Up-to-date information about COVID-19 vaccination for children and youth

School Name

Date

By the SickKids COVID-19 Vaccine Consult Service and STOP COVID-19 in Kids Project

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Land Acknowledgement

We would like to acknowledge the land on which SickKids operates. For thousands of years it has been the traditional land of the Huron-Wendat and Petun First Nations, the Seneca, and most recently, the Mississaugas of the Credit River. Today, Toronto is home to Indigenous Peoples from across Turtle Island. SickKids is committed to working toward new relationships that include First Nations, Inuit, and Métis peoples, and is grateful for the opportunity to share this land in caring for children and their families.

Objectives

Provide evidence-based information on **SARS-CoV-2 transmission**, **COVID-19 clinical features**, and **consequences** in the pediatric age.

Discuss the clinical and socially relevant aspects of COVID-19 vaccination in children.

Show scientific data on **COVID-19 vaccination** development, protection, and safety in children aged 5-11 years old.

Provide key resources to learn more information on COVID-19 vaccination in children.

Provide a safe place for questions and discussion around COVID-19 vaccination.

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Agenda

First part - introduction:

What is the STOP COVID-19 in Kids project?

What SARS-CoV-2 is and how does it spread?

Second part – the importance of protecting children against COVID-19:

What are the clinical features and social implications of COVID-19 in children?

Third part - bust the myth and learn the facts on COVID-19 vaccination in children.

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Stop COVID-19 in Kids

School-based vaccine education outreach to build trust and empower families

Explore beliefs about covid-19 vaccination in children, parents, and educational preferences on COVID-19 vaccines

- Parental attitudes, acceptance, and hesitancy toward COVID-19 vaccines
- COVID-19 vaccines safety and Adverse Events Following Immunization in children aged < 18 years old.
- Gathering and evaluating available educational online resources for parents on COVID-19 vaccines
- Survey: vaccine acceptance and uptake among caregivers of children 5-11 years of age
- Focus groups discussion with parents recruited through the survey study to generate in-depth qualitative data.
- Perceptions and Practices on COVID-19 Vaccines for Children in Ontario

Systematic Review

Caregivers Survey and focus group discussion

Pediatrician Survey

Development of the intervention and educational program

Training of healthcare professionals

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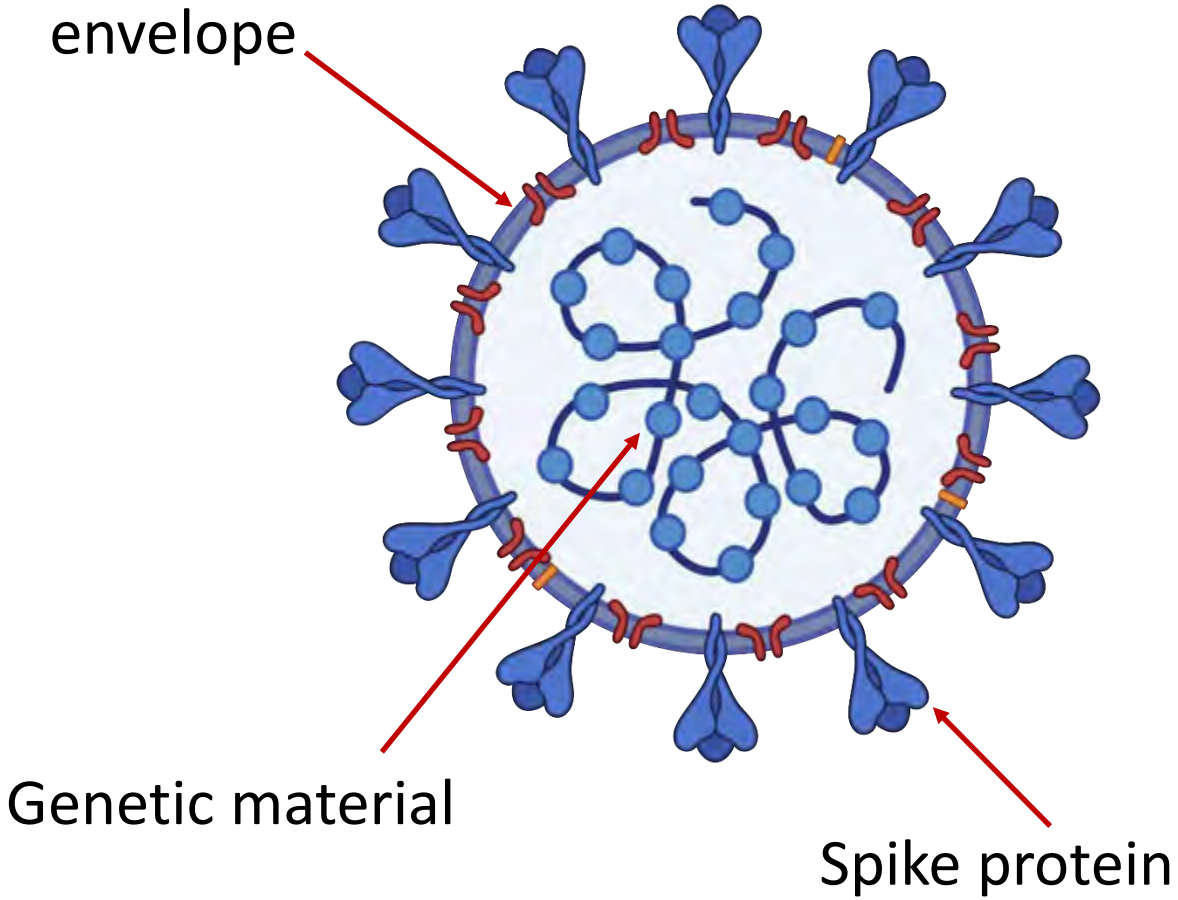
What are coronaviruses?

Crown = Corona



Coronaviruses are **NON LIVING** microorganisms

They cannot carry out the function of reproduction by themselves

Viruses use **vectors** as carriers to infect other organisms and humans

Using the **spike protein**, viruses are able to enter human cells and quickly replicate their genetic material, infecting the entire person

Vaccines target the **spike protein.**

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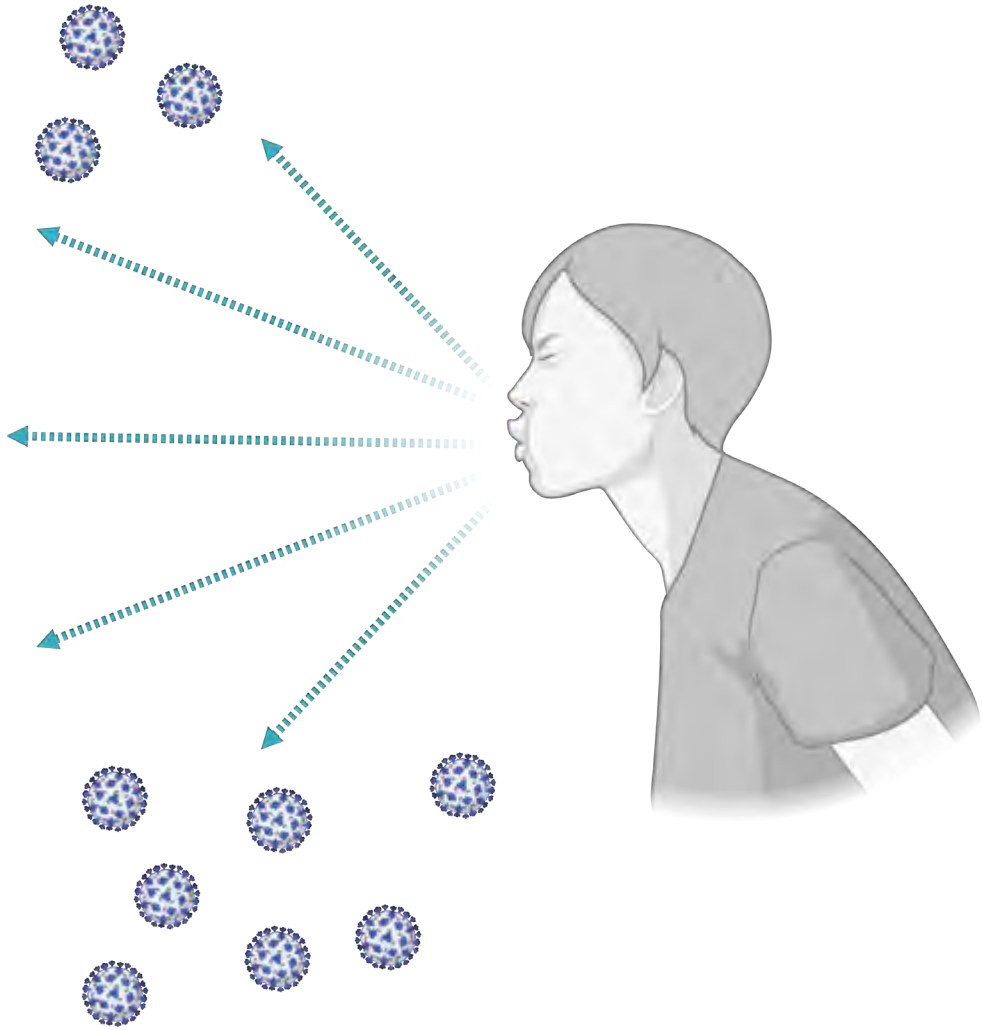
How do coronaviruses spread?



Coronaviruses are **RESPIRATORY viruses.**

SARS-CoV-2 spreads easily through AIR droplets.

When an **infected person coughs**, droplets containing the virus spray out

The **virus can infect new people** when the droplets enter their nose or mouth

This is the reason why coronaviruses transmit best in enclosed spaces, schools, buses, restaurants…

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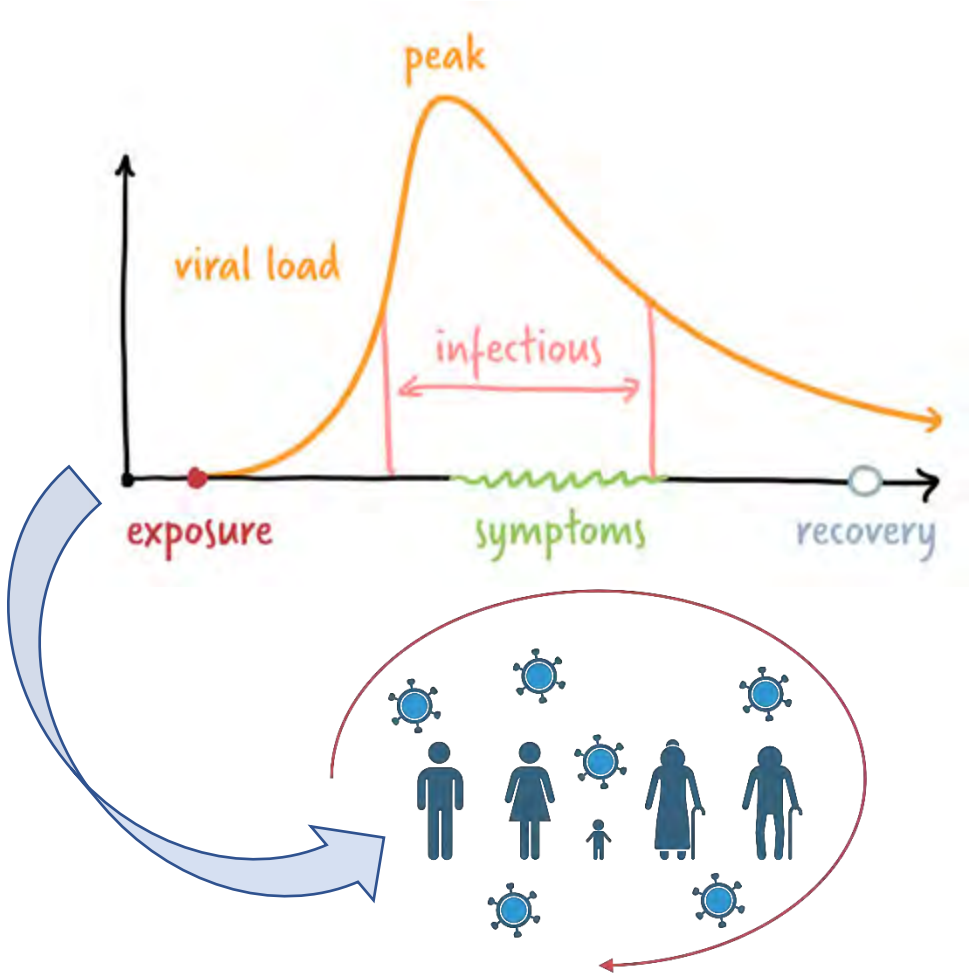
Which features do coronaviruses have?

SARS-CoV-2 can remain silent for many days after infecting a person



People can feel well for **up to 7-10 days** after being infected.

They continue to go to school, work, and meet their friends

Nobody knows, but the **coronavirus is striking other people that are not still immune**!

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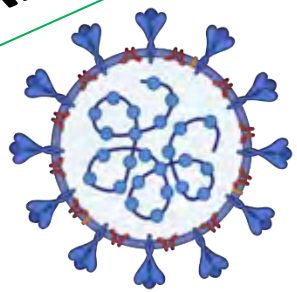
CORONAVIRUS

SARS-COV-2



COVID-19

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PANDEMIC

March 11, 2020

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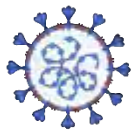
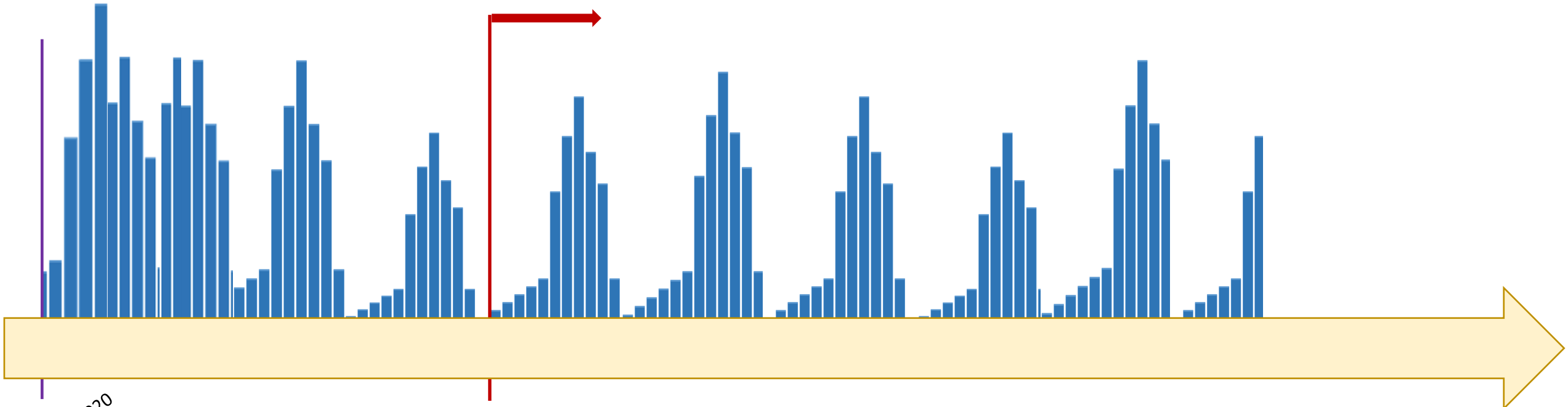
PANDEMIC

SEASONAL EPIDEMIC





Co-epidemic of COVID-19 + flu + RSV

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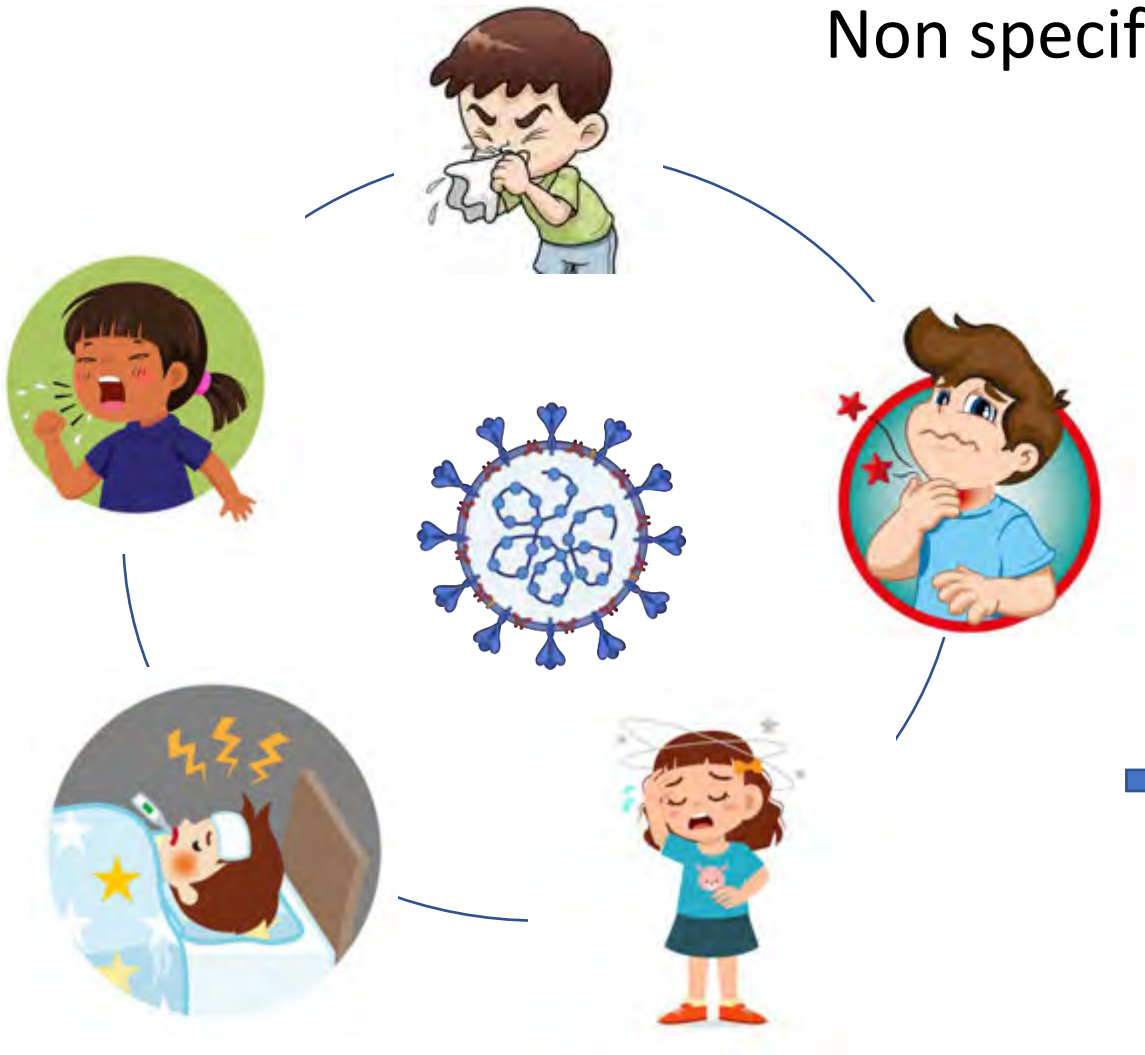
Clinical features of COVID-19 in children



Non specific and **mainly MILD** symptoms.

Children of all age may experience a severe disease.

Previously healthy kids are also at risk to be hospitalized due to COVID-19.

severe cases
Pneumonia
organ failure
death

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COVID-19 hospitalization and emergency department statistics, Canada

COVID-19 cumulative hospitalization rate for 5-11 year-old kids was **32.5 per 100,000 population**; death rate in 0-18 year old individuals was **0.8 per 100,000 population**.
(from January 15, 2020 to February 18, 2023, Ontario)

Ontario

Overall effectiveness in protecting 5-11-year-olds kids from severe outcomes (e.g. hospitalization) is around 80% after two doses of the vaccine.
(March 2023, Ontario)

CPSP
CANDIAN PAEDIATRIC SURVEILLANCE PROGRAM
IMPACT

Among 1357 IMPACT COVID-19 hospitalizations, 53% of kids had zero comorbidities.

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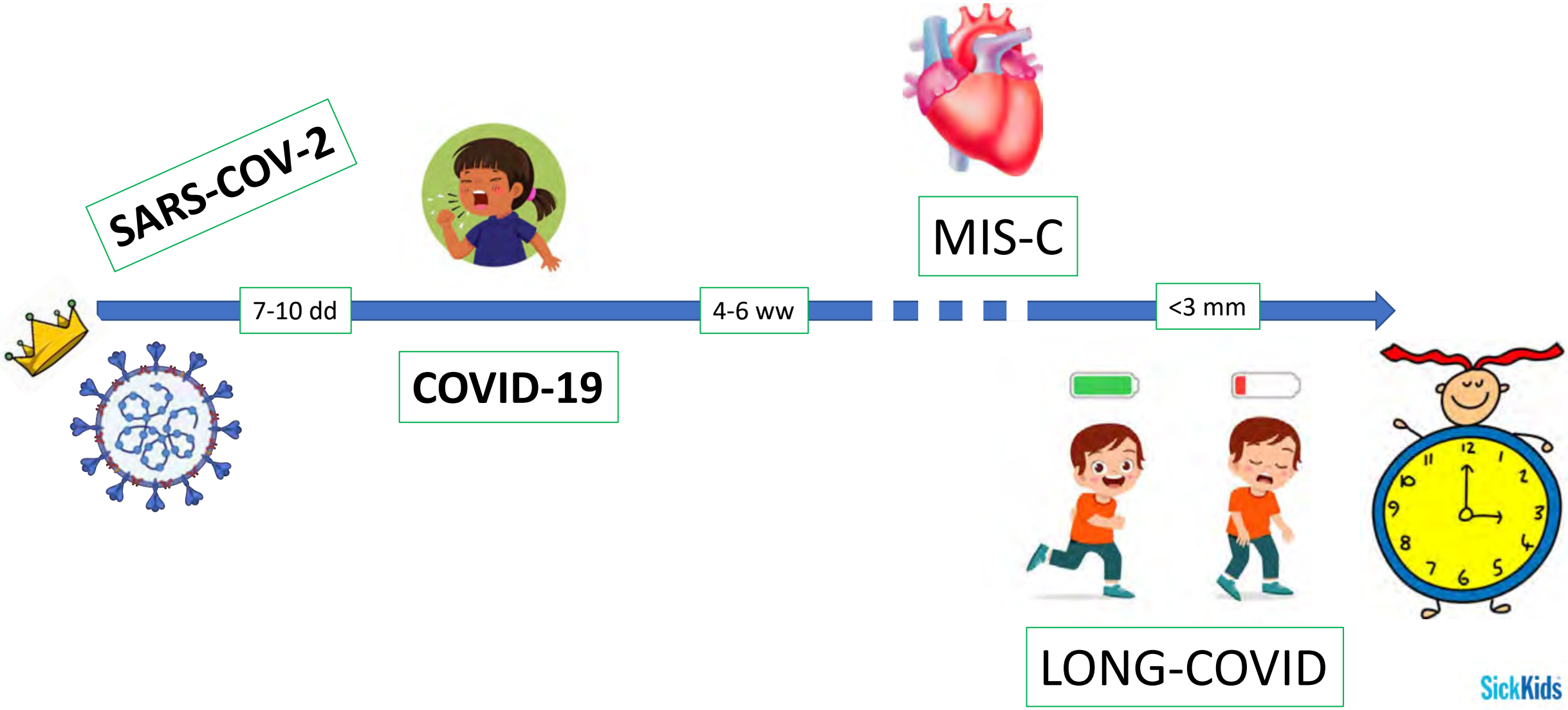
COVID-19 long-term complication



Preventing COVID-19 with nonpharmacological interventions

- Stay home when sick
- Masks
- Improve indoor ventilation
- Rapid Antigen Tests (RAT) and PCR testing, if applicable
- Good handwashing and cough etiquette

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Preventing COVID-19 through vaccination

Vaccines introduce our immune system to a new virus

The immune system will remember it and will react

They reduce the risk of getting infected and sick!

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Why should children get vaccinated?

COVID-19 vaccines protect from:

- SARS-CoV-2 severe infection, the risk of hospitalization, and death
- MIS-C (Multisystem Inflammatory Syndrome in Children)
- Post-COVID symptoms (named as Long-COVID)

COVID-19 vaccines will also:

- Reduce the risk of transmitting SARS-CoV-2 to others
- Protect vulnerable
- Help to return to daily activities: back to school, participate in sports and other group activities with their friends

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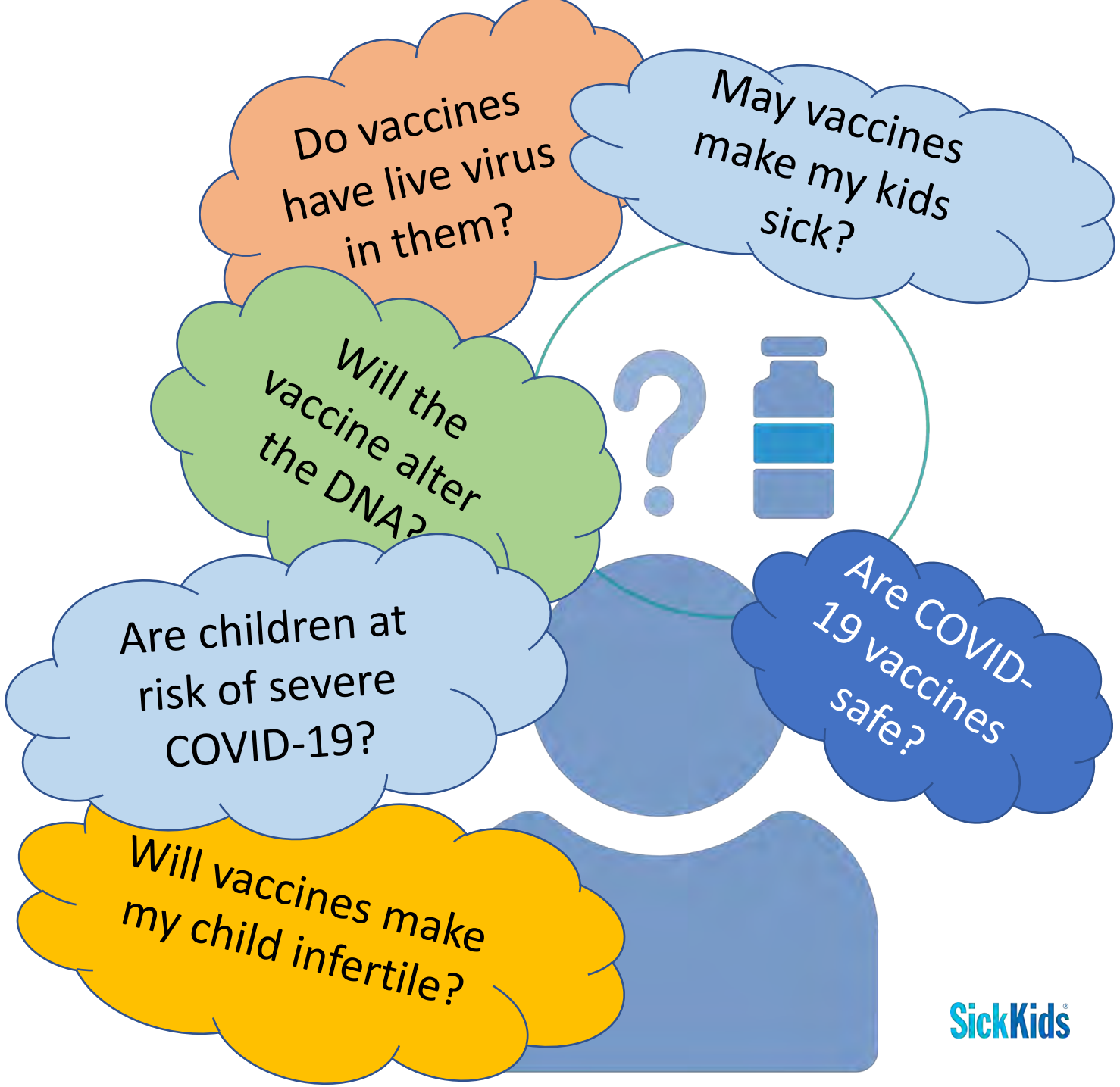
Bust the Myths
Learn the Facts



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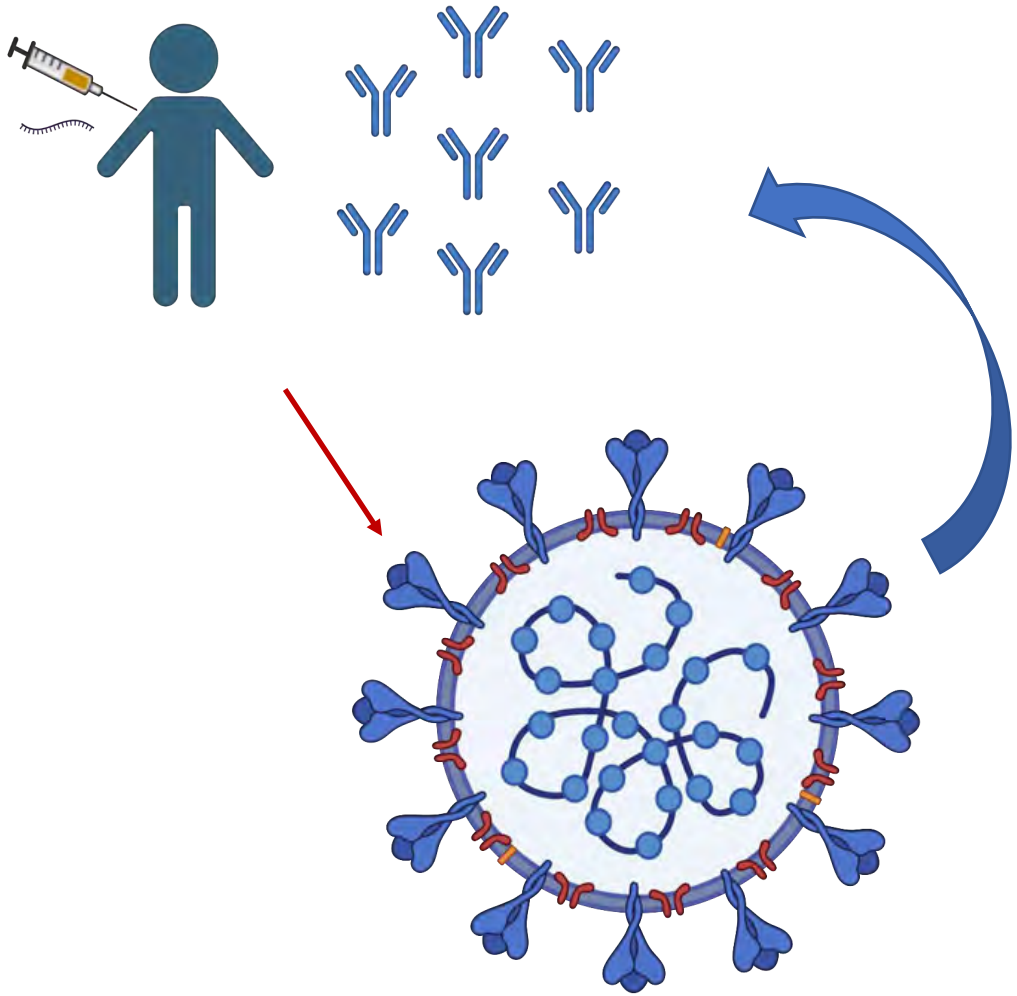
How do COVID-19 vaccines work?



Using a **piece of mRNA** created in a laboratory, they **teach our body how to make the spike protein.**

These spike protein appears like the proteins of the virus but **is not actually the virus.**

Our **immune system recognizes** the induced **spike** protein and **produces antibodies.**

In the future, these antibodies will **recognize the threat** and sound the alarm to **protect us from infection**.

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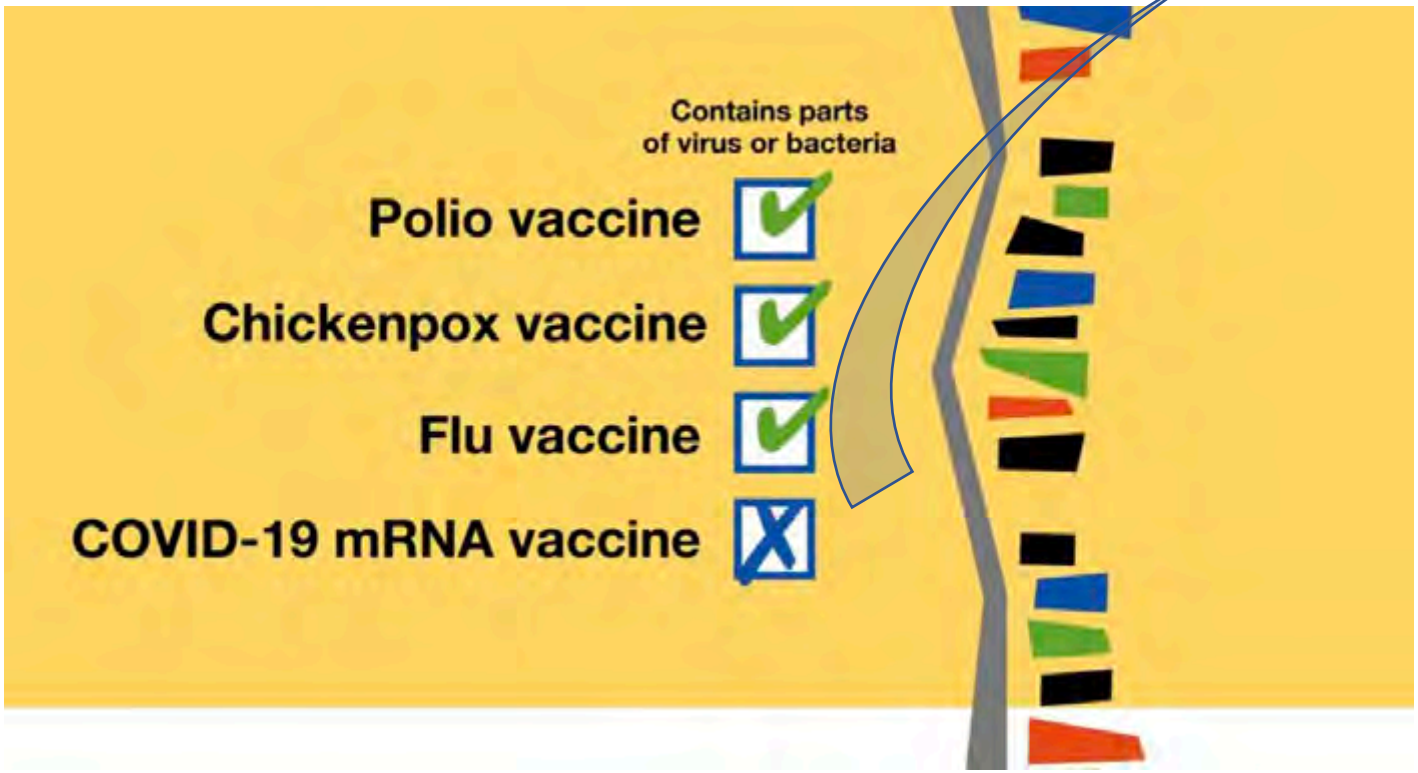
What do COVID-19 vaccines contain?



mRNA vaccines approved for children **do not contain virus**

They **do not affect or interact** with our **DNA** and not make your kids infertile

The ingredients in COVID-19 vaccines are **NOT dangerous**

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How are vaccines developed and approved?

Bringing a new vaccine to the public involves many mandatory steps including:

- Vaccine development
- Clinical trials
- Health Canada authorization
- Tracking safety using vaccine monitoring systems

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How were COVID-19 vaccines developed so quickly?

COVID-19 vaccine development became the top priority for many countries and health organizations

- More resources were devoted than ever before
- The technologies used (including the mRNA platform) have been extensively studied for many years
- More vaccine candidates were developed than ever before

234
Vaccine Candidates

808
Vaccine Trials

80
Countries with Vaccine Trials

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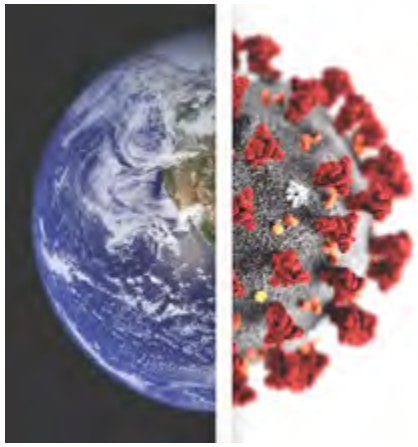
Are COVID-19 vaccines safe? How are COVID-19 vaccines monitored after vaccination?

Government of Canada

COVID-19 vaccines are **safe** and meet Health Canada's rigorous scientific standards for safety and manufacturing quality.

After a vaccine is authorized for use, the Health Canada monitors its safety and how well it works in people, including children → **post-market surveillance**



Adjust vaccine recommendations, as needed, such as booster doses

Guide vaccine policy and vaccine distribution

Inform development of vaccine technologies

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Are COVID-19 vaccines safe?

Millions of children in the world have received COVID-19 vaccines.

Government of Canada

Last updated on March 3, 2023

	At least 1 dose	
Total population	5 years and older	0 to 4 years
83.4% (32,458,765)	**87.1%** (32,269,493)	**9.6%** (180,037)

	Primary series completed[a]	
Total population	5 years and older	0 to 4 years
80.7% (24,396,513)	**84.5%** (24,304,405)	**5.3%** (99,422)

	In last 6 months, primary series completed or booster dose received	
Total population	5 years and older	80 years and older
22.4% (8,705,405)	**23.2%** (8,604,103)	**54.2%** (953,754)

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Are COVID-19 vaccines safe?

Government of Canada

Last update on March 3, 2023

43,884 were not serious (0.045% of all doses administered)

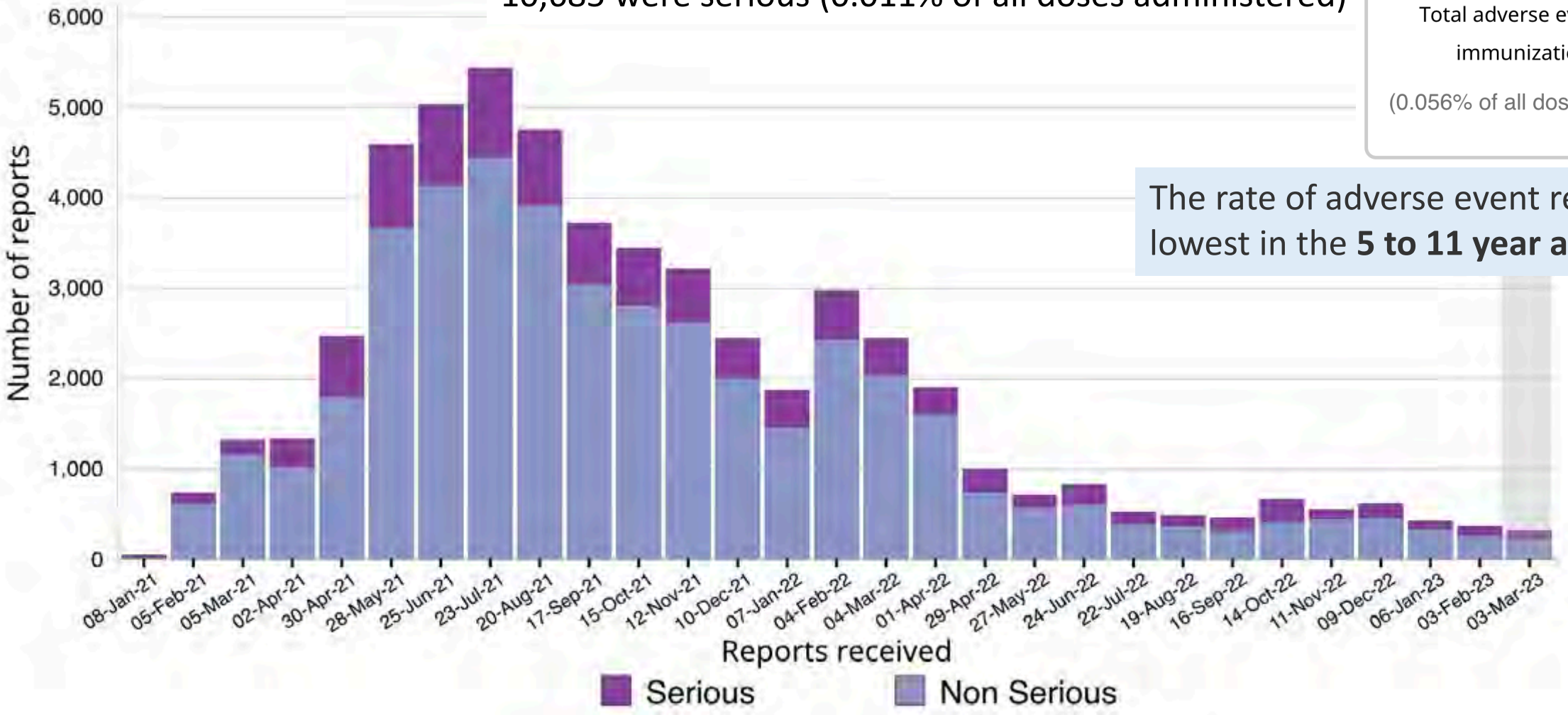
10,685 were serious (0.011% of all doses administered)

54,569

Total adverse event following immunization reports

(0.056% of all doses administered)

The rate of adverse event reports was lowest in the **5 to 11 year age group**



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Are COVID-19 vaccines safe? What about side effects?

- Some have **no** side effects
- Experience **mild** side effects in a few days **is normal** and may include:
    - Sore arm
    - Irritability
    - Fatigue
    - Low-grade fever/chills
    - Muscle or joint pain

Even if you don't experience any side effects, your body is building protection against the virus.

Recommended treatments may be given as directed, if necessary, for fever or pain/irritability.

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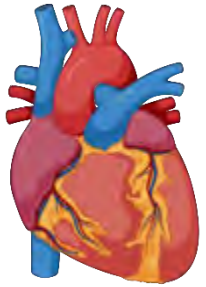
Are COVID-19 vaccines safe? What about myocarditis and pericarditis?

Myocarditis and pericarditis are inflammatory diseases of the heart and lining around the heart

This is a **very rare** side effect following mRNA vaccination, especially in 5-11 year old kids.



They occur more commonly after the 2nd dose, typically within 4 to 5 days, mainly in **adolescents/young adults (12-24 years old),** and more often in **males** than females.

Public Health Ontario | Santé publique Ontario

SURVEILLANCE REPORT

Last update on March 3, 2023

In Ontario, the crude rate of myocarditis and pericarditis is 22.4 per million doses of mRNA vaccines administered.

The highest reporting rate was observed for males (18 to 24 years old) following 2nd dose (201.8 events per million doses administered).

A longer interval between the 1st and 2nd dose is important.

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Will vaccines stop my kids from getting COVID-19?

COVID-19 vaccines **protect** children from getting seriously ill, being hospitalized, and even dying.

COVID-19 vaccines **prevent** severe complications in children.

COVID-19 vaccination **plays a key role** in reducing the viral spread in the community, combining with the use of masks and social distance.

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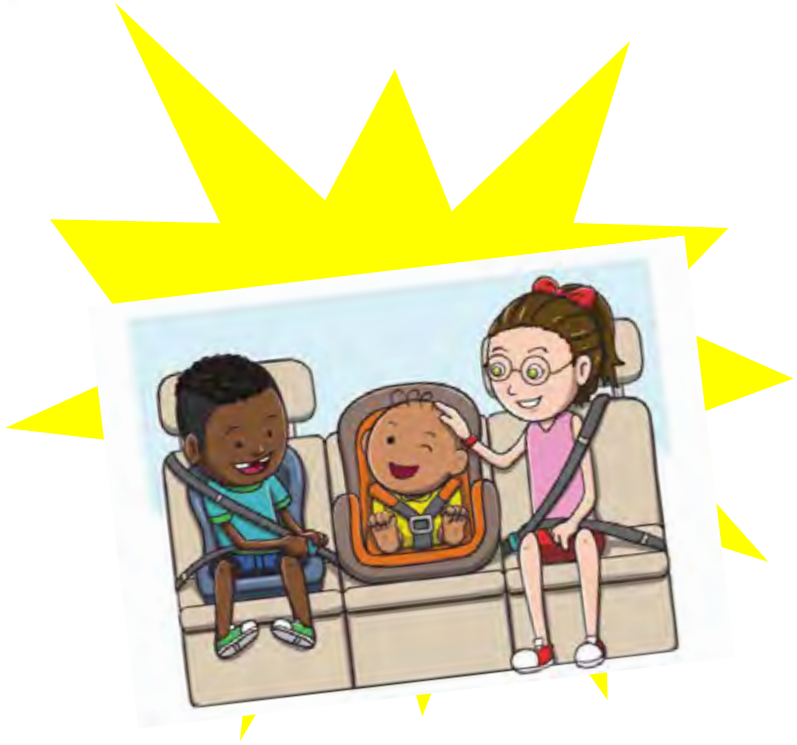
Will vaccines stop my kids from getting COVID-19?



A correctly used child seat can reduce the risk of death by up to 28% for children aged 2-6 years, but not completely protect them.

Vaccines **reduce the risk** of getting COVID-19, but **do not completely eliminate it.**

Some vaccinated kids will **still get infection**, but they are likely to have **milder, shorter illness** and appear to be less likely to spread the virus to others.

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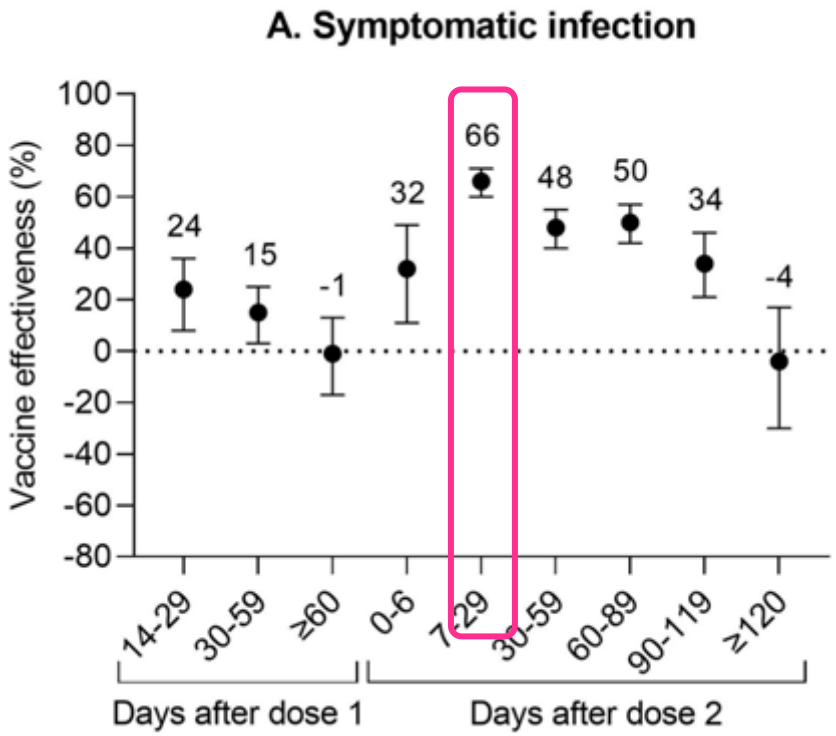
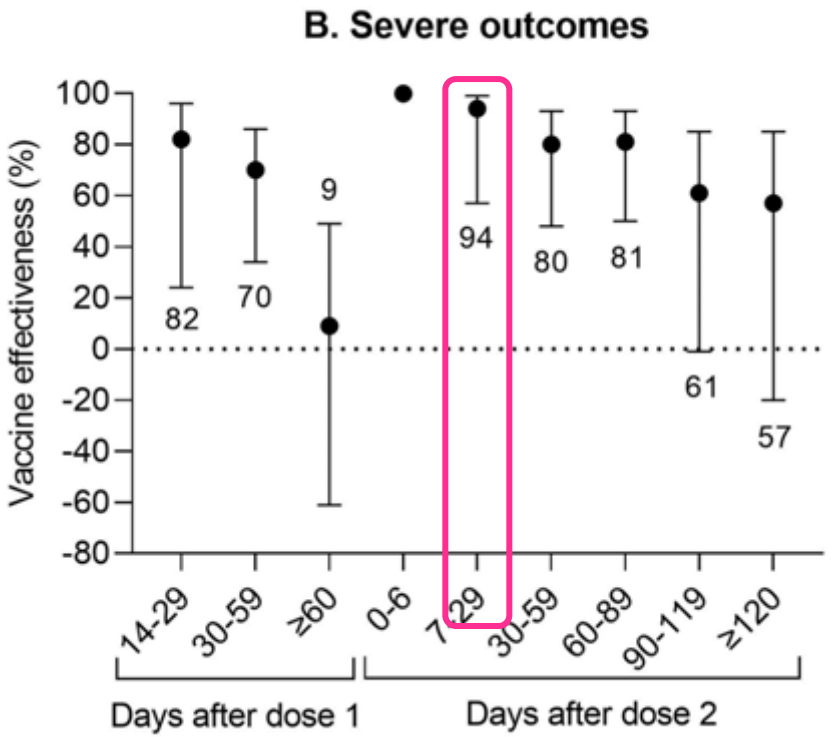
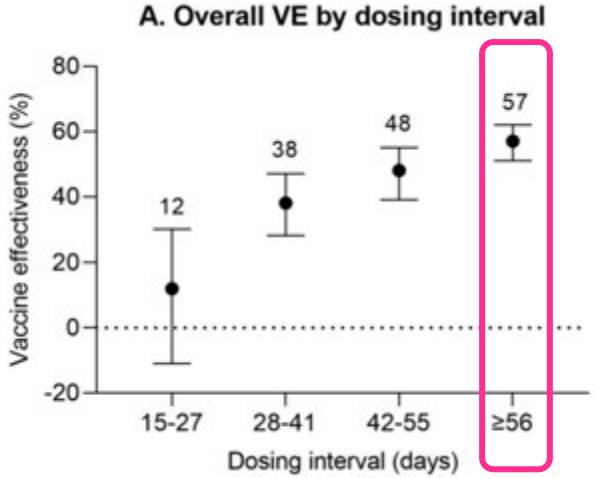
Will vaccines stop my kids from getting COVID-19?

Stop COVID-19 in Kids

To estimate BNT162b2 vaccine effectiveness against **symptomatic infection** and **severe outcomes** caused by **Omicron** in children aged **5-11 years** between January 2 and August 27, 2022 in Ontario







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What are the approved COVID-19 vaccines for children aged 5 to 11 years old?

Primary Series:

1. Pfizer 10 mcg – 2 doses; 8-week interval (preferred vaccine)
2. Moderna 50 mcg – 2 doses; 8-week interval

Boosters:

1. Pfizer Bivalent BA.4/5 – preferred booster
2. Pfizer 10 mcg

- Eligible 6 months after completion of primary series

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What are the approved COVID-19 vaccines for children from 6 months to under 5 years old?

Primary Series:

1. Moderna 25 mcg – 2 dose primary series; 8-week interval

2. Pfizer 3 mcg – 3 dose primary series; 8-week intervals

- Get whichever one is available first!
- No time needed between COVID-19 and other vaccines

Booster: not approved in Canada at this time

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What are the approved COVID-19 vaccines for children aged 12 to 17 years old?

Primary Series:

1. Pfizer 30 mcg – 2 doses; 8-week interval (preferred vaccine - MOH)
2. Moderna 100 mcg – 2 doses; 8-week interval

Boosters: 6 months after previous dose

1. Pfizer Bivalent B.A.4/5 – preferred booster
2. Pfizer Monovalent
3. Moderna Monovalent

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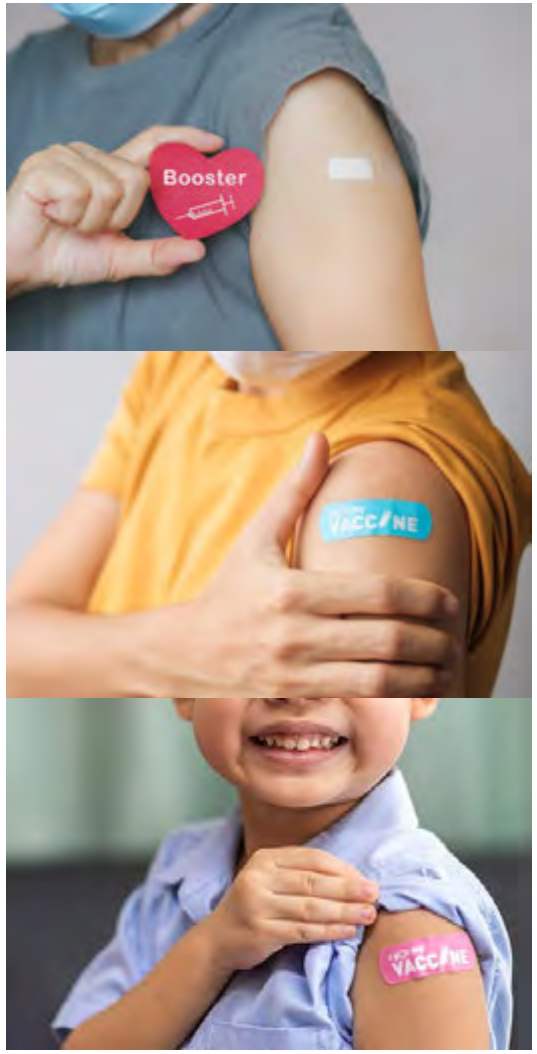
What is the importance of the booster dose?



Primary doses teach our immune system to **recognize** and **produce antibodies** against the virus

Booster shots are administered to **remind** the body's immune system **about the virus** it needs to defend against

This improves or gives the immune system a boost.

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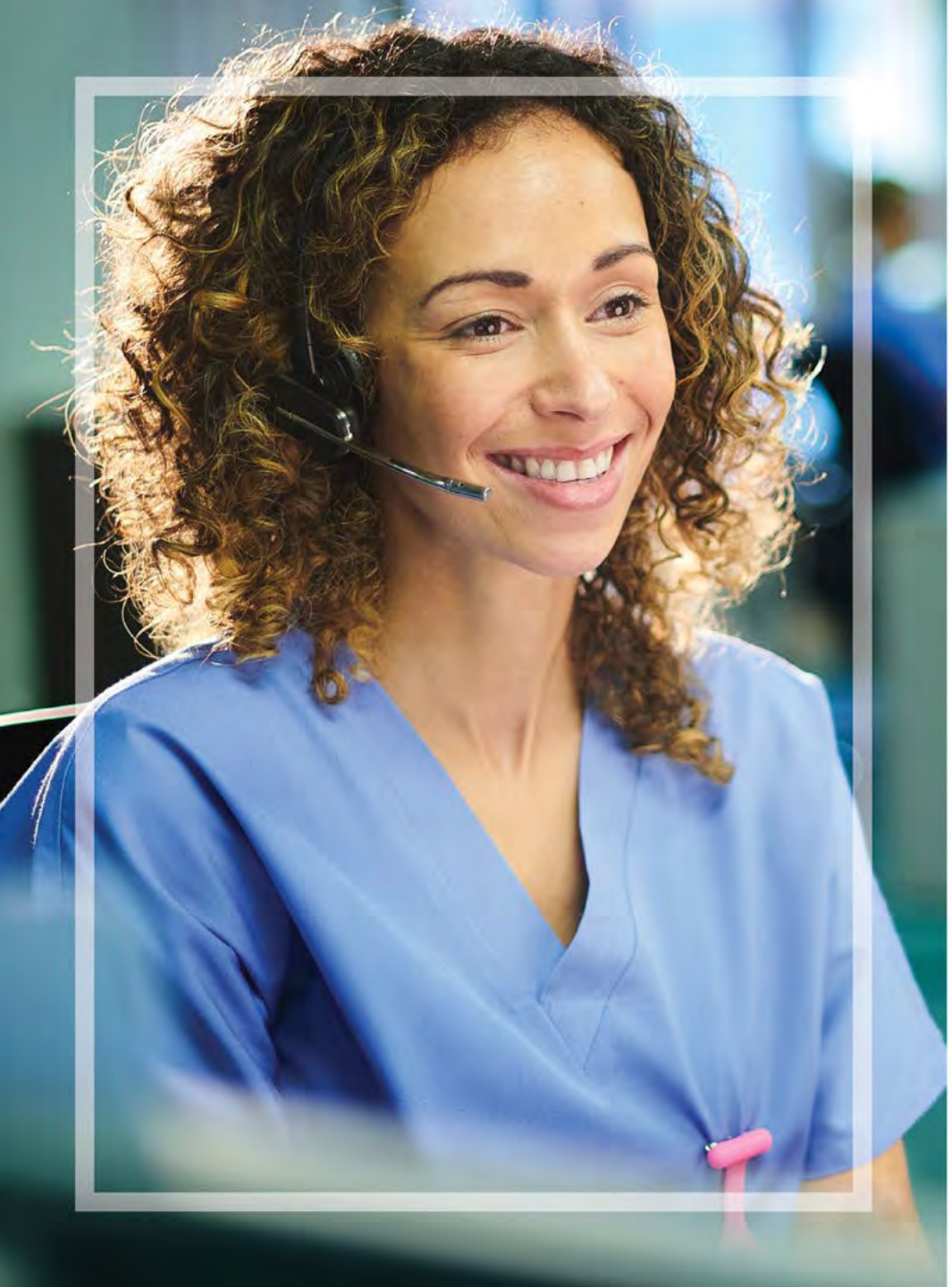

COVID-19 Vaccine Consult Service

SickKids Vaccine Consult Service

- Safe and judgement-free space to have an open conversation about the COVID-19 Vaccine
- Book a phone consultation to speak with a nurse to have your questions answered

Contact:

- Phone: 437-881-3505 or 1-888-304-6558 (Toll-Free)
- Email: stopcovid19.inkids@sickkids.ca
- Website: https://www.sickkids.ca/en/care-services/support-services/covid-19-vaccine-consult/
- Language Line available upon request

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Thank you!

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Suggested resources where to find more information

BC Centre for Disease Control

Children and COVID-19 Vaccination

http://www.bccdc.ca/health-info/diseases-conditions/covid-19/covid-19-vaccine/vaccines-children

BRITISH COLUMBIA | ImmunizeBC

COVID-19 vaccines (children 5 to 11 yrs)

https://immunizebc.ca/question-categories/covid-19-vaccines-children-5-11

Government of Canada

Vaccines for children: COVID-19

https://www.canada.ca/en/public-health/services/vaccination-children/covid-19.html

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COVID-19

https://www.aboutkidshealth.ca/COVID-19

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