

Dr. Andrew Wakefield's Infamous Contribution to Medical Science

Dr. Andrew Wakefield was a British surgeon and medical researcher. In 1998, *The Lancet*, one of the world's best known, oldest, and most respected general medical journals, published a study done by Dr. Wakefield in which he implied that there was a link between the MMR (measles, mumps and rubella) vaccine and autism. The ramifications of this study have since rocked medical and private communities worldwide and done a great disservice to children everywhere. Dr. Wakefield's "research" has set progress in the field of vaccine-preventable diseases back by decades.

Before measles immunization became available in 1963, nearly everyone in the United States caught measles. An average of 450 measles-associated deaths were reported each year between 1953 and 1963. Seventeen percent of measles cases have one or more complications, including pneumonia and encephalitis. Pneumonia is present in about six percent of cases and accounts for most of the deaths attributed to measles. Encephalitis (swelling of the lining of the brain) can cause permanent brain damage. As many as three out of every 1,000 persons with measles will die in the U.S. In the developing world, the rate is much higher, with death occurring in about one out of every 100 persons.

Measles is one of the most infectious diseases in the world and is frequently imported into the U.S. In the period between 1997-2000, most cases in this country were associated with international visitors or U.S. residents who were exposed to measles while traveling abroad. More than 90 percent of people who are not immune (been vaccinated or had the disease) will get measles if they are exposed to the virus.

Although no longer common in the United States, measles remains a common illness in the developing world. According to the World Health Organization (WHO), nearly 900,000 measles-related deaths occurred among persons in developing countries in 1999. In populations that are not immune to measles, the disease spreads rapidly. If vaccinations against this disease were stopped, it is estimated that about 2.7 million measles deaths could be expected worldwide.

In the U.S., widespread use of measles vaccine has led to a greater than 99 percent reduction in measles compared with the pre-vaccine era. However, if we stop immunizing against measles, the disease will likely increase to pre-vaccine levels. Following the publication of Dr. Wakefield's study, many parents panicked and refused to have their children vaccinated. Vaccination rates in England plummeted. In the United Kingdom and Ireland, measles outbreaks hospitalized hundreds of people and killed four children. In the United States, more cases of measles were reported in 2008 than in any other year since 1997. More than 90% of those infected had not been vaccinated or their vaccination status was unknown.

Dr. Wakefield's study involved twelve subjects. He reported that all twelve had been previously healthy with no underlying developmental problems. All twelve were reported to have developed autism following administration of the MMR vaccine. In his conclusion, Dr. Wakefield implied that there was a causal relationship between the MMR vaccine and autism.

Dr. Wakefield's research has been subjected to harsh criticism. The study was renounced and much maligned by many of Dr. Wakefield's colleagues when it was first published. Most of Wakefield's co-authors withdrew their names from the study in 2004 after learning he had had been paid by a law firm that intended to sue vaccine manufacturers -- a serious conflict of interest that Wakefield failed to disclose. According to the *British Medical Journal*, Wakefield received more than \$674,000 from the lawyers. A new investigation has revealed that his research was conducted fraudulently. When the hospital records of the subjects used in the study were compared to the histories that Dr. Wakefield reported in his study, there were obvious discrepancies. Five of the twelve children clearly had developmental problems long before getting their shots and three of the twelve had no autism diagnosis at all after getting their shots. The new data found that the histories of all twelve cases were misrepresented or altered and that there was "no doubt" that Wakefield was responsible. The *British Medical Journal* called Dr. Wakefield's study an "elaborate fraud" that has done long-lasting damage to public health.

Following publication of Dr. Wakefield's study, multiple large epidemiological studies were undertaken. Reviews of the evidence by the Centers for Disease Control and Prevention, the American Academy of Pediatrics, the Institute of Medicine of the US National Academy of Sciences, the UK National Health Service, and the Cochrane Library all found no link between the vaccine and autism. Dr. Wakefield has been unable to reproduce his own results. His original study has long since been debunked and dismissed by the scientific community.

In 2004, *The Lancet* partially retracted its 1998 publication and fully retracted it in 2010. The research was declared fraudulent in 2011 by the *British Medical Journal*. Dr. Wakefield was found guilty of serious professional misconduct by the General Medical Council of England and in May of 2010, was stripped of his license to practice medicine.

Despite all of the scientific evidence showing that Dr. Wakefield's study was fraudulent, the damage to public health continues. Nearly 40% of American parents have declined or delayed a vaccine according to the CDC. Many parents now have a vague distrust of vaccines -- with little or no memory of diseases that terrified their grandparents. Officials say it may take years to rebuild trust in vaccines. One official stated, "It's very hard to un-scare people. You can do study after study, but people are far more compelled by their fears than by their reason."

In 2011, one journal article described the vaccine-autism connection as "the most damaging medical hoax of the last 100 years." Please vaccinate your children. Their health and the health of those around them depends on your decision.