Update as of August 25, 2020
- San Mateo County COVID-19 Dashboard
- Santa Clara County COVID-19 Dashboard

ADDITIONAL COVID-19 RESOURCES

- 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
- COVID-19 Resource Center: Core COVID-19 Calculators

