

Ministry of Health

COVID-19 Vaccine Booster Recommendations

Version 8.3 July 22, 2022

Highlights of changes

- Expanding eligibility for second booster doses to immunocompromised individuals aged 12-17 (page 15).

This guidance provides basic information only. This document is not intended to provide or take the place of medical advice, diagnosis or treatment, or legal advice.

- Please check the Ministry of Health (MOH) [COVID-19](#) website regularly for updates to this document, mental health resources, and other information, including the [COVID-19 Vaccine Administration Guidance](#).

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Background

In response to the evolving SARS-CoV-2 virus and variants of concern, the Ministry is recommending booster doses of COVID-19 vaccines to provide increased protection across the population.

Per the [Canadian Immunization Guide \(CIG\)](#), the intent of a booster dose is to restore protection that may have decreased over time to a level that is no longer deemed sufficient in individuals who initially responded adequately to a complete primary vaccine series. Doses of the COVID-19 vaccines after the primary series are described as booster doses. However, over time, the nomenclature of this additional dose could evolve as the optimal number of doses in a primary series is better understood. Evidence is emerging that vaccine effectiveness against infection and COVID-19 disease decreases with time, and the effectiveness of currently authorized COVID-19 vaccines against the Omicron variant and sub-variants is decreased. Therefore, booster doses are recommended for eligible individuals, to obtain stronger protection.

Evidence from clinical trials suggests that booster doses of mRNA vaccines given six months after the primary series elicited a robust immune response. Real world data suggests that a booster dose provides good short-term vaccine effectiveness and has a safety profile similar to the second dose of the vaccine. Emerging evidence suggests that vaccine effectiveness against infection/symptomatic disease for Omicron from a first booster of mRNA vaccine decreases over time since vaccination ([NACI, 2022](#)). Serological testing is not recommended before or after COVID-19 vaccination ([CIG, 2022](#)). See the [CIG](#) for more information on the evidence, safety and immunogenicity of COVID-19 booster doses.

The evidence on the risk of myocarditis/pericarditis after a booster dose of an mRNA vaccine is limited, but appears to be lower than the already rare risk after the second dose of the primary series but higher than after the first dose ([NACI, 2021](#)). Information for subsequent immunization in individuals who experienced myocarditis (with or without pericarditis) within 6 weeks of receiving a previous dose of an mRNA COVID-19 vaccine is available in the [COVID-19 Vaccine Chapter of the CIG](#).

The National Advisory Committee on Immunization (NACI), the Ontario Immunization Advisory Committee (OIAC), the Ministry of Health (MOH), and Public Health Ontario (PHO) are closely following the research on the safety and effectiveness of additional doses. Recommendations will be re-examined on an ongoing basis as new data emerges and any updates will be issued as part of Ontario's ongoing COVID-19 vaccination program as further evidence becomes available.

See the [Staying Up to Date with COVID-19 Vaccines: Recommended Doses](#)

Guidance for vaccination schedules and more information on recommended doses for individuals who received COVID-19 vaccines not authorized by Health Canada.

For information on the timing of booster doses following SARS-CoV-2 infection and booster dose post-vaccination observation periods, see the MOH [COVID-19 Vaccine Administration](#) guidance.

Recommended COVID-19 Vaccine Products

Individuals are recommended to receive an mRNA vaccine for their primary series and booster dose(s), due to the strong protection offered and well established safety and effectiveness data ([CIG, 2022](#)). People who experienced a severe immediate allergic reaction after a dose of an mRNA COVID-19 vaccine can safely receive future doses of the same or another mRNA COVID-19 vaccine after consulting with an allergist/immunologist or another appropriate physician. See [the Canadian Immunization Guide](#) for more information.

Booster dose(s) of Novavax may be offered to individuals without contraindications who are not able or willing to receive an mRNA vaccine. As part of informed consent, individuals who are not able or willing to receive an mRNA vaccine should be made aware of the long-term effectiveness and safety data that is available for the mRNA vaccine products as compared to the other authorized COVID-19 vaccines and that this vaccine is not currently authorized for use as a booster dose in Canada ([CIG, 2022](#)).

Booster dose(s) of a viral vector vaccine should only be offered when all other Health Canada authorized COVID-19 vaccines are contraindicated. Informed consent for a viral vector vaccine should include discussion about the increased risk of Vaccine-Induced Immune Thrombotic Thrombocytopenia (VITT), Capillary Leak Syndrome (CLS), and Guillain-Barre syndrome (GBS) following viral vector COVID-19 vaccines and the very limited evidence on the use and effectiveness of an additional dose of viral vector COVID-19 vaccine. ([CIG, 2021](#)).

The Medicigo COVID-19 vaccine is not currently authorized for use as booster dose(s) in Canada. Informed consent when administering a Medicigo primary series should include mention that this vaccine is not currently authorized for use as a booster dose in Canada. There are no data available on the use of Medicigo as a booster dose, following either a homologous or heterologous schedule ([CIG, 2022](#)). NACI will assess evidence on the use of Medicigo vaccine as a booster dose as information becomes available and provide additional guidance as needed.

Table 1: COVID-19 immunization series and recommended intervals for individuals 6 months of age and older

Age	Recommended Intervals ¹	Minimum Intervals ²
6 months to 5 years (Moderna)	<p>Primary Series</p> <ul style="list-style-type: none"> • 1st dose • 2nd dose, 8 weeks after 1st dose <p>Booster Doses - Not eligible</p>	<p>Primary Series</p> <ul style="list-style-type: none"> • 1st dose • 2nd dose, 28 days after 1st dose <p>Booster Doses - Not eligible</p>
5 to 11 years (or 6-11 years, Moderna)	<p>Primary Series</p> <ul style="list-style-type: none"> • 1st dose • 2nd dose, 8 weeks after 1st dose <p>Booster Doses - Not eligible</p>	<p>Primary Series</p> <ul style="list-style-type: none"> • 1st dose • 2nd dose, 19 days (Pfizer-BioNTech) or 21 days (Moderna) after 1st dose <p>Booster Doses - Not eligible</p>

¹ There is emerging evidence that longer intervals between the first and second doses of COVID-19 vaccines result in more robust and durable immune response and higher vaccine effectiveness and may be associated with a lower risk of myocarditis and/or pericarditis in adolescents and young adults. See the [Canadian Immunization Guide](#) for more information..

² NACI's Minimum Interval Recommendation ([Table 1: Immunization schedule for a primary series, by COVID-19 vaccine](#)).

Age	Recommended Intervals ¹	Minimum Intervals ²
12 to 17 years	<p>Primary Series</p> <ul style="list-style-type: none"> • 1st dose • 2nd dose, 8 weeks after 1st dose <p>Booster Doses</p> <ul style="list-style-type: none"> • 1st booster dose, 6 months after 2nd dose • 2nd booster dose – not eligible 	<p>Primary Series</p> <ul style="list-style-type: none"> • 1st dose • 2nd dose, 19 days (Pfizer-BioNTech) or 21 days (Moderna) after 1st dose <p>Booster Doses</p> <ul style="list-style-type: none"> • 1st booster dose 3 months after 2nd dose • 2nd booster dose – not eligible
18+	<p>Primary Series</p> <ul style="list-style-type: none"> • 1st dose • 2nd dose, 8 weeks after 1st dose <p>Booster Doses</p> <ul style="list-style-type: none"> • 1st booster dose, 5 months after 2nd dose • 2nd booster dose, 5 months after first booster 	<p>Primary Series</p> <ul style="list-style-type: none"> • 1st dose • 2nd dose, 19 days (Pfizer-BioNTech) or 21 days (Moderna) after 1st dose <p>Booster Doses</p> <ul style="list-style-type: none"> • 1st booster dose, 3 months after 2nd dose • 2nd booster dose, 3 months after first booster

Age	Recommended Intervals ¹	Minimum Intervals ²
Moderately or severely immuno-compromised individuals ≥6 months of age ³	<p>Primary Series</p> <ul style="list-style-type: none"> • 1st dose • 2nd dose, 8 weeks after 1st dose • 3rd dose, 8 weeks after 2nd dose <p>Booster Doses</p> <ul style="list-style-type: none"> • 1st booster dose <ul style="list-style-type: none"> ○ (if under 11) not eligible ○ (if 12-17) 6 months ○ (if 18+) 5 months after 3rd dose • 2nd booster dose <ul style="list-style-type: none"> ○ (if under 11) not eligible ○ (if 12-17) 6 months after first booster ○ (if 18 and over) 5 months after first booster 	<p>Primary Series</p> <ul style="list-style-type: none"> • 1st dose • 2nd dose, 19 days (Pfizer-BioNTech) or 21 days (Moderna for 6 years and over) or 28 days (Moderna for 6 months to 5 years) after 1st dose • 3rd dose, 28 days after 2nd dose <p>Booster Doses</p> <ul style="list-style-type: none"> • 1st booster dose <ul style="list-style-type: none"> ○ (if under 11) not eligible ○ (if 12 and over) 3 months after 3rd dose • 2nd booster dose <ul style="list-style-type: none"> ○ (if under 11) not eligible ○ (if 12 and over) 3 months after first booster

³ Immunocompromised individuals are encouraged to complete the primary series and to stay up to date with booster doses if eligible.

Table 2: Options and Rationale for Vaccine Type and Dose offered for COVID-19 Vaccine Booster Dose(s) in Certain Populations

Population	Vaccine type (and dose) which may be preferred	Rationale or additional considerations
<p>12 to 29 years of age (including those moderately to severely immune-compromised)</p>	<p>Pfizer-BioNTech (30 mcg) is recommended.</p> <p>For moderately to severely immunocompromised individuals, the vaccine offered is based on clinical discretion; if Moderna is being used, a 100 mcg dose may be considered.</p>	<p>Lower reported rates of myocarditis/pericarditis following vaccination with Pfizer-BioNTech (30 mcg) compared to Moderna (100 mcg)</p> <p>There is currently very limited data on the use of Moderna booster dose in adolescents 12 to 17 years of age.</p>
<p>≥30 years of age (including those moderately to severely immune-compromised)</p>	<p>Either Moderna (50 mcg) or Pfizer-BioNTech (30 mcg) may be considered.</p> <p>For individuals 70 years of age and older; moderately to severely immunocompromised individuals; residents of long-term care homes, retirement homes or seniors in other congregate settings, the vaccine offered is based on clinical discretion; if Moderna is being used, a 100 mcg dose may be considered.</p>	<p>Data suggest that the Moderna COVID-19 vaccine may provide a more robust humoral and cellular immune response.</p> <p>Moderna (100 mcg) induces somewhat higher antibody levels compared to Pfizer-BioNTech (30 mcg). Protection (against severe disease) from a primary series with Moderna (100 mcg) may be more durable than Pfizer BioNTech (30 mcg). These populations may have less robust immune function (elderly) or a diminished immune response to the vaccine (some immunocompromised individuals). It is possible that Moderna (100 mcg) may induce a better immune response than Moderna (50 mcg).</p> <p>Currently there are no data comparing the immune responses after a booster vaccination with Moderna (100 mcg) and Pfizer-BioNTech (30 mcg) in these populations.</p>

3-Dose Primary Series for Moderately to Severely Immunocompromised

Rationale

- A 3-dose primary series is recommended for moderately to severely immunocompromised individuals with the aim of enhancing the immune response and establishing an adequate level of protection for individuals who may develop no or a sub-optimal immune response to a 2-dose primary series. See the COVID-19 chapter in the [Canadian Immunization Guide: Immunocompromised persons](#) for more information.
- There is emerging evidence on the safety and immunogenicity following a third dose of a COVID-19 vaccine for those that have not seroconverted following their second dose in select immunocompromised populations. Certain moderately and severely immunocompromised populations may benefit from a third dose to complete a primary COVID-19 vaccines series.

Recommendations

- A 3-dose primary series of mRNA COVID-19 vaccines is recommended for the following populations eligible for vaccination with the vaccine product authorized for their age group
 - Individuals receiving dialysis (hemodialysis or peritoneal dialysis)
 - Individuals receiving active treatment⁴ (e.g., chemotherapy, targeted therapies, immunotherapy) for solid tumour or hematologic malignancies
 - Recipients of solid-organ transplant and taking immunosuppressive therapy
 - Recipients of chimeric antigen receptor (CAR)-T-cell therapy or hematopoietic stem cell transplant (within 2 years of transplantation or taking immunosuppression therapy)

⁴ Active treatment includes patients who have completed treatment within 3 months. Active treatment is defined as chemotherapy, targeted therapies, immunotherapy, and excludes individuals receiving therapy that does not suppress the immune system (e.g., solely hormonal therapy or radiation therapy). See Ontario Health/Cancer Care Ontario's [Frequently Asked Questions](#) for more information.

- Individuals with moderate to severe primary immunodeficiency (e.g., DiGeorge syndrome, Wiskott-Aldrich syndrome)
 - Individuals with HIV with prior AIDS defining illness **or** prior CD4 count $\leq 200/\text{mm}^3$ **or** prior CD4 fraction $\leq 15\%$ **or** (in children 5-11 years) perinatally acquired HIV infection
 - Individuals receiving active treatment with the following categories of immunosuppressive therapies: anti-B cell therapies⁵ (monoclonal antibodies targeting CD19, CD20 and CD22), high-dose systemic corticosteroids (refer to the [Canadian Immunization Guide](#) for suggested definition of high dose steroids), alkylating agents, antimetabolites, or tumor-necrosis factor (TNF) inhibitors and other biologic agents that are significantly immunosuppressive (See Table 3).
- For moderately to severely immunocompromised children ages 5-11, the pediatric Pfizer-BioNTech (10 mcg) vaccine may be given as a 3-dose primary series. Indirect data from adult populations (≥ 18 years of age) suggests Moderna (100 mcg) may result in higher vaccine effectiveness after a 2-dose primary series compared to Pfizer-BioNTech (30 mcg) and is associated with a higher seroconversion rate among adult immunocompromised patients ([NACI, 2022](#)). Given this potential benefit, administration of the Moderna (50 mcg) vaccine as a 3-dose primary series may be considered for some immunocompromised individuals 6 to 11 years of age, as outlined in the product monograph.
 - Immunocompromised individuals 12 years of age and older should be offered the full dose of either Moderna (100 mcg) or Pfizer-BioNTech (30 mcg) as a 3-dose primary series. Immunocompromised individuals between the ages of 12-29 are preferentially recommended to receive Pfizer-BioNTech but may receive Moderna (100 mcg) based on clinical discretion.
 - The safety and efficacy of Novavax have not been established in individuals who are immunocompromised due to disease or treatment. Informed consent for use of the vaccine in this population (as a 3-dose primary series or booster dose(s)) should include discussion that there is currently limited evidence on the use of Novavax in this population, while there is evidence on the safety profile and effectiveness of mRNA COVID-19 vaccines in these populations based on real world use with large numbers of individuals ([CIG, 2022](#)).

⁵ Active treatment for patients receiving B-cell depleting therapy includes patients who have completed treatment within 12 months.

- The recommended interval between the second dose and the third dose of the primary series is at least **2 months (56 days)**.
 - As per NACI, the minimum interval is 28 days; however, an interval longer than the minimum of 28 days between doses is likely to result in a better immune response.
 - Exact timing should be decided with the treating provider in order to optimize the immune response from the vaccine series and minimize delays in management of the individual's underlying condition. Additionally, the interval should consider risk factors for exposure (including local epidemiology and circulation of variants of concern) and risk of severe disease from SARS-CoV-2 infection. Some immunocompromised individuals may still be susceptible after the 1 or 2-dose in the primary series, so their period of susceptibility until receipt of the additional dose will also increase if the interval between doses is increased.
- For guidance on the timing of vaccine administration for transplant recipients and those requiring immunosuppressive therapies, a more comprehensive list of conditions leading to primary immunodeficiency, and for further information on immunosuppressive therapies, refer to [Immunization of Immunocompromised Persons in the Canadian Immunization Guide \(CIG\), Part 3 – Vaccination of Specific Populations](#).
- To protect those who are immunocompromised, it also is strongly recommended that all people that come into close contact (e.g., healthcare workers and other support staff, family, friends, caregivers) with these individuals [stay up to date](#) with their COVID-19 vaccines by receiving all recommended doses (i.e., “ring vaccination”). Immunocompromised individuals and those that come into close contact with them should also continue to follow recommended public health measures for prevention and control of SARS-CoV-2 infection and transmission.

Table 3: List of Significantly Immunosuppressive Medications

*This list may not be comprehensive; health care providers may identify patients on other medications that are significantly immunosuppressive. Prescriptions for the below immunosuppressant medications can be presented for additional doses as needed. If an individual presents a prescription of a medication that is not listed in Table 1, they should be directed to their health care provider to receive a referral form/letter for a third and any subsequent dose(s) of a COVID-19 vaccine.

Class	Generic Name(s)	Brand Name(s)
Steroids (>20 mg per day of prednisone or equivalent for at least 2 weeks) ⁶	<ul style="list-style-type: none"> • Prednisone 	
	<ul style="list-style-type: none"> • dexamethasone 	<ul style="list-style-type: none"> • Decadron
	<ul style="list-style-type: none"> • methylprednisolone 	<ul style="list-style-type: none"> • DepoMedrol • SoluMedrol • Medrol
Antimetabolites	<ul style="list-style-type: none"> • cyclophosphamide 	<ul style="list-style-type: none"> • Procytox
	<ul style="list-style-type: none"> • leflunomide 	<ul style="list-style-type: none"> • Arava
	<ul style="list-style-type: none"> • methotrexate 	<ul style="list-style-type: none"> • Trexall • Metoject • Otrexup • Rasuvo • Rheumatrex
	<ul style="list-style-type: none"> • azathioprine 	<ul style="list-style-type: none"> • Imuran
	<ul style="list-style-type: none"> • 6- mercaptopurine (6-MP) 	<ul style="list-style-type: none"> • Purinethol
	<ul style="list-style-type: none"> • mycophenolic acid 	<ul style="list-style-type: none"> • Myfortic
	<ul style="list-style-type: none"> • mycophenolate mofetil 	<ul style="list-style-type: none"> • Cellcept
	Calcineurin inhibitors/mTOR kinase inhibitor	<ul style="list-style-type: none"> • tacrolimus
<ul style="list-style-type: none"> • cyclosporine 		<ul style="list-style-type: none"> • Neoral • Gengraf • Sandimmune
<ul style="list-style-type: none"> • sirolimus 		<ul style="list-style-type: none"> • Rapamune
JAK (Janus kinase) inhibitors	<ul style="list-style-type: none"> • baricitinib 	<ul style="list-style-type: none"> • Olumiant
	<ul style="list-style-type: none"> • tofacitinib 	<ul style="list-style-type: none"> • Xeljanz
	<ul style="list-style-type: none"> • upadacitinib 	<ul style="list-style-type: none"> • Rinvoq

⁶ As the dosing information may not be included on the patient's prescription, confirmation of the dosage from the individual presenting their prescription is sufficient. Equivalent steroid dose (prednisone 20 mg = prednisolone 20 mg = methylprednisolone 16 mg = hydrocortisone 80 mg = dexamethasone 3 mg)

Class	Generic Name(s)	Brand Name(s)
Anti-TNF (tumor necrosis factor)	<ul style="list-style-type: none"> adalimumab 	<ul style="list-style-type: none"> Humira Amgevita Hadlima Hulio Hyrimoz Idacio
	<ul style="list-style-type: none"> golimumab 	<ul style="list-style-type: none"> Simponi
	<ul style="list-style-type: none"> certolizumab pegol 	<ul style="list-style-type: none"> Cimzia
	<ul style="list-style-type: none"> etanercept 	<ul style="list-style-type: none"> Enbrel Brenzys Erelzi
	<ul style="list-style-type: none"> infliximab 	<ul style="list-style-type: none"> Remicade Avsola Inflectra Remsima Renflexis
Anti-Inflammatory	<ul style="list-style-type: none"> Sulfasalazine 	<ul style="list-style-type: none"> Salazopyrin Azulfidine
	<ul style="list-style-type: none"> 5-Aminosalicylic Acid (ASA)/mesalamine 	<ul style="list-style-type: none"> Pentasa
Anti-CD20	<ul style="list-style-type: none"> Rituximab 	<ul style="list-style-type: none"> Rituxan Ruxience Riximyo Truxima Riabni
	<ul style="list-style-type: none"> ocrelizumab 	<ul style="list-style-type: none"> Ocrevus
	<ul style="list-style-type: none"> ofatumumab 	<ul style="list-style-type: none"> Kesimpta
IL-1 RA (interleukin-1 receptor antagonist)	<ul style="list-style-type: none"> anakinra 	<ul style="list-style-type: none"> Kineret
	<ul style="list-style-type: none"> canakinumab 	<ul style="list-style-type: none"> Ilaris
Anti-IL6	<ul style="list-style-type: none"> tocilizumab 	<ul style="list-style-type: none"> Actemra
	<ul style="list-style-type: none"> sarilumab 	<ul style="list-style-type: none"> Kevzara
Anti-IL12/IL23	<ul style="list-style-type: none"> ustekinumab 	<ul style="list-style-type: none"> Stelara
Anti-IL17	<ul style="list-style-type: none"> secukinumab 	<ul style="list-style-type: none"> Cosentyx
	<ul style="list-style-type: none"> ixekizumab 	<ul style="list-style-type: none"> Taltz

Class	Generic Name(s)	Brand Name(s)
Anti-IL17R	• brodalumab	• Siliq
Anti-BLyS	• belimumab	• Benlysta
Anti-IL23	• guselkumab	• Tremfya
	• risankizumab	• Skyrizi
Selective T-cell costimulation blocker	• abatacept	• Orencia
S1PR (sphingosine 1-phosphate receptor) agonist	• fingolimod	• Gilenya
	• siponimod	• Mayzent
	• ozanimod	• Zeposia
Phosphodiesterase inhibitors	• Apremilast	• Otezla
Anti-integrin	• vedolizumab	• Entyvio

First Booster Dose Recommendations

A first booster dose is recommended based on the ongoing risk of infection due to waning immunity, the ongoing risk of severe illness from COVID-19, the societal disruption that results from transmission of infections, and the adverse impacts on health system capacity from the COVID-19 pandemic.

- All individuals in Ontario aged **≥12 years of age** are recommended to receive a first booster dose after completion of a primary COVID-19 vaccine series.
 - For individuals who received a 3-dose primary series (e.g., moderately to severely immunocompromised individuals, individuals who received COVID-19 vaccines not authorized by Health Canada), the first booster dose would be their 4th dose.⁷
 - For immunocompetent individuals that received a dose of Janssen COVID-19 vaccine (a one dose primary series), the first booster dose would be their 2nd dose.

⁷ See the [Staying Up to Date with COVID-19 Vaccines: Recommended Doses](#) Guidance for vaccination schedules and more information on recommended doses for individuals who received COVID-19 vaccines not authorized by Health Canada.

- Ontario strongly recommends that a booster dose of an mRNA vaccine should be offered.

Recommended First Booster Dose Intervals

- Individuals in Ontario aged **12-17 years of age** are recommended to receive a first booster dose of the Pfizer-BioNTech COVID-19 vaccine **≥6 months (168 days)** after completion of a primary COVID-19 vaccine series.
 - This interval may be associated with a lower risk of myocarditis with or without pericarditis. With informed consent, individuals 12-17 years of age may receive a first booster dose at a minimum of 3 months (84 days) after completion of a primary COVID-19 vaccine series.
- Individuals in Ontario aged **18 years of age and older** are recommended to receive a first booster dose of an mRNA vaccine **≥5 months (140 days)**, and at a minimum of three months (84 days), after completion of a primary COVID-19 vaccine series.

Second Booster Dose

The term "second booster dose" refers to the dose given after the complete primary series and first booster dose.⁸

- A second booster corresponds to a 4th dose among eligible immunocompetent individuals, as they have a recommended 2-dose primary series
- A second booster corresponds to a 5th dose among individuals that have a recommended 3-dose primary series (e.g., moderately to severely immunocompromised individuals, individuals who received non-Health Canada authorized COVID-19 vaccines).

⁸ See the [Staying Up to Date with COVID-19 Vaccines: Recommended Doses](#) Guidance for vaccination schedules and more information on recommended doses for individuals who received COVID-19 vaccines not authorized by Health Canada.

Recommended Second Booster Dose Intervals

All individuals in Ontario aged ≥ 18 are eligible to receive a second booster dose **≥ 5 months (140 days)**, and at a minimum of 3 months (84 days), after their first booster dose.

All individuals 12+ who are moderately to severely immunocompromised are recommended to receive a second booster dose:

- For those 12-17, a dose of Pfizer-BioNTech COVID-19 vaccine **≥ 6 months (168 days)** after their first booster dose. This interval may be associated with a lower risk of myocarditis with or without pericarditis. With informed consent, these individuals may receive a second booster dose at a minimum of 3 months (84 days) after their first booster dose.
- For those 18+, a dose of an mRNA vaccine **≥ 5 months (140 days)**, and at a minimum of 3 months (84 days), after their first booster dose.

Other groups who are at higher risk of severe disease from COVID-19 infection and are **recommended** to get the second booster dose of COVID-19 vaccine as soon as they become eligible, include:

- Individuals 60 years of age and older
- First Nation, Inuit and Métis individuals, and their non-Indigenous household members 18 years of age and older
- 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

A new bivalent COVID-19 vaccine product is planned to be available in Fall 2022, pending Health Canada approval and recommendations by NACI. However, the timing of release may be subject to change. Obtaining a second booster may impact timing of eligibility once the bivalent product becomes available. Individuals who belong to one of above-mentioned groups, are recommended to receive a second booster now to ensure adequate protection against the next wave of COVID-19 infection and severe disease. Guidance will be updated as more information

Appendix A: List of Immunosuppressive Medications in Alphabetical Order

#	Entyvio	mofetil	Rituximab
5-Aminosalicylic Acid (ASA)/mesalamine	Envarsus	mycophenolic acid	Riximyo
6- mercaptopurine (6-MP)	Erelzi	Myfortic	Ruxience
A	etanercept	N	S
Abatacept	F	Neoral	Salazopyrin
Actemra	fingolimod	O	Sandimmune
adalimumab	G	Ocrelizumab	Sarilumab
Advagraf	Gengraf	Ocrevus	Secukinumab
Amgevita	Gilenya	ofatumumab	Siliq
anakinra	golimumab	Olumiant	Simponi
apremilast	guselkumab	Orencia	Siponimod
Arava	H	Otezla	sirolimus
Avsola	Hadlima	Otrexup	Skyrizi
azathioprine	Hulio	ozanimod	Stelara
Azulfidine	Humira	P	sulfasalazine
B	Hyrimoz	Pentasa	T
baricitinib	I	Prednisone* (>20mg/day for 14 or more consecutive days)	tacrolimus
belimumab	Idacio	Procytox	Taltz
Benlysta	llaris	Prograf	tocilizumab
Brenzys	Imuran	Purinethol	tofacitinib
Brodalumab	Inflectra	R	Tremfya
C	infliximab	Rapamune	Trexall
canakinumab	ixekizumab	Rasuvo	Truxima
Cellcept	K	Remicade	U
certolizumab	Kesimpta	Renflexis	upadacitinib
Cimzia	Kevzara	Rheumatrex	ustekinumab
Cosentyx	Kineret	Rinvoq	V
cyclophosphamide	L	Risankizumab	vedolizumab
cyclosporine	Leflunomide	Rituxan	X
E	M		Xeljanz
Enbrel	Mayzent		Z
	Methotrexate		Zeposia
	Metoject		
	mycophenolate		

*or equivalent steroid dose (prednisone 20 mg = prednisolone 20 mg = methylprednisolone 16 mg = hydrocortisone 80 mg = dexamethasone 3 mg)