

Myocarditis and pericarditis after COVID-19 vaccination

In rare incidents, the heart conditions of myocarditis and pericarditis (inflammation in the heart) have been reported following COVID-19 **infection** and following **immunization** with a COVID-19 mRNA vaccine. The risk for these complications is greater following infection than after vaccination among males and females and in all age groups. A [recent U.S. study](#) found that there is a 2 to 8 times greater risk of heart complications after an infection than compared to after a vaccination. Therefore, COVID-19 vaccination is the best way to protect against COVID-19 and rare heart complications.

Where there are cases of myocarditis and pericarditis, most have occurred in males under the age of 30 years and are more commonly reported one week after a second dose of an mRNA COVID-19 vaccine. Data on the risk of myocarditis and pericarditis after a booster dose is limited but appears to be lower than the second dose of the primary series, but higher than after the first dose. There have been case reports of myocarditis and/or pericarditis following the administration of [Novavax Nuvaxovid](#) (NACI, PDF) however, current information is insufficient to determine a causal relationship with the vaccine.

Of the reported cases of myocarditis and pericarditis in Ontario, the illnesses have been mild, the individuals responded well to treatment and their symptoms improved quickly.

If you experience chest pain, trouble breathing, or an irregular heartbeat in the days after a vaccination, seek medical attention. As a precaution and until more information is available, further doses of an mRNA COVID-19 vaccines should be deferred among individuals who have experienced myocarditis (with or without pericarditis) within the 6 weeks following a previous dose of an mRNA COVID-19 vaccine in most circumstances ([NACI](#), PDF).

In Ontario, the Pfizer-BioNTech Comirnaty COVID-19 vaccine is recommended for individuals under 30 years of age due to a lower observed risk of myocarditis/pericarditis as compared with Moderna Spikevax COVID-19 vaccine ([PHO](#), PDF).

Anyone 12 to 29 years old who wishes to receive Moderna Spikevax may do so with informed consent. Moderna Spikevax may also be considered as a three-dose primary series for children ages 6 to 11 years old.

Vaccination is highly recommended as the benefits outweigh the potential risks.

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