The problem of congenital rubella is aggravated by the fact that the newborn, affected by the infection, sheds viruses for long periods of time: not for 7-10 days as in the acquired disease after birth, but for months and sometimes even for more than one year.

He becomes a real "machine gun" that shoots viruses all around
He has a tremendous infectious potential, so his isolation must be expected, both when he is hospitalized in the nursery and when he returns to his home; contact with women in an early stage of pregnancy should be avoided, in the hypothesis that they may be susceptible.

Before the advent of vaccination, the percentage of susceptible women of childbearing age was around 20%: today they are certainly fewer and above all include immigrant women, who, as is clear from reading the publications on the subject, are to be considered particularly at risk.

- One thing must be taken into account, when dealing with a combined vaccine against measles, mumps and rubella: if the subject we are about to vaccinate has already passed one or two of the three diseases against which the vaccine is active, nothing bad.
- We can safely vaccinate the subject with the triple vaccine anyway, in the absence, as is happening, of single-component vaccines that would allow us not to use the triple vaccine. A two-component vaccine has recently been put on the market, active to confer defenses against measles and rubella, but the other different combinations are missing.

Rubella
Rubella is one of the most common and well-known exanthematous diseases which, despite its benignity in children and adults, can have serious consequences on the fetus if contracted during pregnancy.

The disease has an incubation of 2 - 3 weeks and the IgM appear about a week after the rash and remain for about 6 - 8 weeks, their dosage within a few days from the onset of the rash can therefore provide false negatives.

Their presence in the newborn is a sure sign of infection during pregnancy. IgG appear later and provide permanent immunity even if reinfection is possible, sometimes due to partial response to the vaccine, with reappearance of IgM; however, it would seem that in these cases there is no risk of fetal contagion as there would be no viremia.

- It should be remembered that even in this disease there are conditions of persistence of the IgM even for years or the presence of false positives of the IgM dosage due to a non-specific reactivity towards other viruses such as Epstein Barr, cytomegalovirus and Parvovirus or in subjects with autoimmune diseases or positivity of the rheumatoid factor.
- It is advisable in case of doubt and in the presence of positive IgG to study the period of infection by evaluating the avidity of the IgG which, as we have already seen, is directly proportional to the distance from the infection.
From an epidemiological point of view, currently about 90% of adults are protected from rubella; the State-Region Conference in 2003 issued a plan for the elimination of Congenital Rubella and measles, incorporating an indication from the WHO. One of the pillars of this policy is vaccination, which is specifically carried out with combined MMR vaccines (measles - mumps - rubella) within two years of life.

**Measles-mumps-rubella vaccine**

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- Content last modified Jun 2021
- Click here for patient education
- Preparations
- Indications
- Contraindications and precautions
- Dose and administration
- Adverse Effects
- For more information

The measles, mumps, and rubella vaccine effectively protects against all 3 infections. People given the measles-mumps-rubella vaccine under the United States vaccination schedule are considered to be protected for life.

For more information, see MMR Advisory Committee on Immunization Practices Vaccine Recommendations (Measles, Mumps and Rubella) and Centers for Disease Control and Prevention (CDC): Measles Mumps, and Rubella (MMR) Vaccination. A summary of the changes to the 2021 adult vaccination schedule is available here.

**Measles-mumps-rubella vaccine preparations**

The measles-mumps-rubella vaccine contains the live attenuated measles and mumps virus, produced in chicken embryonic cell cultures. The vaccine also contains live attenuated rubella virus, produced in human diploid lung fibroblasts.

The measles-mumps-rubella vaccine and the varicella vaccine are available as a combination vaccine (measles-mumps-rubella-varicella vaccine).

**Indications for the measles-mumps-rubella vaccine**

The measles-mumps-rubella vaccine is a routine childhood vaccination (Recommended vaccination schedule for ages 0-6 years). All adults who were born in 1957 or later should be given 1 dose of the vaccine unless they have one of the following situations:

- Vaccination documentation with one or more doses of measles-mumps-rubella vaccine
- Laboratory tests indicating immune coverage against the 3 diseases
- A contraindication to the vaccine
A documented diagnosis of the disease by a doctor is not considered acceptable proof of immunity against measles, mumps, or rubella.

**Tips and mistakes to avoid**

A documented diagnosis of the disease by a doctor is not considered acceptable proof of immunity against measles, mumps, or rubella. A second dose of measles-mumps-rubella vaccine (or, if not vaccinated, 2 doses given ≥ 28 days apart) is recommended for adults who are presumably exposed:

- Students from university or other posthumous high school educational institutions
- Healthcare workers born in 1957 or later with no evidence of immunity
- International travelers
- Patients with HIV infection and a CD4 cell count ≥ 200 / mcL for ≥ 6 months

People born before 1957 are generally considered immune. However, such people working within health care facilities (regardless of whether or not they have patient care duties) should be considered for vaccination if they have no proof of immunity. Two doses of the measles-mumps-rubella vaccine are given (one dose if only rubella coverage is needed).