



Teens, meet *Vaccines*



Public Health
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Vaccins. Allô les ados !

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What is a *vaccine*?

Vaccines protect you from illnesses caused by *vaccine-preventable diseases*. These diseases can make you very sick, disable you or even kill you.

Vaccination is one of the best ways you can protect your health.

Simple as that.

Vaccinations are also called immunizations, needles or shots. When you were a little kid, your parents probably made sure you got them, but now it's on you.

Protect your health. Keep your shots up to date.

Vax Fact

Thanks to vaccines, there hasn't been a single case of smallpox in the entire world since 1977. Before the vaccine, smallpox killed up to 3,000 people in Canada every year.



A decorative orange triangle in the top-left corner contains line drawings of school supplies: a paintbrush, a paint roller, a compass, a pencil, a ruler, and a laptop. Below this triangle, a photograph of a young girl with dark hair, wearing a purple puffer jacket, is shown crawling on green grass.

How are *vaccines* made?

And how do they work?

(Spoiler alert: it's really science-y)

First, researchers must spend time isolating and studying the virus or bacteria that causes the disease. Then, they must figure out how to isolate and produce weakened or dead germs that, when introduced into your body, will teach it how to build antibodies that fight the disease without causing any symptoms of the disease itself.

Next, the scientists figure out the correct quantity of the vaccine to give and how long the protection lasts. The vaccine is then tested and retested in the lab. It is then used in many clinical trials, where it is given to an increasing number of volunteers. Finally the vaccine is determined to be safe to use. On you!

(There, we hope that now at least your homework seems easier by comparison).

For you, it's just a very fast shot in the arm, but the journey it takes to get there is a very long and careful one, designed with nothing but your good health and safety in mind.





Are *vaccines* safe?

In a word...YES...Vaccines are safe!

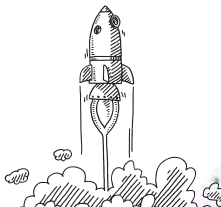
In Canada each and every vaccine goes on an incredible journey. One that begins with years of research, followed by testing and retesting. Each vaccine **MUST** be proven to be safe and to work before it can be given to you.

Even after the vaccine is in use, its safety and effectiveness continue to be checked and rechecked by: Health Canada scientists who review it; doctors, nurses and pharmacists who give it; and public health teams who monitor it.

Step by step, year by year, the journey that each vaccine travels involves high standards, expert judgment and constant attention.

Vaccines are safe and they protect you from disease. That's a win-win.

Check out our vaccine safety video @ Canada.ca/vaccines.





Vax Fact

Wondering why most vaccines are still given with needles, and not by mouth?

It's because saliva and the digestive process break down most vaccines.

Until scientists solve this problem, needles are here to stay. But hey, just remember it's a quick jab that keeps you healthy!

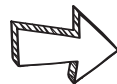
Diseases prevented by *vaccinations*

If there was an easy way to avoid getting sick, would you do it?

That's a trick question, because there is a way, and it's called vaccination.

Vaccines protect you from a wide range of diseases and their effects. Sometimes these effects cause you to break out in spots and keep you in bed for a week. Other times, they can cause more severe discomfort, complications or even death!

Keeping your shots up to date is a great way to keep yourself as healthy as possible, so you don't miss out on something really great because of an illness you can prevent.





Diseases	Possible symptoms	Possible complications
Tetanus	<ul style="list-style-type: none">• Muscle spasms (beginning with jaw & going down the body)• Difficulty swallowing	<ul style="list-style-type: none">• Broken bones• Death
Diphtheria	<ul style="list-style-type: none">• Sore throat & difficulty swallowing• Fatigue• Mild fever	<ul style="list-style-type: none">• Breathing problems• Heart damage• Nerve damage
Pertussis (whooping cough)	<ul style="list-style-type: none">• Runny nose & nasal congestion• Red, watery eyes• Mild fever• Cough (starts mild; can become severe and long-lasting)	<ul style="list-style-type: none">• Pneumonia <p>Infants are more likely to have severe complications (breathing difficulties, seizures, brain damage, death). So, we get vaccinated to protect them.</p>
Hepatitis A & Hepatitis B	<ul style="list-style-type: none">• Fever• Fatigue & loss of appetite• Nausea & vomiting• Abdominal pain• Jaundice (yellowing of the skin and eyes)• Dark urine	<p>Hepatitis A</p> <ul style="list-style-type: none">• Loss of liver function (rare) <p>Hepatitis B</p> <ul style="list-style-type: none">• Cirrhosis (scarring of the liver)• Liver cancer• Death



Diseases	Possible symptoms	Possible complications
Human papillomavirus (HPV)	<ul style="list-style-type: none">• Genital and/or anal warts• Itching or burning• Very often no symptoms	<ul style="list-style-type: none">• Cervical cancer• Other cancers (e.g., anal, throat, tongue, vulvar, vaginal, penile and others)• Warts in the airways• Death
Meningococcal infection	<ul style="list-style-type: none">• Sudden fever• Severe headache• Nausea & vomiting• Red rash or tiny bruises on skin• Stiff neck	<ul style="list-style-type: none">• Meningitis (infection of the lining of the brain and spinal cord)• Septicemia (infection of the blood)• Coma• Death
Seasonal influenza (flu)	<ul style="list-style-type: none">• High fever• Headache, general aches & pains• Tired & weak• Sore throat• Coughing & chest discomfort	<ul style="list-style-type: none">• Bronchitis (inflammation of airways)• Pneumonia• Respiratory failure• Can worsen a chronic condition (e.g. asthma, congestive heart failure)• Death

Other diseases such as measles, mumps, rubella (German measles) and varicella (chickenpox) can affect teens if vaccines are missed as a young child. Talk to your healthcare provider about what vaccines you need to be fully protected.

For more information on these and other diseases visit Canada.ca/vaccines.





Do I have to get *vaccinated*?

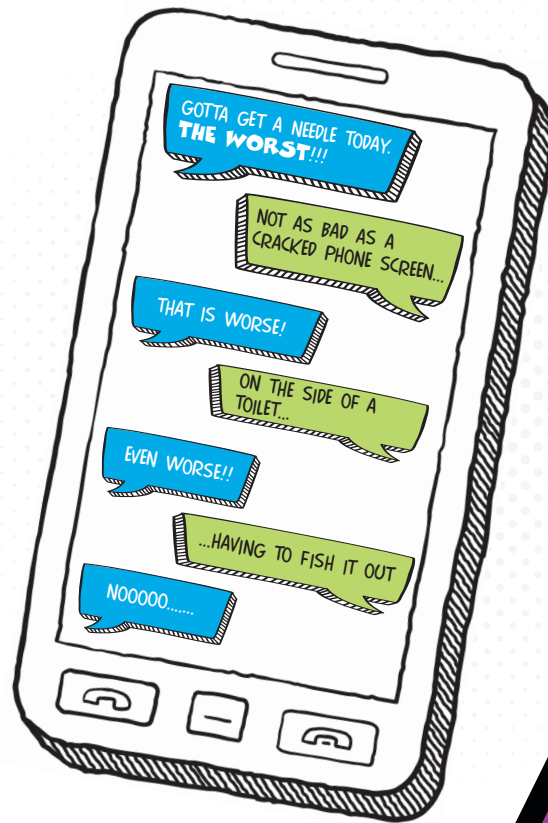
Nobody wakes up in the morning and says, “I’d really love to go get a needle in the arm today!”

But everyone wants to be healthy, and the fact is, vaccines work. They prevent disease and death. Vaccination has worked so well that we’re barely aware of diseases that we are vaccinated against. But that doesn’t mean we can stop worrying about disease. There’s still a danger of disease outbreaks if there are groups of people who aren’t vaccinated.

For example, measles is still a leading cause of death in children worldwide. In 2016, there were 89,780 measles deaths globally. A World Health Organization (WHO) immunization program managed to reduce death from measles by 84% between 2000 and 2016.

But as long as people travel and the disease still exists, measles can continue to make it into Canada. One person with measles can very rapidly infect 12 to 18 people who have not had the vaccine. And if not enough people are vaccinated, an outbreak will happen. That’s exactly what happened in Canada not long ago.

The problem is summed up nicely in a video called “Vaccination: Are We There Yet?”, which you can watch at Canada.ca/vaccines (or on YouTube).



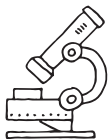


You're not just protecting yourself.

Many vaccines work by creating “community immunity” (also known as “herd immunity” and it has nothing to do with farming). When most people in a community have been vaccinated against a disease, the chance of an outbreak of that disease is greatly reduced.

The vaccine protects you, but it also protects those around you, like little babies who are too young for vaccines, people fighting illnesses such as cancer, and the elderly.

What is community immunity?



Minority are vaccinated,
sickness spreads.



Majority are vaccinated,
sickness does not spread.





How often should I get *vaccinated*?

Now that you know keeping your shots up to date is a really smart thing to do, you should know when you need them.

In Canada, each province and territory has its own **vaccination schedule**. So talk to your healthcare provider or public health nurse about what vaccines you need and the best time to get them. Some may be offered free right in your school. Now that's convenient!

There's a *vaccine* for HPV.

Human papillomavirus (HPV) is a common sexually transmitted virus and it can cause cancer. You can have HPV and pass it on without knowing it. The virus is spread by skin-to-skin or oral contact, so you don't have to have intercourse to get it, and using a condom doesn't fully protect you from the virus.



There are many types of HPV. Some cause warts on the genitals of both males and females. And the really bad news is that HPV can cause cancers, like cervical, vaginal, vulvar, penile, anal, throat, tongue and others!

Now for the good news! You can protect yourself against many of the types of HPV that cause warts and cancers by getting the HPV vaccine. The sooner you get it the better.





Here are the common vaccines you should get as a teen.



Vaccine	Age*
Hepatitis B	9-12 years (some provinces/territories give this to infants)
Meningococcal conjugate	9-14 years
Tdap (tetanus/diphtheria/ pertussis booster)	12-16 years
Human papillomavirus (HPV)	9-13 years
Seasonal influenza	Annually (in the fall)

*Age depends on your province/territory



Vax Fact

Vaccines have been with us for over 200 years. The science behind them keeps on improving, allowing us to be protected from more and more diseases. It's like a never-ending Science Fair project that has saved millions and millions of lives.





Vaccines are as easy as one, two, (ouch!) three.

It's true that needles may hurt for a second or two. But hey, isn't the pain worth it for protection from a disease that could hurt you a whole lot more?

You know vaccination is one of the best steps you can take to protect your health, but it's a good idea to think of getting it in terms of three steps.

Before

- ☐ Ask your healthcare provider or public health nurse which shots you need and for information on which are free to the public or may be covered by a school, work or private health plan.
- ☐ If you find needles painful, ask your pharmacist about getting a patch that will numb your arm.
- ☐ If the vaccine is supposed to be given at school and you would be more comfortable getting it at your healthcare provider's office or a clinic, just say so. It can be arranged.

During

- ☐ Sit upright when getting the needle, or lie down if you prefer.
- ☐ Try to keep your arm as relaxed as possible.
- ☐ Take slow deep breaths.
- ☐ Listen to music or watch a video, close your eyes, squeeze a friend's hand, or do all three.
- ☐ Don't get up too quickly afterward.

After

- ☐ It's important to wait 15-20 minutes in the clinic area after your vaccine to make sure you feel OK.
- ☐ Later on, the area where the shot was given may be a bit red or swollen, but it should feel better in 1-2 days.
- ☐ Serious reactions to vaccines are very rare, but if you have a prolonged fever, a rash, or don't feel well, seek medical attention right away.





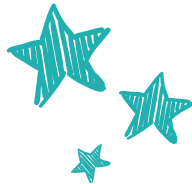
Travel *vaccines*

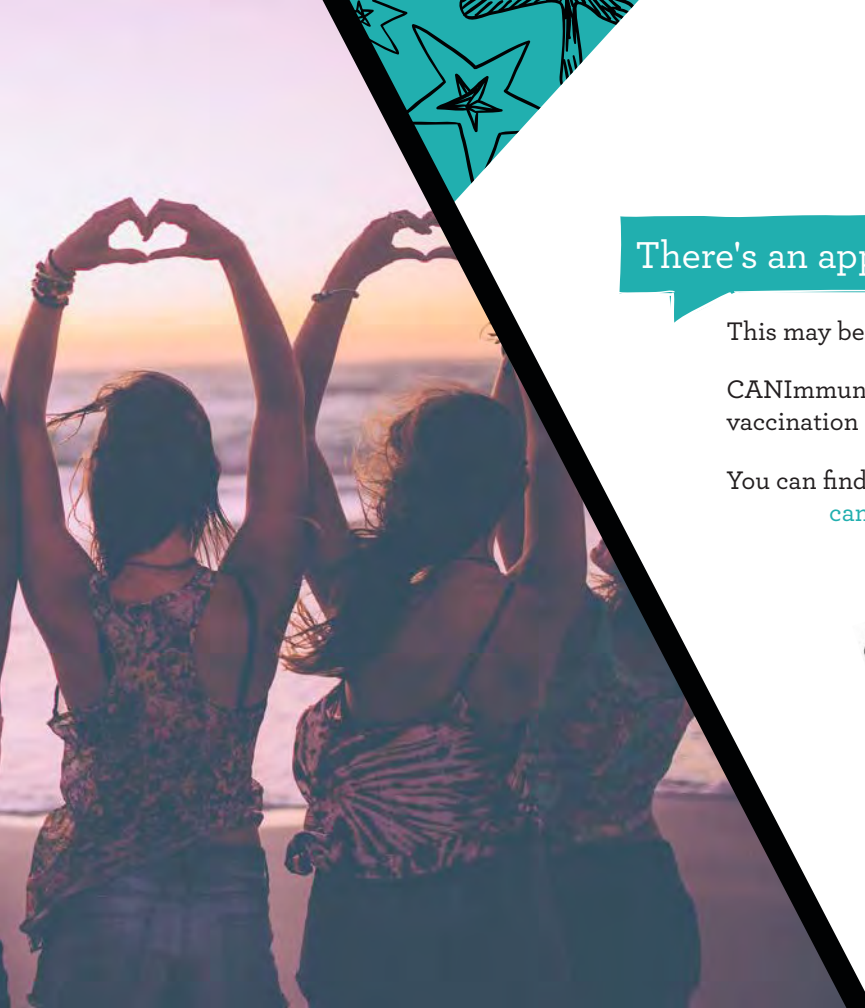
Are you going to be travelling outside Canada on a vacation, or for a school or volunteer trip? Lucky you!

Before you make your 'bon voyage' ensure your routine vaccinations are up to date and ask your healthcare provider or travel medicine specialist what vaccines you may need to protect you on your trip. Visiting other countries can expose you to diseases not commonly found in Canada. They can be caused by contaminated food or water, insect bites, animals or human contact. Hepatitis A and B, yellow fever and meningitis are just a few examples. It all depends on where you are going and your planned activities.

Ask at least 6 weeks in advance, so you can be sure you are properly prepared. The sooner you ask, the better, as some vaccines may require more than one dose and can take time to be effective.

Visit Canada.ca/travel for lots of helpful travel info.





Want to keep track of all your vaccination information?

There's an app for that!

This may be the healthiest thing you'll ever do with your phone.

CANImmunize is a free mobile app that will help you keep your vaccination information at your fingertips.

You can find it here:

canimmunize.ca



8 things your doctor wants you to know about vaccinations.



1 Some vaccines offer lifelong protection. Talk about commitment! Others require boosters in the teen and adult years.

4 No, your days of getting needles are not over now that you're no longer a kid.

Vaccines don't cause the disease they are meant to prevent. They help your body develop antibodies to the disease so you become immune to it.

3 Some vaccines can cause mild side effects. Serious reactions to a vaccine are extremely rare, like really, REALLY rare.



6

Canada's vaccination rates are too low, which makes disease outbreaks possible. This is why you need to be vaccinated. As a country, we need to get our vaccination marks up to an A+.

7

Vaccines have done amazing things in reducing suffering and disease. But most diseases are still around, some just a plane ride away. That's why you need to keep your shots up to date.

5

It's okay to get a vaccination even when you have a mild illness like a cold, a low-grade fever or diarrhea.

8

There is a lot of misinformation out there about vaccines. Make sure you get your info only from trusted sources and credible websites.



Unscramble the word to learn about *Vaccination!*

Hint: all answers can be found
throughout this guide!

- 1 **LPXSOLMA** There hasn't been a case of this disease since 1977

- 2 **DEELEN** Vaccines are usually given through this method, rather than
through the mouth, because saliva can break down the vaccine

- 3 **PHV VEICNCA** A vaccine that can prevent many types of cancer (two words)

Answer key:
1. Smallpox
2. Needle
3. HPV Vaccine
4. Booster Shots
5. Caninimmunize App

4

SOOBTER THSOS

Some vaccines last a lifetime,
others require more doses.
These are called. . . (2 words)

5

PPA ZINUANMCMEI

Something really useful that lets you
keep track of your vaccinations
(2 words)






Great places to find more *Vaccination* information.

There, that wasn't too painful, was it? We hope this guide has given you some useful information about how important vaccines are for your health, and that you'll keep yours up to date.

Make sure you get all the information you need about vaccination from trusted sources, such as your doctor, nurse or pharmacist.





Here are some websites where you'll find information you can trust.

Public Health Agency of Canada

Canada.ca/vaccines

Canadian Paediatric Society

caringforkids.cps.ca

HPV Information

hpvinfo.ca

World Health Organization

who.int

Immunize Canada

immunize.ca





Canada.ca/vaccines

