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Health officials, AAP urge COVID-19 vaccination despite rare myocarditis cases

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Editor's note:*For the latest news on COVID-19, visit http://bit.ly/AAPNewsCOVID19.*

Federal health officials are adding new clinical guidance on the potential for myocarditis after COVID-19 vaccination for adolescents and young adults, while continuing to urge youths to get vaccinated.

"The facts are clear: this is an extremely rare side effect, and only an exceedingly small number of people will experience it after vaccination," health officials and medical organizations said in a statement Wednesday. "Importantly, for the young people who do, most cases are mild, and individuals recover often on their own or with minimal treatment. In addition, we know that myocarditis and pericarditis are much more common *if you get COVID-19*, and the risks to the heart from COVID-19 infection can be more severe."

The statement was signed by leaders of the Department of Health and Human Services, the Centers for Disease Control and Prevention (CDC), the AAP and other medical and public health groups. It followed an in-depth discussion by the CDC's Advisory Committee on Immunization Practices (ACIP) on myocarditis cases after COVID-19 vaccination.

Myocarditis/pericarditis cases after vaccination

In total, 1,226 cases of myocarditis or pericarditis have been reported to the Vaccine Adverse Event Reporting System (VAERS) after administration of about 300 million doses of mRNA COVID-19 vaccines from Pfizer-BioNTech and Moderna. However, not all of them have been verified.

The cases have been seen predominantly in male adolescents and young adults. They occur more after the second dose than the first and typically appear within a week of vaccination, according to Tom Shimabukuro, M.D., M.P.H., M.B.A., deputy director of the CDC's Immunization Safety Office.

Of 484 reports in people under age 30, 323 have met CDC case definition and 148 are under review. The most common symptoms were chest pain, elevated cardiac enzymes, ST or T wave changes, dyspnea and abnormal echocardiography/imaging.

Of the 323 confirmed cases, 309 patients were hospitalized and 295 of them have been discharged. About 79% of those discharged have recovered. Nine remain hospitalized, and data were not available for five.

Cases of myocarditis/pericarditis within seven days after a second dose are higher than what would otherwise be expected for adolescents and young adults, according to CDC experts.

The CDC also looked at the reporting rate of myocarditis/pericarditis in relation to the number of doses administered. For every 1 million second doses of COVID-19 vaccine, there have been about 67 reported cases in males ages 12-17 years, 56 cases in males ages 18-24 years and 20 cases in males ages 25-29 years, according to VAERS data including both confirmed and unconfirmed cases The rates for females were nine, six and three cases, respectively.

COVID-19 vaccine benefits

CDC experts also highlighted the benefits of the COVID-19 vaccines in preventing a potentially deadly disease. Since the start of the pandemic, at least 7.7 million people ages 12-29 years have been diagnosed with COVID-19 and 2,767 have died, according to the CDC. There also have been just over 4,000 cases of multisystem inflammatory syndrome in children following a SARS-CoV-2 infection.

In females ages 12-17 years, the CDC estimates every 1 million second doses could prevent 8,500 infections, 183 hospitalizations and one death in females. Every 1 million second doses would prevent 5,700 infections, 215 hospitalizations and two deaths in 12- to 17-year-old males.

"There are no alternatives to mRNA vaccines for the foreseeable future in adolescents," said Megan Wallace, Dr.P.H., M.P.H., from CDC's National Center for Immunization and Respiratory Diseases. "Vaccination of students offers an additional layer of protection against COVID-19 and can be important tool to return to normal. Higher levels of vaccination coverage can lead to less community transmission, which can protect against development and circulation of emerging variants."

ACIP members said they felt the benefits of COVID-19 vaccination outweigh the risks of myocarditis/pericarditis and applauded the national surveillance systems that picked up on the cases.

"Folks should have confidence in the systems that are in place and our processes," said Grace M. Lee, M.D., M.P.H., co-chair of ACIP's Vaccine Safety Technical Work Group and associate chief medical officer for practice innovation at Stanford Children's Health. "There is continuous and ongoing monitoring of vaccine safety for all vaccinations in the U.S."

Clinical recommendations

The FDA plans to add warnings to COVID-19 fact sheets for clinicians and patients explaining the small risk of myocarditis or pericarditis.

The CDC recommends people with a history of myocarditis or pericarditis who have recovered still get vaccinated. People who have pericarditis after the first dose of COVID-19 vaccine can receive a second

dose after their symptoms resolve. Those who experience myocarditis after the first dose could consider getting the second dose under certain circumstances, if the heart has recovered. Patients experiencing either condition after the first dose should discuss additional vaccination with their clinician.

Resources

- The AAP will hold a town hall on COVID-19 at 7 p.m. CDT on June 24.
- CDC guidance for clinicians on myocarditis after COVID-19 vaccination
- Information from the CDC on clinical considerations for COVID-19 vaccines
- CDC COVID vaccination toolkit for pediatricians
- AAP guidance on providing COVID-19 vaccines to adolescents
- Information for parents from HealthyChildren.org on myocarditis after vaccination
- Information for parents from HealthyChildren.org on preparing children and adolescents for COVID-19 vaccination