

## Autism Spectrum Disorder (ASD) and Vaccine Status

| Citation   | Methods   | Participants  | Outcomes  |
|--|---|---|---|
| <p>Honda, H., Shimizu, Y., &amp; Rutter, M. (2005). No effect of MMR withdrawal on the incidence of autism: a total population study. <i>Journal of Child Psychology and Psychiatry</i>, 46(6), 572-579.</p>                                       | <p>In 1988, Japan replaced the MMR vaccine with single-dose vaccines due to contaminated MMRs. Researchers examined the autism rates in Japan following the withdrawal of the MMR.</p>  | <p>31,000 children who did not receive the MMR in Yokohama, who were tracked for 6 years to see if they developed autism.</p>   | <p>The 7-year incidence of ASD rose from 47.6 per 10,000 for children born in 1988 to 117.2 for those born in 1996. This occurred in the five-year period from 1988 to 1992 during which MMR vaccine usage fell from 69.8% to zero population coverage.</p>           |
| <p>Taylor, L. E., Swerdfeger, A. L., &amp; Eslick, G. D. (2014). Vaccines are not associated with autism: an evidence-based meta-analysis of case-control and cohort studies. <i>Vaccine</i>, 32(29), 3623-3629.</p>                               | <p>A meta-analysis, which examined several pooled studies to seek connections between MMR vaccination and autism.</p>   | <p>Five cohort studies involving 1,256,407 children, and five case-control studies involving 9,920 children were included in this analysis</p>  | <p>Analyses looking specifically at MMR vaccinations, mercury dosage, and thimerosal exposure were negative, as were subgroup analyses looking specifically at development of autistic disorder versus other spectrum disorders.</p>                                  |
| <p>Jain, A., Marshall, J., Buikema, A., Bancroft, T., Kelly, J. P., &amp; Newschaffer, C. J. (2015). Autism occurrence by MMR vaccine status among U.S. children with older siblings with and without autism. <i>Jama</i>, 313(15), 1534-1540.</p> | <p>Researchers decided to study whether ASD is more common in vaccinated children than unvaccinated children. They also examined whether having a sibling with autism increased the chance that the MMR would cause autism.</p> | <p>Of 95,727 children with older siblings, 994 (1.04%) were diagnosed with ASD and 1929 (2.02%) had an older sibling with ASD. Of those with older siblings with ASD, 134 had ASD, vs 860 children with unaffected siblings</p> | <p>The authors found that the MMR vaccine was not associated with increased risk of autism, regardless of whether older siblings had ASD. Their findings indicated no association between MMR vaccine and ASD even among children already at higher risk for ASD.</p> |
| <p>Madsen, K. M., Hviid, A., Vestergaard, M., Schendel, D., Wohlfahrt, J., Thorsen, P., ... &amp; Melbye, M. (2002). A population-based study of measles, mumps, and</p>   | <p>A retrospective cohort study of all children born in Denmark from January 1991 through December 1998. MMR status</p>   | <p>537,303 children were studied. 440,655 were vaccinated, while nearly 100,000 were unvaccinated.</p>  | <p>There was no association between vaccination and the development of autism. The odds ratio for developing autism after receiving the MMR was 0.92 (which indicates no</p>  |

This educational handout was created by the Vaccine Task Force of the EMES Initiative.  
 Questions? Call: 347.669.EMES Email: [info@emesinitiative.org](mailto:info@emesinitiative.org)

| Citation   | Methods   | Participants | Outcomes  |
|--|---|--------------|---|
| rubella vaccination and autism. New England Journal of Medicine, 347(19), 1477-1482. | was obtained from the Danish National Board of Health. Information on the children's autism status was obtained from the Danish Psychiatric Central Register. |              | correlation at all). Autism rates were found equally in vaccinated and unvaccinated children. |

