

Measles, Rubella, and the MR Vaccine

FAQs

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Measles

What is measles?

- Measles is a highly contagious disease caused by a virus. It spreads easily when an infected person breathes, coughs or sneezes.
- Measles is preventable by vaccination, but can cause severe disease, complications, and even death in people who are not immune.
- Measles can affect anyone but is most common in children.
- Measles infects the respiratory tract and then spreads throughout the body. Symptoms include a high fever, cough, runny nose and a rash all over the body.
- Being vaccinated is the best way to prevent getting sick with measles or spreading it to other people. The vaccine is safe and helps your body fight off the virus.

What are the symptoms of measles?


Measles symptoms

				
Red, blotchy rash	Fever	Sore, watery pink eyes	Cough	Runny nose

The rash normally appears 3 to 7 days after the other symptoms. It starts on the face and then spreads to the rest of the body.

What should I do if I have measles symptoms?

- If you have measles symptoms seek medical help.
- If you need to visit a health facility, call first so you do not risk passing on measles to others.

- Until you have seen a healthcare worker, isolate yourself from other people, especially young children, so you don't pass the virus on.
- If you have measles you will need to stay home and isolate until you are no longer infectious. This reduces the risk of you passing on measles to others.
- It usually takes 7 to 10 days to recover after first getting symptoms. Measles can make you very sick, and sometimes people need hospital care.

What are the complications of measles?

- Complications from measles include severe diarrhoea, ear infections, blindness, pneumonia, and encephalitis (swelling of the brain).
- Some of these complications can lead to death.
- Complications are most common in children < 5 years (especially malnourished children) and adults over 30 years old.
- Measles is therefore one of the leading causes of death among young children worldwide.
- There is no specific treatment against the virus, but there is a safe and effective vaccine to prevent it.
- If a woman catches measles during pregnancy, this can be dangerous for the mother and can result in her baby being born prematurely with a low birth weight.

What are the detailed signs and symptoms of measles?

- Symptoms of measles usually begin 10–14 days after exposure to the virus. A prominent rash is the most visible symptom.
- Early symptoms usually last 4–7 days. They include:
 - running nose
 - cough
 - red and watery eyes
 - small white spots inside the cheeks.
- The rash begins about 7–18 days after exposure, usually on the face and upper neck. It spreads over about 3 days, eventually to the hands and feet. It usually lasts 5–6 days before fading.
- Most deaths from measles are from complications related to the disease.
- Complications can include:
 - blindness
 - encephalitis (an infection causing brain swelling and potentially brain damage)
 - severe diarrhoea and related dehydration
 - ear infections
 - severe breathing problems including pneumonia.

How does measles spread?

- Measles is one of the most contagious and infectious diseases we have. It spreads very easily among people who have not been vaccinated against measles or have not had measles before.
- People who have measles are infectious for four days before and four days after the rash appears. They can pass the disease on to others by breathing, sneezing or coughing near them.
- The virus also remains active and contagious in the air and on infected surfaces for up to two hours.
- Measles is much more contagious than COVID-19. One person infected by measles can infect nine out of 10 of their unvaccinated close contacts.

Who is most at risk from measles?

- Measles is a disease that will find and attack those who aren't protected.
- Any non-immune person can become infected.
- Unvaccinated young children and pregnant women are at highest risk of severe measles complications.
- Young children who are malnourished are at greater risk of serious illness and death from measles. Vitamin A supplements can help prevent eye damage and blindness from measles and also reduce the number of measles deaths.

How dangerous is measles?

- Before the introduction of measles vaccine in 1963 and widespread vaccination, measles caused an estimated 2.6 million deaths each year worldwide.
- Because global vaccination coverage is not high enough, even in 2021 around 128 000 people died from measles – mostly children under the age of five years, despite the availability of a safe and cost-effective vaccine.
- If an outbreak happens, nearly all children who are not vaccinated will get measles.
- If you get measles while you're pregnant it can make you very sick and can harm your baby.
- Some international examples show how serious a measles outbreak is:
 - In 2019, a measles outbreak in Samoa, an island nation in the Pacific with a similar health system to Lao PDR, led to 5,520 cases and 79 deaths. One in 150 babies in all Samoa died from measles during this outbreak.
 - During New Zealand's last measles outbreak in 2019, 40% of children who caught measles were admitted to hospital. New Zealand has an advanced healthcare system, but it was still very lucky that no one died in this outbreak.

Can measles be treated?

- If you get measles there's no drug that you can take, there's no specific treatment for the virus.
- Healthcare workers can only provide care to relieve the symptoms of measles and prevent complications while the sick person's body fights off the virus. Very sick people are admitted to hospital and may need to be treated in the intensive care unit.
- The best way to protect yourself and your family against getting measles is to make sure everyone is vaccinated.
- Children should have both routine vaccinations (MR1 and MR2) and we encourage children under 5 years old to also get vaccinated in the national MR campaign.

Is Lao PDR at risk of a measles outbreak?

- Not enough people in Lao PDR are immunised against measles, which means it could just take a single case of measles to start an outbreak.
- At least 95% of people living in a community need to be immune to measles to prevent an outbreak.
 - This level of immunity protects babies who cannot be vaccinated until they are older than six months.
 - It also protects other vulnerable people who have health conditions that mean their immunity is lower, even if they are vaccinated.
- That's why the Government is working with UNICEF, WHO and other partners on a nationwide MR vaccination drive to give extra protection to children and communities against the risk of measles.

Rubella

What is rubella?

- Rubella is a contagious virus that is the leading vaccine-preventable cause of birth defects.
- There is no specific treatment for rubella, but the disease is preventable by vaccination.
- Rubella usually causes a mild fever and rash in children and adults.
- However, if a woman catches rubella early in her pregnancy it can lead to miscarriage, stillbirth, or birth defects known as congenital rubella syndrome (CRS).
- Children who are born with CRS can suffer from serious hearing, eye and heart problems and other lifelong disabilities.
- Rubella spreads through airborne droplets when infected people sneeze or cough.
- Being vaccinated is the best way to protect all the pregnant women in your community and their babies from rubella. The vaccine is safe and helps your body fight off the virus.

What are the symptoms of rubella?

- Rash
- Low fever (<39°C)
- Nausea
- Sore watery red eyes
- Swollen lymph glands

How does rubella spread?

- The rubella virus is transmitted by airborne droplets when infected people sneeze or cough.
- It spreads between people who are not immune to the virus (either through vaccination or having had rubella).

What should I do if I have rubella symptoms?

- If you have rubella symptoms seek medical help.
- If you need to visit a health facility, call first so you do not risk passing on rubella to others.
- Until you have seen a healthcare worker, isolate yourself from other people, especially pregnant women, so you don't pass the virus on.
- The most infectious period is usually 1–5 days after the appearance of the rash.

What are the complications of rubella?

- Children born with CRS (congenital rubella syndrome) can suffer hearing impairments, eye and heart defects and other lifelong disabilities, including autism, diabetes mellitus and thyroid dysfunction.
- The highest risk of CRS is in countries where women of childbearing age do not have immunity to the disease (either through vaccination or from having had rubella).
- There is no specific treatment against rubella, but there is a safe and effective vaccine to prevent it.

What are the detailed symptoms of rubella?

- In children, the disease is usually mild, with symptoms including a rash, low fever (<39°C), nausea and mild conjunctivitis.
- The rash, which occurs in 50–80% of cases, usually starts on the face and neck before progressing down the body, and lasts 1–3 days.
- Swollen lymph glands behind the ears and in the neck are the most characteristic clinical feature. Infected adults, more commonly women, may develop arthritis and painful joints that usually last from 3–10 days.
- Once a person is infected, the virus spreads throughout the body in about 5-7 days. Symptoms usually appear 2 to 3 weeks after exposure. The most infectious period is usually 1–5 days after the appearance of the rash.

How dangerous is rubella?

- Rubella is most dangerous during pregnancy, causing miscarriages, stillbirths, and birth defects.
- Before the introduction of the rubella vaccine, up to 4 babies in every 1000 live births were born with congenital rubella syndrome (CRS). Many suffered from lifelong serious health issues.
- For children and non-pregnant adults, rubella is usually a mild illness.

Can rubella be treated?

- There is no specific treatment or medicine for rubella.
- However, rubella and the birth defects it can cause are prevented by vaccination.
- The best way to protect pregnant women and their babies is to make sure everyone is vaccinated.
- In Lao PDR, the rubella vaccine is combined with the measles vaccine into one injection – known as the MR (Measles and Rubella) vaccine.
- Children should have both routine vaccinations (MR1 and MR2) and we encourage children under 5 years old to also get vaccinated in the national MR campaign.

The MR (Measles and Rubella) Vaccine

How can I protect myself and my family against measles?

- Community-wide vaccination is the most effective way to prevent measles cases and deaths.
- To prevent measles outbreaks a community needs 95% of the people living in it to have had at least two doses of the measles vaccine.
- When a community has 95% vaccine coverage it has herd immunity to measles and is protected from outbreaks.
- Children should receive two doses of the vaccine to ensure they are immune as soon as they are old enough.
- In Lao PDR the first dose is given at 9-11 months, the second at 12 -18 months. Measles and rubella vaccines are given together as one MR vaccine.
- In this 2024 national MR campaign, we are providing a bonus dose of the MR vaccine to all children between 9 months and 5 years of age to boost herd immunity.

What is the MR (Measles and Rubella) vaccine?

- In Lao PDR, the measles vaccine is combined with the vaccine for rubella, a vaccine preventable disease that can be very serious for pregnant women and their babies – we call this the MR vaccine.
- The MR vaccine provides excellent protection against both measles and rubella.
- In Lao PDR, the first dose (called MR1) is given at 9-11 months of age. The second dose (MR2) is given at 12–18 months.
- In this 2024 national MR campaign, we are offering an extra dose to all children aged 9 months to 5 years. The purpose of the campaign is to make sure all children in Lao PDR are protected from measles outbreaks.

How does the MR vaccine work?

- Like other vaccines, the MR vaccine works by activating our immune system so it is prepared to fight off these viruses if we are exposed to them in the future.
- The vaccine is safe and very effective.

Does the MR vaccine have side effects?


- Mild to moderate side effects are normal for all vaccines, including the MR vaccine.
- Vaccines help protect us against disease and feeling mild or moderate side effects after receiving one is a sign that the vaccine and our immune system is working.
- This is because when a virus enters the body, the body fights back. It attacks the virus by increasing our blood flow and raising our temperature – creating symptoms like a fever or chills.

- Vaccines are designed to activate the immune system in the same way, but without making us sick.
- So, while it's normal to build immunity without side effects, it's also normal for some people to experience mild to moderate symptoms after being vaccinated, like pain at the injection site, fever, and chills.
- These side effects usually last a few days then go away on their own.


What is the treatment for mild to moderate side effects?

Common Side Effects


Following symptoms can take place, and it usually resolves within 2 to 3 days




Pain, redness, swelling
where you got the vaccination



Warmth, nausea,
muscle pain




Tiredness




Headache


Helpful Tips




If the arm is sore,
apply a clean, cool,
wet washcloth over
the area



If you feel feverish,
drink plenty of fluids
and dress lightly



You can take painkillers for
any pain and discomfort you
may experience after getting
vaccinated *(unless you have
other medical reasons that prevent
you from taking these medications normally)*



**If symptoms do not get
better within 3 days,**
seek medical advice

Is the measles vaccine safe?

- The measles vaccine is safe and effective. It has been in use for more than 60 years and millions of people worldwide get measles vaccines each year.
- Like all the vaccines that we have, the measles vaccine undergoes rigorous ongoing scientific safety evaluations. Over and over again, these studies have demonstrated that measles vaccine is safe and effective.

How can I tell if my child is fully protected against measles?

- Your Mother & Child book (the pink book) records whether your child has had both the MR vaccines (MR1 and MR2) that protect them against measles.
- If it has been more than two weeks since your child has had an MR vaccine we encourage you to take your child to get the bonus dose in the national MR campaign.

Why is Lao PDR holding a nationwide MR campaign?

- The Government is working with UNICEF and WHO on a nationwide MR vaccination drive to give extra protection to children and communities against the risk of measles.
 - In this 2024 national MR campaign, we are offering a bonus dose of the MR vaccine to all children between 9 months and 5 years of age to boost immunity.
 - Measles cases are increasing around the world and not enough people in Lao PDR are immunised against measles, which means it could just take a single case of measles to start an outbreak.
 - At least 95% of people living in a community need to be immune to measles to prevent an outbreak. When countries achieve >95% vaccination rates they can eliminate measles completely.
 - The level of immunity among children in Lao PDR has dropped in the past few years, mainly because the pandemic interrupted routine health services.
 - This means we have gaps in our immunity and need to take action before there is a measles outbreak.
- Giving the rubella vaccine as part of this campaign also helps protect future generations of Lao children from the risk of birth defects and disabilities.

Sources

- [Measles \(who.int\)](#)
- [Measles - PAHO/WHO | Pan American Health Organization](#)
- [Measles \(who.int\)](#)
- [Global measles threat continues to grow as another year passes with millions of children unvaccinated \(who.int\)](#)
- [Rubella \(who.int\)](#)
- [summary-of-key-points---who-position-paper-on-rubella.pdf](#)
- [Routine Vaccination Coverage — Worldwide, 2022 | MMWR \(cdc.gov\)](#)
- [Measles-Mumps-Rubella \(MMR\) Vaccine Information Statement | CDC](#)
- [Measles | ARPHS](#)
- [Q&A on measles \(youtube.com\)](#)
- [Measles case confirmed in Auckland | Te Whatu Ora Te Toka Tumai Auckland \(adhb.health.nz\)](#)
- [Measles in Samoa: how a small island nation found itself in the grips of an outbreak disaster \(theconversation.com\)](#)
- [Samoa grapples with deadly measles outbreak \(youtube.com\)](#)
- [2019 Samoa measles outbreak and response \(youtube.com\)](#)