

# Childhood vaccinations

[health.gov.au/childhoodimmunisation](https://health.gov.au/childhoodimmunisation)

## Your Questions Answered

Have any questions about immunisation or vaccinations?

We have compiled answers to the most frequently asked questions about childhood vaccinations

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# How vaccines work

## How do vaccines work?

Vaccines protect us by using our body's natural defences to build resistance to specific infections before we come into contact with them.

When a child gets a vaccine, their body produces an immune response in the same way it would after exposure to a disease. If the child comes in contact with that disease in the future, their immune system remembers it and responds quickly, preventing the disease from developing.

Vaccines give protection without causing disease. They are safer than getting the disease itself.

More:

- [Academy of science – What is immunisation](#) video
- [About immunisation | Australian Government Department of Health and Aged Care](#)
- [Questions about vaccination | Australian Government Department of Health and Aged Care](#)

## How does vaccination protect children and the community?

Vaccination protects children against serious diseases that could lead to complications including disability and even death. By vaccinating your child, you help protect other members of your family who are vulnerable and may get very unwell if they get sick with the disease, such as pregnant women, older people and people with health conditions. When many people in the community are vaccinated, it is much harder for a disease to spread as people are much less likely to meet an infected person and catch the disease. This is called herd immunity.

The benefit of herd immunity is that we can protect those who cannot get vaccinated, including babies who are too young to get vaccinated or people who can't get vaccinated for medical reasons.

More:

- [Academy of science – What is immunisation](#) video
- [About immunisation | Australian Government Department of Health and Aged Care](#)
- [Questions about vaccination | Australian Government Department of Health and Aged Care](#)

## What is in vaccines?

Vaccines contain a number of ingredients including an antigen, which is a modified form of the virus, bacteria or toxin that causes the disease.

Other ingredients such as adjuvants, preservatives and stabilisers ensure vaccines are safe and effective, helping to strengthen the immune response, making them work better.

Vaccine ingredients can look unfamiliar when they are listed on a label. However, many of the components used in vaccines occur naturally in the body, in the environment, and in the foods we eat. All the ingredients in vaccines – as well as the vaccines themselves - are thoroughly tested and monitored to ensure they are safe.

More:

- [What is in the vaccines? | Sharing Knowledge about Immunisation | SKAI Academy of Science - What is in a vaccine?](#) video
- What ingredients are in vaccines? - [Questions about vaccination | Australian Government Department of Health and Aged Care](#)



## Do vaccines contain mercury?

Mercury is no longer used as a preservative in any vaccines routinely given to children in Australia. Before 2000, some contained thiomersal (a compound containing mercury) as a preservative in multidose packaging. Scheduled childhood vaccines under the National Immunisation Program come in a single dose package.

More:

- [What is in the vaccines? | Sharing Knowledge about Immunisation | SKAI \(talkingaboutimmunisation.org.au\)](https://www.talkingaboutimmunisation.org.au/what-is-in-the-vaccines/)
- [Do vaccines contain aluminium or mercury? - Questions about vaccination | Australian Government Department of Health and Aged Care](https://www.health.gov.au/healthcare/questions-and-answers/do-vaccines-contain-aluminium-or-mercury)

## Do some children get the disease even if they are immunised?

Yes, it is possible since no vaccine is 100% effective. The protection levels provided by vaccines differ so there will be a small number of people who do not develop immunity and may still get the disease. If they have been vaccinated, they usually experience less severe disease than if not vaccinated.

# Vaccine safety

## Are vaccines safe?

Yes, vaccines are safe. All vaccines go through rigorous testing to ensure they are safe and effective before they are approved for use in Australia by the Therapeutic Goods Administration (TGA). This includes various stages of clinical trials and testing of ingredients. Vaccines that don't meet quality and safety criteria are not approved and are not made available for use. This forms part of a comprehensive process before vaccines can be listed on the National Immunisation Program.

Once available, their safety continues to be monitored with any concerns raised taken very seriously and investigated promptly. This is through reporting of adverse events to the [TGA](https://www.tga.gov.au) and national active monitoring through [AusVaxSafety](https://www.ausvaxsafety.gov.au).

More:

- [Vaccine safety | Australian Government Department of Health and Aged Care](https://www.health.gov.au/healthcare/vaccine-safety)
- [Academy of Science – Are vaccines safe? video](https://www.youtube.com/watch?v=Kj8j8j8j8j)
- [Vaccine safety and effectiveness: how is it tested? - Curious \(science.org.au\)](https://www.science.org.au/curious/vaccine-safety-and-effectiveness-how-is-it-tested)
- [How do I know the vaccines are safe? | Sharing Knowledge about Immunisation | SKAI \(talkingaboutimmunisation.org.au\)](https://www.talkingaboutimmunisation.org.au/how-do-i-know-the-vaccines-are-safe/)

## What are the risks and benefits of vaccines?

Vaccines protect people from serious infectious diseases that once harmed many infants, children, and adults and caused deaths every year. Without vaccines, your child is at risk of getting seriously ill and suffering ongoing complications, and even death from diseases like measles and whooping cough. While there are possible side effects of vaccination, these are almost always mild (such as redness and swelling at the injection site) and go away within a few days. Serious side effects after vaccination, such as a severe allergic reaction, are very rare.

It is safer to be vaccinated than get the disease. For example, tetanus could cause extreme pain, muscle spasms, and difficulty breathing. Measles could cause pneumonia or brain swelling.

More:

- [Who benefits from vaccines? | Australian Academy of Science](#)
- [immunisation-3-number-of-deaths.jpg \(832×337\) \(science.org.au\)](#)
- [Questions about vaccination | Australian Government Department of Health and Aged Care](#)

## What about autism?

No. There is no established link between vaccines and autism. The measles mumps rubella (MMR) vaccine doesn't cause autism. High-quality studies and reviews over many years have compared the health of large numbers of vaccinated and unvaccinated children and found no link between the MMR vaccine and autism. Scientific studies and reviews continue to show no relationship between vaccines and autism.

People first became concerned about autism and immunisation after a research paper published in a respected medical journal published in 1998 suggested a link between the MMR vaccine and autism.

Since then, scientists have completely discredited this paper based on only 12 children. In 2004, the authors retracted their claim of a link between vaccination and autism. In 2010, the journal withdrew the paper after the UK's General Medical Council found the results in the paper had proved to be false. The journal printed an apology.

More:

- [Sharing Knowledge About Immunisation](#) website – What about autism?
- [Are vaccines safe? | Australian Academy of Science](#)



# Side effects

## What reactions might appear after receiving a vaccine?

Most of the side effects associated with vaccines are minor, and usually go away within a few days.

Some children might have common reactions such as:

- redness, swelling and soreness where the needle went in,
- appearing grizzly, unsettled, unhappy and sleepy; and
- a mild fever.

These reactions show the immune system is interacting with the vaccine. This is normal. While these symptoms may concern you and upset your child at the time, they usually resolve quickly on their own.

To reduce fever or soreness after vaccination, you can use pain relief medicines, such as paracetamol, as directed.

Serious side effects from immunisation are very rare. There is a very small risk of a serious allergic reaction (anaphylaxis) to any vaccine. Anaphylaxis usually happens within a few minutes of vaccination, before you and your baby leave the clinic. This is why you are asked to stay at the clinic or medical surgery for at least 15 minutes following immunisation in case further treatment is required.

Your doctor or nurse knows what to do to help a baby having an anaphylactic reaction recover quickly.

If your child has a reaction that you think is severe or unexpected, seek medical advice straight away.

More:

- [Possible side effects of vaccination | Australian Government Department of Health and Aged Care](#)
- [following-vaccination-what-to-expect-and-what-to-do.pdf \(health.gov.au\)](#)
- [Common reactions | Sharing Knowledge about Immunisation | SKAI \(talkingaboutimmunisation.org.au\)](#)
- [Australia's active vaccine safety program | AusVaxSafety | NCIRS](#)

## Is it safe for children to receive multiple vaccines at the same time?

Yes. Giving babies and children several vaccines at a single visit is safe. Combination vaccines allow children to be immunised against more diseases with fewer injections. This means less pain and stress for the child.

For example, one of the vaccines given at 2, 4 and 6 months of age provides protection against six diseases, which means your baby is protected against six diseases by having this injection with one visit. This is completely safe and will not overload the immune system.

Infants' immune systems are very strong. Babies encounter many thousands of different types of antigens (parts of organisms that cause disease, such as bacteria or viruses). Vaccines contain only a very small number of antigens compared with the large number children encounter every day. Vaccines will strengthen your baby's immunity to protect them from some of the most dangerous infectious diseases.

More:

- [Questions about vaccination | Australian Government Department of Health and Aged Care – Is it safe to give my child more than one vaccine at the same time?](#)
- [What is immunisation? | Australian Academy of Science – Vaccination is disease specific](#)
- NCIRS card - in development
- [Why is the schedule the way it is? | Sharing Knowledge about Immunisation | SKAI \(talkingaboutimmunisation.org.au\)](#)

## Do vaccines cause or worsen asthma and allergies in children?

No. There is no evidence that vaccines cause or worsen asthma or allergies. It is important that children with asthma or allergies are vaccinated to reduce their chance of getting a serious infection, which could make their existing condition worse.

Some vaccines contain ingredients that can be allergens. So, if your child is allergic to any foods or medicines, you should tell your doctor or nurse so they can check that the vaccines they plan to give your child are safe.

More:

- [Questions about vaccination | Australian Government Department of Health and Aged Care](#) – Do vaccines cause or worsen asthma and allergies?

## Vaccine preventable diseases

### Are the diseases we vaccinate children against really serious?

Yes. The diseases that routine immunisation protect against can be serious and even fatal. We don't hear much about them as they are no longer common due to the success of vaccination programs in Australia. However, if we don't vaccinate, the serious diseases will re-emerge in the community.

More:

- [Questions about vaccination | Australian Government Department of Health and Aged Care](#) – Are the diseases we vaccinate against really serious?

### If the diseases are rarely seen, why does my child still need vaccines?

Childhood immunisations are needed to protect children, even if we don't often see the diseases they protect against. Some diseases are no longer common in Australia because of vaccines, such as polio, diphtheria and measles. If we stopped vaccinating, the few cases we have in Australia could very quickly become tens or hundreds of thousands of cases. Even though many serious vaccine-preventable diseases are uncommon in Australia, some are common in other parts of the world, such as measles and polio. Even if your family does not travel internationally, you could come into contact with international travellers anywhere in your community.

Getting your child vaccinated can also help protect people who can't be vaccinated through herd immunity.

# Vaccination schedule

## Why do children need so many vaccines at such an early age?

Children get vaccines to protect them as soon as possible as they are at greatest risk from disease while they are very young. Even though babies' immune systems are strong, vaccinations in early stages of life are vital because they protect babies while their immune system is still developing.

Babies are perfectly capable of tolerating vaccines, just like they handle the thousands of bacteria and viruses they encounter in their environment since the moment of birth. Immunisation can protect your child from serious infections that could lead to suffering, hospitalisation or even be fatal.

The schedule is different in other countries because patterns of disease, strains of viruses or bacteria, medical care, available vaccines and their costs vary from country to country.

More:

- [Why is the schedule the way it is? | Sharing Knowledge about Immunisation | SKAI \(talkingaboutimmunisation.org.au\)](https://talkingaboutimmunisation.org.au)

## Can I space out or delay some vaccines?

When vaccines are delayed or spaced out, children are unprotected for longer than they need to be, at the age when disease is most common or most serious. The first dose of a vaccine is recommended for the youngest age that a baby's immune system is mature enough to give a good response and get good protection.

The timing of each dose of every vaccine given to babies and children is carefully chosen and based on many decades of research - so it is best to follow the [National Immunisation Program schedule](#) and the due dates. Even if you're just a few weeks late this puts your child at risk of contracting serious disease.

Spacing out vaccines would also mean that a child is likely to need more vaccination appointments and injections. This would mean more stress for the child. Research has shown that children experience just as much stress when they get one needle as they do when they get more than one.

More:

- [Why is the schedule the way it is? | Sharing Knowledge about Immunisation | SKAI \(talkingaboutimmunisation.org.au\)](https://talkingaboutimmunisation.org.au)

## Why do some children need extra vaccines?

Some children may need extra vaccines if they are at a higher risk of disease. Additional vaccines for certain groups are also available free under the National Immunisation program. This could be children with certain medical conditions that put them at greater risk of disease or Aboriginal and Torres Strait Islander children who have a higher risk of some diseases than non-Indigenous people.

Speak to your doctor about your child's specific needs.

More:

- [Immunisation for Aboriginal and Torres Strait Islander people | Australian Government Department of Health and Aged Care](#)
- [Immunisation for people with medical risk conditions | Australian Government Department of Health and Aged Care](#)



## Should I delay immunisations if my child is unwell?

Babies and children with minor coughs and colds without fever, or babies recovering from an illness, can be immunised safely and effectively.

Immunisation should be postponed if a child is very unwell with a high fever (over 38.5 degrees Celsius).

You can arrange an appointment a week or two later when your child is well again. If in any doubt, ask your doctor or health clinic staff before delaying immunisation.

## What if my child misses a scheduled vaccination?

On time vaccination offers the best protection. However if your child has fallen behind it is easy to catch up. There is no need to repeat the doses already received and there is no need to get extra doses. Talk to your immunisation provider about a catch-up program.

## Are all childhood immunisations free?

Vaccines that are routinely recommended for your child under the National Immunisation Program are free if your child is eligible for Medicare. Your doctor may charge a consultation fee.

Aboriginal and Torres Strait Islander children and children with certain medical conditions may be recommended to receive extra vaccines for free.

Refugees and humanitarian entrants can also get a range of missed childhood vaccines for free.

More:

- [Getting vaccinated | Australian Government Department of Health and Aged Care](#)
- [Immunisation for infants and children](#) or speak to your GP or immunisation provider.

## Where can I get more information to support vaccinating my child?

If you have further questions about vaccines, be sure to talk to your doctor, nurse or health care worker.

When looking online for information about vaccines, be sure to use reliable sources that are based on scientific evidence. There are links to many reliable sources on this website.

If you have more questions or want more detail to help you make a decision about vaccination, you can check out the following resources or talk to your doctor, nurse or health care worker for more information. They can provide you with information about vaccination for you and your family.

- [Sharing Knowledge About Immunisation](#) website
- [Questions about vaccination](#) booklet
- [The Science of Immunisation](#) booklet