

Potential to Reduce Autism Prevalence via Alternative Vaccination based on Family Medical History:

Could we avoid about 1/4th of new autism cases by changing the vaccination schedule for only about 2% of children?

A study entitled “Familial Risk Factors in Autism” by Brimacombe et al was published in 2007 in the Journal of Child Neurology. The study on children in New Jersey found that a family medical history of certain illnesses (such as thyroid disorders, rheumatoid arthritis, epilepsy, diabetes, and other illnesses) was prevalent at significantly higher rates in the autism cohort versus the general population. In a December 2008 Age Of Autism article, I used data from the “Familial Risk Factors in Autism” study and the CDC “Prevalence of Autism Spectrum Disorders” study released in February 2007 (“1 in 150” autism rate across USA, “1 in 94” autism rate in New Jersey) to calculate the risk of autism for children born to families with certain family medical histories (<http://www.ageofautism.com/2008/12/new-clues-to-who-is-susceptible-to-autism-via-vaccine-injury.html>). My calculations showed that a child born in New Jersey in 1994 to a family with certain medical histories had a very high risk of autism.

In today’s article, I examine retroactively the possible reduction to autism prevalence in the 1994 New Jersey birth cohort if boys born in families with certain medical histories had been allowed to follow an alternative vaccine schedule that would’ve eliminated the risk of vaccine-induced autism. Calculations indicate that up to 23% of autism cases could have been avoided if a mere 2.3% of the children born in New Jersey in 1994 had been allowed to follow an alternative vaccine schedule that would’ve eliminated the risk of vaccine-induced autism:

Risk is described as "1 in X" children

	Autism Prevalence Rate in New Jersey			
Autism Risk for Children in New Jersey born in 1994¹	1 in 94			
		% of boys in birth cohort in 1994:	% of boys in total autism cases:	Autism RR Vax vs Unvax, 11-17 yr old boys:
		51%	80%	2.12

<i>If child in New Jersey has a family history of²:</i>	Autism cohort with this family medical history ²	General population with this family medical history ^{2,3}	Risk of Autism for Child in New Jersey born with this family medical history	Autism Cases per 10,000 with this family medical history	Boys with Autism with this family medical history per 10,000 children	Boys with autism with this family medical history per 10,000 children if vaccine-induced autism cases were avoided
Thyroid Disorders	20.8%	1.6%	1 in 7	22.1	17.7	5.7
Rheumatoid Arthritis	10.4%	0.9%	1 in 8 or higher ³	11.1	8.9	2.8
Epilepsy	5.6%	0.9%	1 in 15 or higher ³	6.0	4.8	1.5
Mental retardation	4.8%	1.0%	1 in 20	5.1	4.1	1.3

¹ MMWR Morbidity and Mortality Weekly Report Surveillance Summaries February 9, 2007 / Vol. 56 / No. SS-1; Prevalence of Autism Spectrum Disorders -- Autism and Developmental Disabilities Monitoring Network, 14 Sites, United States, 2002

² Brimacombe M, Ming X, Parikh A. Familial risk factors in autism. JChild Neuro. 2007; 22:000-000

³ If “Familial Risk Factors in Autism” paper indicated that the prevalence in the general population as less than 1%, then 0.9% was used. If the actual prevalence in the general population is lower than 0.9%, then the risk for autism for this sub-population is even higher than shown in this table.

Autism cases per 10,000 children born in NJ in 1994:	106.4
% of children born in 1994 in NJ that were boys with a family medical history of thyroid disorders, rheumatoid arthritis, epilepsy, or mental retardation:	2.3%
Autism cases per 10,000 children born in NJ in 1994 if vaccine-induced autism were eliminated for boys with those family medical histories:	82.3
Percentage reduction in autism prevalence:	23%

Assumptions:

- The ratio of 4:1 boys to girls with autism across the general population would also be found in these susceptible sub-groups
- The relative risk of autism in vaccinated versus unvaccinated children in the general population would also be found in these susceptible sub-groups
- In the continued absence of a formal government epidemiological study on autism prevalence in vaccinated versus unvaccinated populations, the relative risk of autism in vaccinated versus unvaccinated boys ages 11-17 (2.12 RR) from the 2007 Generation Rescue-funded study is used in these calculations. <http://www.generationrescue.org/survey.html>
- Although there is likely overlap between the different sub-groups (e.g. a child could have a family medical history of both thyroid disorders and epilepsy), the Brimacombe study did not provide specific numbers on overlap. Thus, my calculations necessarily were done assuming no overlap, and the calculated reduction in autism prevalence should be viewed as a maximum achievable number (meaning that overlap in the family medical history sub-groups would reduce this percentage).

Disclaimers:

The following calculations are mine only, and have not been vetted with the authors of the “Familial Risk Factors in Autism” study.

There is nothing in the “Familial Risk Factors in Autism” study which refers to vaccines or indicates in any manner that the authors think that vaccines might be a causal factor in autism.

Generation Rescue wrote regarding the vaccinated versus unvaccinated study:
“Generation Rescue is not representing that our study proves that the U.S. vaccine schedule has caused an epidemic in neurological disorders amongst our children. We are a small non-profit organization. For less than \$200,000, we were able to complete a study that the CDC, with an \$8 billion a year budget, has been unable or unwilling to do. We think the results of our survey lend credibility to the urgent need to do a larger scale study to compare vaccinated and unvaccinated children for neurodevelopmental outcomes.”
(from <http://www.generationrescue.org/survey.html>)