Measles, mumps, and rubella are widespread illnesses which are caused by infection with viruses (measles, mumps or rubella virus) and predominantly develop in children but may also occur in adults. The MMR combination vaccine offers simultaneous protection against measles, mumps, and rubella. There is no medication which can cure measles, mumps or rubella. Only timely and consistent MMR vaccination can protect against these diseases!

**Measles** is a frequently very severe illness which is easily transmitted from person to person. It lasts around 2 weeks and is accompanied by high fever, coughing, conjunctivitis and a typical rash (exanthem). Frequent complications include pneumonia and middle ear infections. Brain inflammation (encephalitis) develops in around 1 in 1,000 to 2,000 patients, which can be fatal in around 30 percent or lead to mental and physical handicap. Children under 5 years old and adults, though adolescents as well, are particularly at risk due to measles- they experience complications more frequently. If measles occurs in early childhood, there is increased risk of the rare but always fatal brain disease SSPE.

**Mumps** is a viral illness accompanied by fever, headaches and a swelling of the salivary glands (“mumps”). In around every tenth case of mumps, an additional inflammation of the meninges develops (meningitis) and occasionally of the brain (encephalitis). A rare but typical complication is hearing loss. Every 4th adolescent or adult male develops swelling and inflammation of the testes which can also rarely lead to infertility.

**Rubella** is a mostly mild viral illness accompanied by fever, rash (exanthem) and lymph node swelling. It is not rare for it to proceed without clinical symptoms; these individuals can also infect their surroundings. But, during pregnancy rubella can be transmitted to the unborn child where it can cause miscarriages and stillbirths or severe malformations of the eyes, ears, heart or brain.

**Vaccine**

The measles, mumps, and rubella (MMR) vaccines consist of weakened, live vaccine viruses which multiply after the vaccination. The vaccine is injected subcutaneously or into muscle and can usually be given simultaneously with other vaccines without affecting its tolerability or effectiveness. Your doctor can advise you on exceptions to this rule and the start of vaccine protection. Current knowledge indicates that no boosters are required after receiving the MMR vaccination twice.
Who should be vaccinated and when?

Vaccinations against measles, mumps and rubella are recommended by the Standing Committee on Immunisation (STIKO) for children aged 11 months. For reliable vaccine protection, children are re-vaccinated at 15 months (interval of at least 4 weeks from the first vaccination).

The vaccine can be given from 9 months of age, e.g. prior to admission to a childcare facility. If vaccination occurs before the age of 11 months, then the second vaccination should be delivered shortly after the first birthday. Your doctor can advise you on this.

STIKO also recommends that all adults born after 1970 with an unknown vaccination status, with no or only a single vaccination during childhood, receive a single vaccination against measles (MMR). Employees in certain fields of employment should receive a double vaccination – this also includes students and staff at colleges, vocational schools, and universities.

The Measles Protection Act requires proof of double vaccination against measles (with MMR or MMRV vaccines) for children and adolescents in community facilities, as well as for individuals in certain fields of employment who were born after 1970 (e.g. in medical and care facilities and in community facilities for children and adolescents).

Notes: 1. Unvaccinated individuals over the age of 9 months or persons who have thus far not been vaccinated or only received a single dose of the MMR vaccine, or whose vaccination status is unclear, should receive a single MMR vaccination – if at all possible – within 3 days of contact with an individual suffering from measles, mumps or rubella. 2. Women of childbearing age should have 2 documented rubella vaccinations, in which case titre determination can be omitted. 3. Administering the measles, mumps and rubella protective vaccine to individuals who are already immune to one or more of these illnesses is harmless.

Who should not be vaccinated?

Anyone suffering from an acute illness with fever over 38.5 °C, should not be vaccinated until they have recovered. Individuals with immune deficiency – be it congenital, acquired or caused by medications – should generally not be vaccinated. Exceptions are possible under certain circumstances. These patients should take the advice of the treating doctors as to whether, with this immune deficiency, and after suitably weighing the risks and benefits, they might after all receive an MMR vaccination. If symptoms developed following a previous MMR vaccination, or if there is severe hypersensitivity to vaccine constituents, then the vaccinating doctor will advise you. Individuals with a severe hen’s albumen (egg white) allergy (anaphylaxis after consumption of hen’s egg whites) can generally be vaccinated; if necessary, the vaccination should be administered with appropriate precautions.

MMR vaccination should not be performed in individuals who have received immunoglobulins within recent months (interval of 3 to 8 months depending upon dosage of the immunoglobulin preparation used) or in recipients of a blood
transfusion in the same time period (the vaccine can remain inactive due to protective substances - antibodies - in the donor blood against the named viruses). The MMR vaccine should not be administered to pregnant women, since there is a theoretical risk to the baby in the womb from the vaccine viruses. For the same reason pregnancy should be avoided for a period of 1 month following vaccination. Accidental vaccination during pregnancy, however, is not a reason to terminate the pregnancy.

**Behaviour before and after vaccination**
The vaccinating doctor should be informed prior to vaccination if individuals are prone to circulatory reactions or are known to have immediate allergic reactions. The person being vaccinated does not need to take any special precautions, although unusual physical exertion should be avoided for 1 to 2 weeks following vaccination. The vaccine viruses are not transmissible to contacts, or do not cause any illness. Vaccination of a child is therefore harmless, even if there is a pregnant woman living in their environment.

**Possible local and generalised allergic reactions following vaccination**
Following MMR vaccination, there may be pain, swelling and reddening at the vaccination site in approx. 10 percent of vaccinated individuals. This is an expression of the normal reaction of the body to the vaccine and develops within 1 to 3 days after the vaccination, rarely lasting longer. Occasionally (0.1 to 1 percent) nearby lymph nodes will swell up. Frequently (1 to 10 percent), general symptoms such as headache, weariness, malaise or gastrointestinal symptoms may also develop. Frequently, mild symptoms of measles, mumps or rubella can develop - mostly 5 to 12 days following vaccination – the non-infectious, so-called vaccine illness. In this condition, 5 to 15 percent of vaccinated individuals show fever, frequently (approx. 2 percent) associated with a weak measles-like rash. Occasionally the parotid gland may swell slightly. Transient joint pains have been observed in adolescents and adults, but very rarely in children. Very rarely, the testes may swell mildly and transiently, or the pancreas may react mildly and transiently (enzyme level increase). All these manifestations are usually transient and subside rapidly and without consequences.

**Are vaccine-induced complications possible?**
Vaccine-induced complications are consequences which go beyond the normal extent of vaccine reactions and which appreciably impair the health of the vaccinated individual. If an infant or toddler reacts to the MMR vaccine by developing a fever, this may in rare cases lead to a febrile spasm. This usually has no consequences. Allergic reactions are very rare. They are most often directed against additives in the vaccine such as gelatin or antibiotics (which are trace constituents). Anaphylactic shock has only been reported in isolated cases. Similarly, skin haemorrhaging as a result of reduced blood platelet numbers following vaccination has only been occurred in isolated cases. As a rule, they subside rapidly and without consequences, and severe courses only occur in isolated cases. Very rarely, longer lasting joint inflammation can be seen in adolescents and adults. There is no evidence that the weakened mumps virus used in this vaccine can produce meningitis. Medical literature rarely reports on other nervous system illnesses (e.g.
seizures, abnormal sensations, transient paralysis) or blood vessel inflammation in temporal relation to the vaccine.

**Note:** Allergy to hen’s albumen (egg white) is not a contraindication to MMR vaccination, as the measles and mumps viruses are multiplied not in albumen but in embryonal chicken cells (see also “Who should not be vaccinated?”).

**Advice on possible side effects from the vaccinating doctor**
In addition to this information leaflet, your vaccinating doctor will offer an advisory consultation. If symptoms exceeding the transient local and general reactions described above develop after a vaccination, the vaccinating doctor will, of course, be available for further advice.

You can reach the vaccinating doctor
Protective vaccination against measles, mumps, and rubella

Schutzimpfung gegen Masern, Mumps und Röteln

Name

Name

Prior to vaccination, please provide the following personal details:

Vor Durchführung der Impfung wird zusätzlich um folgende Angaben gebeten:

1. Does the person to be vaccinated have an immune deficiency disorder (acquired, inherited or caused by medications)?
   Yes       No

   1. Besteht bei der zu impfenden Person eine Immunmangelkrankheit (erworben, angeboren, durch Medikamente bedingt)?
      ja      nein

2. Has the person to be vaccinated received immunoglobulin (gamma globulin) or a blood transfusion in the past 3 (to 8) months?
   Yes       No

   2. Hat die zu impfende Person in den vergangenen 3 (bis 8) Monaten Immunglobulin (Gammaglobulin) erhalten oder wurde eine Bluttransfusion vorgenommen?
      ja       nein

3. Has the person to be vaccinated received a protective vaccine in the past 4 weeks or is one planned in the coming 4 weeks against other illnesses?
   Yes       No

   if yes, which and when

   3. Wurde bei der zu impfenden Person in den vergangenen 4 Wochen eine Schutzimpfung durchgeführt oder ist in den kommenden 4 Wochen eine Schutzimpfung gegen andere Erkrankungen geplant?
      ja       nein

   wenn ja, welche und wann

4. For women of childbearing age: Are you currently pregnant?
   Yes       No

   4. Bei Impfung von Frauen im gebärfähigen Alter: Besteht zurzeit eine Schwangerschaft?
      ja       nein

If you would like to know more about protective vaccinations against measles, mumps, and rubella, please ask the vaccinating doctor!

Please bring your vaccination passport to the vaccination appointment!

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

Zum Impftermin bringen Sie bitte das Impfbuch mit!
Confirmation of consent

to perform protective vaccination against measles, mumps, and rubella

(Forms with carbon copy are also available in order to provide the person to be vaccinated, or their legal representative, with a copy in accordance with the Patients' Rights Act)

Name of the person to be vaccinated

Name der zu impfenden Person

born on

geb. am

I have taken note of the contents of the information leaflet and have also been advised extensively on the vaccination by my doctor.

I have no further questions.

I consent to the proposed vaccination against measles, mumps, and rubella.

I decline the vaccination. I have been advised of the possible consequences of this rejection.

Remarks:

Place, Date:

Signature of the person to be vaccinated or their legal representative

Signature of the doctor

Unterschrift der zu impfenden Person bzw. des gesetzlichen Vertreters

Unterschrift der Ärztin/ des Arztes