

Medical News

DOI: <https://doi.org/10.70302/jpsim.v3i1.2218>**New Study Shows Natural Immunity to COVID Has Enduring Strength**

It's a matter of quality, not quantity. That's the gist of a new Israeli study that shows that unvaccinated people with a prior SARS-CoV-2 infection create antibodies that are more effective in the long run compared with others who were vaccinated but never infected. "While the quantity of antibodies decreases with time in both COVID-19 recovered patients and vaccinated individuals, the quality of antibodies performance increases following infection but not after vaccination," lead author Carmit Cohen, PhD, told Medscape Medical News. This difference could explain why previously infected patients appear to be better protected against a new infection than those who have only been vaccinated, according to a news release attached to the research. One key caveat: This research does not include people from the later part of the pandemic. This means there is a catch in terms of timing, William Schaffner, MD, Vanderbilt University School of Medicine, Nashville, Tennessee, said when asked to comment on the study: "The study involved only the early COVID strains — it has no information on either the Delta or Omicron variants. Thus, the results primarily are of scientific or historical interest, but are not immediately relevant to the current situation." The findings come from an early release of a study to be presented at the European Congress of Clinical Microbiology & Infectious Diseases (ECCMID 2022) in April. An unexpected finding of the study showed that obese people had better protection - a higher and more sustained immune response — compared with overweight and normal-weight individuals. "The results in the obese group were indeed unexpected and need further research to confirm or dispute," Schaffner said. "Obesity does predispose to more severe disease."

A Focus on Earlier Strains: Cohen - a senior research assistant in infectious disease prevention at the Sheba Medical Center in Ramat Gan, Israel - and her colleagues recruited participants between March 25, 2020, and November 25, 2020, and completed analysis in April 2021. This means they assessed people with a history of infection from the original, the Alpha, and some Beta strains of SARS-CoV-2.

Cohen indicated that the next phase of their research will examine innate and acquired immune responses to the more recent Delta and Omicron variants. The investigators analyzed the antibody-induced immune response up to 1 year in 130 COVID-19 recovered but unvaccinated individuals versus up to 8 months among 402 others matched by age and body mass index (BMI) and without previous infection who received two doses of the Pfizer vaccine. The numbers of antibodies a month after vaccination were higher than those in the COVID-19 recovered patients. However, these numbers also declined more steeply in the vaccinated group, they note. To assess the antibody performance, the investigators used the avidity index. This assay measures antibody function based on the strength of the interactions between the antibody and the viral antigen. They found that the avidity index was higher in vaccinated individuals than in recovered patients initially but changes over time. At up to 6 months, the index did not significantly change in vaccinated individuals, whereas it gradually increased in recovered patients. This increase would potentially protect them from reinfection, the authors note. These findings stand in stark contrast to an October 29, 2021, Centers for Disease Control and Prevention study that found that COVID-19 vaccines provided five times the protection of natural immunity. Those results, published in the organization's Morbidity and Mortality Weekly Report, suggest that vaccination helps people mount a higher, stronger, and more consistent level of immunity against COVID-19 hospitalization than infection alone for at least 6 months.

Protection Linked to Obesity: Another finding that ran against the scientific grain was the data about obesity. There was a higher and more persistent antibody performance among people with a BMI of 30 kg/m². This could relate to greater disease severity and/or a more pronounced initial response to infection among the obese group. "Our hypothesis is that patients with obesity begin with a more pronounced response — reflected also by the disease manifestation — and the trend of decline is similar, therefore the kinetics of immune response remain higher throughout the study," Cohen said.

"The results in the obese group were indeed unexpected and need further research to confirm or dispute," said Schaffner, who is also the current medical director of the National Foundation for Infectious Diseases. "Obesity does predispose to more severe disease."

Before the Boosters: Along with using participants from only the earlier part of the pandemic, another limitation of the study was that the vaccinated group had only two doses of vaccine; boosters were not given during the time of the study, Schaffner said. "Again, not the current situation." "That said, the strength and duration of natural immunity provided by the early variants was solid for up to a year, confirming previous reports," he said.

Approval of Omnipod 5 Automated Insulin Delivery System 'Exciting'

The Omnipod 5 automated insulin delivery system is finally FDA approved. I've done a video on Omnipod 5 outcomes. To refresh your memory, it is an automated insulin delivery system that uses the Omnipod pump plus the Dexcom to deliver insulin in an automated fashion. In the pivotal study for this system, they found an improvement in A1c levels, an improvement in time in range from 65% to 74%, and a reduction in the time below range in people — both children and adults — with type 1 diabetes. Now we have it available for general use. Well, we will soon. To refresh your memory about the pieces of the system, it starts with the Omnipod pod (which is filled with insulin) which the individual places on their body. Additionally, the individual uses the excom G6, which is used just like the regular Dexcom G6 system, but now it communicates with the pod, and the pod in this system is where the algorithm lives. These two now talk to each other in order to deliver the basal rates of insulin. The pod is able to give insulin based on the Dexcom readings, and it adjusts how much insulin it gives based on whether the Dexcom readings are going up, staying flat, or going down. The system is controlled by the ontroller, which is either this locked Android phone or an individual's Android phone. It allows for the person to set up the system and then give bolus doses for meals and corrections as necessary. They're working on having this available on an Apple phone as well. It's the first system that allows for a patient to use their own phone to control what's happening with the pump. One of the most important things for us as clinicians to realize is that each one of these automated insulin delivery systems works differently. I was able to do a research

study using the Omnipod 5 system, and it took me a while to get the hang of it. You change different things here than you change in, say, the Tandem Control-IQ system or the Medtronic 670G system.

First, it has five different algorithm basal targets so a person can set it to a target of 110, 120, 130, 140, or 150. I was chicken at first because I didn't know quite how this system worked, so I tended to start people off at a target of around 130. You can also set different targets for the correction doses, so that's also adjustable, and you can adjust the active insulin time. The only things you really can't adjust are the basal rates because they're determined through the algorithm with this system.

The system does not give autocorrect boluses, but as I said, it adjusts the basal rate based on the rising and falling of the person's glucose levels. It also adjusts the recommended doses for carbs and correction based on the CGM trends. The automated basal insulin delivery is calculated from the total daily insulin given since the last pod change, which is the prior 3 days, and this is called an adaptive basal. It has a mode called hypocorrect, which raises the target to 150, and this is what our patients are likely to use when they exercise and need a higher target. It's going to launch through pharmacies as a pharmacy benefit, and as I said, it works directly either through an Android phone or the Omnipod 5 controller. Unfortunately, at the moment, it is not available in Spanish, but they're working on that and hopefully will have it out soon.

It's planned to start with a limited launch that will be followed by a general launch. Remember, it's very important to provide patients with initial training. I think it's pretty simple and intuitive to follow the steps that they give you on the controller, but still, education is key for any of this to work.

For providers, we need to put in the initial settings for the system, and it takes some time of watching patients on the system to understand what we can and can't adjust in order to help patients reach their target.

I'm really excited to finally have this on the market and I can't wait to start using it in my patients.

Statin Intolerance 'Overestimated and Over-diagnosed'

Statin intolerance is far less common than previously reported, according to a new meta-analysis, with data on more than 4 million adults from around the world, looking at reported statin adverse effects. The study puts the prevalence of statin intolerance at 6% to 10%, meaning that statin intolerance is "overestimated and overdiagnosed" in most cases, Maciej Banach, MD, PhD, from the Medical University of Lodz and the

University of Zielona Góra, Poland, said in a news release. It also means that "around 93% of patients on statin therapy can be treated effectively, with very good tolerability and without any safety issues," Banach added. The study, conducted on behalf of the Lipid and Blood Pressure Meta-Analysis Collaboration and the International Lipid Expert Panel, was published online February 16 in the European Heart Journal.

Reassuring Data: In a statement from the British nonprofit Science Media Center, Sir Nilesh J. Samani, MBChB, MD, medical director of the British Heart Foundation, said: "Decades of evidence have proven that statins save lives. This latest analysis, showing that the risk of side effects from statins are less than previously thought, should provide reassurance to those who are recommended this medicine to reduce their risk of a heart attack or stroke."

The reported prevalence of statin intolerance varies widely, from 2% to 3% to as high as 50%, chiefly because "there is still a lack of a clear and easy way to apply the definition of statin intolerance," Banach told theheart.org Medscape Cardiology.

"The ones we use in lipid clinics - by National Lipid Association (NLA), European Atherosclerosis Society (EAS) and International Lipid Expert Panel (ILEP) — are not used or are rarely used in everyday clinical practice by GPs and other specialists," Banach explained. He also blames "physician inertia; when they listen to a patient complain of muscle pain, or see elevated alanine aminotransferase (ALT), in most of the cases, they will immediately discontinue statins, without any further investigations. One should remember that there are many secondary causes of statin intolerance," Banach said.

To get a better handle on the true prevalence of statin intolerance, the study team did a meta-analysis of 4,143,517 patients worldwide from 176 studies: 112 randomized controlled trials and 64 cohort studies.

The overall prevalence of statin intolerance was 9.1% (95% CI, 8.0% - 10.0%).

The prevalence of statin intolerance was even lower when assessed with diagnostic criteria from the NLA (7.0%; 95% CI, 6.0% - 8.0%), the ILEP (6.7%; 95% CI, 5.0% - 8.0%), and the EAS (5.9%; 95% CI, 4.0% - 7.0%).

The main factors associated with an increased risk for statin intolerance are female gender, hypothyroidism, high statin dose, advanced age, concomitant use of anti-arrhythmic drugs, and obesity. Other factors include race (being Asian or African American), type

2 diabetes, alcohol use, and chronic liver and renal diseases. "Our findings mean that we should evaluate patients' symptoms very carefully, firstly to see whether symptoms are indeed caused by statins, and secondly to evaluate whether it might be patients' perceptions that statins are harmful — so called nocebo or drucebo effect — which could be responsible for more than 50% of all symptoms, rather than the drug itself," Banach said.

He encourages use of the Statin-Associated Muscle Symptom Clinical Index (SAMS-CI) to assess the likelihood that a patient's muscle symptoms are caused or worsened by statin use.

Substantial Analysis, Valid Results: "This is a substantial analysis [and], based on what we know about statin side effects to date, the results are likely to be broadly valid, and indicate that we should not overestimate statin side effects or be too quick to stop statins without due consideration," Riyaz Patel, MBBS, professor of cardiology, University College London, told the Science Media Center. "Some patients do experience real side effects and we do our best to help them with alternative therapies, as with any other medicine. However, for the vast majority of people experiencing statin side effects, we can usually work with the patient to understand the symptoms, use proven strategies to manage these, and ensure they do not miss out on the well-established benefits of statins," Patel said. "This is especially important for people who have already had a heart attack or stroke, where statin therapy is really important in preventing further events," Patel added. Also weighing in on the results, Peter Sever, MB B Chir, professor of clinical pharmacology and therapeutics, Imperial College London, said: "The importance for clinicians and patients is to realize that commonly reported symptoms, such as muscle aches and pains and lethargy, are not due to the chemistry of the drug." "These 'nocebo' symptoms may be psychological in origin but they are no less real than pharmacological symptoms in how they affect quality of life," Sever told the Science Media Center. "However, it's important to note that as they are not directly caused by the drug, they should not override the decision to prescribe and take statins on account of their proven benefit in reducing death and disability from heart attacks, strokes, and other cardiovascular conditions," he added. This meta-analysis was conducted independently; no company

or institution supported it financially. Banach is on the speakers bureau for Amgen, Herbapol, Kogen, KRKA, Polpharma, Mylan/Viatris, Novartis, Novo Nordisk, Sanofi-Aventis, Teva, and Zentiva; is a consultant to Abbott Vascular, Amgen, Daichii Sankyo, Esperion, FreiaPharmaceuticals, Novartis, Polfarmex, and Sanofi-Aventis; has received grants from Amgen, Mylan/Viatris, Sanofi, and Valeant; and serves as CMO for Nomi Biotech Corporation. Samani has no relevant disclosures. Patel has received past honoraria and consulting fees from drug companies manufacturing new cholesterol-lowering drugs, and currently work with NICE as a topic advisor for CVD prevention. Sever has received research grants and consultancy from Pfizer and Amgen.

PSIM News

Women Leadership in Healthcare Program

PSIM, in collaboration with royal college of physicians UK and university of health sciences has launched the women leadership program to bring women doctors and healthcare workers in Pakistan to



leadership positions in their institutions and

organizations on Sunday 06-03-2022. In this regard, a ceremony was organized at UHS on Sunday in which Federal Parliamentary Secretary for Health Dr. Nausheen Hamid and wife of Punjab governor Begum Perveen Sarwar participated as special guests. The launched program is part of the Global Women Leaders Program of the RCP UK, which will provide training certificate courses for women doctors and



workers working in the health sector to advance their careers and help gain key positions in institutions.

Symposium on Novel Treatment Options in Acid Suppression.

PSIM conducted a symposium on Noval treatment options in acid suppression in collaboration of horizon Pharmaceutical on 12th February 2022 at Ramada hotel Lahore. Prof Atab Mohsin Senior Vice President PSIM was the presenter and among the panelist were Prof Javed Akram, Prof Khalid



Mehmood Khan & Dr Somia Iqtadar. Huge number of consultants, family physicians residents and undergraduate doctors attended the symposium.

PSIM GOLD MEDAL

PSIM announced gold Medal for the first position in the subject of Medicine in final professional MBBS examination university of health sciences Lahore. The first gold medal has been awarded to the first position holders named Muhammad Usama Azhar, Jagadish Upreti, Ayesha Shahab, Saqib Nasir And Hafiza Aisha Tahir in the 3rd convocation of UHS



held on 24th February 2022. General secretary Dr Somia Iqtadar awarded the gold medal along with President PSIM Prof Javed Akram.

National Study Groups Formed for Indigenous Research on Diabetes

On 13th February 2022, PSIM Senior physicians of the country have lined up against the growing risk of diabetes in Pakistan as National Study Groups have been formed to carry out research on diabetes in local settings for better prevention and control of the disease.

The groups, each consisting of five or more senior physicians, were formed in a meeting of the National Diabetes Chapter of Pakistan Society of Internal Medicine (PSIM) held here at the University of Health Sciences (UHS) on Sunday under the chairmanship of UHS VC and PSIM President Professor Javed Akram. under the Pakistan Society of Internal Medicine. The meeting was attended by a



large number of senior physicians from all over Pakistan. Prof. Zaman Sheikh, President National Diabetes Chapter was also present in the meeting.

PSim Session in 31st Doctorscon 2022

PSIM held a full session of internal medicine in Family physicians 31st DOCTORSCON from 11th to



13th February 2022 at Pearl continental hotel Lahore. Prof Zaman Sheikh, Prof Aftab Mohsin & Dr Somia Iqtadar were the speakers. Prof Javed Akram, Prof

Tariq Waseem And Prof Aziz Ur Rehman were among the panelists. Large number of family physicians and doctors attended the session.

