

## Information

### Combination vaccination against measles, mumps and rubella

Measles, mumps and rubella are widespread illnesses caused by viral infections (measles virus, mumps virus and rubella virus), and, in the majority of cases, occur mostly in children but in adults, too. Since the vaccines to protect against measles, mumps and rubella are administered in one combined injection (so-called MMR vaccination), these illnesses and the vaccination are discussed here together.

There are no drug treatments to cure measles, mumps or rubella. Only the timely, complete and correct administration of the MMR vaccination can protect you from these illnesses.

**Measles** is an infection that is easily transmitted from person to person and frequently causes serious illness. Symptoms include high fever, cough, conjunctivitis and a typical skin rash (exanthema). The illness lasts for about 2 weeks. Frequent complications are pneumonia and middle ear infections. Approximately one in 1,000 to 2,000 measles patients will develop inflammation of the brain (encephalitis), and 30 percent of these cases are either fatal or can lead to permanent mental and physical impairment. Adolescents and adults are at particular risk from measles and more frequently experience complications.

**Mumps** is a viral infection involving fever, headaches and swollen salivary glands ("mumps"). About every 10<sup>th</sup> mumps patient develops meningitis, and occasionally encephalitis. A rare, but typical complication is hearing loss. Every 4<sup>th</sup> adolescent or adult male with mumps will experience swollen and inflamed testicles, which in rare cases can also lead to infertility.

**Rubella** is usually a mild viral infection involving fever, skin rash (exanthema) and swollen lymph nodes. It often runs its course without symptoms, but these patients can still infect those around them. If rubella occurs during pregnancy, the infection can be passed on to the unborn child, causing abnormalities of the eye and ear as well as heart and brain.

### Vaccine

The Measles Mumps Rubella vaccine consists of weakened but live viruses, which then reproduce in the body. The vaccine is injected into a muscle (intra-muscularly) or under the skin (subcutaneously). Your doctor can tell you about the start and duration of the vaccine protection. According to the state of knowledge today, booster shots are not required after 2 MMR vaccinations.

### Who should be vaccinated, and when?

The MMR combination vaccine is recommended for all boys and girls aged between 11 and 14 months. In order to achieve a safe level of immunity, all children aged between 15 and 23 months are vaccinated again. However, it is also possible to vaccinate again just four weeks after the first vaccination.

If a child is to be placed in a day-care facility, then the first MMR vaccination can also be administered earlier – however at 9 months at the earliest. If the first vaccination was administered before the age of 11 months, then it is important to give the 2<sup>nd</sup> vaccination just after the 1<sup>st</sup> birthday.

The German Standing Committee for Vaccination (*STIKO*) points out that vaccinations that have not been carried out at the recommended times should be caught up later, up to the age of 18 years.

Also, all adults born after 1970 who have been vaccinated in childhood against measles only once or not at all, or whose vaccination status is unknown, should receive a one-off vaccination, preferably with MMR vaccine. Furthermore, all those employed in health services, and working in community services as well as those in contact with persons with a weakened immune system should be vaccinated if they are not already protected against measles, mumps and rubella.

After contact with a person with measles, mumps or rubella, unvaccinated persons older than 9 months, or those who have been vaccinated only once or not at all, or whose vaccination status is unclear, should receive a one-off MMR vaccination, if possible within 3 days after contact.

**Please note:** for children and adolescents it should be checked whether they have already received 2 MMR vaccinations. The Measles Mumps Rubella vaccination poses no risk to people who are already immune to one or more of these illnesses. There is no upper age limit for the MMR vaccination.

If there is an outbreak of measles, all adults born after 1970 with an unknown vaccination status, who have not been vaccinated, or who have only been vaccinated once in their childhood should receive a one-off vaccination, preferably with MMR vaccine.

### **Who should not be vaccinated?**

Individuals suffering from an acute illness with more than 38.5°C fever should be vaccinated at a later time. In general, persons with an immunodeficiency, be it congenital, acquired or caused by medication, should not be vaccinated; vaccination can be considered when the benefit outweighs the risk (e.g., with asymptomatic HIV-infection). If symptoms of diseases appeared after a first MMR vaccination, or if there is severe hypersensitivity against components in the vaccine, your immunizing doctor will advise you about a possible procedure. Persons with an allergy to chicken eggwhite (anaphylactic reaction after eating eggwhite) can usually be vaccinated, but the vaccination should be performed with appropriate precautionary measures in place.

The MMR vaccination should not be administered to persons who have received immunoglobulin within the past 3 months or who have had a blood transfusion during the same period (antibodies present in the donated blood may render the vaccination ineffective). The MMR vaccination should not be administered during pregnancy as there is a theoretical risk to the unborn child from the vaccine virus. For the same reason, pregnancy should be avoided for up to 1 month after vaccination. However, a vaccination administered accidentally during a pregnancy is not a reason for abortion.

### **After the vaccination**

The vaccinated person (vaccinee) does not need to take special care, but higher than usual physical exertion should be avoided for 1 to 2 weeks after vaccination. The vaccinating physician should be informed before vaccination of any tendencies towards circulatory problems or sudden onset allergic reactions.

The weakened vaccine viruses cannot be transmitted from person to person, i.e. vaccinating a child poses no risk to pregnant women in close proximity.

### **Possible localised and general reactions to the vaccination**

As well as providing the intended immunity, to protect from the illness, for about 5 percent of the vaccinated persons the vaccination can result in some discomfort, including soreness, swelling and redness at the injection site. This is the body's normal way of dealing with the vaccine and occurs within 1 to 3 days after the vaccination, rarely lasting very long. Occasionally, nearby lymph nodes can become swollen. General symptoms like headache, weariness, feeling unwell or gastrointestinal complaints can occur frequently. Between 5 and 15 percent of vaccinated persons experience a slightly or moderately elevated temperature.

One to two weeks after the vaccination, approximately 2 percent of vaccinated persons show slight signs of a measles, mumps or rubella infection. This is a non-infectious, so-called vaccination illness. Fever, for example, can occur together with a mild, measles-like rash. Sometimes the parotid gland becomes slightly swollen. Temporary joint pain has been observed in some adolescents and adults, but very rarely in children. Very rarely the testicles can become slightly swollen or the pancreas may react mildly and temporarily (through an enzyme increase).

As a rule, these are all of a temporary nature, and subside quickly and without lasting effects.

### **What about vaccination complications?**

Complications are unintended effects beyond usual vaccine reactions and affect the vaccinated person's health significantly. If an infant or young toddler reacts to the MMR vaccination with fever, there is a slight possibility of developing a febrile seizure. These generally have no lasting effect. Allergic reactions are very rare. They are mostly caused by the secondary components of the vaccine, such as gelatine or antibiotics. Hardly any cases of anaphylactic shock have been reported. There have also only been isolated cases of skin bleeding after vaccination as a result of a reduced platelet count. They usually subside quickly with no lasting effects. Serious developments occur only in isolated cases. On very rare occasions, longer periods of inflammation of the joints have been observed in adolescents and adults. Concerning locally licenced mumps vaccines made from the 'Jeryl Lynn' strain, sporadic cases of meningitis seem possible, but have so far not been virologically confirmed. A causative connection with other disorders of the neurological system that appeared at the same time as the MMR vaccination, which was reported in rare cases, is also questionable.

**Please note:** allergies to chicken egg white is no reason to avoid MMR vaccination as measles and mumps vaccine viruses are not grown in eggs, but using embryonic chicken cells. This means that chicken egg white (ovalbumin) is present, at most, as small and almost undetectable traces, which are therefore not harmful

### **Physician's advice on side effects**

In addition to this information leaflet your doctor is offering a personal consultation.

If, after a vaccination, symptoms occur that go beyond the rapidly subsiding local and general reactions described above, the vaccinating doctor will also be available to advise you.

You can contact the vaccinating doctor here:

### **Disclaimer**

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Name \_\_\_\_\_  
Name

## Vaccination against measles, mumps and rubella

*Schutzimpfung gegen Masern, Mumps und Röteln*

Please find enclosed an information leaflet about vaccination against measles, mumps and rubella. It contains essential information about illnesses that can be prevented by the vaccination, the vaccine, the vaccination, tips for after the vaccination, and also describes common reactions to the vaccination and possible complications.

*Anliegend erhalten Sie ein Merkblatt über die Durchführung der Schutzimpfung gegen Masern, Mumps und Röteln. Darin sind die wesentlichen Angaben über die durch die Impfung vermeidbaren Krankheiten, den Impfstoff, die Impfung, das Verhalten nach der Impfung sowie über Impfreaktionen und mögliche Impfkomplicationen enthalten*

Before the vaccination is administered, we request the following additional information:

*Vor Durchführung der Impfung wird zusätzlich um folgende Angaben gebeten:*

1. Does the person to be vaccinated have an immunodeficiency (congenital, acquired or caused by medication)?

*Besteht bei dem Impfling eine Immundefizienz (erworben, angeboren, durch Medikamente bedingt)?*

Yes (*Ja*)                       No (*Nein*)

2. Did the person to be vaccinated receive immunoglobulin (gamma globulin) or a blood transfusion in the last 3 months?

*Hat der Impfling in den vergangenen drei Monaten Immunglobulin (Gammaglobulin) erhalten oder wurde eine Bluttransfusion vorgenommen?*

Yes (*Ja*)                       No (*Nein*)

3. Has the person to be vaccinated received another vaccination in the last four weeks, or is there a vaccination against other illnesses planned in the next four weeks?

*Wurde bei dem Impfling in den vergangenen vier Wochen eine Schutzimpfung durchgeführt oder ist in den kommenden vier Wochen eine Schutzimpfung gegen andere Erkrankungen geplant?*

Yes (*Ja*)                       No (*Nein*)

If yes, which ones and when: \_\_\_\_\_  
*wenn ja, welche und wann?*

4. For vaccinations of women of child-bearing age: are you currently pregnant?

*Bei Impfung von Frauen im gebärfähigen Alter: Besteht zurzeit eine Schwangerschaft?*

Yes (*Ja*)                       No (*Nein*)

If you would like to know more about the vaccination against measles, mumps and rubella, please ask the vaccinating physician.

*Falls Sie noch mehr über die Schutzimpfung gegen Masern, Mumps und Röteln wissen wollen, fragen Sie den Impfarzt!*

Please bring your vaccination record to your vaccination appointment.

*Zum Impftermin bringen Sie bitte das Impfbuch mit!*

**Declaration of consent***Einverständniserklärung***to vaccinate the person listed below against measles, mumps and rubella***zur Durchführung der Schutzimpfung gegen Masern, Mumps und Röteln*Name of person to be vaccinated: \_\_\_\_\_  
*Name des Impflings*Date of birth: \_\_\_\_\_  
*geb. am*

I have read the information leaflet and have received detailed information about the vaccination during the consultation with my physician.

*Ich habe den Inhalt des Merkblatts zur Kenntnis genommen und bin von meinem Arzt/meiner Ärztin im Gespräch ausführlich über die Impfung aufgeklärt worden.*

- I have no further questions.  
*Ich habe keine weiteren Fragen.*
- I give my consent to the recommended vaccination against measles, mumps and rubella.  
*Ich willige in die vorgeschlagene Impfung gegen Masern, Mumps und Röteln ein.*
- I decline the vaccination. I have been informed about the possible disadvantages of declining this vaccination.  
*Ich lehne die Impfung ab. Über mögliche Nachteile der Ablehnung dieser Impfung wurde ich informiert.*

Notes: *Vermerke* \_\_\_\_\_Place and date: *Ort, Datum* \_\_\_\_\_\_\_\_\_\_  
Signature of person to be vaccinated  
or his/her legal guardian  
*Unterschrift des Impflings bzw. des Sorgeberechtigten*\_\_\_\_\_  
Doctor's signature  
*Unterschrift des Arztes/der Ärztin*