

Adenoviral-based COVID-19 vaccines may up short-term cardiovascular risk

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Adenoviral-based COVID-19 vaccines may be associated with increased

incidence of myocardial infarction and pulmonary embolism among people aged younger than 75 years, according to a study published online Aug. 23 in the *Annals of Internal Medicine*.

Jérémie Botton, Pharm.D., Ph.D., from the French National Agency for the Safety of Medicines and Health Products in Paris, and colleagues examined the short-term risk for severe cardiovascular events (excluding myocarditis and pericarditis) after COVID-19 vaccination among 46.5 million adults aged younger than 75 years in France. The relative incidence of each cardiovascular event was estimated in the three weeks after vaccination versus other periods.

The researchers found that neither the Pfizer-BioNTech nor the Moderna vaccine was associated with severe cardiovascular events. Acute myocardial infarction and [pulmonary embolism](#) were seen in the second week after vaccination in association with the first dose of the Oxford-AstraZeneca vaccine (relative incidences, 1.29 and 1.41, respectively). There was the suggestion of an association with myocardial infarction in the second week after a single dose of the Janssen vaccine (relative incidence, 1.75).

"Although our findings about the short-term cardiovascular safety profile of mRNA-based vaccines are reassuring overall, there is evidence of a moderate association with pulmonary embolism and [acute myocardial infarction](#) for the Oxford-AstraZeneca vaccine and a potential risk for [myocardial infarction](#) with the Janssen vaccine that would warrant confirmation in other studies," the authors write.

More information: Jérémie Botton et al, Risk for Myocardial Infarction, Stroke, and Pulmonary Embolism Following COVID-19 Vaccines in Adults Younger Than 75 Years in France, *Annals of Internal Medicine* (2022). [DOI: 10.7326/M22-0988](https://doi.org/10.7326/M22-0988)

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