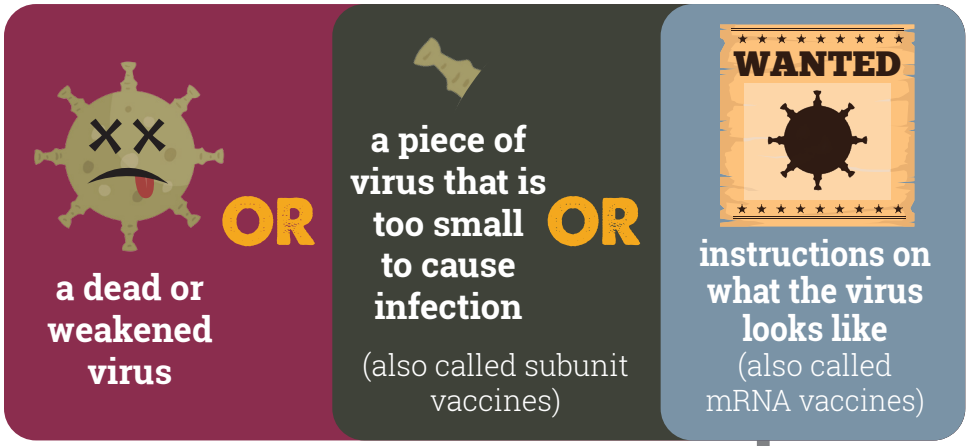
Questions about VACCINES FOR CHILDREN and the answers that may SURPRISE YOU

A booklet for parents and caregivers who would like to learn more about vaccines

How do vaccines work?

Our bodies have an immune system that is good at learning and remembering how to fight germs (viruses and bacteria). In order to learn, the immune system needs practice.

Vaccines provide a safe way to practice.
For example, a vaccine for a virus is usually:



The vaccine does not contain the actual virus, so it cannot cause an infection. **Think of it like practicing with a punching bag – it makes you stronger and yet you will not be punched back.**

After the vaccine is given, your child's immune system will be trained and ready. Your child may not get sick when they encounter the actual virus or bacteria ... or if your child does get sick, they will generally be less ill and recover faster.

Do vaccines cause side effects?

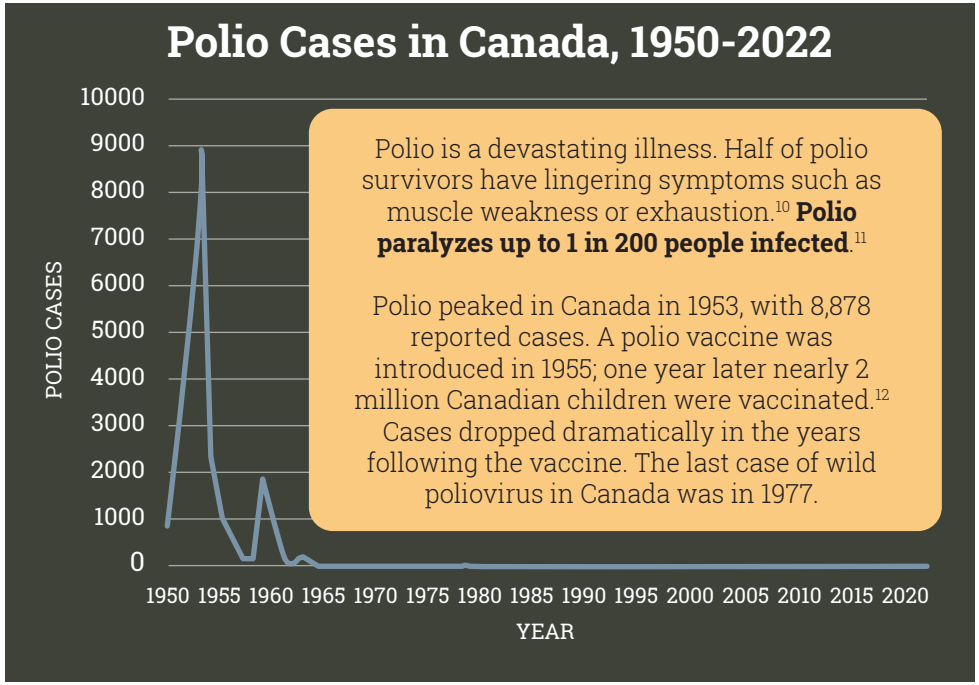
Vaccines are exercise for the immune system. After practicing on the punching bag from page 2, the body can feel a little tired.

Side effects that are common and expected with vaccines include fever, chills, a sore arm, and low energy. These side effects are usually mild and go away on their own within a day or two. They do not mean that your child is ill. Rather, they are a sign that your child's immune system is working hard to build its memory of a disease.

It can be helpful to know that **serious side effects from vaccines are extremely rare**. Research suggests that after 100,000 people have a vaccine, only one person will develop a serious side effect, such as an allergic reaction.[1-3]

Why risk the possibility of side effects?

Let's examine the success of the polio vaccine.



Getting vaccinated helps **KEEP** polio from coming back.

MY CHILD ALREADY HAD COVID-19. BESIDES, IT'S NOT THAT SERIOUS FOR KIDS ANYWAY.

I'VE NEVER HEARD OF ANYONE GETTING TETANUS.

IF POLIO IS GONE FROM CANADA, WHY SHOULD MY CHILD GET THE VACCINE?

The final period is about to start....
Is now the right time to start celebrating your victory?

NO WAY!

If you start coasting, the other team could mount a comeback!

Without vaccination, it is easy for diseases to become more common. For example, every year small outbreaks of measles and other preventable infections occur in Canada and the United States. The viruses are still out there, waiting for an opportunity to spread.

Meanwhile, some infections such as COVID-19 and influenza (or 'the flu') keep changing (or 'mutating'). It's hard to know if mutation will make these infections more severe. The safest strategy is to keep your child fully up to date on vaccines.

MY CHILD HAS A STRONG IMMUNE SYSTEM. CAN'T THEY JUST FIGHT OFF THE FLU WITHOUT THE VACCINE?

This is an understandable belief. It is true that most healthy kids can fight off a number of different infections on their own.

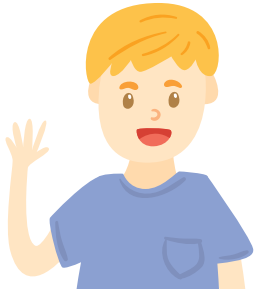
Some things to consider...

Getting vaccinated helps not just your child – it also helps stop infections from spreading to others.

The more people who are vaccinated, the more protection given to our vulnerable friends and neighbours.

Getting vaccinated helps protect newborns, who are too young to be vaccinated.

Getting vaccinated helps protect older adults, who have a weaker immune system.



Getting vaccinated helps protect people like Declan, who have serious allergies to vaccinations. Declan's story is on page 6.

Getting vaccinated is like sharing your umbrella with a loved one. YOU stay out of the rain – and so do they!

Declan's Story

Right after Declan was born, he was sent to the neonatal intensive care unit. He had an anaphylactic reaction (a life-threatening allergy) to his milk formula. We found out that Declan seems to have idiopathic mast cell activation. Mast cells are responsible for immune responses. Somehow Declan's mast cells are overactive. **Declan has had anaphylaxis over 30 times in his life.**

Declan can get anaphylaxis to all sorts of things – different foods, and heat, and pain – **but his biggest trigger that we know of is sickness.** Viruses, fevers, or any illness is very bad for him. When he catches a simple cold, he'll need 3 to 5 doses of epinephrine, and a month of steroids. He'll be quite unwell for a long time just from something small. So we know that if Declan got something like measles it would be awful.

That being said, vaccines aren't great for Declan either. **Vaccines can give him anaphylaxis too.** We have had to give him his vaccines in the emergency department of the hospital and be ready with epinephrine. He can only get one vaccine at a time. Then we have to wait until he recovers to as close to perfect health as possible before he gets another vaccine.

It's very risky for Declan to get vaccines, but we know that he can't skip them. There aren't enough people who are vaccinated in our community to say that Declan would be

safe without vaccinations. Each time we think about giving Declan a vaccine, we know we are risking anaphylaxis. But each day or week or month we delay a vaccine, we know we are risking a life-threatening illness.

The other thing that we worry about is we don't know if Declan's immune system is allowing him to get a full response to the vaccines. We don't know if he's as protected as everyone else. So that makes it really important for everyone he comes in contact with to be vaccinated.

If we had enough people getting vaccines that Declan didn't have to risk his life to get one, it would help a lot. But right now, we have to risk it because so many people are unvaccinated.

Declan's quite the kid. He's come a long way. Things are often really hard for him, but he gets through it. I really hope that meeting and understanding a kid like Declan will help people realize how important vaccinations are.

People read horror stories on social media about reactions to vaccines. So they think, my kid is healthy, they can skip their shots. But kids die every year in Canada from whooping cough, and it's completely preventable**. Social media doesn't tell you about the dangers of skipping your vaccinations.**

Declan's story was shared by his mom, Pam.

Vaccines Help Protect Your Neighbours

Helping Kids Be More Comfortable Getting a Vaccine

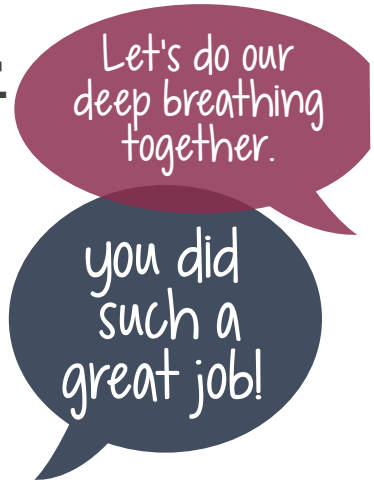
NUMB THE AREA.

Ask your pharmacist for a numbing cream. This will help your child not feel the sting of the needle as much. The cream should be applied at least 30-60 minutes before the needle is given (depending on which cream is chosen).

Scan this QR code for instructions on how to apply the cream.

PROVIDE ENCOURAGEMENT.

A calm caregiver means a calm child. Explain what will happen: sleeve up, wash arm, and then vaccine. Honesty helps build trust, and the truth is often less scary than imagination. Practice deep breathing beforehand so it can be used during the vaccination. Consider planning something fun to do after the vaccine. Afterwards, give praise and celebrate success!



HOLD YOUR CHILD FIRMLY BUT GENTLY IN A WAY THAT YOUR CHILD FINDS COMFORTABLE.

Holding your child during the vaccination helps them feel safe. Healthcare providers who give vaccines are also trained on holding techniques. They can guide you on the best position for your child.

PROVIDE A DISTRACTION.

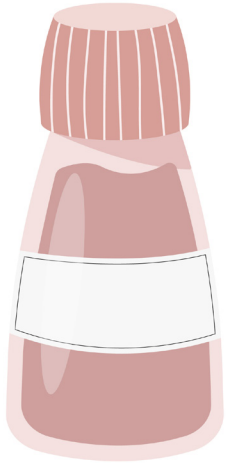
If your child's mind is not on the vaccine, it tends not to hurt as much.

Studies show that some sugar prior to a vaccine decreases the amount of pain a child feels.

GIVE ACETAMINOPHEN OR IBUPROFEN IN THE FIRST DAY OR TWO AFTER THE VACCINE IF NEEDED.

If your child has a sore arm or a high temperature after the vaccine, medicines like acetaminophen or ibuprofen can help them feel better.

Your health care provider can help you choose the proper dose for your child.



COMMON VACCINE QUESTIONS

Is natural immunity safer than vaccine immunity?

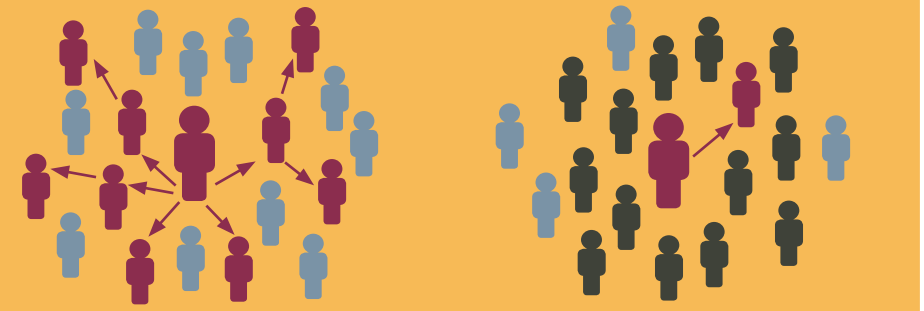
No. Natural immunity is when your body learns how to fight an infection after getting sick. Sometimes natural immunity will help prevent a repeat infection, but **vaccine immunity is safer.**

Vaccines are better than natural immunity at preventing death.
For example, around 1 in 5 people who are infected with tetanus may die.[8] The tetanus vaccine drops this risk close to zero.[9]

Vaccines are better than natural immunity at preventing complications.
Vaccines help prevent:
- deafness after getting measles
- cancer after getting HPV
- long COVID after getting COVID-19

Why did my child get sick even after being vaccinated?

While vaccines reduce the risk of infections, they do not eliminate risk completely. This is one reason why it is important for as many people as possible to get vaccinated. The more people who are vaccinated, the less likely an infection is able to spread. This is called *herd immunity*.



Do vaccines cause autism?

No. This claim is false and was based on falsified data. You may find it interesting to learn that the man who falsified the data appears to have been trying to discredit existing vaccinations so that he could patent his own measles vaccination.[5] Studies of vaccines given to millions of children have not found any link to autism.[6]

Do vaccines contain aluminum?

Yes, some do. However the **amount of aluminum in these vaccines is similar to the amount naturally found in breastmilk.** At these levels, it is safe and will not cause harm. The reason for the aluminum is to help the vaccine have the greatest possible effect.

Do children's vaccines contain mercury?

No, not anymore. Previously, some vaccines contained a form of mercury called ethylmercury, which was not absorbed by the body. **Today, all the vaccines routinely recommended for kids do not contain any form of mercury.**

Can an mRNA vaccine change my child's DNA?

No, it cannot. mRNA is simply a message that the body reads, giving it instructions on what a particular bacteria or virus looks like. It cannot change DNA and quickly dissolves away in a few days.

Are children's vaccines well-studied?

Yes. Large trials of thousands of kids need to be completed before vaccines are approved for use. Even after a vaccine is approved, ongoing safety monitoring continues. For example, tens of millions of kids have now been monitored for side effects from COVID-19 vaccines.

Should my child get vaccinated?

CONS	PROS
· kids can be nervous about needles	· protects your child from serious infections (and from staying home sick from school)
· your child's arm will likely be sore for a couple of days, and they may feel a little tired	· helps protect others who are vulnerable to serious illness (Declan's story is on page 6)
· for every 100,000 people who are vaccinated, about one will have a serious reaction, such as an allergy[1-3]	· typically provided for free by the health care system

It's normal for kids to be nervous about needles. You may ask yourself – is it worth some discomfort to prevent serious diseases?

Open this booklet to learn more. And turn to page 8 for ways to help children feel more comfortable during vaccination.

REFERENCES

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ALSO SEE
A Parent's Guide to Vaccination

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