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**New study: 133x risk of myocarditis after COVID vaccination**

**Comparisons with myocarditis rates following infection now irrelevant as vaccination no longer prevents infection.**

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A recent study published on January 25, 2022, on JAMA Network, has shown that the risk of myocarditis following mRNA COVID vaccination is around 133 times greater than the background risk in the population.

The study, conducted by researchers from the U.S. Centers for Disease Control (CDC) as well as from several U.S. universities and hospitals, examined the effects of vaccination with products manufactured by Pfizer-BioNTech and Moderna. The study’s authors used data obtained from the CDC’s VAERS reporting system which were cross-checked to ensure they complied with CDC’s definition of myocarditis; they also noted that given the passive nature of the VAERS system, the number of reported incidents is likely to be an underestimate of the extent of the phenomenon.

1626 cases of myocarditis were studied, and the results showed that the Pfizer-BioNTech product was most associated with higher risk, with 105.9 cases per million doses after the second vaccine shot in the 16 to 17 age group for males, and 70.7 cases per million doses after the second shot in the 12 to 15 age group for males. The 18 to 24 male age group also saw significantly higher rates of myocarditis for both Pfizer’s and Moderna’s products (52.4 and 56.3 cases per million respectively).

The study found that median time to symptom onset was two days, and that 82 percent of cases were in males, consistent with previous studies. Around 96 percent of affected people were hospitalized, with most treated with nonsteroidal anti-inflammatory drugs; 87 percent of those hospitalized had resolution of symptoms by time of discharge.

At the time of data review, two reports of death in people younger than 30 years of age with potential myocarditis still remained under investigation and were not included in the case counts.

Among the reported symptoms were: chest pain, pressure, or discomfort (89%), shortness of breath (30%), abnormal ECG results (72%), and abnormal cardiac MRI findings (72%).

The study’s authors noted that myocarditis following vaccination appeared to resolve more swiftly than in typical viral cases; however, given that vaccination is no longer considered a reliable way in which to avoid COVID infection, it is unclear whether this has any specific relevance to the cost-benefit analysis of COVID vaccination, especially considering the low risk of complications following coronavirus infection for the age group most at risk for heart-related complications following vaccination.

Given the plethora of studies confirming a link between vaccination and myocarditis, the CDC has commenced active surveillance of adolescents and young adults to monitor their progress following heart-related incidents after vaccination. Long-term outcome data, however, are not yet available.

In the meantime, the American Heart Association and the American College of Cardiology advise that people with myocarditis should refrain from competitive sports for three to six months, and only resume strenuous exercise after normal ECG and other test results are obtained. In addition, they advise that further mRNA vaccine doses should be deferred.

In conclusion, the study’s authors note that myocarditis is a “rare but serious adverse event that can occur after mRNA-based COVID-19 vaccination … [and that] the risk of myocarditis after receiving mRNA-based COVID-19 vaccines was increased across multiple age and sex strata and was highest after the second vaccination dose in adolescent males and young men. This risk should be considered in the context of the benefits of COVID-19 vaccination.”