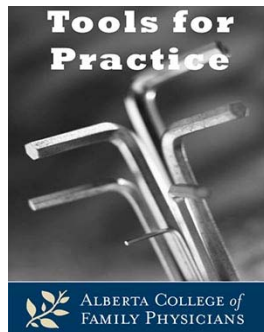


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The Autism and Vaccine Story: Fiction and Deception?

Clinical Question:

Is there any link between the MMR vaccine and autism?

Evidence:

- In 1998, Wakefield and colleagues published a study¹ of 12 children that suggested a link between MMR vaccine, gastrointestinal symptoms and autism.
- Since then, at least 20 higher quality studies^{2,3} have failed to show any link between MMR and autism. For example,
 - o Cohort study of 500,000+ children followed for mean 4 years: no difference in autistic or autistic spectrum disorder.⁴
 - o Case-control study of 1294 autistic children with 4469 non-autistic children: no association between vaccination and autism.⁵
 - o Time series analyses reveal no association between start of MMR immunization and autism,^{6,7} and no association between trends in MMR vaccination rates and autism.^{8,9}
 - o Canadian research also shows no link between MMR vaccination and neurodevelopmental disorders.¹⁰
- Thimersol, a preservative in vaccines, has been suggested as another possible cause of autism but a number of studies have failed to show an association¹¹⁻¹³

Context:

- The truth about the Wakefield Study
 - o The 12 children in the study were selected carefully and many parents already felt MMR was the cause of their child's autism.¹⁴
 - o Dr. Wakefield had serious undisclosed financial conflicts: funded by lawyers involved in lawsuits against immunization manufacturers and applying for a new vaccine patent.^{14,15}
 - o In 2004, 10 of 13 authors retracted their support for the MMR - Autism association.¹⁶
 - o Britain's General Medical Council has subsequently investigated Wakefield and found him guilty of dishonesty and irresponsibility.¹⁵
 - o In 2010, Lancet fully retracted the Wakefield study.¹⁴
- The legacy of this unfortunate publication includes decreased immunization rates with increased measles rates¹⁷ and continued parental immunization fear.¹⁸

Bottom-line: There is convincing evidence from multiple countries showing there is no association between the MMR vaccine (or thimerosal) and autistic disorders. The controversy is based on unethical and untruthful findings.

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Tools for Practice is a biweekly article summarizing medical evidence with a focus on topical issues and practice modifying information. It is coordinated by G. Michael Allan, MD, CCFP and the content is written by practising family physicians. Archived articles are available on the ACFP website.

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