Measles

The Immunisation Advisory Centre

What is measles?
Measles, also known as 'English measles' or morbilli, is a potentially serious, highly infectious disease caused by a virus.

How do you catch measles?
Measles is spread through contact with infectious droplets from the nose or throat of a person with measles, often during the first 2–4 days of symptoms before the rash appears. One person with measles can pass the disease on to 12–18 people who have not already had measles or been immunised against the disease.

How common is measles?
New Zealand had large measles epidemics in 1991 and 1997, and continues to have regular outbreaks, the most recent being in 2019/20 with 2194 cases. The last measles related death in New Zealand was one of seven during the 1991 epidemic.

How serious is measles?
Complications from measles are common. They may be caused by the measles virus or a bacteria because the measles virus lowers the body's ability to fight other infections. The risk of complications and death are higher in children under 5 years and adults over 20 years of age. A table listing possible complications of measles is on page two.

Anyone who has a weakness of their immune system is at greater risk of very serious disease. These people are often unable to be immunised and rely on protection from those around them being immunised.

What are the symptoms of measles?
The illness begins with fever, cough, runny nose and conjunctivitis (inflammation in the eyes), which lasts for 2–4 days. It may be possible to see small white spots (Koplik spots) inside the mouth. A rash appears 2–4 days after the first symptoms, beginning on the head and gradually spreading down the body to the arms and legs. The rash lasts for up to one week.

How can you prevent measles?
Immunisation is the best way to prevent measles.

In the event of a measles outbreak, children and adults born since 1968 who are a contact of a measles case and who are unimmunised or do not have evidence of immunity against measles are advised NOT to attend early childhood services, school or public places for 14 days after their last contact with the infected person.

Which vaccine protects against measles?
A measles vaccine was introduced in New Zealand in 1969 and replaced by the combined measles, mumps, rubella (MMR) vaccine in 1990. The combined measles, mumps, rubella vaccine is the only vaccine available in New Zealand to prevent measles. The vaccine currently being used is called Priorix®.

The MMR vaccine contains weakened live measles, mumps and rubella viruses. Two doses of MMR vaccine are recommended from 12 months of age, at least four weeks apart.

After the first dose of MMR vaccine, 90–95% of people will be protected against measles, i.e. 5–10 people out of every 100 immunised could still get measles. After the second dose almost everyone is protected.

How safe is the MMR vaccine?
The risk of the MMR vaccine causing serious harm is extremely rare. Immunisation against measles is considerably safer than getting the disease. A table comparing the effects of measles with vaccine responses is on page two.

There is no evidence that the MMR vaccine causes autism. Extensive research conducted into whether the MMR vaccine contributes to the development of autism has not shown a link. More detailed information is available on our website.

Who should get the MMR vaccine?
From 1 October 2020, the first dose of the MMR vaccine is due at 12 months of age and the second at 15 months of age.

The spacing of the 12-months and 15-months Schedule MMR doses is not recommended to be shortened. However, if there was a high risk of exposure to measles disease, such as during an outbreak, the second MMR dose could be given as soon as 4 weeks after the first dose.

Children who are due to have their second MMR dose when they are 4 years of age can have this dose before they turn 4 years.

Infants in whom a liver or kidney transplant is likely are funded for an accelerated immunisation schedule and have their MMR immunisations at 7 months and 12 months of age. Older children and adults who are scheduled for a solid organ transplantation should also receive the MMR vaccine before their transplant if they have not been immunised or are not immune.

During an outbreak of measles, a Medical Officer of Health may recommend that a baby in close contact with measles and aged 6–12 months of age have an extra MMR vaccine dose. When a baby this young has an MMR vaccine, they still need two doses at 12 months and 15 months of age.

It is recommended that adults born after 1968 have documented evidence of two doses of the MMR vaccine given when aged 12 months or older, even if they have records showing receipt of measles-only or measles/rubella vaccine(s).

» Adults born before 1969 are considered immune to measles because the virus is so infectious, and a measles vaccine was not available in New Zealand until 1969.

Healthy close contacts of pregnant women or those with an immune system weakness can be given the MMR vaccine.

Women who are breastfeeding can be given the MMR vaccine.

Individuals who have had a bone marrow transplant, or who are not immune to measles, mumps or rubella after chemotherapy can be given the MMR vaccine on advice of their specialist.

Who should seek more advice before having the MMR vaccine?
» Anyone who has received human immunoglobulin or a blood transfusion within the previous 11 months.
» Anyone who developed thrombocytopenia (ITP) after a previous dose of measles containing vaccine.
» Anyone who is unsure if they have a weakness of their immune system or is taking medication to suppress their immune system.
» People who are HIV-positive.

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Can people with an egg allergy have the MMR vaccine?

Yes. Two studies of over 1200 children with severe egg allergy showed that these children safely received the MMR vaccine. Those with a severe allergic reaction (anaphylaxis) to egg can be vaccinated in general practice following the usual processes for safe immunisation.

Who should not have the MMR vaccine?

- Anyone who has experienced a severe allergic reaction (anaphylaxis) to a previous dose of any measles containing vaccine or any of the vaccine components.
- Anyone who is acutely unwell. The presence of a minor infection is not a reason to delay immunisation.
- Anyone with a diagnosed weakness of their immune system.
- Anyone who has received another live injected vaccine, including varicella (chickenpox) or BCG vaccines, within the previous month.
- Women who are currently pregnant (women should delay pregnancy for one month after having the vaccine).
- Babies under 12 months of age, except on the advice of a Medical Officer of Health during a measles outbreak.

What if a woman has MMR and then finds out she is pregnant?

Research in the US, Germany and the UK found no injury to the unborn child when the MMR vaccine was inadvertently given just before or during pregnancy.

Disease	Possible complications of disease	Possible vaccine responses
A highly contagious viral illness causing fever, cough and rash.	» Ear infection (otitis media) » Diarrhoea » Pneumonia » Low platelet count » Encephalitis (brain inflammation) for around 1 person out of 1000—2000 cases » Weakened immune system » Hospitalisation for around 1 person out of 10 cases » Death for around 1 person out of 1000 cases despite treatment » Degenerative brain disease for around 1 person out of 100,000 cases, occurs years later and is always fatal » Measles during pregnancy increases the risk of miscarriage or premature birth	**Common responses** » **Measles component**: Fever and/or mild rash 6–12 days after immunisation » **Mumps component**: Fever and/or mild swelling under the jaw 10—14 days after immunisation » **Rubella component**: Fever, mild rash and/or swollen glands 2—4 weeks after immunisation » Temporary joint pain 2—4 weeks after immunisation is more common in adult women than children **Rare responses** » Temporary low platelet count » Convulsion associated with fever

Vaccines are prescription medicines. Talk to your doctor or nurse about the benefits or any risks.

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