COVID-19 tied to higher diabetes risk—but vaccination helps

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Early in the COVID-19 pandemic when the Delta variant was dominant, individuals who recovered from infection had an increased risk for new-onset cardiometabolic diseases, including diabetes, hypertension and hyperlipidemia. And now with the less virulent Omicron variants—such as the XBB.1.5 subvariant—that risk remains, but COVID-19 vaccination may help, according to a research letter published in JAMA Network Open.

The research letter examined nearly 24,000 adult patients at a large California health system with at least one confirmed COVID-19 diagnosis. Accounting for both vaccinated and unvaccinated patients, researchers found that the combined risk of diabetes around the time of SARS-CoV-2 infection was 2.1%, with a significant majority, 70%, occurring after COVID-19 infection compared with 30% prior to exposure.

But vaccination prior to infection appears to diminish the likelihood of diabetes with 1% of patients receiving new diabetes diagnoses and about an equal proportion of patients receiving the diagnosis before versus after the infection. For patients who had not yet received a vaccine at time of infection, the rate was nearly triple—2.7%, and a much larger portion of 74% occurred after infection versus 26% happening before exposure.

“We’re entering a different phase of how we deal with COVID, particularly in the United States. We’re moving into a normal chronic phase of the pandemic where we’re not acutely dealing with it in the same way,” said Alan C. Kwan, MD, MSc, the study’s lead author and a cardiologist at Smidt Heart Institute at Cedars-Sinai Medical Center.

“However, COVID infections will continue to occur, and at this point, we still don’t understand the effects on the body,” Dr. Kwan said. “What we’re trying to do is prepare for this next phase of the pandemic where we understand the population level effects of COVID infection.”

During an AMA interview, Dr. Kwan shared what physicians can do to help their patients.
Screen for type 2 diabetes

Type 2 diabetes is an “important cardiovascular risk factor that people may be unaware of since the onset of diabetes may be asymptomatic,” Dr. Kwan said. “Having an increased awareness for diabetes as well as adverse cardiovascular events in general after COVID infection is important.”

“If a patient is having new symptoms after a COVID-19 infection, it may be reasonable to screen for diabetes,” he said. While this won’t impact overall guidelines on type 2 diabetes screening, “at least from our data, I would be more inclined if somebody told me they were having frequent urination or new onset fatigue to send for a hemoglobin A1C and double-check that nothing had changed.”

The AMA’s Diabetes Prevention Guide supports physicians and health care organizations in defining and implementing evidence-based diabetes prevention strategies. This comprehensive and customized approach helps clinical practices and health care organizations identify patients with prediabetes and manage the risk of developing type 2 diabetes, including referring patients at risk to a National Diabetes Prevention Program lifestyle-change program based on their individual needs.

Encourage COVID-19 vaccination

“I still do not think of COVID as just another cold or just another seasonal virus,” Dr. Kwan said. “We don’t know enough to really say one way or another, but at least the data that’s come out suggests that the effects on your health are far more significant than that, and therefore it becomes more important to try to prevent infection in the first place.”

“As far as trying to prevent infection, vaccination is such an important measure—it is a globally important intervention that has saved tens of millions of lives,” he said. “In addition to the possibility of making it so you don’t catch COVID, it may protect you from some of these bad health effects afterwards.”

Don’t ignore cardiovascular symptoms

“Taking cardiovascular health and cardiovascular complaints seriously in the post-COVID infection population—which is going to include most of us—is important even if the patients are young and otherwise healthy,” Dr. Kwan said. “When you see somebody who is relatively young, previously healthy, who has new symptoms after a COVID infection, it can be hard to think about just because we don’t have the adequate knowledge base yet.”

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“There are a number of different post-COVID conditions that can occur. For example, within long COVID is a relatively broad spectrum, which we don’t fully understand,” he said. “We have seen increases in postural orthostatic tachycardia syndrome and we do see issues with blood clots and cardiovascular events after COVID as well.”