



**World Health Organization  
Regional Office for Europe**

UN City, Marmorvej 51,  
DK-2100 Copenhagen Ø, Denmark

**Tel.:** +45 45 33 70 00  
**Fax:** +45 45 33 70 01  
**Email:** [eurocontact@who.int](mailto:eurocontact@who.int)  
**Website:** [www.who.int/europe](http://www.who.int/europe)

# Measles: how to stay protected



## **Measles** is a highly contagious viral disease and can cause severe complications, and even lead to death.

- You can catch measles when an infected person breathes, coughs or sneezes.
- The measles virus can live for up to 2 hours in the air or on a surface. If you breathe in the contaminated air or touch the infected surface and then your eyes, nose or mouth, you can become infected.
- An infected person can spread the virus even before they have typical symptoms (e.g. rash).



**Measles can affect anyone who is not immune but is most common in children.**

One in five children infected with the measles virus may develop severe complications.



**The only way to stop measles is to prevent it through vaccination.**

Measles vaccination is safe and effective. Two doses of measles vaccine provide life-long protection against infection and the potentially serious consequences of the disease.



**Measles infection has been shown to weaken a person's immune system,** making it more difficult for them to fight off other diseases for months to even years after being sick with measles.

# Measles **signs and symptoms**

Measles is normally spread through direct contact and through the air. The virus infects the respiratory tract, then spreads throughout the body. The symptoms of measles are:

high fever



runny nose



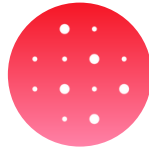
cough



red and watery eyes



small white spots inside the cheeks



rash.



The virus is so contagious that 90% of people who are not immune (through measles vaccination or from having had the disease) and come into contact with an infected person will become infected and develop the disease.

Most deaths from measles are from complications related to the disease and are most common in children under 5 years and adults over 30.

Severe complications can include:

blindness



encephalitis (an infection causing brain swelling and potentially brain damage)



severe diarrhoea and related dehydration



ear infections that can lead to permanent deafness



severe breathing problems including pneumonia.



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.

# Protecting against measles



**The only way to protect against measles is through vaccination.**

The measles-mumps-rubella (MMR) vaccine is safe and effective. Two doses provides 99% protection from measles infection and the potentially serious consequences of the disease. For most people this protection against measles is lifelong.

## If you have measles

There is no specific treatment for measles. If you suspect that you or your child has measles:



- contact your health-care provider as soon as possible;
- let them know about your symptoms or concerns.

Your health-care provider may decide to make special arrangements to evaluate you, if needed, without putting others at risk.



Giving the MMR vaccine or immunoglobulin in the early stage after measles infection may sometimes prevent severe disease.



Drinking enough water and treatments for dehydration can replace fluids lost to diarrhoea or vomiting. Eating a healthy diet is also important.



All children and adults with measles should receive two doses of vitamin A supplements, given 24 hours apart.

Having vitamin A supplements restores low vitamin A levels that occur even in well-nourished children. It can help prevent eye damage and blindness. The supplements may also reduce the number of measles deaths.



Antibiotics do not affect the measles virus. However, doctors may use antibiotics to treat secondary bacterial pneumonia and ear and eye infections.



# Vaccination against **measles**

The MMR vaccine is a “live” virus vaccine that contains measles, mumps and rubella viruses that have been weakened so they can produce an immune response but do not cause the diseases themselves.

It is extremely unlikely for anyone who has been fully vaccinated to develop measles. In rare cases in which infection does occur, symptoms are generally milder.

**Infection-induced “natural” immunity** is life-long, but a child with measles can suffer great discomfort and may develop severe and potentially life-threatening complications. Furthermore, infection has also been shown to weaken a person’s immune system, making it more difficult for them to fight off other diseases for months to even years.



**Vaccine-induced immunity** is long-lasting – generally life-long – and vaccination protects a child from suffering the consequences of the disease.

## Effectiveness of MMR vaccine



	After 1 dose	After 2 doses
<b>Measles immunity:</b>	<b>95%</b> of immunized	<b>99%</b> of immunized
<b>Rubella immunity:</b>	<b>99%</b> of immunized	<b>99–100%</b> of immunized
<b>Mumps immunity:</b>	<b>78%</b> of immunized	<b>88%</b> of immunized

# Side effects of MMR vaccine

**Most children don't develop any side effects** from the MMR vaccine.



Side effects that may occur are usually mild. These may include soreness, redness or mild swelling at the injection site.

Fever lasting 2–3 days, mild flu-like symptoms and a mild rash can occur 7–10 days after vaccination but are not cause for concern.

More serious adverse reactions following immunization are extremely rare.

The risk of serious outcomes from measles is far higher than the risk of serious side effects from the vaccine.

## When to get vaccinated?



Talk to your health-care provider to find out when your child is eligible for the vaccine.

If your child has missed any scheduled doses, they could be vulnerable to very serious diseases. Make an appointment to catch-up as soon as possible.

## If you are not sure whether you are immune to measles...



If you do not have written documentation of measles immunity, consult your health care provider about getting vaccinated.

There is no harm in getting another dose of the MMR vaccine if you may already be immune to measles (or mumps or rubella).