

## What is rubella?

Rubella is an infectious disease caused by a virus.

## How do you catch rubella?

The virus is transferred person to person through contact with infected droplets in the air from the person with rubella coughing, sneezing or laughing. A person can transmit the virus to others up to seven days before they know they have the disease until seven days after they develop a rash. Some people with rubella will not have any symptoms but could still transmit the disease to others.

## How common is rubella?

Since 2011, the number of confirmed rubella cases in New Zealand each year have been small, mainly in people returning from an overseas trip or visiting New Zealand. As not all people with rubella have symptoms, some unconfirmed cases may also have occurred each year.

## How serious is rubella?

Rubella can cause serious complications in children and adults, such as a low platelet count or encephalitis (brain inflammation).

Rubella infection during pregnancy can cause miscarriage, death of the baby, or for the baby to be born with severe abnormalities (congenital rubella syndrome), including deafness, blindness, heart defects, and brain damage. The last baby in New Zealand with congenital rubella syndrome was born in 1998.

## What are the symptoms of rubella?

The illness may begin with swollen glands and progress to a fever, tiredness, conjunctivitis (inflammation in the eyes), and a rash. Adolescents and adults may also experience joint pain. However, up to half the people with rubella won't have any symptoms. They do not know they have the disease, but they can still spread it to others.

## How do you prevent rubella?

Immunisation is the best way to prevent rubella.

Children with suspected rubella are advised NOT to attend early childhood services, school or public places until they are well or for seven days after the appearance of the rash.

## Which vaccine protects against rubella?

The rubella vaccine was introduced in New Zealand in 1970 and replaced by the combined measles, mumps, rubella (MMR) vaccine for all children in 1990. The combined measles, mumps, rubella vaccine is the only vaccine available in New Zealand to prevent rubella. 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, 90–97 people out of 100 will be protected from rubella. The number of people protected is expected to increase after a second dose of MMR vaccine.

## How safe is the MMR vaccine?

The risk of the MMR vaccine causing serious harm is extremely rare. Immunisation against rubella is considerably safer than getting the disease. A table comparing the effects of rubella 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.

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 rubella-only or measles/rubella vaccine(s).

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.

## 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, mumps or rubella 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.

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## Who should not have the MMR vaccine? *Continued*

- » 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).

## 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
An infectious disease caused by a virus	<ul style="list-style-type: none"> <li>» Some cases have no symptoms, which increases the risk of exposing pregnant women to the disease</li> <li>» Rash and painful swollen glands</li> <li>» Joint pain in adolescents and adults</li> <li>» Low platelet count</li> <li>» Encephalitis (brain inflammation) for around 1 person out of 6,000 cases</li> <li>» Rubella during early pregnancy can cause severe abnormalities in unborn babies including deafness, blindness, heart defects, brain damage</li> </ul>	<p><b>Common responses</b></p> <p><b>Measles component:</b></p> <ul style="list-style-type: none"> <li>» Fever and/or mild rash 6–12 days after immunisation</li> </ul> <p><b>Mumps component:</b></p> <ul style="list-style-type: none"> <li>» Fever and/or mild swelling under the jaw 10–14 days after immunisation</li> </ul> <p><b>Rubella component:</b></p> <ul style="list-style-type: none"> <li>» Fever, mild rash and/or swollen glands 2–4 weeks after immunisation</li> <li>» Temporary joint pain 2–4 weeks after immunisation is more common in adult women than children</li> </ul> <p><b>Rare responses</b></p> <ul style="list-style-type: none"> <li>» Temporary low platelet count</li> <li>» Convulsion associated with fever</li> </ul>

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

## References

- American Academy of Pediatrics. Rubella. In: Pickering L, Baker C, Kimberlin D, Long S, editors. Red Book: 2012 Report of the Committee on Infectious Diseases. 29th ed. Elk Grove Village, IL: American Academy of Pediatrics; 2012. p. 629-634.
- Ministry of Health. Immunisation handbook [Internet]. Wellington: Ministry of Health; 2020 [updated 2020 September 25; cited 2020 September 30]. Available from: <https://www.health.govt.nz/publication/immunisation-handbook-2020>
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