

Combined MMR vaccine – measles

Numbers for people who either received the full MMR vaccination series in childhood or not, if exposed to the measles virus later in life.

	10,000 people without vaccination exposed to the measles virus	10,000 people with vaccination exposed to the measles virus
Benefits*/**		
How many people contract measles?	9,310	93-745
How many people suffer from fever due to measles?	9,124	91-730
How many people suffer from pneumonia due to measles?	93-559	1-45
How many people suffer from inflammation of the brain (encephalitis) due to measles?	5-9	0-1
How many people die from measles?	9-28	0-2
Harms***		
How many children suffer from a low platelet count (thrombocytopenia) due to the vaccination?	–	0-1
How many children suffer from febrile seizures due to the vaccination?	–	2-16

*The combined MMR vaccination also protects against mumps and rubella. **Numbers given under benefits are based on model calculations. ***Redness, pain, or swelling at the injection site are possible.

Short summary: A vaccination may protect against measles in case of exposure to the virus or reduce severe symptoms if infected despite vaccination. Redness, swelling, or pain at the injection site are possible; however, severe reactions to the vaccination are very rare.

Sources: [1] Demicheli et al. *Cochrane Database Syst Rev* 2012;2:CD004407. [2] Doerr & Gerlich. Georg Thieme 2010. [3] Plotkin et al. *Vaccines*. 6 ed: Saunders 2012. [4] RKI (ed.). *RKI-Ratgeber für Ärzte: Masern*. 2014. [5] Wichmann & Ultsch. *Bundesgesundheitsbl Gesundheitsforsch Gesundheitssch* 2013;56(9):1260-9. [6] Friese K et al. (ed.). *Infektionserkrankungen der Schwangeren und des Neugeborenen*. Springer 2013. [7] Quast & Stück. *Ärzte Merkblatt* 2002. [8] Black et al. *BJCP* 2003;55(1):107-11. [9] Patja et al. *Pediatrics* 2001;107(2):e27. [10] Vestergaard et al. *JAMA* 2004;292(3):351-7. [11] Wilson et al. *PLoS One* 2011;6(12):e27897.