



Not Just For Kids.
An Adult Guide
to *Vaccination*



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Always trying to do the right thing for your health? Make *vaccination* a big part of it.

You may think of vaccination as something for kids, but the fact is you never outgrow your need to keep your shots up to date.

That's because vaccines are your best protection against vaccine-preventable diseases. Getting sick from a preventable illness could cause you to miss work, school, or a vacation you'd been looking forward to. These diseases can cause serious harm or even death.



Shot of Truth

A recent survey shows that while most adults believed they had received all vaccines required for someone their age, less than 10% were actually up-to-date on their immunizations.

What are *vaccines* and how do they work?

Vaccines are made from tiny amounts of dead or weakened germs called microbes. They help your body's immune system learn how to protect itself against disease by building antibodies and immune memory. Vaccines create immunity that protects you from an infection without causing suffering from the disease itself.

Vaccines are also called immunizations, needles or shots.

Some vaccines prevent one disease, while others are combined to protect you from several diseases with one shot. Often, your immune system remembers how to keep fighting a disease for the rest of your life. Sometimes immunity needs to be reinforced, and that's what booster shots are for.

To better understand how a vaccine works, consider this analogy: When you look in the mirror, what you see isn't actually you, it's just your reflection. Same thing with a vaccine's relationship to a real disease microbe. The vaccine teaches your immune system to recognize the microbe. Now that it recognizes it, it can protect you from the disease without causing its symptoms.



Shot of Truth

Although you may have had chickenpox as a child, you are not home-free. Shingles (or herpes zoster) is a disease that is a reactivation of the chickenpox virus that occurs in adults. Adults with shingles can then infect non-immune children causing them to develop chickenpox. Getting your shingles vaccine can protect you and those around you.

Vaccines don't just protect you. They protect those around you, too.

Vaccines protect individuals against specific diseases, but they also help those who have not had the vaccine by creating “community immunity” (also known as “herd immunity”). When most people in a community have been immunized against a disease, the chance of an outbreak of that disease is greatly reduced. This protects people vulnerable to the disease, such as babies too young to be immunized, people undergoing chemotherapy, the elderly, and people who cannot be immunized for medical reasons.

What is community immunity?



Minority are immunized,
sickness spreads.



Majority are immunized,
sickness does not spread.



Are *vaccines* safe?

Simply put...YES...Vaccines are safe!

Before it can be given to you, each and every vaccine must go on an incredible journey. The journey begins with years of research, followed by testing and retesting in order to prove that the vaccine is safe.

But the journey doesn't end there. Even after the vaccine is in use, its quality and safety continue to be checked and rechecked by: scientists who review it; doctors, nurses and pharmacists who give it; and public health professionals who monitor it.

The journey that every vaccine travels involves high standards, expert analysis and constant attention.

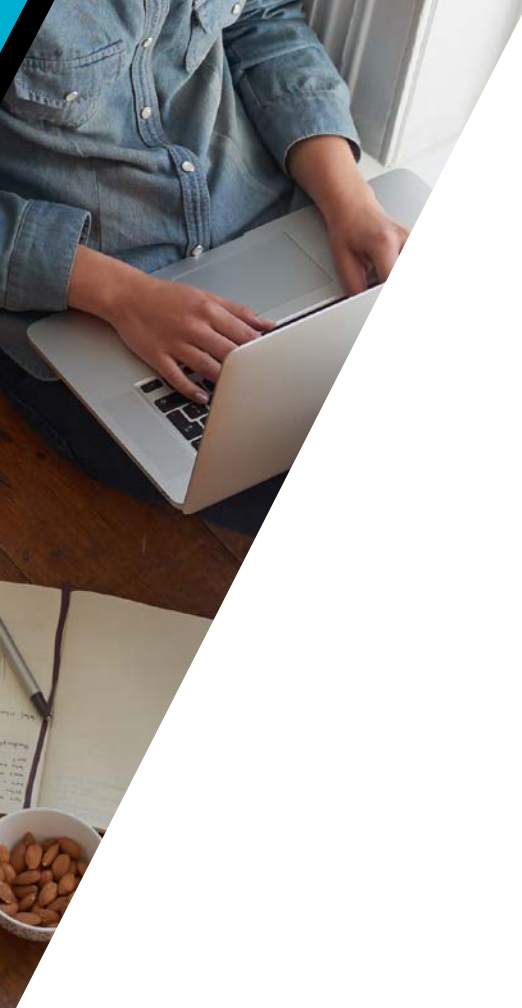
Vaccines are safe and they protect you from disease. That's a win-win.

Watch our vaccine safety video @ Canada.ca/vaccines.

Shot of Truth

You are far more likely to suffer from a vaccine-preventable disease than from a reaction to a vaccine. Most reactions, such as a sore arm or mild fever, are usually minor, and last no longer than a day. Serious side effects are very rare, and are carefully monitored by healthcare providers.

Remember, most vaccine-preventable diseases have no cure, and a minor side effect is nothing compared to the disease.



How are *vaccines* developed?

A new vaccine begins with a very careful study of the disease it is meant to prevent. Studying the disease allows scientists to learn more about the microbe (bacteria or virus) that causes it.

Vaccines are made in different ways. For some, the microbe which causes the disease is “killed”, or inactivated, in the manufacturing process. For others, the parts of the microbe that cause your body to make antibodies are used in making the vaccine. And in other cases, the living microbe is weakened but remains strong enough to give you immunity without causing the disease itself.

Once this vaccine has been developed, clinical trials can begin. The trials go through several phases involving an increasing number of volunteers until the vaccine is proven safe and effective to use.

The process of making and testing the vaccines that protect you is a long, careful and scientific one that has been designed with the health of you and your family as a top priority.

Why should I get *vaccinated*?

The really short answer is because vaccination is so effective at keeping you and those around you healthy.

In fact, it is estimated that vaccines prevent 2-3 million deaths worldwide per year.

Vaccines have worked so well that we now take them for granted. We've forgotten just how bad some of these diseases were.

Smallpox was an infectious disease that caused painful, red blisters. It killed millions of people around the world, and up to 3,000 Canadians every year. Vaccines completely wiped out smallpox in the late 1970s, and that's why we no longer need to use a smallpox vaccine.

Polio caused paralysis and deformity, and used to affect over 5,000 Canadians a year. Thanks to vaccines, Canada has been totally polio-free for over 20 years.





In many cases such as these, vaccines have worked so well that people think the danger has passed.

But disease outbreaks can still happen if there are groups of people who aren't vaccinated. Since there are areas of the world that still have diseases such as polio, infection can be just a plane ride away.

Vaccination is quite simply one of the most important things you can do to protect your health and the health of your community.

Diseases prevented by *vaccines*.

When should I get *vaccinated*?

Nearly all vaccine-preventable diseases are contagious. Some, like shingles (also known as herpes zoster), are a reactivation of a previous infection, in this case, chicken pox. Shingles can cause great pain and inconvenience in your daily life, while other infections have even more severe complications and can be fatal. Your best defense is to get all recommended vaccines at the right time.

The chart on the next page lists common vaccine-preventable diseases. To find out more, visit Canada.ca/vaccines.

Shot of Truth

Some vaccines are “publicly funded” (free) while others may need to be purchased (or are covered by school, work or private drug plans). Each province/territory makes this decision for its area.

Diseases	Symptoms	Possible complications	Who should get vaccinated?				
Tetanus	<ul style="list-style-type: none"> > Muscle spasms (beginning with jaw and going down the body) > Difficulty swallowing 	<ul style="list-style-type: none"> > Broken bones > Death 	<ul style="list-style-type: none"> > Everyone (1 dose every 10 years) 				
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 	<ul style="list-style-type: none"> > Everyone (1 dose every 10 years) 				
Pertussis (whooping cough)	<ul style="list-style-type: none"> > Runny nose & nasal congestion > 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 (such as pneumonia, breathing difficulties, seizures, brain damage, death)</p>	<ul style="list-style-type: none"> > Everyone (1 booster dose as an adult) 				
Hepatitis A & B	<ul style="list-style-type: none"> > Fever > Fatigue & loss of appetite > Nausea & vomiting > Abdominal pain > Jaundice (yellowing of skin & eyes) > Dark urine 	<table border="0"> <tr> <td>Hepatitis A</td> <td>Hepatitis B</td> </tr> <tr> <td> <ul style="list-style-type: none"> > Liver failure > Death (rare; risk increases over age 60) </td> <td> <ul style="list-style-type: none"> > Cirrhosis (scarring of the liver) > Liver cancer > Death </td> </tr> </table>	Hepatitis A	Hepatitis B	<ul style="list-style-type: none"> > Liver failure > Death (rare; risk increases over age 60) 	<ul style="list-style-type: none"> > Cirrhosis (scarring of the liver) > Liver cancer > Death 	<ul style="list-style-type: none"> > Everyone wanting protection > Especially people with medical, occupational, travel or lifestyle risks (Usually 2-3 doses)*
Hepatitis A	Hepatitis B						
<ul style="list-style-type: none"> > Liver failure > Death (rare; risk increases over age 60) 	<ul style="list-style-type: none"> > Cirrhosis (scarring of the liver) > Liver cancer > Death 						
Human papillomavirus (HPV)	<ul style="list-style-type: none"> > Genital warts > Anal warts 	<ul style="list-style-type: none"> > Cervical cancer & other cancers (e.g., anal, throat, tongue, vulvar, vaginal, penile) > Warts in the airways > Death 	<ul style="list-style-type: none"> > Females and males 9 to 26 years of age > Females and males 27 years of age and older at ongoing risk of exposure (Usually 2-3 doses)* 				

Other diseases such as measles, mumps, rubella (German measles) and varicella (chickenpox) can affect adults. People who have not had the disease or the vaccine may need it as an adult. These diseases are especially dangerous for pregnant women and immune-compromised individuals. For more information on these and other diseases visit Canada.ca/vaccines.

Remember: Each province and territory has its own vaccine schedule and decides which vaccines are given for free.

Diseases	Symptoms	Possible complications	Who should get vaccinated?
Seasonal influenza (flu)	<ul style="list-style-type: none"> > High fever > Headache, general aches & pains > Fatigue & weakness > Sore throat > Coughing & chest discomfort 	<ul style="list-style-type: none"> > Bronchitis (inflammation of airways) > Pneumonia > Can worsen a chronic condition (e.g., asthma, congestive heart failure) > Death 	<ul style="list-style-type: none"> > Everyone (1 dose every year in the fall)
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 (inflammation of the lining of the brain and spinal cord) > Septicemia (infection of the blood) > Coma > Death 	<ul style="list-style-type: none"> > People with specific medical conditions > People living in residential accommodation (e.g., students, military) (Usually 1 dose—depends on risk)*
Pneumococcal infection	<ul style="list-style-type: none"> > Fever & chills > Cough & difficulty breathing > Chest pain 	<ul style="list-style-type: none"> > Pneumonia > Meningitis > Septicemia > Death 	<ul style="list-style-type: none"> > Everyone 65 years and older, and people with specific medical conditions (Usually 1 dose—depends on risk)*
Herpes zoster (shingles)	<ul style="list-style-type: none"> > Headache, sensitivity to light > Fatigue > Anywhere on one side of body: <ul style="list-style-type: none"> > Skin pain, burning, itching or tingling, sensitivity to touch > Red rash, fluid-filled skin blisters 	<ul style="list-style-type: none"> > Post-herpetic neuralgia (prolonged pain can last for years & affect daily activities) > Vision or hearing loss > Severe skin infections > Nerve damage 	<ul style="list-style-type: none"> > Everyone 60 years and older > Can also be given to people 50-59 years and those with specific medical risks* (1 dose)

* Talk to your healthcare provider about what vaccines are recommended for you. It depends on where you live, your age, medical history and factors.

Visit Canada.ca/vaccines for more information on these and other vaccine-preventable diseases.



Getting *vaccinated*.

Now that you know that vaccines are not only safe, but also important in staying healthy, here's how to get them.

Before

- Locate your own vaccination record to find out which vaccines you need to keep up-to-date.
- If you cannot locate your vaccination record, contact your healthcare provider or local public health office—they will help you determine which vaccines you need, and where you have to go to get them.
- Depending on the vaccine, it may be given in your healthcare provider's office, public health clinic or through your pharmacist.

Each province and territory determines which vaccines are offered free of charge and which you have to pay for. Some vaccines may be covered by your work, school or personal health plan.

During

- Remain calm and relaxed, taking slow deep breaths.
- If it helps, you may want to distract yourself by listening to music, talking with the healthcare provider or simply closing your eyes.
- Whether you choose to sit up or lie down while receiving your vaccine, don't get up too quickly afterward.

After

- It is important to remain in the clinic for 15-20 minutes after the injection and to follow your healthcare provider's instructions.
- After you get vaccinated, you may be more tired than usual and you may be a bit red and sore where the shot was given. These are common side effects, normally lasting no more than a day or two.
- Serious reactions to vaccination are very rare. If you have a prolonged fever, a rash, or feel confused or unwell, seek medical attention immediately.

Shot of Truth

While vaccine-preventable diseases are rare in some countries, the infectious agents that cause them continue to spread in other parts of the world.

These agents can cross borders and infect anyone who is not immunized. In other words, some diseases are just a plane ride away.

Vaccination and pregnancy.

If you are pregnant or planning to become pregnant, the vaccinations you need depend on your age, lifestyle, any medical conditions you may have, and on previous vaccinations.

When you're pregnant, you are uniquely vulnerable. Pregnancy changes your immune response and can increase your risk of infection, and the risk to your baby. So it's more important than ever to make sure you get the vaccines you need.

While it's best to talk to your healthcare provider before you become pregnant, that's not always possible. As soon as you find out that you are pregnant, you should talk to your healthcare provider about the vaccines you need.

Before pregnancy



Vaccine-preventable diseases can cause birth defects, premature birth, miscarriage and death. Always make sure you're up-to-date on all routine vaccinations, and find out what additional vaccines you may need.

Some vaccines are not recommended to be given during pregnancy but are important to have. That is why it is a good idea to plan ahead and get them before getting pregnant.

You should also make sure everyone in your household has their shots up to date. It is easier for newborns to catch infections, and it takes longer for them to be fully immunized. So it's up to those around them to provide protection.



Shot of Truth

Medical conditions such as diabetes and cardiac disease, and lifestyle choices (such as smoking) may also influence what vaccines are recommended for you.

You should ask your healthcare provider about what is best for you.

During pregnancy



Years of research have shown that routine vaccines can be given safely during pregnancy. However, to be cautious, vaccines that contain live viruses (such as measles, mumps, rubella, chickenpox and others) are avoided in pregnancy.

Talk to your healthcare provider about vaccines that can protect you and your baby during pregnancy. These may include vaccines against hepatitis B, tetanus, diphtheria and pertussis (Tdap vaccine), polio, meningococcal, pneumococcal, and other diseases.

Vaccination against influenza (flu) during pregnancy is recommended for all pregnant women and their families, especially during flu season (November to April in Canada). This is because flu is more likely to cause severe illness in pregnant women. Getting the flu vaccine lowers the risk of complications from flu during pregnancy and after your baby is born.

After pregnancy



The routine vaccines provided in Canada are safe for you and your baby while breastfeeding. Some less common (non-routine) vaccines should not be given to breastfeeding women. These include vaccines against yellow fever and the Bacillus Calmette-Guerin (BCG) vaccine for tuberculosis.

As a new mom, you should get a flu vaccine whether you are breastfeeding or not. This also reduces your baby's chance of getting this serious infection.

Don't forget that even though you pass some temporary protection to your baby by breastfeeding, they still need to start their own immunizations on time. The immunity they get from you decreases over time, and your baby will need the help of vaccines to stay protected against serious and potentially life-threatening diseases. At 2 months of age, you should start your baby on their vaccination schedule.

For more information on your child's vaccination needs, see "A Parent's Guide to Vaccination" and learn more at Canada.ca/vaccines.

Consult with your baby's healthcare provider to discuss your provincial or territorial vaccine schedule.

Shot of Truth

Breastfeeding your baby is highly recommended, but is not a substitute for vaccinations. While antibodies and immune cells are passed from the mother to the child through breast milk, the protection it provides is temporary and incomplete. Be sure to follow your baby's vaccination schedule.



Vaccinations for older adults and seniors.

Our immune system can get weaker as we age, which puts us at greater risk for certain diseases such as influenza.

The flu is more likely to cause severe complications like pneumonia or even death in seniors. This is why as a senior you should be vaccinated against it.

Pertussis (whooping cough) is usually mild for adults, but can be deadly for infants. Getting a pertussis booster (combined with your tetanus vaccine) will protect you, your grandchildren, and any babies you happen to come in contact with.

Shingles (or herpes zoster) is caused by reactivation of the chickenpox virus. It is a very painful illness that can lead to serious and long-lasting health problems. Pneumococcus causes severe pneumonia and death in the elderly. Each of these diseases is preventable with one dose of vaccine.

Tetanus and diphtheria are rare but severe diseases and are more likely to occur in older adults. They are often fatal. Tetanus is caused by bacteria entering a small cut, which can occur while gardening or renovating, or from an animal bite. Diphtheria is caused by bacteria that infect a person's throat, airways and skin. It is usually spread from person to person.

Seniors are especially vulnerable to the harmful germs infants carry in their nostrils. Even healthy infants can carry these germs, which, if shared with seniors, can cause serious infections. Make sure you as a grandparent or caregiver have all of your recommended vaccines so you can spend time with those you love.

The flu can be a very serious disease.

Flu is very contagious and can spread quickly and easily. You can pass the flu on to others who may be at higher risk of serious complications before you even know you are sick. In Canada, an average of 12,200 hospitalizations and 3,500 deaths related to the flu occur each year. The flu can affect anyone, including those who are healthy.

You need to get *vaccinated* every year.

Flu viruses change each year. Experts create a new vaccine to protect you each flu season.

You can't get the flu from the flu *vaccine*.

The viruses in the flu vaccine are either killed or weakened and cannot give you the flu.

The flu *vaccine* is safe.

The flu vaccine has benefited millions of Canadians since 1946. Most people don't have reactions to the flu vaccine; those who do may have soreness, redness or swelling at the injection site. Severe reactions to the vaccine are extremely rare.

By getting the flu vaccine, you protect yourself and others because you are less likely to spread the flu. It's a simple action that can save lives.

Learn more at Canada.ca/flu.



When travelling, don't come home with a souvenir you don't want.

If you are going to be visiting other countries, you could be exposed to diseases (i.e. yellow fever, rabies, Japanese encephalitis) not frequently seen in Canada. Some of these may be caused by contaminated food or water, human contact, insect bites or other means. Ensure that routine vaccines are up to date, and find out if you will need additional vaccines depending on your age, location or travel plans. Consult your healthcare provider or visit a travel health clinic preferably six weeks before you travel. The sooner you do this the better, as some vaccines require more than one dose and can take time to become effective.

Search “PHAC Travel” for a website providing travel information including international health advisories, travel health notices, recommended vaccines, travel clinics and general travel health information.

And visit travel.gc.ca for more travel info.



Shot of Truth

Many infections can spread regardless of how clean we are. If people are not vaccinated, diseases that have become uncommon will quickly reappear.

8 Things Your Doctor Wishes You Knew About *Vaccines*

1. There is a lot of misinformation out there about vaccines. Make sure you get your information only from trusted sources and credible websites.
2. 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.
4. Some vaccines offer lifelong protection, others require boosters in the teen and adult years.
5. It's okay to get a vaccination even when you have a mild illness, like a cold, a low-grade fever, or diarrhea. Ask your doctor.
6. Canada's vaccination rates are too low, which makes disease outbreaks possible. Protect yourself and others by keeping your vaccines up to date.
7. Vaccines have done amazing things to reduce suffering and disease. Let's keep up the good work.
8. No, your days of getting needles are not over now that you're no longer a kid.

There really is an app for everything, including immunization!

CANImmunize is a free mobile app that can help you keep your immunization information at your fingertips. It's available for everyone, everywhere.

Use the CANImmunize app to:

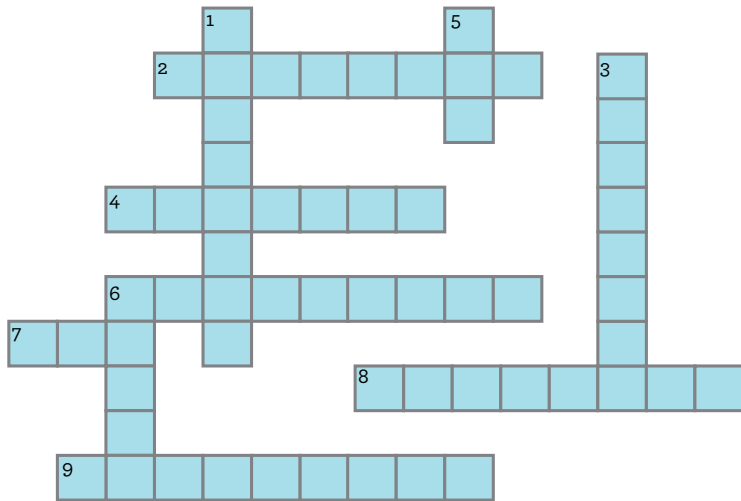
- Keep track of your family's vaccinations
- Receive appointment reminders
- Find out when your next vaccine is due
- Get alerts about outbreaks near you

You can find more information about it at canimmunize.ca.



Vaccines

Hint: All the answers can be found throughout this guide!



Answer key
Across 2: November 4: Tetanus 6: Pertussis 7: Two
8: Shingles 9: Community
Down 1: Boosters 3: Clinical 5: Ten 6: Polio

Across

2. This month is usually the start of the flu season in Canada.
4. _____ is caused by bacteria passing into a cut and can occur when gardening.
6. _____ can be passed on from older adults to infants and is vaccine-preventable.
7. After _____ months, your baby should start their vaccination schedule.
8. _____ disease affects older adults and is caused by the zoster virus.
9. _____ is a synonym for “herd” immunity which helps protect those who are at risk in the population.

Down

1. Some vaccines last a lifetime while others require _____.
3. All vaccines go through _____ trials to make sure they are safe and effective.
5. Approximate percentage of adults who are actually up to date on vaccinations.
6. Canada has been free of this disease for 20 years.

Where to find more information.

Make sure you get all the information you need about vaccination from reliable 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

Immunize Canada

immunize.ca

World Health Organization

who.int

The Society of Obstetricians and Gynaecologists of Canada

sogc.org
hpvinfo.ca

Are you
a parent?
There are other
free resources
for getting up to
speed on vaccines:

A Parent's Guide to
Vaccination

Teens, meet *Vaccines*



Canada.ca/vaccines

