

Vaccinations and Autism - Retraction

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The practice of vaccinating in today's world has diminished the occurrences of many diseases. Vaccinations can prevent or ameliorate the effects of a disease or infection. In the 21st century, vaccinations are, for the most part, considered a safe and cost effective method of preventing infectious diseases. Even though vaccinations have been shown to be safe and effective, there has been much debate about the use of vaccinations and autism.^{1,2}

In February 1998, a group led by Andrew Wakefield published a controversial paper in *Lancet*³ linking the MMR vaccine to the development of autism. In this study, the authors noted that eight of the twelve children who were administered the MMR vaccination reported the onset of gastrointestinal discomfort followed by behavioral problems within two weeks. The authors theorized that the gastrointestinal effects were due to the measles vaccine replicating in the intestinal tract leading the bowel to become porous due to inflammation. The measles virus then spread via blood to the brain affecting the nervous system and causing autism. Although the study did not prove a causal connection, Wakefield called for stoppage of the use of MMR vaccine until further research was completed.⁴

The paper described a new "syndrome", which could possibly be a link between bowel inflammation, autism, and the MMR vaccine.³ The controversy began to gain momentum in the next few years after the publication of Wakefield's paper stating the MMR vaccine might not be safe. The use of MMR vaccine dropped to under eight percent as a result of this paper and the incidence of measles and mumps reached epidemic levels in 2005.⁴

In March 2004, as the controversy escalated, ten of the twelve authors released a retraction in *Lancet* stating this paper showed no causal link between the MMR vaccine and autism, and concluded that data was insufficient.⁵ More recently, the editors of *Lancet* fully retracted Wakefield's paper which linked the MMR vaccine to autism. The retraction notice stated, "...the claims in the original paper that children were "consecutively refereed" and that investigations were "approved" by the local ethics committee have been proven false."⁶

Lancet's decision came after the General Medical Council which oversees doctors in Britain,

ruled that Dr. Wakefield acted “dishonestly and irresponsibly.” Wakefield continues to proclaim his innocence and stands by his work.

In recent years, scientists at Columbia University replicated important parts of Wakefield’s study. The study was co-authored by John O’Leary, a pathologist, who was also a co-author of Wakefield’s original study.⁷ In this latest study, researchers tried to find evidence of genetic material from the measles virus in the gastrointestinal tract of children with autism who had preceding GI problems. Dr. Mady Hornig, a co-author of the study stated, “We found no relationship between the timing of MMR vaccine and the onset of either GI complaints or autism.”⁷

Many parents chose not to vaccinate their children due to their concerns of autism. The use of thimerosal, a preservative containing mercury found in vaccines, has also been a major issue in this controversy. However manufacturers of vaccines have largely eliminated thimerosal from their vaccines, so this is no longer an issue. The use of vaccinations can prevent many highly infectious diseases that result in severe and permanent complications. Therefore, health care providers are encouraged to educate parents on the importance of childhood vaccinations and their safety.

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