

Know Your Child's Seizure Risk from the MMR Vaccine

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Every
2
Hours

**ANOTHER CHILD
SUFFERS A SEIZURE**

from the MMR Vaccine

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Every year, about 5,700 U.S. children suffer seizures from the measles, mumps and rubella (MMR) vaccine.¹ This finding is derived from results of the most statistically powered safety study ever to measure the association between MMR vaccination and febrile seizures. Published in *JAMA* in 2004, the study² evaluated more than half a million children, both vaccinated and unvaccinated, from a Danish population that is relied upon globally to examine vaccine safety.

The results show that seizures from the MMR vaccine occur in about 1 in 640 children up to two weeks following MMR-vaccine administration. Applying this risk of seizures to the 3.64 million U.S. children vaccinated with a first dose of MMR every year³ results in about 5,700 annual MMR-vaccine seizures.

Febrile Seizures and Epilepsy

There is a five-fold higher risk of seizures from the MMR vaccine than seizures from measles infection,⁴ and a significant portion of MMR-vaccine seizures may cause permanent harm. For example, a Danish study of 1.54 million people, published in the *American Journal of Epidemiology* in 2007,⁵ examined the association between febrile seizures and epilepsy, a chronic brain disorder that leads to recurring seizures. The study found that 5% of febrile seizures may result in epilepsy. Consequently, about 300 MMR-vaccine seizures (5% of 5,700) may lead to epilepsy annually.¹

The risk of seizure increases in siblings of children with a history of febrile seizures and in children with a personal history of febrile seizures, to 1 in 250 and 1 in 50, respectively.²

Risk of Seizure Resulting from the First Dose of the Measles, Mumps and Rubella (MMR) Vaccine²

Children receiving first dose of MMR vaccine	Risk of seizure
Children overall	1 in 640
Siblings of children with a history of febrile seizures	1 in 250
Children with a personal history of febrile seizures	1 in 50

In the U.S., measles is generally a benign, short-term viral infection; 99.99% of measles cases experience full recovery.⁶ Thus far, the MMR vaccine has not been proven to be safer than measles.⁴ It's important for physicians and parents to objectively weigh the risks of measles vs. the risks and limitations of the MMR vaccine, so families can make informed, evidence-based vaccination decisions.

Summary of Key Facts and Figures



Seizures from the MMR vaccine occur 5 times more often than measles-related seizures.



Seizures can occur up to 2 weeks following the first dose of the MMR vaccine.



5,700 U.S. children experience MMR-vaccine seizures each year.



5% of febrile-seizure cases may develop epilepsy, a chronic brain disorder.



Of the U.S. children who experience MMR-vaccine seizures, 300 cases may result in epilepsy annually.

References

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3. Centers for Disease Control. *Epidemiology and prevention of vaccine-preventable diseases*. 13th ed. Hamborsky J, Kroger A, Wolfe S, editors. Washington D.C.: Public Health Foundation; 2015. Appendix E-8. [[Source](#)]
4. Physicians for Informed Consent. Newport Beach (CA): Physicians for Informed Consent. Measles – vaccine risk statement (VRS); updated 2019 Sep. [[Source](#)]
5. Vestergaard M, Pedersen C, Sidenius P, Olsen J, Christensen J. The long-term risk of epilepsy after febrile seizures in susceptible subgroups. *Am J Epidemiol*. 2007 Apr 15;165(8):911-18. [[Source](#)]
6. Physicians for Informed Consent. Newport Beach (CA): Physicians for Informed Consent. Measles – disease information statement (DIS); updated 2019 Sep. [[Source](#)]

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Seizures from the measles, mumps and rubella (MMR) vaccine occur in about **1 in 640 children** up to two weeks following MMR-vaccine administration. Of the **5,700 U.S. children** who suffer MMR-vaccine seizures each year, **300 cases may result in epilepsy.**

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