

## What is mumps?

Mumps is an infectious disease caused by a virus.

## How do you catch mumps?

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

## How common is mumps?

Generally, since the introduction of a mumps vaccine in 1990, only small numbers of mumps cases are confirmed each year. However, New Zealand experienced a mumps epidemic in 1994, and the current outbreak began in 2017.

## How serious is mumps?

Mumps can cause serious complications. The risk of complications are usually higher in adults than children. However, inflammation of the hearing nerves is more likely to occur in children. Around four people out of 10 cases have temporary deafness, and around one person out of 15,000 cases become permanently deaf after having mumps. Adolescents and adults may develop inflammation of one or both testicles, breasts or ovaries. Inflammation of the testicle can cause infertility. Inflammation of other parts of the body can also occur including joints, pancreas and heart.

Up to 15 people out of 100 cases develop inflammation of the membranes around the brain (meningitis), and around one person out of 6000 cases inflammation of the brain itself (encephalitis). One to two people out of 100,000 mumps cases will die. Catching mumps during early pregnancy increases the risk of miscarriage.

## What are the symptoms of mumps?

The illness may begin with a fever and headache and usually progresses to swelling and pain of one or more glands under the jaw. Some people, usually young children and older adults, may not have any symptoms even though they have the disease.

## How do you prevent mumps?

Immunisation is the best way to prevent mumps.

In the event of a mumps outbreak, children and adults born since 1981 who are a contact of a mumps case and who are unimmunised or do not have evidence of immunity against mumps are advised NOT to attend early childhood services, school or public places for 25 days after their last contact with the infected person.

## Which vaccines protect against mumps?

The mumps vaccine was introduced in New Zealand in 1990 as part of the combined measles, mumps, rubella (MMR) vaccine. The combined measles, mumps, rubella vaccine is the only vaccine available in New Zealand to prevent mumps.

M-M-R® II and Priorix® are weakened live measles, mumps and rubella vaccines. M-M-R II has been used in New Zealand for many years. From July 2017, the MMR vaccine will change to Priorix. These two vaccines are fully interchangeable.

Two doses of MMR vaccine are recommended after the age of 12 months, given at least four weeks apart. After the first dose of MMR vaccine, 69–81 people out of 100 will be protected from mumps. After a second dose of MMR vaccine up to 90% will be protected.

## How safe is the MMR vaccine?

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

The first dose of the MMR vaccine is due at 15 months of age and the second at 4 years of age. However, parents can request that the first MMR vaccine be given anytime from 12 months of age and the second any time from four weeks after the first.

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 after 12 months of age, even if they have records showing receipt of measles-only or measles/rubella vaccine(s), as this will increase the likelihood they are protected against measles, mumps and rubella.

Adults born before 1981 are considered immune to mumps.

- » A mumps vaccine became available in New Zealand in 1990 for children aged 12–15 months and 1992 for children aged 11 years. Anyone older than 11 years in 1992 in New Zealand is expected to have had mumps disease.

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.

## 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.
- » 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).

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## 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.

## 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.

Disease	Possible complications of disease	Possible vaccine responses
An infectious disease caused by a virus	<ul style="list-style-type: none"> <li>» Fever, headache, swelling and pain of one or more glands under the jaw</li> <li>» Viral meningitis for up to 15 people out of 100 cases</li> <li>» Temporary deafness for around 4 people out of 10 cases and permanent deafness for around 1 person out of 15,000 cases</li> <li>» Inflammation of the testicles or ovaries in adolescents and adults</li> <li>» Nerve, joint, kidney, heart inflammation</li> <li>» Encephalitis (brain inflammation) for around 1 person out of 6000 cases, which may result in death for 1 person out of 100</li> <li>» Death for 1–2 people out of 100,000 cases</li> <li>» Mumps during early pregnancy increases the risk of miscarriage</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>» Encephalitis</li> <li>» Aseptic (infection free) meningitis</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. Mumps. 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. 514-7.
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