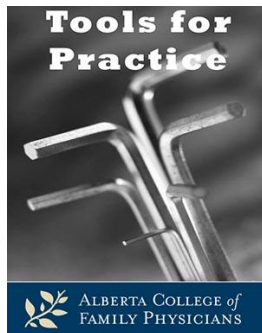


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**Reviewed: December 16, 2017**  
**Evidence Updated: Meta-analysis**  
**Bottom Line: Unchanged**  
**First Published: June 21, 2010**



## **The Autism and Vaccine Story: Fiction and Deception?**

**Clinical Question: Is there any link between the MMR vaccine and autism?**

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

### **Evidence:**

- In 1998, Wakefield and colleagues published a study<sup>1</sup> of 12 children that suggested a link between MMR vaccine, gastrointestinal symptoms, and autism.
- Since then, at least 20 higher quality studies<sup>2,3</sup> have failed to show any link between MMR and autism. For example,
  - Meta-analysis<sup>4</sup> of 5 cohort and 5 case-control studies of 1.2 million+ children: no difference in autism or autism spectrum disorder.
  - Time series analyses reveal no association between start of MMR immunization and autism,<sup>5,6</sup> and no association between trends in MMR vaccination rates and autism.<sup>7,8</sup>
  - Canadian research also shows no link between MMR vaccination and neurodevelopmental disorders.<sup>9</sup>
    - A Cochrane review of 10 studies found no association between MMR vaccination and autism.<sup>10</sup>
- Thimerosal, a preservative in vaccines, has been suggested as another possible cause of autism but a number of studies have failed to show an association.<sup>4,11-13</sup>

### **Context:**

- The truth about the Wakefield Study:
  - The 12 children in the study were carefully selected and many parents already felt MMR was the cause of their child's autism.<sup>14</sup>
  - The children's medical histories were altered, e.g. of 9 children reported to have regressive autism, 3 did not have autism diagnosed at all.<sup>15</sup>

- Dr. Wakefield had serious undisclosed financial conflicts: funded by lawyers involved in lawsuits against immunization manufacturers and applying for a new vaccine patent.<sup>14,16</sup>
- In 2004, 10 of 13 authors retracted their support for the MMR-autism association.<sup>17</sup>
- Britain's General Medical Council has subsequently investigated Wakefield and found him guilty of dishonesty and irresponsibility.<sup>16</sup>
- In 2010, Lancet fully retracted the Wakefield study.<sup>14</sup>
- The legacy of this unfortunate publication includes decreased immunization rates with increased measles rates<sup>17</sup> and continued parental immunization fear.<sup>19</sup>

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