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**FREQUENTLY ASKED QUESTIONS**

# Myocarditis and Pericarditis After Covid-19 Vaccines

This guide was made for teens, their guardians, and young adults. We used information from the National Advisory Committee on Immunization (NACI), the Canadian Paediatric Society (CPS), the U.S. Centers for Disease Control and Prevention (CDC), and government data from Canada, Israel, and the United States.

**What are myocarditis and pericarditis?**

Myocarditis is inflammation of the heart muscle (myocardium). Pericarditis is inflammation of the sac (the pericardium) that goes around the heart. Inflammation happens when your immune system is activated. This can lead to reactions including swelling or pain in any part of the body.

**What causes myocarditis and pericarditis?**

Myocarditis and pericarditis can occur when your immune system is activated because of infections, including Covid-19. They can also happen because of injuries, medications, or other health problems. Healthcare professionals know about these conditions, and how to treat them.

**What do we know about myocarditis and pericarditis after Covid-19 vaccines?**

Myocarditis and pericarditis have happened after mRNA Covid-19 vaccines (Moderna or Pfizer). Most cases have been mild. Early data suggests that these conditions occur more often after dose 2. They are more common in males. They are most common in people younger than 30. People who have heart problems do not seem to be at higher risk of these conditions.

**How often do myocarditis or pericarditis happen after a Covid-19 vaccine?**

The U.S. Centers for Disease Control estimate that from 2 to 69 out of every 1 million males getting a second dose of Moderna or Pfizer will develop myocarditis or pericarditis (0.0002% to 0.0069%). The CDC estimates that from 1 to 10 out of every 1 million females getting a second dose will develop these conditions (0.0001% to 0.0010%). Other data from Israel suggests that the chances may be up to 330 in 1 million (about 0.03%) for young males getting a second dose. Until we have more data from Canada, these are the best estimates available.

**What are the symptoms of myocarditis or pericarditis?**

Symptoms can include chest pain (most common), feeling short-of-breath, and fluttering or pounding of your heart. Symptoms usually start in the first 7 days after a Covid-19 vaccine. Most cases have happened after dose 2.

**How are myocarditis and pericarditis diagnosed and treated?**

Blood tests and an electrocardiogram (ECG) can be used to quickly diagnose myocarditis and pericarditis. The usual treatments are rest and anti-inflammatory medications. Some people with these conditions have been treated in hospital. Experts do not believe that these conditions will have long-term effects.

## Should I wait to get vaccinated until there is more information about myocarditis and pericarditis?

No. Myocarditis and pericarditis are rare and treatable. In contrast, Covid-19 can cause serious illness and have long term effects (like tiredness and shortness-of-breath). As a result, the benefits of getting vaccinated are greater than the risks. Being fully vaccinated with 2 doses will give you the best protection from Covid-19, including more contagious variants like Delta. Being fully vaccinated will lower your chances of spreading Covid-19. Being fully vaccinated will let you get safely back to many of the activities you miss.

Almost all new Covid-19 infections are happening in people who are not fully vaccinated. This includes teens and younger adults. Experts believe that most people who do not get vaccinated will eventually be infected with Covid-19.

## What should I do if I notice symptoms?

If your symptoms are mild, you should book a visit with your healthcare team within 24 hours.

If you have severe symptoms, symptoms that get in the way of doing your normal activities, or your symptoms are getting worse, you should see a healthcare provider right away.

People with heart or lung disease can become very sick with myocarditis and pericarditis. If you have heart or lung disease, and you notice these symptoms, see a healthcare provider right away.

## If I get myocarditis or pericarditis after dose 1, should I still get dose 2?

Vaccine experts say that people who develop myocarditis or pericarditis after dose 1 should wait to get dose 2 until we know more.

*NACI's Recommendations on the Use of Covid-19 Vaccines are updated often. For the most up-to-date information, visit: <https://www.canada.ca/en/public-health/services/immunization/national-advisory-committee-on-immunization-naci/recommendations-use-covid-19-vaccines.html>*

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["I got AstraZeneca for my first dose, which vaccine should I get for my second?" \(6-pager\)](#)

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<https://www.canada.ca/content/dam/phac-aspc/documents/services/immunization/national-advisory-committee-on-immunization-naci/recommendations-use-covid-19-vaccines/recommendations-use-covid-19-vaccines-en.pdf>  
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**Focused Communication** is: Andrea Chittle, MD; Department of Family Medicine, McMaster University. Kelly Grindrod, BScPharm, PharmD, MSc; School of Pharmacy, University of Waterloo. Noah Ivers, MD, PhD; Women's College Hospital-University of Toronto. Samira Jeimy, MD, PhD, FRCP; Division of Clinical Immunology and Allergy, Department of Medicine, Western University. Tara Kiran, MD, MSc, CCFP, FCFP; Department of Family and Community Medicine, St. Michael's Hospital, University of Toronto. Kate Miller, MD; Department of Family Medicine, McMaster University. Menaka Pai, MSc, MD, FRCP; Department of Medicine, McMaster University. Adrian Poon, BA; University of Waterloo. Sabina Vohra-Miller, MSc; Unambiguous Science. Kristen Watt, BScPhm, RPh. Holly Witteman, PhD; Department of Family & Emergency Medicine, Université Laval. Samantha Yamine, PhD; Science Sam Media.

Reviewed by: Rosemary Killeen, BScPhm, PGCert, RPh; School of Pharmacy, University of Waterloo. Lillian Lai, MHA, MD, Paediatric Cardiologist, Children's Hospital of Eastern Ontario and Assistant Professor at the University of Ottawa.

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