# LIVING WELL
## Beyond COVID-19

**BY RESPIPLUS ™**

A plan of action for life
A learning tool for patients and their families

# Prevention Strategies for COVID-19

In this module, you will learn about COVID-19 prevention and vaccines. You can use this guide to help you talk to your doctor, health care team or resource person about your risks and what you can do to prevent COVID-19.

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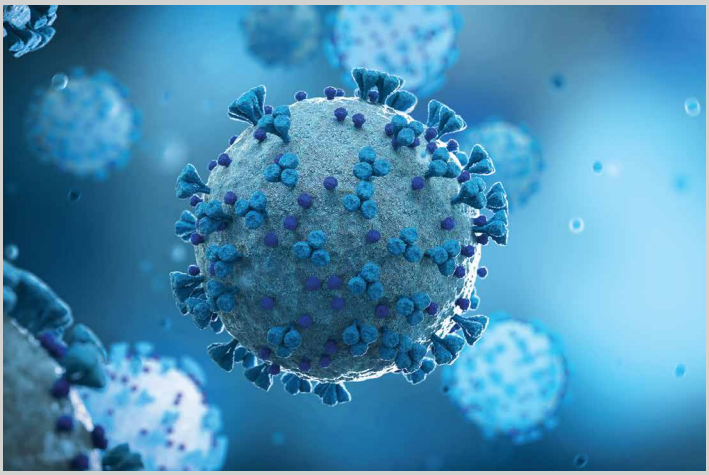
This guide is also available in PDF on our portal:
https://www.chroniclungdiseases.com/en/resources/covid-19

# How is COVID-19 spread



COVID-19 is caused by a virus that was first discovered in China in 2019. It is primarily spread by small fine virus particles floating in the air called aerosols. These aerosols are released into the air whenever someone talks, breathes, sings, shouts, coughs, or sneezes. If you breathe the virus into your body, you could get COVID-19.

The more virus that is in the air, the higher the risk of you getting COVID-19.

If you are in close contact with someone who has the virus or are in a small, crowded area that has poor ventilation you have a high risk of getting COVID-19. It is still possible, but less likely, to contract COVID-19 by touching a surface contaminated with the virus and then touching your face.

The virus can cause a wide range of illness, from mild to potentially life threatening. Any person can become very sick with the virus, but there are certain people at higher risk.

# Welcome to the module "Prevention Options for COVID-19"

Identify the subjects for which you need additional information and which may be important for you at this time. Your resource person - a health care professional that supports you in your COVID-19 treatment journey - may help you.

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# Are you at high-risk of complications if you get COVID-19?

Please check off which situation(s) apply to you:

- [ ] Older than 60 years of age

- [ ] Have a weakened immune system because of a health condition (such as cancer, or organ transplant) or a medication that you are taking (such as prednisone, or on chemotherapy)

- [ ] Suffering from other serious chronic health conditions and diseases, such as, asthma (moderate to severe), COPD (chronic obstructive pulmonary disease, emphysema or chronic bronchitis), dementia, diabetes, heart disease, high blood pressure, kidney disease, liver disease, lung disease, stroke, and/or any neurological condition.

If you checked off one or more of the boxes above, you are considered a person at high-risk of becoming very sick with COVID-19.

Everyone should try to protect themselves from COVID-19, but people at high-risk should take extra precautions because they can be at higher risk of severe outcomes (such as needing to go to the hospital) if they get COVID-19.

If you are at high-risk, it is important to not only protect yourself but everyone in your family. This can help to prevent you from coming into contact with the virus that causes COVID-19.

# What you can do to reduce the risk of getting COVID-19

There are many things you can do every day to help stop the spread of COVID-19.

The most important action you can take is to get your COVID-19 vaccines and boosters as recommended. Getting vaccinated will help protect you from getting very sick from COVID-19.

## Health Canada recommends some simple additional health measures you can follow

- Wear a mask, especially for indoor gatherings.
- Improve ventilation in a small space where people gather, by opening windows and doors.
- Cough or sneeze in your elbow.
- Wash your hands frequently.
- Clean and disinfect high touch/contact surfaces, for example light switches and doorknobs.
- Finally, stay at home when you are sick.

# COVID-19 Vaccines

# How vaccines help us

Vaccines work by teaching your immune system to recognize and kill the COVID-19 virus and get ready to fight the virus if we come in contact with it.

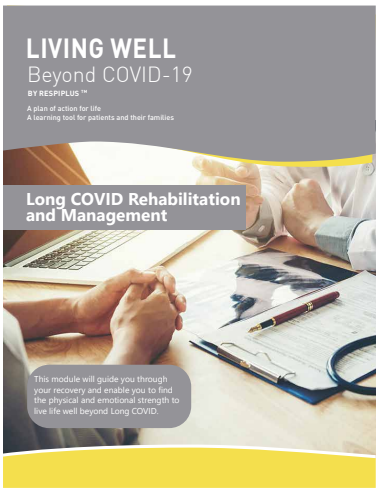
Being up to date with your COVID-19 vaccines can help to prevent you from getting very sick from COVID-19.

## Serious Complications

Everybody is at risk of serious complications from COVID-19. These include:

- Hospitalization
- Admittance to the ICU (intensive care unit)
- Need for oxygen and respirators
- Death

**Long COVID** happens in a person who gets COVID-19 and still suffers symptoms 3 months later. This condition can be mild to very severe. For more information about Long COVID you can refer to our module “Long COVID Rehabilitation and Management” from the series “Living Well Beyond COVID-19”.



# What are Boosters and Why are They Important?

After your initial set of COVID-19 vaccines, we all need to have COVID-19 booster shots to keep us protected from COVID-19. Booster shots help our body's immune system remember the COVID-19 virus and keep it ready if we come in contact with the virus.

## How long do I have to wait after my last booster or COVID-19 infection before I receive a booster?

COVID-19 booster shots are available everywhere in Canada. Health Canada recommends waiting 3-6 months following your initial set of COVID-19 vaccines or testing positive for COVID-19 before getting a booster shot.

If you are older, more frail, have a weakened immune system, or have certain health conditions, as previously discussed you have a higher risk of becoming very sick from COVID-19. Everyone needs a booster to keep them protected from COVID-19, and high-risk individuals should always stay up to date with their COVID-19 vaccines.

# Vaccine Approvals and Availability in Canada

Health Canada has approved several types of COVID-19 vaccines for use in Canada.

At the time of writing this module, these are the vaccines that are approved and available:

1. **Pfizer-BioNTech Comirnaty® and Moderna Spikevax® COVID-19 vaccines** are approved **mRNA vaccines** and are widely used across Canada.

2. **Novavax Nuvaxovid® COVID-19 vaccine** is an approved **protein-based vaccine** that has limited availability depending on the province.

There are other vaccines that have been approved by Health Canada and are not currently available or were discontinued. Please consult the Health Canada website or ask your healthcare professional if you would like to have more information.

https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/prevention-risks.html#p

# Types of Vaccines

The 2 main types of COVID-19 vaccines approved and available in Canada are messenger ribonucleic acid (mRNA) vaccines and protein subunit vaccines.

## Messenger ribonucleic acid (mRNA) vaccines

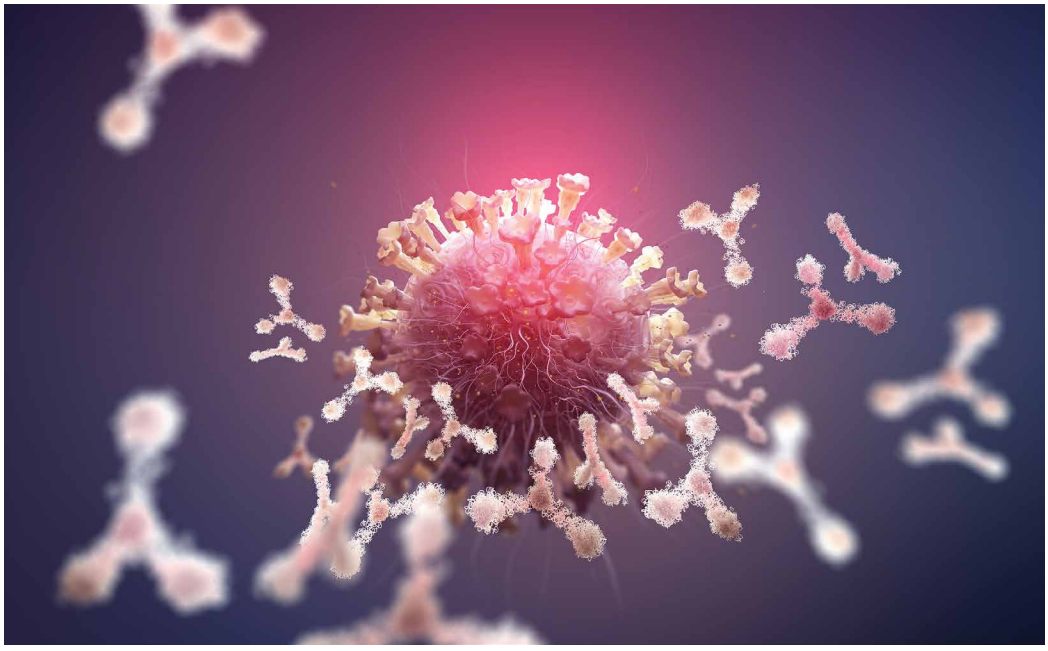
In Canada, these are the approved COVID-19 mRNA vaccines:

1. **Moderna Spikevax® vaccines**
2. **Pfizer-BioNTech Comirnaty® vaccines**

mRNA vaccines don't contain any part of the virus. They contain instructions for your immune system on how to protect your body from the virus.  Your body uses these instructions to make antibodies and gets itself ready to fight off the virus if it gets into the body.

**Antibodies:** are proteins produced by your immune system that stick to unwanted invaders like viruses and bacteria and help your body recognize and eliminate them.

Please see appendix for more detailed information on specific mRNA vaccines.



# Types of Vaccines

## Protein Subunit Vaccines

In Canada, this is the approved COVID-19 protein subunit vaccine:

1. **Novavax Nuvaxovid®**

Protein subunit vaccines contain pieces of the virus. By injecting the pieces of the virus into the body, you prepare the body's immune system to fight off the virus if it gets into the body. This vaccine also contains a special ingredient called an adjuvant, that increases how well the vaccine works.

Please see appendix for more detailed information on Novavax Nuvaxovid vaccine.

# Types of Vaccines

## Bivalent Vaccines

Scientists and vaccine manufacturers are updating COVID-19 vaccines to specifically target the circulating virus strains (also known as virus variants). A "bivalent" vaccine targets two different coronavirus strains at the same time. This helps to create a broader immune response and improve the strength and duration of protection against circulating variants.

At the time of this module publication, these are the mRNA bivalent vaccines approved by Health Canada:

1. Moderna Spikevax® Bivalent COVID-19 vaccine Original/Omicron B.1.1.529 (BA.1)
2. Moderna Spikevax® Bivalent COVID-19 vaccine Original/Omicron BA.4/5
3. Pfizer-BioNTech Comirnaty® Original and Omicron BA.4/BA.5, bivalent COVID-19 vaccine
4. Pfizer-BioNTech Comirnaty® Original and Omicron BA.1, bivalent COVID-19 vaccine

# Medication for COVID-19 Prevention

# Medication for COVID-19 Prevention

## Prophylaxis Treatment

A prophylaxis pre-exposure treatment is available to certain high risks groups, namely those who for whatever reason cannot be vaccinated against COVID-19.

## Evusheld® (Tixagevimab and Cilgavimab)

Evusheld is an approved prophylaxis treatment. You could be prescribed this medication, to help prevent you from getting COVID-19.

**Who is this medication for:**

- Pre-Exposure: must be administered to the following individuals, and who have not had a known recent exposure to an individual infected with COVID-19 to be effective.
- Criteria: adults and children 12 years of age and older weighing at least 40 kg who:
  - have a weaker immune system and are unlikely to be protected by a COVID-19 vaccine
  - when vaccination is not recommended

**How is it administered:**

- Evusheld is administered by intramuscular injection by a health care professional as two separate (3.0 mL) successive intramuscular injections.

**Potential Side Effects:**

- Common: (up to 1 in 10 people)
  - Hypersensitivity reaction: rash or hives - an itchy red rash or raised bumps.
  - Injection site reaction: pain, redness, itching, swelling where the injection was given.
- Uncommon: (up to 1 in 100 people)
  - Injection related reaction including: headache, chills and redness, discomfort, or soreness near where the injection was given.
- Rare: Serious cardiac adverse events.

Evusheld is not a substitute for COVID-19 vaccination in individuals where vaccination is recommended

# Myths vs Facts

# Common Myths vs Facts about COVID-19 and the Vaccines

Even though COVID-19 vaccines are safe, there is a lot of misinformation out there. Let's look at some of the more common myths about COVID-19 and the vaccines.

**Myth:** Vaccines will prevent COVID-19.

**Fact:** Vaccines do reduce your risk from getting infected with the COVID-19 virus but your risk is not reduced to zero.

*However, vaccines dramatically reduce your risks of serious illness, hospitalizations and death related to COVID-19 infections. They can also help reduce the spread of the virus.*

**Myth:** COVID-19 vaccines last for life, and you do not need boosters.

**Fact:** Booster doses are needed because your immunity can decrease over time.

*Booster doses increase your defenses by activating your immune response to restore protection that may have decreased over time. The virus is constantly mutating, exposing you to new variants. Boosters improve protection against severe outcomes and may also reduce the risk of Long COVID (also known as post COVID-19 condition).*

**Myth:** Boosters do not work as the virus is mutating anyway.

**Fact:** Current boosters help target mutations and new COVID-19 variants.

*COVID-19 constantly changes (mutates) to survive. The more the virus spreads, the more opportunities it has to change. High vaccination rates and booster shots can reduce the spread of the virus and help prevent new variants from rapidly occuring.*

# Common Myths vs Facts about COVID-19 and the Vaccines

**Myth:** Vaccines will give you COVID-19 and make you sick.

**Fact:** COVID-19 vaccines currently approved in Canada do not contain the live virus and will not give you COVID-19.

*COVID-19 vaccines teach our immune system how to recognize and fight the virus that causes COVID-19. Vaccines can, however, cause some symptoms or side effects, such as fever. These symptoms are normal and are signs that your body is building protection against the virus that causes COVID-19.*

**Myth:** COVID-19 vaccines will cause myocarditis (an inflammation or swelling of your heart muscle).

**Fact:** In Canada, cases of myocarditis after COVID-19 vaccines are very rare (about 2 per 100,000 people).

*Most cases of myocarditis related to COVID-19 vaccines happen in boys and men aged 12-29 years old. The symptoms (chest pain, shortness of breath and feelings of having a fast-beating, fluttering, or pounding heart) are usually mild, and most people fully recover with supportive treatment in the hospital. In fact, COVID-19 infections are more likely to cause myocarditis than the vaccines (226 per 100,000 people).*

# Common Myths vs Facts about COVID-19 and the Vaccines

**Myth:** You do not need your flu shot if you had a COVID-19 shot.

**Fact:** The flu and COVID-19 are caused by different viruses. COVID-19 vaccines will not protect you from the flu.

*The flu is very contagious, can affect anyone, and spreads quickly. Young children, adults aged 65 and over, pregnant women, and those living with a chronic health condition are most at risk for serious complications. Every year in Canada, the flu kills on average of 4,000 Canadians. Flu shots are a safe and effective way to protect yourself and others. You can get a flu shot at the same time as a COVID-19 vaccine.*

**Myth:** mRNA technology is dangerous and unproven.

**Fact:** mRNA research and technology is nothing new and has been around for more than 20 years.

*mRNA technology was developed in the 1990s and first tested in humans in 2013. The success of these vaccines during the COVID-19 pandemic is based on decades of research. COVID-19 mRNA vaccines are held to the same high standards for safety, effectiveness and quality as all vaccines authorized for use in Canada. Only vaccines that meet those standards can be approved.*

# How prepared do you feel about preventing COVID-19?

It is your time to assess your knowledge and confidence about preventing COVID-19.

After reading this module, please rate your confidence in your knowledge about:

1. How COVID-19 can affect me personally, including knowing if I am in a high-risk group


2. How I can prevent COVID-19


3. Understanding how vaccines work


4. Understanding the benefits and safety of vaccines and boosters

# How prepared do you feel about preventing COVID-19?

Now, let us test your confidence level on whether you can take the necessary actions to protect yourself:

1. I feel confident to ask questions about COVID-19 and vaccines from my healthcare team


2. I feel confident that I will get answers from my healthcare team.

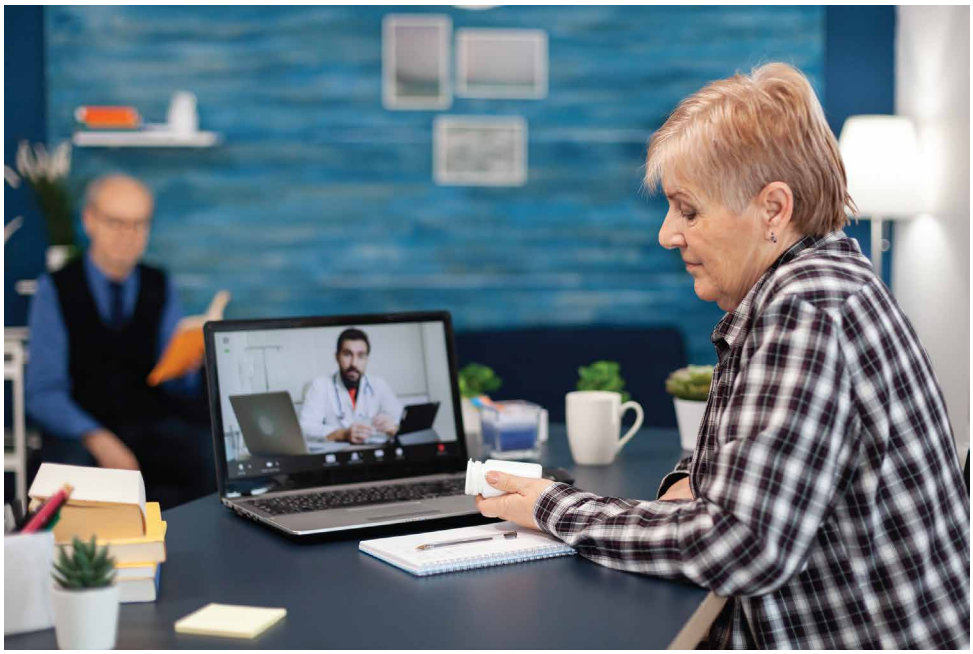

3. I can find information I need on COVID-19 vaccination for myself


4. I can easily make an appointment and find a location to get vaccinated

# Summary

After reading this module, you can now see that there are different ways to prevent you from getting very sick from COVID-19. Following the basic public health recommendations, such as masking and avoiding high-risk situations is important. But one of the most important things you can do to protect yourself and others is to **get vaccinated and boosted with a COVID-19 vaccine.** If you are part of a high-risk group or have a weakened immune system, you could discuss with your doctor as to whether you can benefit from a prevention treatment.

When visiting your doctor, pharmacist, or healthcare team, take this module with you to help you make an informed decision regarding COVID-19 vaccination and prevention.



# Appendix

# Spikevax®

## Messenger ribonucleic acid (mRNA) vaccines

1. **Moderna Spikevax COVID-19 vaccine available and approved for:**

- Primary series (2 doses spaced one month apart)
- Ages 6 months and older
- Booster doses in individuals aged 12 years and older

2. **Moderna Spikevax Bivalent COVID-19 vaccine (Original/Omicron B.1.1.529 (BA.1)) available and approved for:**

- Booster doses
- Ages 6 years and older
- 4 months after the primary series is completed or previous booster dose
- Includes a dose for the original strain and variant BA.1

3. **Moderna Spikevax Bivalent COVID-19 vaccine (Original/Omicron BA.4/5) available and approved for:**

- Booster doses
- Ages 18 years and older
- 4 months after the primary series is completed or previous booster dose
- Includes a dose for the original strain and variant BA.4/5

**Additional information**

- Produces a strong immune response
- Proven to be very safe and effective in preventing serious illness and death from COVID-19

**Possible common temporary side effects lasting a few hours to a few days following vaccination:**

- redness, soreness, and swelling at the injection site
- chills
- nausea and vomiting
- enlarged lymph nodes
- decreased sense of touch or sensation, numbness, or tingling, itching or pricking sensation
- dizziness
- fatigue
- joint pain
- headache
- mild fever
- muscle aches

# Comirnaty®

## Messenger ribonucleic acid (mRNA) vaccines

1. **Pfizer-BioNTech Comirnaty available and approved for:**

- Primary series (2 doses spaced 21 days apart) for ages 6 months and older
- Booster doses (6 months after the primary series) for ages 5 years and older

2. **Pfizer-BioNTech Comirnaty Original Bivalent (Omicron and BA.1) available and approved for:**

- Booster doses
- Ages 12 years and older
- 3-6 months after the primary series is completed or previous booster dose
- Includes a dose for the variant BA.1.

3. **Pfizer-BioNTech Comirnaty Bivalent (Original and Omicron BA.4/BA.5) available and approved for:**

- Booster doses
- Ages 5 years and older
- 3-6 months after the primary series is completed or previous booster dose
- Includes a dose for the variant BA.4 and the variant BA.5.

**Additional information**

- Produce a strong immune response
- Proven to be very safe and effective in preventing serious illness and death from COVID-19

**Possible common temporary side effects lasting a few hours to a few days following vaccination:**

- redness, soreness, and swelling at the injection site
- chills
- fatigue
- joint pain
- headache
- mild fever
- muscle aches

# Nuvaxovid®

## Protein Subunit Vaccine

**Nuvaxovid is available and approved for:**

- Primary series (two doses spaced 21 days apart) for ages 12 years and over
- Booster doses (6 months following primary series) for ages 18 years and older

**Additional information**

- The technology has been around many years, lots of data available from use in humans
- Needs an **adjuvant** to get a good immune response

**Possible common temporary side effects lasting a few hours to a few days following vaccination:**

- redness, soreness, and swelling at the injection site
- chills
- fatigue
- joint pain
- headache
- mild fever
- muscle aches
- nausea and vomiting
- generally feeling unwell (malaise)

**Adjuvant:** an ingredient used in some vaccines that helps create a stronger immune response in people receiving the vaccine.

# Evusheld®

## Pre-Exposure Prophylaxis/Prevention

**Evusheld is available and approved for:**

- Pre-exposure prophylaxis/prevention of COVID-19 in adults and adolescents ages 12 years of age and older weighing at least 40 kg who:
  - have a weaker immune system and are unlikely to be protected by a COVID-19 vaccine
  - or when vaccination is not recommended.

**Common Potential Side effects of Evusheld:**

- hypersensitivity reaction (rash or hives - any itchy red rash or raised bumps)
- redness, pain, itching or swelling at the site of injection
- headaches, chills, and soreness

**Note:**
Contact your healthcare professional or get medical help right away if you get any symptoms of cardiac events, including pain in the chest, arms, neck, back, stomach or jaw, as well as shortness of breath, feeling tired or weak (fatigue), feeling sick (nausea), or swelling in your ankles.

# Acknowledgements

**Living Well Beyond COVID-19 developed in consultation with groups of healthcare professionals, educators and COVID-19 patients across Canada.**

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## Collaborating Organizations

- RESPTREC
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## Sponsors and collaborators

AstraZeneca Pfizer GSK moderna

*"Prior to reading this module, I was unsure about the COVID-19 vaccine and had many questions. However, after reading it and discussing with my doctor, I now feel much more knowledgeable and confident. I would highly recommend this module to anyone who is unsure about vaccines or has questions about preventing COVID-19."*

Charles, 45

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