Meta-analysis: COVID-19 Infection Protects Against Severe Disease

Immunity generated by COVID-19 infection protects against hospitalization and death, according to a meta-analysis of 65 studies representing data from 19 countries. Protection against severe disease remained high after 40 weeks, at 90.2% for ancestral, Alpha, and Delta variants and 88.9% for Omicron BA.1 after 40 weeks.

The researchers, who reported their results in The Lancet, found that infection with pre-Omicron variants was more than 82% protective against reinfection and symptomatic disease, although that protection declined slightly—to about 79%—at 40 weeks. Protection from reinfection with Omicron BA.1 was lower and fell quickly, reaching 36.1% at 40 weeks.

The analysis suggests that previous infection is at least as protective as 2 doses of messenger RNA vaccines, according to the authors. Vaccination, however, continues to be the safest way to protect against COVID-19, study author Stephen Lim, PhD, said in a statement.

Published Online: March 1, 2023. doi:10.1001/jama.2023.2885

Prior COVID-19 Infection Tied to Lasting Lung Abnormalities

More than one-third of patients hospitalized with COVID-19 had lung abnormalities including scarring and thickening 2 years later, according to an analysis of chest computed tomographic (CT) scans from 144 participants aged 27 to 80 years.

The researchers, who reported their findings in Radiology, examined participants’ scans at 6 months, 12 months, and 2 years after symptom onset. The proportion of those with lung abnormalities fell from 54% at 6 months to 39% after 2 years, although the number of participants with fibrotic abnormalities was constant throughout the follow-up period.

Patients with lung abnormalities also reported more respiratory symptoms including cough and shortness of breath and had worse pulmonary diffusion than those whose CT scans were clear.

Published Online: March 1, 2023. doi:10.1001/jama.2023.2886

Study: Breast Radiotherapy Does Not Improve Survival in Older Patients

Treatment with radiotherapy alongside breast-conserving surgery and hormone therapy did not improve overall or breast cancer–specific survival, investigators recently reported. It also did not decrease the incidence of distant recurrence as a first event, according to a phase 3 clinical trial involving 1326 older women with low-risk, hormone receptor–positive early breast cancer.

“Patients and clinicians can balance the harms and benefits of irradiation knowing that avoiding it does not increase the risk of death from breast cancer,” the authors wrote in The New England Journal of Medicine. Risks linked with radiotherapy include increased risk of certain cancers and cardiac events.

Over the 10-year study period, local breast cancer did recur in a substantial number—9.5%—of the participants who did not receive radiotherapy, compared with 0.9% of those who did receive radiotherapy. But the rate fell below the 10% acceptable recurrence rate set by the European Society of Mastology.

Published Online: March 1, 2023. doi:10.1001/jama.2023.2887

On-Demand Male Contraceptive Compound Promising in Mouse Study

A single dose of an experimental compound inactivated sperm in male mice within 30 minutes for up to 2.5 hours and prevented pregnancy in a proof-of-concept study. The researchers also found that the treatment, known as TDI-11861, was safe and did not cause severe adverse effects such as organ damage or changes in behavior. The drug is in development as a potential nonhormonal and on-demand method of contraception.

The compound works by inhibiting soluble adenylyl cyclase (sAC), a cell-signaling protein that sperm need to become mobile and mature. The effects of the drug were quickly reversible: almost all the sperm regained normal mobility after 24 hours, according to the study published in Nature Communications.

Published Online: March 1, 2023. doi:10.1001/jama.2023.2888

Chronic Pain at Multiple Sites Tied to Increased Dementia Risk

Chronic pain, especially at multiple sites in the body, was linked to a higher risk of dementia in a study of more than 350 000 UK Biobank participants aged 39 to 73 years. After adjustments for potential confounders, participants who reported a single site of pain had a 15% higher risk of dementia than those without pain. That risk climbed to 36% for those with multiple pain sites, researchers reported in Proceedings of the National Academy of Sciences.

People with multiple sites of pain also had a faster rate of cognitive decline and a larger decrease in hippocampal size than those with no pain or only a single pain site, based on cognitive assessments and magnetic resonance imaging data from a subset
of 19,116 participants. A decrease in fluid intelligence—the ability to reason and manipulate complex information—among individuals with multiple pain sites was linked to hippocampal atrophy.

Published Online: March 1, 2023.


ADHD Drugs in Pregnancy Not Linked to Children’s Brain Development

After adjusting for maternal confounders, children born to mothers who continued to use attention-deficit/hyperactivity disorder (ADHD) medications during pregnancy were no more likely to have neurodevelopmental disorders than those whose mothers discontinued use, according to a population-based cohort study published in Molecular Psychiatry.

In addition, in utero exposure did not increase children’s risk for vision problems, hearing impairment, or seizures, based on data from 898 children exposed to ADHD medications in utero and 1270 who were not exposed.

“There are still unknowns,” study author Veerle Bergink, MD, PhD, said in a statement. “[B]ut these results may contribute to women making informed decisions about using ADHD medication during pregnancy.”

Published Online: March 1, 2023.


Nursing Homes Required to Reveal Ownership Status Under Proposed Rule

In mid-February, the US Department of Health and Human Services (HHS) announced another step toward strengthening transparency around nursing home ownership. Under the proposed rule, nursing homes enrolled in Medicaid or Medicare would be required to disclose more information about ownership status to the Centers for Medicare & Medicaid Services (CMS) and states, such as which agencies are involved in administrative and clinical services or lease property to the facility.

The proposed rule would implement a section of the Affordable Care Act and is open to electronic or mailed comments until April 14.

Published Online: March 1, 2023.


Majority of Infant Formula Health Claims Are Poorly Supported

Manufacturers of most infant formulas claim a range of benefits, such as supporting infants’ brain and eye development, strengthening their immune systems, and easing digestion, based on an analysis of 757 products from 15 countries.

The researchers, who reported their results in The BMJ, identified 41 groups of ingredients tied to 1884 claims; 50% of those claims, however, didn’t name a specific ingredient. In addition, only 26% of products had claims supported by a specific scientific reference. Of the 266 total references, half cited the results of clinical trials—88% of which were funded by the formula industry, had formula industry authors, or both.

A linked editorial called infant formula a “big business,” racking up $55 billion globally in 2019. With the formula industry unlikely to change, given shareholder interests, “regulatory authorities must therefore decide whether the use of such apparently misleading evidence is acceptable or hold the formula industry to higher standards,” the author wrote.

Published Online: March 1, 2023.


Patients With Normal Gut Biopsy Still at Increased Risk of IBD

A normal gastrointestinal (GI) tract biopsy result might not eliminate an inflammatory bowel disease (IBD) diagnosis, according to a population-based, sibling-controlled study published in PLOS Medicine.

Over a median follow-up period of 10 years, 2.4% of the 200,495 participants with a normal lower GI tract biopsy went on to develop IBD compared with 0.4% of the 989,484 matched population references. The researchers found that participants with normal lower GI tract biopsies had a higher risk of IBD than their matched references and siblings. A normal upper GI tract biopsy was specifically linked with an increased risk of Crohn disease.

The findings suggest a prolonged symptomatic period before IBD diagnosis, the authors noted, with implications for patients’ quality of life and the effectiveness of treatments.

− Emily Harris

Published Online: March 1, 2023.


Note: Source references are available through embedded hyperlinks in the article text online.