

First and Second Booster Shots (Third and Fourth Doses) for COVID-19

What is a booster shot? And why do I need one?

- A booster shot is an additional dose of a COVID-19 vaccine that is given after someone completes a primary series (which is the first one or two doses of a COVID-19 vaccine).^{1,2} A primary series of three doses is recommended for moderately to severely immunocompromised individuals.^{1,2}
- Research suggests that protection against COVID-19 infection from vaccines decreases over time.^{3,4}
- **Booster shots are given to restore protection against a disease that may have decreased over time** to sufficient levels.^{1,3} They help maintain protection against serious COVID-19 outcomes (including hospitalization and death) and reduce the risk of developing long COVID (or post COVID-19 condition).⁵
- Additionally, the original strain of the COVID-19 virus has undergone mutations, or *changes*, which has caused variants like Beta, Delta, and Omicron to emerge.⁶ **A primary series (the first two doses of a COVID-19 vaccine for most people)** is less effective against variants of COVID-19 compared to the original virus strain, which is another reason why booster shots are recommended.⁷
- Staying up to date with vaccines greatly reduces your risk of getting seriously ill from COVID-19 and reduces your risk of developing Long COVID-19.⁸

Did you know? *Needing booster shots or subsequent doses of a vaccine is common for other viruses that Canadians routinely receive, such as influenza (the flu), Hepatitis A and B, and Human Papilloma Virus (HPV) in Canada.*⁹



How effective is the first booster shot?

- The first two doses of a COVID-19 vaccine provided much lower protection against the Omicron variant, compared to other variants. **A booster shot, or third dose, was needed to reach similar levels of protection against Omicron.**^{10,11}
 - Studies of Pfizer and Moderna vaccines showed that three doses of an mRNA vaccine achieved similar levels of protection against the Omicron variant that two doses offered against the original strain of the virus.¹²
 - Vaccine effectiveness against severe disease from Omicron is about 90% after the first booster shot and remains above 70% for up to 20 weeks.¹³⁻¹⁶
 - According to vaccine effectiveness data collected in Canada between May and June of 2022, individuals who received their first two doses plus their first booster shot had a 4X lower rate of hospitalization and 6X lower rate of death compared to unvaccinated individuals.¹⁷

How effective is the second booster shot?

- Evidence on the effectiveness of a second booster shot is limited.¹⁸
- Small-scale research studies suggest that receiving a second booster shot provides more protection against COVID-19, including against severe illness, compared to receiving a first booster shot only.¹⁸ However, the duration of protection is currently unknown.¹⁹

Who can receive a booster shot?

- All eligible Canadians 5 years of age or older are recommended to receive a first booster dose.
- All eligible Canadians 18 years of age or older are recommended to receive a second booster dose.
- For a summary of the booster recommendations for Canadians, please see the summary table below:

Summary Table of Booster Dose Recommendations (adapted from the Government of Canada^{2,20,21})

First Booster Recommendations		
Age	Eligible?	Products & Dosage
70+ years	Yes	Moderna (100mcg) or Pfizer (30 mcg) *
30 to 69 years	Yes	Moderna (50mcg) or Pfizer (30mcg) *
18 to 29 years	Yes	Pfizer (30mcg) is preferred *
12 to 17 years	Yes	Pfizer (30mcg) is preferred
5 to 11 years	Yes	Pfizer (10mcg)
6 months to 5 years	Not at this time.	N/A

Second Booster Recommendations		
Age	Eligible?	Products & Dosage
70+	Yes	Moderna (50mcg) or Pfizer (30mcg) may be considered; Moderna (100mcg) possible based on clinical discretion*
30-69	Yes	Either Moderna (50mcg) or Pfizer (30mcg)*
18-29	Yes	Pfizer (30mcg) is preferred*
12-17	Not at this time.	N/A
5-11	Not at this time.	N/A
Under 5	Not at this time.	N/A

* For those aged 18+, non-mRNA booster doses can be used if mRNA vaccines are contraindicated or not desired.²² Novavax Nuvaxovid may be offered.²² Johnson & Johnson can be offered as a first booster if all other vaccines are contraindicated.²² Medicago Covifenz is not authorized to be used as a booster at this time.^{2,22}

Who is recommended to receive a second booster shot?

Second booster shots are being offered at an interval of five months after someone receives their first booster shot.²

High-risk individuals who should get their second booster dose as soon as possible include³:

- Individuals aged 60 and over
- First Nation, Inuit and Métis individuals and their non-Indigenous household members aged 18 and over
- Residents of a long-term care home,

retirement home, or Elder Care Lodge and older adults living in other congregate settings that provide assisted-living and health services; and

- Individuals aged 12 and over who are moderately to severely immunocompromised.

Other populations that can also receive a second booster shot include:

- Individuals aged 18 and over

Most healthy individuals ages 18 to 59 years will continue to have strong protection against COVID-19 for more than six months after receiving their first booster dose.³ However, expanding second booster dose eligibility will allow Canadians to make an informed decision based on their personal circumstances (for example, your risk of getting or spreading COVID-19 if you are a frontline healthcare worker or caregiver of those at increased risk of severe illness and death).^{3,23}

Do I still need to get a booster shot if I've already had COVID-19?

- Yes, you are recommended to stay up to date with your COVID-19 vaccines, including booster doses, even after being infected with COVID-19.⁵
- This is recommended to help improve your immune response and provide longer-lasting protection against re-infection with COVID-19.⁵
- Health Canada recommends that you receive your booster dose **6 months after you tested positive for COVID-19 or started having symptoms.**⁵ However, shorter intervals of 3 months between infection and a booster shot may be warranted in certain cases.⁵

What is different about the new Moderna Spikevax Bivalent vaccine that was recently approved by Health Canada?

- The new bivalent COVID-19 vaccine by Moderna offers more targeted protection against the Omicron variant.^{18,24} It can be used as a booster dose in individuals 18 years of age and older at least four months after

completing their primary series or receiving a previous booster dose.²⁵

- All other COVID-19 vaccines are monovalent – meaning they were designed to defend against the original strain of the COVID-19 virus only.^{18,24}
- Bivalent vaccines are designed to provide protection against two different types, or *variants*, of a virus.²⁴ The new Moderna Spikevax Bivalent vaccine is designed to provide protection against the original strain of the virus as well as the highly contagious Omicron variant and its subvariants.²⁴
- The new bivalent vaccine is essentially a mixture of the original vaccine (which targets the original strain of the virus) and a new vaccine (which targets the Omicron variant), which means this vaccine can provide protection against both.²⁴
- A similar process is done for the flu shot, which is a mixture of vaccines that target different variants of the flu virus.²⁴
- It is hoped that this bivalent vaccine can help prevent a possible surge in COVID-19 cases that could overwhelm the health-care system as winter approaches and people spend more time indoors.²⁶

How many booster shots will I end up needing and how often?

- It is unclear how regularly Canadians will need to receive COVID-19 shots or boosters to maintain protection against the virus, its variants, and serious illness at this time.
- The latest announcements from the Ontario government regarding COVID-19 vaccine recommendations and eligibility can be found here: <https://covid-19.ontario.ca/covid-19-vaccines-ontario>
- For the most up to date information on current Variants of Concern, we recommend you visit the following websites:
 - Public Health Ontario website: <https://www.publichealthontario.ca/en/diseases-and-conditions/infectious-diseases/respiratory-diseases/novel-coronavirus/variants>

- Health Canada website:
<https://health-infobase.canada.ca/covid-19/epidemiological-summary-covid-19-cases.html#VOC>

Where can I get a booster shot?

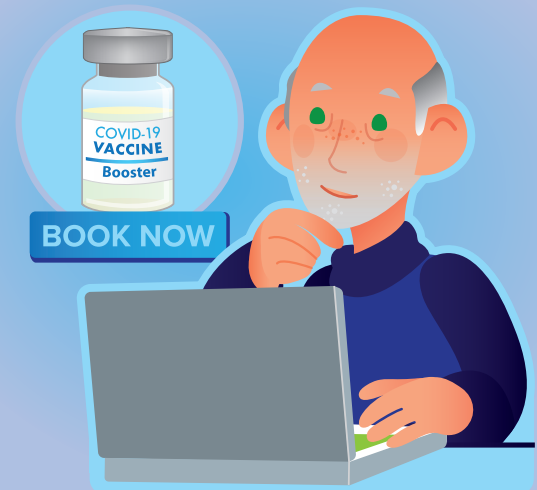
Eligible individuals ages 6 months and older can get a vaccine appointment through the [COVID-19 vaccination portal](#) or by calling the Provincial Vaccine Contact Centre at 1-833-943-3900.³ Eligible individuals can also book an appointment directly through public health units using their own booking system, participating primary care providers and paediatricians, as well as at [participating pharmacies](#) and Indigenous-led vaccination clinics.³

Public health units may also offer additional options for vaccination of children aged six months to under five years old, such as walk-in clinics, which will not be on the COVID-19 vaccination portal.³ For information on local options, please visit your [local public health unit website](#).³

Eligible individuals ages 5 and older can book an appointment for a vaccine dose¹:

- at [participating pharmacies](#)
- through the [provincial](#) booking system
- by calling the Provincial Vaccine Contact Centre at 1-833-943-3900 (TTY for people who are deaf, hearing-impaired, or speech-impaired: 1-866-797-0007)
- with the [GO-VAXX bus](#)
- directly through [public health units](#) that use their own booking system
- through Indigenous-led vaccination clinics
- at select primary care settings
- at hospital clinics (visit your local hospital or public health unit for booking details, if available in your region)
- through mobile or pop-up clinics, (visit your local public health unit website for details, if available in your region)

- at your retirement home, long-term care home, elder care lodge, or congregate living setting (public health units will work with the homes to give you your shot within your home or at a mobile clinic)



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