

# Heart function rebounds for kids with COVID-linked MIS-C

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(HealthDay)—A rare and serious inflammatory condition called MIS-C

can strike kids weeks after they've recovered from their COVID infection.

But now there's good news for parents: Children tend to recover completely from any [heart](#) injury within three months of falling ill, a new study from the Children's Hospital of Philadelphia (CHOP) shows.

"Although it can be quite serious and very, very rarely even fatal, the vast majority of kids recover," said Dr. Kevin Friedman, a pediatric cardiologist at Boston Children's Hospital who was not involved in the study. "Their hearts recover. Recovery is pretty much the norm, over time."

Early in the pandemic, doctors found that COVID-infected children sometimes fall prey to a delayed side effect called MIS-C ([multi-system inflammatory syndrome in children](#)).

Children typically develop MIS-C about four to six weeks after their COVID infection. The syndrome causes profound inflammation throughout the body that affects the major organs.

MIS-C happens in 1 of every 3,000 COVID patients, said Dr. Pei-Ni Jone, a pediatric cardiologist with Children's Hospital Colorado. Jone also is researching the heart effects of MIS-C, but was not involved in the new study.

In more than 4 of 5 MIS-C cases, the heart is one of the organs affected by this inflammation, the CHOP researchers said in background notes.

"The heart is the organ that's affected the most" by MIS-C, Jone said, noting that decreased heart function can sometimes lead to kidney or liver injury as well.

Half of children with MIS-C suffer from decreased function of their left ventricle, the heart chamber that pumps oxygenated blood out to the body.

"The symptoms can be anything from none to severely low blood pressures and a very sick child who's in an ICU needing a breathing tube and heart medicines to support their heart," Friedman said.

To see whether these kids recover, the CHOP doctors compared 60 children hospitalized with COVID-related MIS-C to a group of 60 healthy kids.

[EKG](#) readings showed that heart function in the MIS-C children improved quickly within the first week. By three months, they were essentially back to normal. MRIs taken of several kids revealed no lasting scarring or damage to their hearts.

The Philadelphia findings jibe with what Jone has seen in her MIS-C patients in Colorado.

"They all recover by about six weeks after their illness," Jone said. "Out of 150 patients we've seen here, only two have had persistent ventricular dysfunction that required some heart medicine, but then after three months they've all recovered and they're off the medicine now."

Kids with MIS-C are typically treated with anti-inflammatory drugs, Friedman and Jone said. Doctors might add a heart medication if needed.

"The faster you can dampen the inflammation, the better outcome they have," Jone said.

Ultrasound and EKG scans are employed to monitor children's heart

health during their treatment and recovery, the doctors said.

The study's researchers, led by senior author Dr. Anirban Banerjee, an attending cardiologist with CHOP's Cardiac Center, said that [children](#) with MIS-C should be able to return to sports within three to four months, and Jone concurs.

"These patients at three months are all completely recovered, and they've had stress tests. We exercise them to make sure their heart is completely normal," Jone said.

Of course, there's one way to keep your kids from falling ill with MIS-C in the first place, Friedman and Jone said—get them vaccinated.

Jone noted that vaccine-associated [myocarditis](#) happens in 1 out of every 100,000 people who get the jab, while 1 in every 3,000 kids with COVID will develop MIS-C.

The new study was published Jan. 19 in the *Journal of the American Heart Association*.

**More information:** Johns Hopkins Medicine has more about [MIS-C](#).

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