

Vaccines: Myths and facts

Immunization is one of the most important ways to keep your child healthy. Vaccines are very safe. There are rarely reasons to not get vaccinated. Below are some common myths and facts about vaccines.

MYTH: Most diseases for which vaccines are given are not serious.

FACT: All of the diseases that children are vaccinated against are serious. They can all cause serious illness, complications and death, even with the best medical care. Many of these diseases also have no cure.

- Measles outbreaks still happen. Complications occur in about 10% of cases. For every 1,000 cases of measles, 1 or 2 of those people will die.
- Pertussis (“whooping cough”) kills between 1 and 4 babies in Canada every year. About 1 in 400 babies who survive pertussis has permanent brain damage.
- Tetanus kills 10% or more of its victims.

MYTH: My child doesn’t need vaccines because no one gets these diseases anymore.

FACT: These diseases still exist, even if they are rare. Thanks to vaccine programs, all vaccine-preventable diseases have declined in Canada. But when immunization rates drop, these diseases can come back.

Many of the vaccine-preventable diseases that are uncommon in Canada still occur in other parts of the world. With travel and immigration, there is a real risk of these diseases being brought into Canada. Any child who is not vaccinated is at risk when infections are “imported”.

MYTH: If so many other people are vaccinated, my child doesn't need vaccines.

FACT: Yes, they do. Relying on actions of other parents to protect your unvaccinated child only works if everyone else is vaccinated. If many parents take this attitude, fewer children will be immunized and diseases will start to spread quickly.

And when it comes to tetanus, whether other people are vaccinated makes no difference to your child's safety. Tetanus is caused when bacteria from the soil get into a wound.

MYTH: It's better to get vaccines one at a time.

FACT: Thanks to combination vaccines, your child can get protection from many different diseases with one injection (shot). Examples include MMR (measles, mumps, rubella) and the 5-in-1 vaccine (diphtheria, tetanus, pertussis, polio, Hib disease). Studies show that combination vaccines are safe and effective. There is no reason for your child to get the vaccines one at a time. Getting more than one vaccine at once also means no delay in protection, fewer medical visits and fewer needles (which can be less traumatic).

MYTH: There will be fewer side effects if I delay my baby's vaccinations.

FACT: Vaccines begin at 2 months of age to protect babies as early in life as possible against diseases that can make them very sick (such as pertussis). Babies respond well to vaccines at a very young age. Side effects from vaccination *are not* more common in young babies than older children.

MYTH: Vaccines are not adequately tested for safety.

FACT: Vaccines are safe and effective. Like all medicines, vaccines must go through many steps before Health Canada approves them for use. Vaccines must prove to be safe and effective at preventing the diseases they target. Once a vaccine is in use, Canadian health authorities continue to monitor for side effects. Serious side effects to vaccines are very rare.

MYTH: The MMR vaccine causes autism.

FACT: No, the MMR vaccine **does not** cause autism. There is **no scientific evidence** to support this claim. Because signs of autism may appear around the same age that children receive the MMR vaccine, some people believe the vaccine causes the condition.

Much of the controversy over the MMR vaccine and autism came from a single paper published in 1998 that suggested a link. The report has been found to be fraudulent, and was withdrawn by the journal that published it. Many large scientific studies around the world have found no link between the MMR vaccine and autism.

There is no evidence to link any other vaccines to autism. The number of children with autism seems to have increased in recent years. This is because the diagnosis of autism now includes children with milder symptoms who would not have been included in the past. There is also greater public awareness of autism, and more parents are seeking help. Scientists recently found a gene linked to autism.

MYTH: Thimerosal in vaccines causes autism.

FACT: There is no evidence linking thimerosal (a preservative once used in vaccines) to autism or any other developmental disorder. Also, thimerosal has not been used in infant and childhood vaccines for many years. Yet the numbers of children with autism continued to increase, even after thimerosal stopped being used in vaccines.

Myth: I'm breastfeeding, so my baby is protected from infections.

FACT: Breastfeeding is not a substitute for vaccination. Breastfeeding provides some protection against certain infections, especially viral respiratory infections, ear infections and diarrhea. But this protection is incomplete, temporary, and can be overcome if your baby is exposed to large amounts of a specific germ.

Myth: Natural is better. We shouldn't put foreign substances like vaccines into our bodies.

FACT: Natural is not always better. The germs that vaccines protect against are part of nature, but they are harmful. Many things in nature should not be ingested: Some of the most powerful poisons come from plants and berries. Vaccines are made from natural

sources. Some vaccines are made from live germs that have undergone changes so they can't cause illness. Others contain only part of the germ that has been pulled out and purified. Vaccines stimulate our immune system the same way the infection would, but without making us sick.

Myth: Nosodes are safer and a good alternative to vaccines.

FACT: Nosodes are not a substitute for vaccines, and there is no scientific or medical evidence to show they prevent infectious diseases. Sometimes called homeopathic vaccines, nosodes are made using bacteria, viruses, tissue or other material from someone with a particular infection, disease or ailment. The substance is then diluted so much that little or no active ingredients are left in the final product.

Additional resources

- Immunize Canada
(<https://immunize.ca/>)

Reviewed by the following CPS committees

- Infectious Diseases and Immunization Committee

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