

# You think you had COVID before: Are you really immune now?

September 27 2021, by Dennis Thompson

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(HealthDay)—It seems like common sense for people who've had

COVID-19 to think they now have natural immunity, and therefore don't have to bother getting vaccinated.

Common sense, yes, but also incorrect, infectious disease doctors say.

Your case of COVID—especially if it was very mild—probably didn't create enough of an immune response to provide lasting protection against SARS-CoV-2, said Dr. Buddy Creech, president-elect of the Pediatric Infectious Diseases Society.

Even if you've had COVID-19, you need to get vaccinated to make sure you don't catch a second case that might be worse than your first, experts said.

"Not all infections are created equal," said Creech, director of the Vanderbilt Vaccine Research Program in Nashville, Tenn. "We have over a year's worth of data now that clearly show us the more mild the [infection](#) is, the less high and then the less durable the [immune response](#) to coronavirus is going to be."

He speaks from [personal experience](#). COVID-19 swept through his family of five in March 2020, near the start of the pandemic.

"I was an early adopter, if you will," Creech said.

### **Antibody levels vary significantly after infection**

Blood tests showed that his daughter, who had symptoms for only a day, developed COVID-19 antibody levels around 700, Creech said. His wife had flu-like symptoms for a week and lost her sense of taste and smell, and produced antibody levels around 7,000.

For his part, Creech came down with a nasty 16-day infection that

included a case of pneumonia and wound up with antibody levels around 50,000.

"Just in that one family unit, we had vastly different antibody responses that mirrored how severe our symptoms were," he said.

By comparison, COVID-19 vaccines provide a "controlled exposure" to the virus that won't land you in the hospital but will produce a powerful antibody response that's been stress-tested in clinical trials, Creech said.

The nice part is that, as a COVID-19 survivor, your response to the vaccine should provide you with stronger-than-average protection going forward.

Creech found that out when he again served as an early pandemic adopter in December 2020, as part of the first wave of medical staff to get the newly approved COVID-19 vaccine.

After his second dose of vaccine, "my antibody titers went up to 1.2 million from that 50,000," Creech said.

Creech's experience is reflected by an earlier [study from Tel Aviv University](#) in Israel, where researchers determined that vaccination produces [antibody levels](#) nearly three times higher on average than the levels created through natural infection.

### **Vaccination provides broader protection**

That level of immunity not only will last longer, but also is expected to be broad enough to stand up to the challenges posed by COVID-19 variants trying to mutate around our defenses, said Dr. William Schaffner, medical director of the Bethesda, Md.-based National Foundation for Infectious Diseases.

"If you then get vaccinated, you will get much more antibody than after the natural infection alone," Schaffner said. "You get a broader array of [antibodies](#), which make it better for your body to fend off the various variants."

For example, antibodies produced by people infected with the original strain of COVID-19 don't bind well to newer variants, [researchers at the University of Illinois Urbana-Champaign](#) recently reported.

That raises concern that people who were infected early in the pandemic can fall ill a second time from a more infectious or deadly COVID variant, Creech said.

"If someone has had disease, particularly those who had disease last year, the clear indication from everything that we know is that even a single dose of vaccine will boost them to a point they are durably protected against this virus," he said.

The emergence of the Delta variant in particular has changed how doctors look at natural immunity, given that it's more than twice as contagious as previous variants.

"With Delta, everything changed," Creech said. "Folks can't take comfort in the immunity they received from infection. They can't take safety in that. They really need to get vaccinated in order to have that boost that they need."

### **Misconceptions fuel vaccine hesitancy**

Dr. Amesh Adalja, a senior scholar with the Johns Hopkins Center for Health Security, in Baltimore, said he's concerned that false notions about natural immunity are "contributing to vaccine hesitancy."

"Those with [natural immunity](#) often say that they are being categorized as equivalent to the unvaccinated," Adalja said. "Natural immunity is significant and does provide substantial protection against reinfection and severe disease. However, it is unclear how durable the protection is and how well it fares against variants."

That's not to say you don't have some wiggle room, the experts suggested. You likely have solid immunity in the days and weeks immediately following a COVID-19 infection.

Schaffner said, "After you recover from natural infection, you will have some immunity. There's no doubt about it. We just don't know how long it will last."

You should talk with your doctor about when you should get your vaccination, Creech said, especially if you've just recovered from COVID-19.

For his part, Creech envies those who got their immunity from a vaccination, versus a case of COVID-19.

"If I could have had better immunity for those first few months of the pandemic without getting as sick as I did, boy I would take it," he said.

**More information:** The U.S. Centers for Disease Control and Prevention has a [FAQ about COVID-19 vaccination](#).

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