

Q: What are measles and rubella?

A: Measles is a highly contagious, serious disease caused by a virus. Complications of the disease can lead to pneumonia, blindness, encephalitis (an infection that causes brain swelling), severe diarrhoea and related dehydration, ear infections or severe respiratory infections. Measles is normally spread via droplets from the nose, mouth or throat of infected persons.

Measles is one of the leading causes of death among young children in the world.

Rubella is a comparatively mild illness, but it can cause severe malformations in the unborn child or miscarriage if a mother contracts the infection during pregnancy.

Q: Why are measles and rubella on the WHO and public health agenda?

A: After a period of very low detection of measles in WHO European Region in 2021, cases have been increasing since early 2022 – while persistent immunity gaps and missed doses due to the COVID-19 pandemic have left many people, among whom an increased number of children, susceptible to this potentially fatal disease.

Following large outbreaks of measles in 2018 and 2019 with nearly 200 000 reported cases, the number of reported measles cases in the WHO European Region fell in 2020 to just over 12 000. For 2021, only 159 measles cases were reported in 22 countries, territories and areas; however, this increased in 2022 to 904 cases reported to date in 27 countries, territories and areas.

In Kosovo, no cases of measles were registered between 2000 and 2017. During 2017-2018 measles outbreak, 749 confirmed cases and two deaths were recorded. These cases and deaths could have been prevented if children had been vaccinated.

Q: Measles is no longer common. Is vaccination still needed?

A: New cases of measles have dropped drastically in the past few decades thanks to the introduction of two doses of measles-containing vaccine into routine immunization schedules across the European Region. However, outbreaks continue to occur wherever gaps in immunization allow for the accumulation of susceptible individuals over time. For measles, immunization coverage of at least 95% is needed to protect an entire community, including those who are too young or cannot be vaccinated because of health conditions.

Q: Is there any proof that vaccination causes autism?

A: No! Vaccination protects people of all ages against these diseases. The measles vaccine has been in use for over 50 years. It is safe, effective and inexpensive. The vaccines against these measles, mumps and rubella (MMR) are safe and so effective that with sufficiently high immunization coverage we can eliminate the diseases from the whole European Region.

BASIC FACTS THAT SAVE LIFE

MEASLES AND RUBELLA



Thanks to vaccines, parents of fully vaccinated children need not worry today about major diseases such as diphtheria, tetanus, poliomyelitis, measles and rubella. Every effort needs to be taken to provide evidence-based information on the benefits of vaccination presented in an understandable way to the public. This information has to come from reliable and trusted sources and be made available through all media channels.

By getting your child or yourself vaccinated you will protect your children, your family, your community and your country from measles and rubella and contribute to the global elimination of measles worldwide

Q: But I read that there is evidence that MMR vaccines cause autism?

A: Autism represents an important individual and public health concern, and a better understanding of its causes is needed. Many rigorously designed studies involving hundreds of thousands of children have investigated a possible link between MMR vaccine and autism or autistic disorders, but none has been able to conclusively establish any such link. In 2002 the Global Advisory Committee on Vaccine Safety conducted an extensive review of eleven epidemiological studies (including a large population-based study in Denmark of over 500,000 children representing almost 100% of children born in that period) and concluded that no evidence exists of a causal association between MMR vaccine and autism or autistic disorders. The study can be found at <http://www.nejm.org/doi/full/10.1056/NEJMoa021134>

Q: What about with other diseases?

A: Ensuring the safety and quality of vaccines is one of WHO's highest priorities. Before any vaccine can be licensed, it is exhaustively evaluated and tested to make sure that it is both safe and effective. Every batch of vaccine is controlled separately before it is used and monitoring for side effects is a continuous process that takes place at local and global levels. Common reactions, like redness and discomfort at the injection site, are minor and temporary. Serious health concerns following vaccination are rare, but thoroughly investigated. If any link to vaccination is suspected immediate steps are taken to address the cause. In the vast majority of cases, these prove to be coincidental to vaccination (taking place at the same time but not otherwise linked to the vaccine).

Q: Although there are numerous research studies that prove that vaccination does not cause different diseases, a lot of people believe there is. Why is that and how can we prevent it?

A: Vaccines are some of the most efficient public health tools available for promoting health and reducing the burden of infectious diseases. Because of vaccines, smallpox, which once killed 35% of its victims and left others blind or scarred, has been globally eradicated. Polio, a crippling disease, is endemic in only three countries. Measles and rubella have been eliminated from the entire WHO Region of Americas and are now rarely seen in Europe in places with sufficiently high immunization coverage. The serious health risks they pose to unvaccinated children and adults are nearly forgotten.

Addressing vaccine hesitancy is critical not only for sustaining vaccination uptake in the short term but also for ensuring population resilience against rumours and misinformation in the future.

Q: Is it dangerous giving children combined vaccines like MMR (against measles, mumps and rubella)?

A: Scientific evidence shows that giving several vaccines at the same time has no negative effect on a child's immune system. In fact, through just breathing and eating, children are exposed every day to several hundred foreign substances that trigger an immune response. Combined vaccines are recommended because they: save time and money through fewer clinic visits; reduce discomfort for the child through fewer injections; increase the probability that the child will receive the complete set of vaccinations according to the national schedule.

Q: What is needed to eliminate measles and rubella?

A: Elimination requires high population immunity. At least 95% of every birth cohort in every community must be vaccinated with two doses of the measles-mumps-rubella vaccine. Where vaccination rates are lower than 95%, the number of unprotected individuals grows over time, leaving the community increasingly at risk of large-scale outbreaks.

Elimination also requires high-quality surveillance systems sensitive enough to detect suspected cases of these diseases and capable of performing the necessary laboratory tests. In this way suspected cases can be confirmed or refuted, and control measures can be initiated quickly. Specific laboratory tests also allow for the identification of and characterization of disease transmission within and across borders.

Q: What are the main challenges to eliminate measles and rubella?

A: One of the main challenges is to reach and maintain the required high vaccination coverage of at least 95% with two doses of the vaccine.

While most parents have their children vaccinated, some decide to delay vaccination or even not to vaccinate at all. This puts their children at high risk of acquiring measles at an age when they are particularly vulnerable to serious complications of the disease.

If females of child-bearing age remain unvaccinated and acquire rubella infection during pregnancy, they may miscarry or their babies may develop severe congenital malformations such as hearing loss, blindness and heart defects.

Another challenge is to make disease surveillance sensitive enough to ensure that suspected cases are reported and collected specimens are tested in proficient laboratories. As these diseases have become less common, health workers have become less familiar with their clinical features. They are therefore less likely to suspect or recognize them when they arise.

Delayed detection of cases increases the risk of spreading and delays the initiation of public health measures to control the outbreak (such as investigation of contacts for possible vaccination).

Q: Should people who are travelling to Europe or live in the Region be worried about measles outbreaks? What can they do to avoid the virus?

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A: As measles remains endemic in most parts of the world, it can spread anywhere, including in places that have eliminated the disease. Each and every susceptible person should receive two doses of measles vaccine to be fully immunized.

In the European Region, two-thirds of the 53 countries, territories and areas have interrupted endemic transmission of measles. However, today's travel patterns put no person or country, territory or area beyond the reach of the measles virus. Outbreaks will continue in Europe, as elsewhere, until every community reaches the level of immunization needed to fully protect their populations.

Health authorities should maximize their efforts to achieve and/or sustain at least 95% coverage with 2 doses of measles-containing vaccine to prevent circulation in the event of an importation.

Q: What should we all do individually and collectively?

A: To achieve regional measles and rubella elimination, we have to demonstrate commitment to elimination by taking more action to:

- achieve $\geq 95\%$ immunization coverage with two doses of measles and at least one dose of rubella vaccine;
- close immunity gaps in all age groups;
- detect early suspected cases and outbreaks through strong surveillance;
- provide sound information to health professionals and the public on the benefits and risks associated with vaccination against measles and rubella;
- ensure immunization programmes have sustainable access to predictable funding and high-quality supply.

Q: Where can I find more information?

A: Have a look at these resources:

WHO webpage on measles: <https://www.who.int/health-topics/measles#>

WHO webpage on rubella: <https://www.who.int/news-room/fact-sheets/detail/rubella>

WHO video about 5 things to know about measles: <https://www.who.int/health-topics/measles#>