

# Omicron variant, childhood infections and Long COVID

**SETH LEDERMAN**

In a year that began with so much promise on the COVID-19 front, we now face deadly familiar headlines and new threats such as the Omicron variant that has the world on alert. This latest blow comes amid alarming and widespread spikes in infections globally, a still pernicious Delta variant, and rapidly climbing numbers of breakthrough cases among the vaccinated. The U.S. is reporting more than 94,000 new COVID-19 cases each day, up by 47% since late October. As of November 18, according to the American Academy of Pediatrics, almost 6.8 million children have tested positive for COVID-19 since the onset of the pandemic — and for the 15th week in a row, pediatric cases are above 100,000. Moreover, every new infection could lead to another case of long COVID, which now affects more than 9.4 million Americans. Impressive as they are, our current vaccines are showing limitations in the duration of protection and transmission prevention.

Even with the introduction of vaccine boosters, we're still playing a vicious game of catch-up with the virus. As COVID continues to spread at will around the globe, its rampant mutability means it will manifest in increasingly cunning variants that evade immunity and elude vaccines. Whether the next such lethal enemy is Omicron or another variant, this much is true: We are giving COVID-19 far too much time and space to kill people and dominate our lives.

### Vaccine protection

At yet another pivotal juncture in this pandemic, we can choose to finally get ahead of COVID-19, or we can stay on our current catastrophic trajectory at the mercy of a still-raging virus. To be clear, we are safer from the virus than we were a year ago — for now. Every day and week that variants tear through vaccine protection and further mutate, we face the increased likelihood of a pandemic that stretches from its second year into a horrific third. It's a much bigger war now, and we have to bring a bigger fight.

This virus is agile, smart, and swift. Our escalated response must be as well. For many of us in the scientific and medical communities who are veterans of HIV and other epidemics, there remains the possibility that with ingenuity and expeditiously applied science, COVID-19 could still be wrestled into a manageable endemic. But we have precious little time to make that happen. It will take the prompt deployment of evolved science and public health discipline to challenge the potency of the virus and ward off more hospitalizations and death. I'm not suggesting it will be easy, but it is within reach if we correct our course without hesitation.

This will require bold investment in new vaccines that offer long-term efficacy. Congress and the White House have already enacted laws that provide billions of dollars to the Department of Health and Human Services to combat COVID-19, including \$6.05 billion allocated in the American Rescue Plan Act. We must use that money and additional resources from the upcom-



**Countries around the world announced travel restrictions amid the emergence of the Omicron COVID-19 variant.**

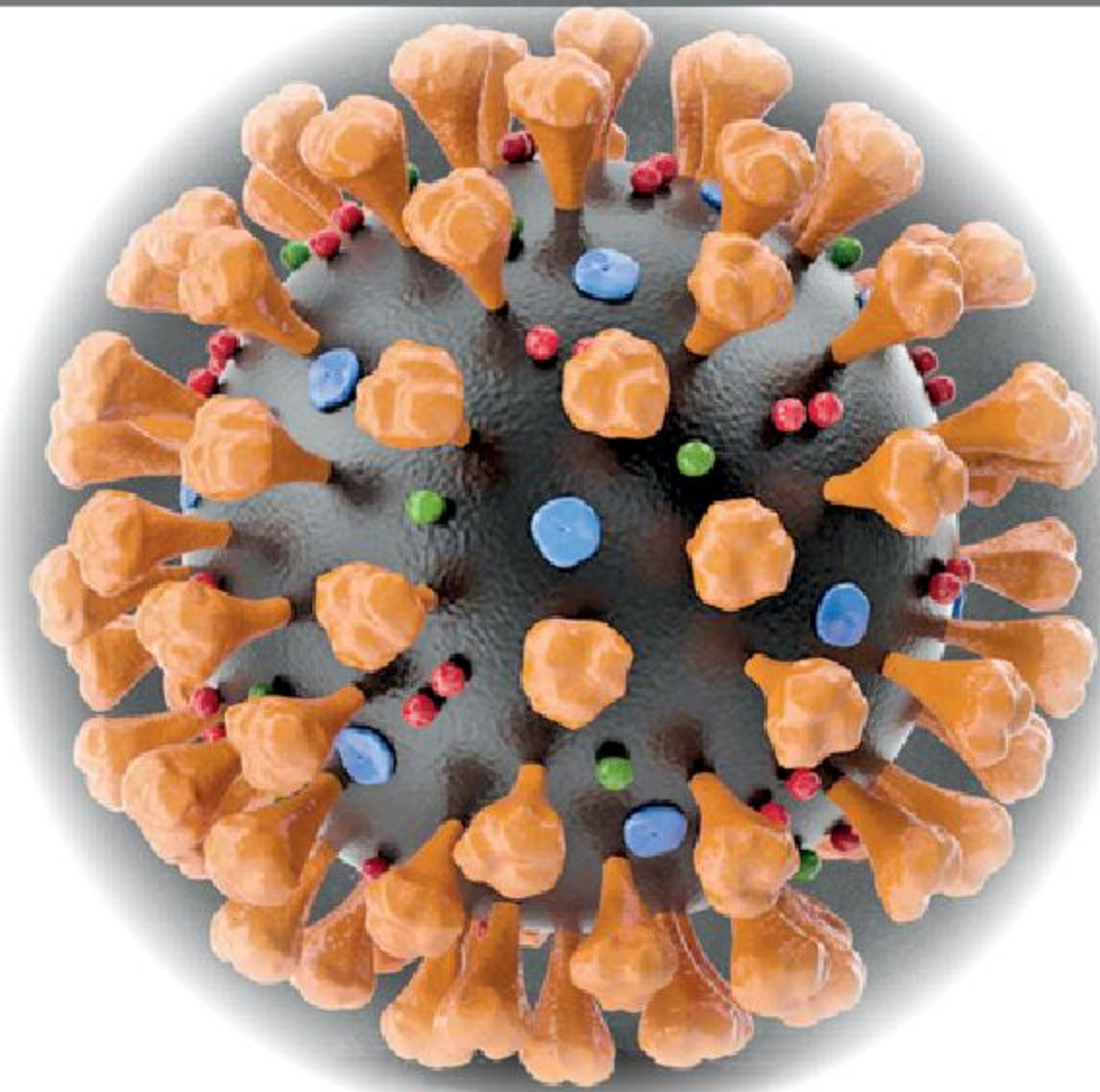
ing budget and appropriations legislation to accelerate work on vaccines that will allow us to coexist safely with the virus. My colleagues and I believe the best way to induce immunity is with a live virus vaccine like the one that wiped out smallpox

or the one we take as children against measles, mumps and rubella. There could also be other approaches to immunization that lead us out of this pandemic. As we push harder than ever for those solutions, we also need therapies to treat Long COVID

and its debilitating health consequences.

### Long-COVID patients

To propel the scientific breakthroughs that produce durable protection from COVID-19, we need support for dramatically



ramped-up research and development and trials fast-tracked in a way only our federal government can make happen. The current crisis requires immediate measures to ensure that all federal agencies leading this battle are prioritizing the rapid buildup of a significantly more powerful antiviral, therapeutic, and vaccine arsenal.

This is no time to stay the course with short-term vaccine protection. We need decisive investment in new approaches to stave off a grim future of potentially

millions of additional infections and countless more Americans joining the ranks of long-COVID patients.

We all know better than this. Before we regress to a nation on fire with COVID-19 for years to come, Americans need and deserve tough and unrelenting government-led action now.

*(Seth Lederman, M.D. is the CEO of New Jersey-based Tonix Pharmaceuticals and a physician-scientist. His research led to the discovery of the CD40 ligand and its role in T cell helper function)*  
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