

## Mashin & Hashika



"Mashin(Measles) ", also known as "hashika," is an infectious disease caused by the measles virus. Nowadays, the term "mashin" is more commonly used, but it was also referred to as "hashika" in the past. The origin of "hashika" comes from the regional dialect "hashikai," meaning "itchy and prickly." Thus, "mashin" and "hashika" are equivalent.

## What is Measles?



People who had measles as a child don't need to worry.

Measles is an infectious disease caused by the measles virus. The modes of transmission include airborne, droplet, and contact infections, and its infectiousness is considered among the strongest of viruses. Nearly 100% of individuals without immunity who are exposed to the virus will develop the disease. Once infected and symptomatic, lifelong immunity is said to be acquired, making it a disease that can be eradicated.

## The current measles outbreak



Measles can be prevented by vaccination, but there are countries and regions where vaccinations have not been administered. It is said that the background of this outbreak includes the lifting of international travel restrictions following the coronavirus pandemic, which has been a trigger.

What did people do before vaccines were available?

It was common to get infected as a child and naturally acquire immunity.



## What is the vaccine situation in Japan?

With a single vaccine dose, immunity is established in 95% of individuals, and for assured immunity, two doses are recommended. In Japan, the current recommendation is for two routine vaccinations. However, since vaccination is not mandatory, it's necessary to verify whether an individual has actually been vaccinated.

Birthdate	Basic number of vaccinations
Before September 30, 1972	A generation likely never vaccinated.
From October 1, 1972, to April 1, 1990	One dose (an era when one routine vaccination was recommended).
From April 2, 1990, to April 1, 2000	One or two doses (an era when two doses were basically possible, but vaccination rates were low, and additional vaccinations were allowed under special measures).
After April 2, 2000	Two doses.

From NHK WEB News, March 13, 2024

## Want to know if I am immune

The maternity health record book in Japan started in 1948, right?



- Check the number of vaccinations in the maternity health record book
- Undergo a measles antibody test through a blood test (subsidies may be available in some regions)

Japan was the first to issue a health record book for both mother and child!

## What symptoms appear when a person without immunity to the measles virus becomes infected?



Incubation period:  
10 to 12 days



Prodromal phase:  
Symptoms similar to a cold, such as fever around 38°C, runny nose, cough, and conjunctivitis, lasting 2 to 4 days.



Rash phase:  
The fever, once subsided, returns, reaching close to 40°C, accompanied by a rash all over the body.



Recovery phase:  
If not severe, recovery occurs 7 to 10 days after onset.

## About complications of measles

厚生労働省：麻疹の現状と今後の麻疹対策について

Complications caused by measles can affect up to 30% of cases, with about half of these being pneumonia, followed by enteritis, otitis media, and others. Although less common, encephalitis is also a complication, and alongside pneumonia, it is considered one of the two major causes of death from measles, warranting caution.

## Are there any preventive measures for measles?

Measles is highly contagious and can be transmitted through the air, so hand washing and masks alone cannot prevent it. Vaccination against measles is the most effective method of prevention. Additionally, if you have been in contact with someone infected with measles, getting vaccinated within 72 hours can potentially prevent the onset of the disease.

### Unpreventable



## Pregnant women need to be cautious

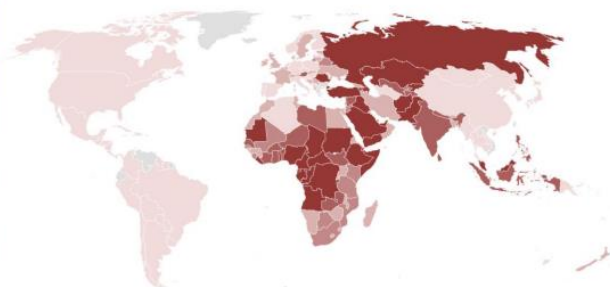


Pregnant women without measles immunity are at risk of miscarriage or premature birth if they contract measles. Vaccination before pregnancy can offer protection, but vaccines cannot be administered during pregnancy. Avoid going out or being in crowded places, and if cohabitants are not immune, they should be vaccinated.

### Global Measles Outbreak Situation (January 2023 to December 2023)

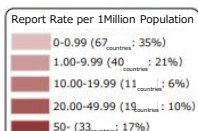
Measles cases reported per population  
Top 10 countries

Country Name	Number of Reports	Report Rate per 1 Million Population
Yemen	47767	1386.57
Azerbaijan	13735	1319.07
Kyrgyzstan	13195	1045.83
Kazakhstan	15111	770.71
Liberia	3910	721.62
Gabon	1201	492.91
Central African Republic	1534	267.14
Cameroon	6101	212.97
Iraq	9367	205.85
Armenia	554	199.43



Source: WHO measles report rate per 100,000 population

<https://www.who.int/teams/immunization-vaccines-and-biologicals/immunization-analysis-and-insights/surveillance/monitoring/provisional-monthly-measles-and-rubella-data>



厚生労働省：麻疹について

#### Is there a cure for measles?

There are no drugs that specifically treat measles. Therefore, treatment is symptomatic, using pain relievers and fever reducers to alleviate symptoms while waiting for natural recovery.

#### What should I do if I think I have measles?

If you have symptoms suggestive of measles, such as a rash or fever, contact your primary care physician or medical institution by phone to inform them that you suspect measles and check whether a consultation is needed. Follow their instructions. When traveling to a medical facility, wear a mask and avoid using public transportation as much as possible.

#### Is it a big problem if I get measles abroad?

Especially in countries or regions where measles is nonexistent or very rare, developing measles during your stay can lead to strict movement restrictions not only for the person who developed the disease but also for their companions, in order to prevent the spread of infection.



#### I'm thinking about traveling abroad; what should I be aware of?

In 2023, the main regions reporting measles were Southeast Asia, the Eastern Mediterranean, and Africa, accounting for 79% of the total (according to the first edition of the 2024 Measles Outbreak Risk Assessment by the National Institute of Infectious Diseases). Besides the measles vaccine, there are other diseases that can be prevented by vaccination. Visit [https://www.forth.go.jp/moreinfo/topics/useful\\_vaccination.html](https://www.forth.go.jp/moreinfo/topics/useful_vaccination.html) for more information.

I feel like I've developed a rash, both from measles and rubella...

I don't really know much about which is which.

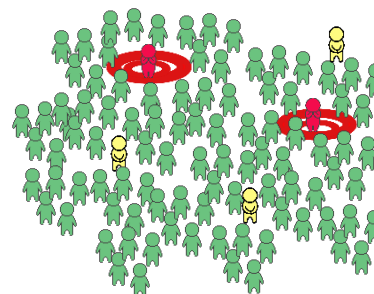


#### What's the difference between measles and rubella?

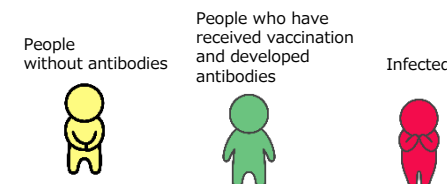
Rubella is also called German measles, and its symptoms are very similar to those of measles.

	Virus Type	Main Modes of Transmission	Incubation Period	Symptoms
Measles	Measles Virus	Airborne transmission, Contact transmission, Droplet transmission	10 to 12 days	Fever, upper respiratory symptoms, conjunctivitis, rash
Rubella	Rubella Virus	Droplet transmission	14 to 21 days	Range from asymptomatic to severe complications; symptoms in children are relatively mild, but adults can occasionally experience severe cases; fever, rash, swollen lymph nodes, joint pain, etc.

#### What is herd immunity?



Infectious diseases spread when pathogens (such as viruses or bacteria) infect individuals who do not have immunity to those pathogens. If a certain percentage of the population acquires immunity to a specific pathogen, even if some individuals become infected, the disease is less likely to spread to others, preventing outbreaks. This indirectly protects individuals without immunity from infection. This condition is referred to as herd immunity.



From the Ministry of Health, Labour and Welfare "New Coronavirus Vaccine Q&A": What is herd immunity?

By actively getting vaccinated, you not only protect yourself but also others.



#### Is it okay to go to work?

If you have symptoms, the first course of action should be to consult a medical institution. (Confirm via phone call before visiting the medical institution.)

If it turns out to be measles, considering its high contagiousness, it is advisable to avoid going to work and to rest at home instead.

Infectious Diseases	School Health Law (Period of Absence)
Seasonal Influenza	After 5 days from onset and 2 days after defervescence (for elementary school students and above)
Measles	Until 3 days have passed since defervescence
Rubella	Until the rash disappears
Tuberculosis	Until a doctor determines there is no risk of contagion

The School Health Law provides guidelines on when students can return to school based on the type of infectious disease.

