Current State of Vaccine Safety Science: Autism

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Centers for Disease Control and Prevention
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Vaccine Safety

CDC > Vaccine Safety > Common Concerns

Vaccines Do Not Cause Autism

Autism spectrum disorder (ASD) is a developmental disability that is caused by differences in how the brain functions. People with ASD may communicate, interact, behave, and learn in different ways. Recent estimates from CDC's Autism and Developmental Disabilities Monitoring Network found that about 1 in 68 children have been identified with ASD in communities across the United States. CDC is committed to providing essential data on ASD, searching for causes of and factors that increase the risk for ASD, and developing resources that help identify children with ASD as early as possible.

There is no link between vaccines and autism.

Some people have had concerns that ASD might be linked to the vaccines children receive, but studies there is no link between receiving vaccines and developing ASD. In 2011, an Institute of Medicine (ION eight vaccines given to children and adults found that with rare exceptions, these vaccines are very saf

A 2013 CDC study [PDF - 204 KB] added to the research showing that vaccines do not cause ASD. T the number of antigens (substances in vaccines that cause the body's immune system to produce disea antibodies) from vaccines during the first two years of life. The results showed that the total amount o vaccines received was the same between children with ASD and those that did not have ASD.

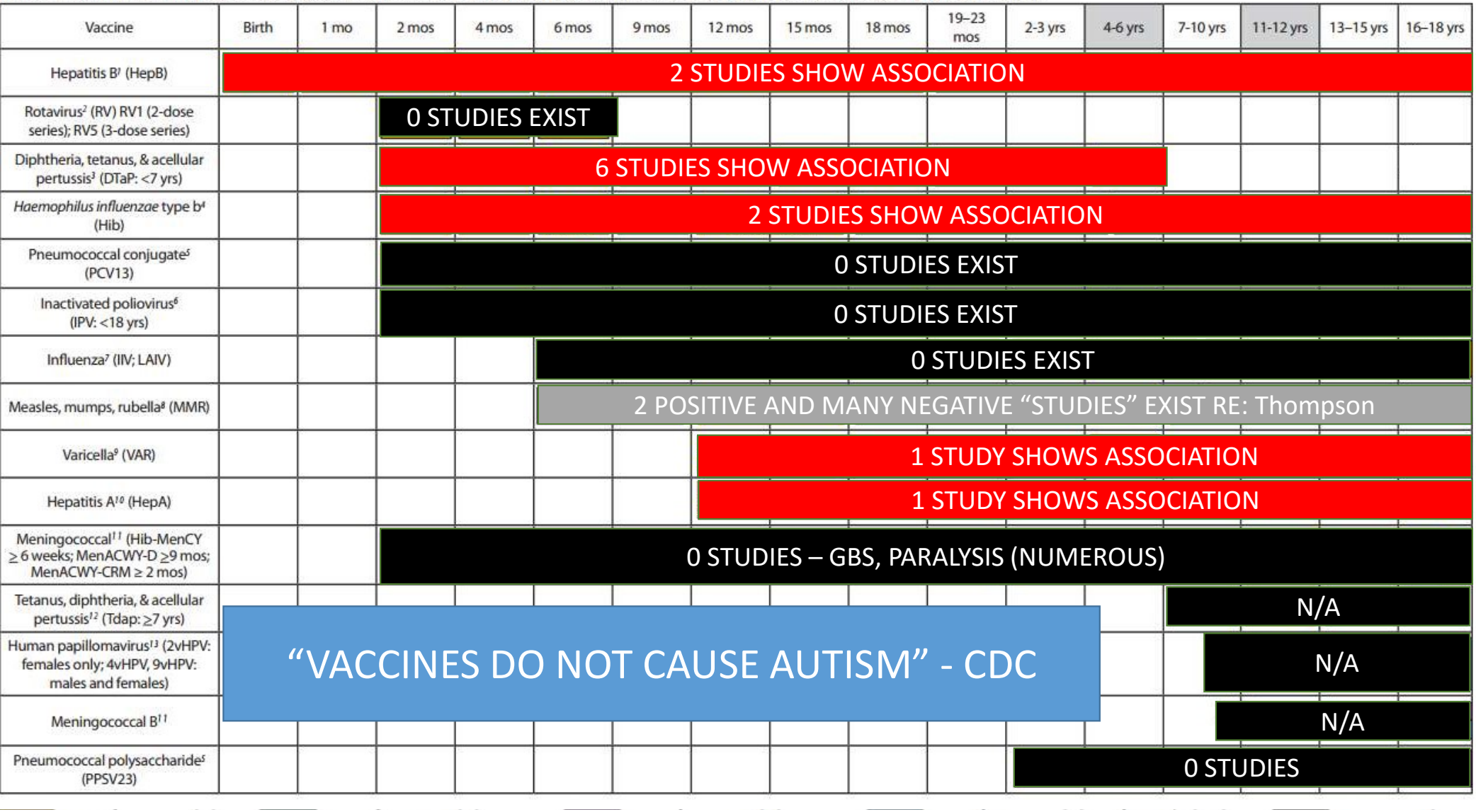
Vaccine ingredients do not cause autism.

One vaccine ingredient that has been studied specifically is thimerosal, a mercury-based preservative contamination of multidose vials of vaccines. Research shows that thimerosal does not cause ASD. In f

CDC Website

"Besides thimerosal, some people have had concerns about other vaccine ingredients in relation to ASD as well.

However, no links have been found between **any vaccine ingredients** and ASD."


Vaccine
Birth
1 mo
2 mos
4 mos
6 mos
9 mos
12 mos
15 mos
18 mos
19–23 mos
2-3 yrs
4-6 yrs
7-10 yrs
11-12 yrs
13–15 yrs
16–18 yrs
Hepatitis B[1] (HepB)
2 STUDIES SHOW ASSOCIATION
Rotavirus[2] (RV) RV1 (2-dose series); RV5 (3-dose series)
0 STUDIES EXIST
Diphtheria, tetanus, & acellular pertussis[3] (DTaP: <7 yrs)
6 STUDIES SHOW ASSOCIATION
Haemophilus influenzae type b[4] (Hib)
2 STUDIES SHOW ASSOCIATION
Pneumococcal conjugate[5] (PCV13)
0 STUDIES EXIST
Inactivated poliovirus[6] (IPV: <18 yrs)
0 STUDIES EXIST
Influenza[7] (IIV; LAIV)
0 STUDIES EXIST
Measles, mumps, rubella[8] (MMR)
2 POSITIVE AND MANY NEGATIVE "STUDIES" EXIST RE: Thompson
Varicella[9] (VAR)
1 STUDY SHOWS ASSOCIATION
Hepatitis A[10] (HepA)
1 STUDY SHOWS ASSOCIATION
Meningococcal[11] (Hib-MenCY ≥ 6 weeks; MenACWY-D ≥9 mos; MenACWY-CRM ≥ 2 mos)
0 STUDIES – GBS, PARALYSIS (NUMEROUS)
Tetanus, diphtheria, & acellular pertussis[12] (Tdap: ≥7 yrs)
N/A
Human papillomavirus[13] (2vHPV: females only; 4vHPV, 9vHPV: males and females)
N/A
Meningococcal B[11]
N/A
Pneumococcal polysaccharide[5] (PPSV23)
0 STUDIES
"VACCINES DO NOT CAUSE AUTISM" - CDC

Population Association Studies Ignored by CDC by Vaccine Type

Hepatitis B

Gallagher CM, Goodman MS. 2010. Hepatitis B vaccination of male neonates and autism diagnosis, NHIS 1997-2002. J Toxicol Environ Health A. 73(24):1665-77. doi: 10.1080/15287394.2010.519317.

Geier DA, Hooker BS, Kern JK, King PG, Sykes LK, Geier MR. 2013. A two-phase study evaluating the relationship between Thimerosal-containing vaccine administration and the risk for an autism spectrum disorder diagnosis in the United States. Transl Neurodegener. 2(1):25. doi: 10.1186/2047-9158-2-25.

Varicella

Deisher et al., 2014. Impact of environmental factors on the prevalence of autistic disorder after 1979. J. Public Health and Epidemiology Vol.6(9), pp. 271-286 , September 2014 DOI: 10.5897/JPHE2014.0649

Hepatitis A

Deisher et al., 2014. Impact of environmental factors on the prevalence of autistic disorder after 1979. J. Public Health and Epidemiology Vol.6(9), pp. 271-286 , September 2014 DOI: 10.5897/JPHE2014.0649

DtaP

Geier DA et al., 2013 A two-phase study evaluating the relationship between Thimerosal-containing vaccine administration and the risk for an autism spectrum disorder diagnosis in the United States. Transl Neurodegener. 2(1):25. doi: 10.1186/2047-9158-2-25.

Geier DA, Geier MR. 2006. A meta-analysis epidemiological assessment of neurodevelopmental disorders following vaccines administered from 1994 through 2000 in the United States. Neuro Endocrinol Lett. 27(4):401-13.

Geier DA, Geier MR. 2005. A two-phased population epidemiological study of the safety of thimerosal-containing vaccines: a follow-up analysis. Med Sci Monit. 11(4):CR160-70.

Geier D, Geier MR. 2004. Neurodevelopmental disorders following thimerosal-containing childhood immunizations: a follow-up analysis. Int J Toxicol. 23(6):369-76.

Geier DA, Geier MR. 2004. An evaluation of serious neurological disorders following immunization: a comparison of whole-cell pertussis and acellular pertussis vaccines. Brain Dev. 2004 Aug;26(5):296-300.

Geier MR, Geier DA. 2003. Neurodevelopmental disorders after thimerosal-containing vaccines: a brief communication. Exp Biol Med (Maywood). 228(6):660-4.

Haemophilus influenza Type B

Geier DA, Geier MR. 2006. An evaluation of the effects of thimerosal on neurodevelopmental disorders reported following DTP and Hib vaccines in comparison to DTPH vaccine in the United States. J Toxicol Environ Health A. 69(15):1481-95.

Geier DA, Geier MR. 2006. A meta-analysis epidemiological assessment of neurodevelopmental disorders following vaccines administered from 1994 through 2000 in the United States. Neuro Endocrinol Lett. 27(4):401-13.

MMR

Goldman, GS FE Yazbak. 2004. An Investigation of the Association Between MMR Vaccination and Autism in Denmark 9:3 (70-75)

Singh VK et al., 2002. Abnormal measles-mumps-rubella antibodies and CNS autoimmunity in children with autism. J Biomed Sci. 9(4):359-64.J Biomed Sci. 9(4):359-64.

Singh VK, Lin SX, Yang VC. Serological association of measles virus and human herpesvirus-6 with brain autoantibodies in autism. Clin Immunol Immunopathol. 1998 Oct;89(1):105-8.

FULL SCHEDULE

Delong G. A positive association found between autism prevalence and childhood vaccination uptake across the U.S. population. J Toxicol Environ Health A. 74(14):903-16. doi: 10.1080/15287394.2011.573736.

Desoto MC, Hitlan RT. Blood levels of mercury are related to diagnosis of autism: a reanalysis of an important data set. J Child Neurol. 2007 Nov;22(11):1308-11.

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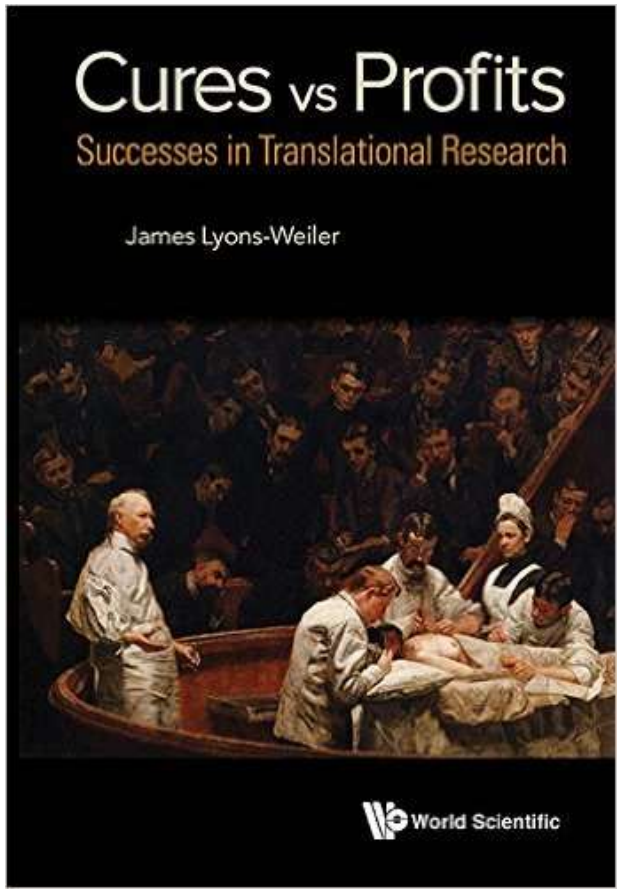
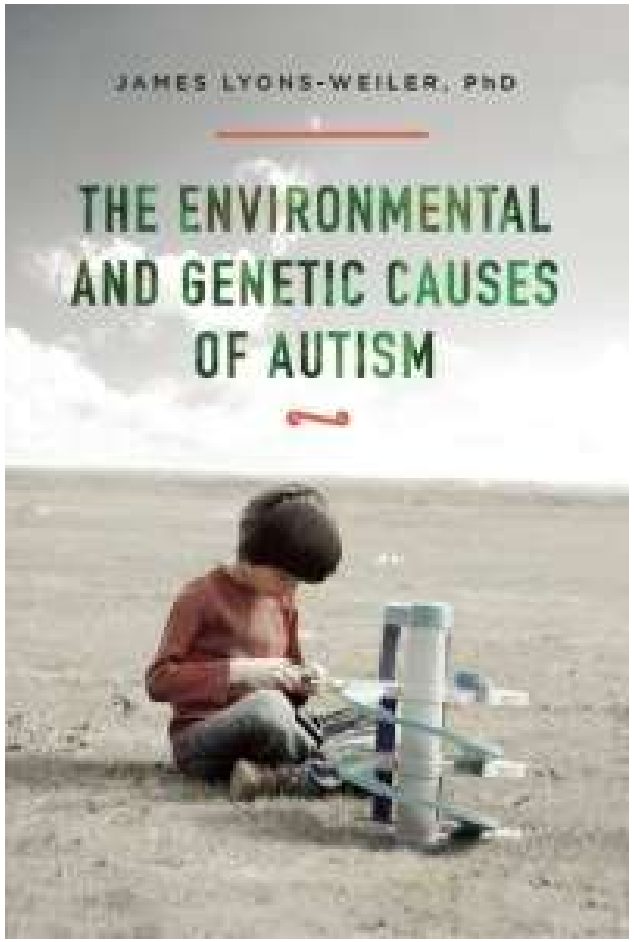
TABLE S-1 Continued

Adverse Event	MMR Vaccine Chapter 4	Varicella Vaccine Chapter 5	Influenza Vaccine Chapter 6	Hepatitis A Vaccine Chapter 7	Hepatitis B Vaccine Chapter 8	HPV Vaccine Chapter 9	DT-, TT-, and aP-Containing Vaccines Chapter 10	Meningococcal Vaccine Chapter 11	Injection-Related Events Chapter 12
Febrile Seizures	CS								
Afebrile Seizures	I								
Seizures		I	I[c]		I		I		
Meningitis	I[c]								
Cerebellar Ataxia		I							
Ataxia	I						I		
Autism	FR						I		
Acute Disseminated Encephalomyelitis	**I**	**I**	**I**	**I**	**I**	**I**	**I**	**I**	
Transverse Myelitis	I	I	I	I	I	I	I	I	
Optic Neuritis	I[c]		I[c]		I[c]		I[c]		
Neuromyelitis Optica	I[c]		I		I	I			
Multiple Sclerosis Onset in Adults	I		I		I		I		
Multiple Sclerosis Onset in Children	I				I				
Multiple Sclerosis Relapse in Adults			I		I		I		

#1 New Release in
PUBLIC HEALTH (Amazon)

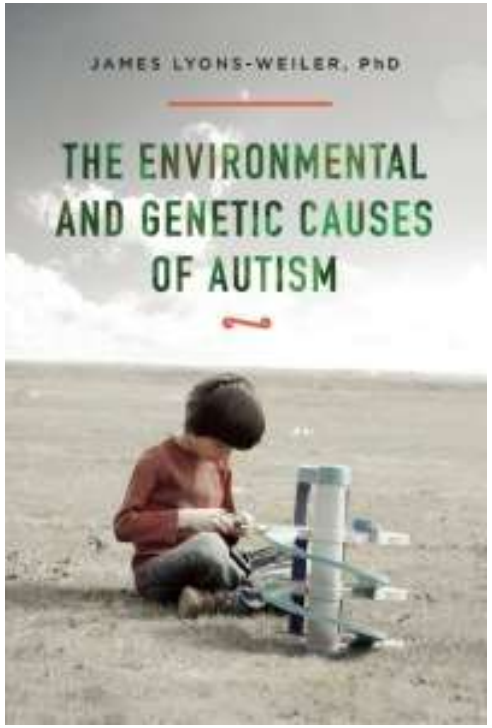


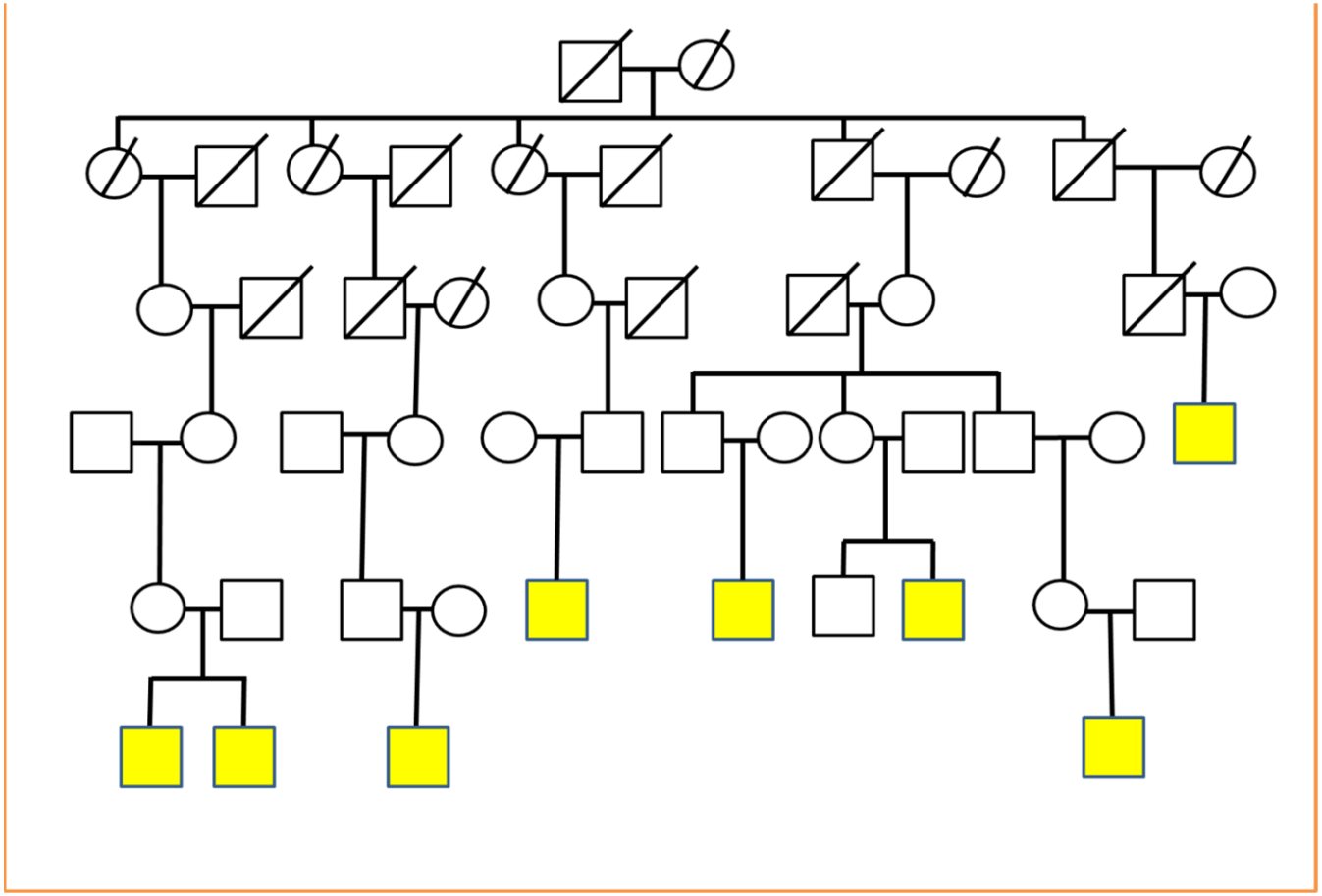
Coming in Nov 2016



I have read >3,000 research studies on autism

- There are hundreds of genes that “contribute” to autism
- No single gene account for >1% risk of autism
- Autism is **no more** than 50% Genetic
- Autism is **at least** 50% Environmental

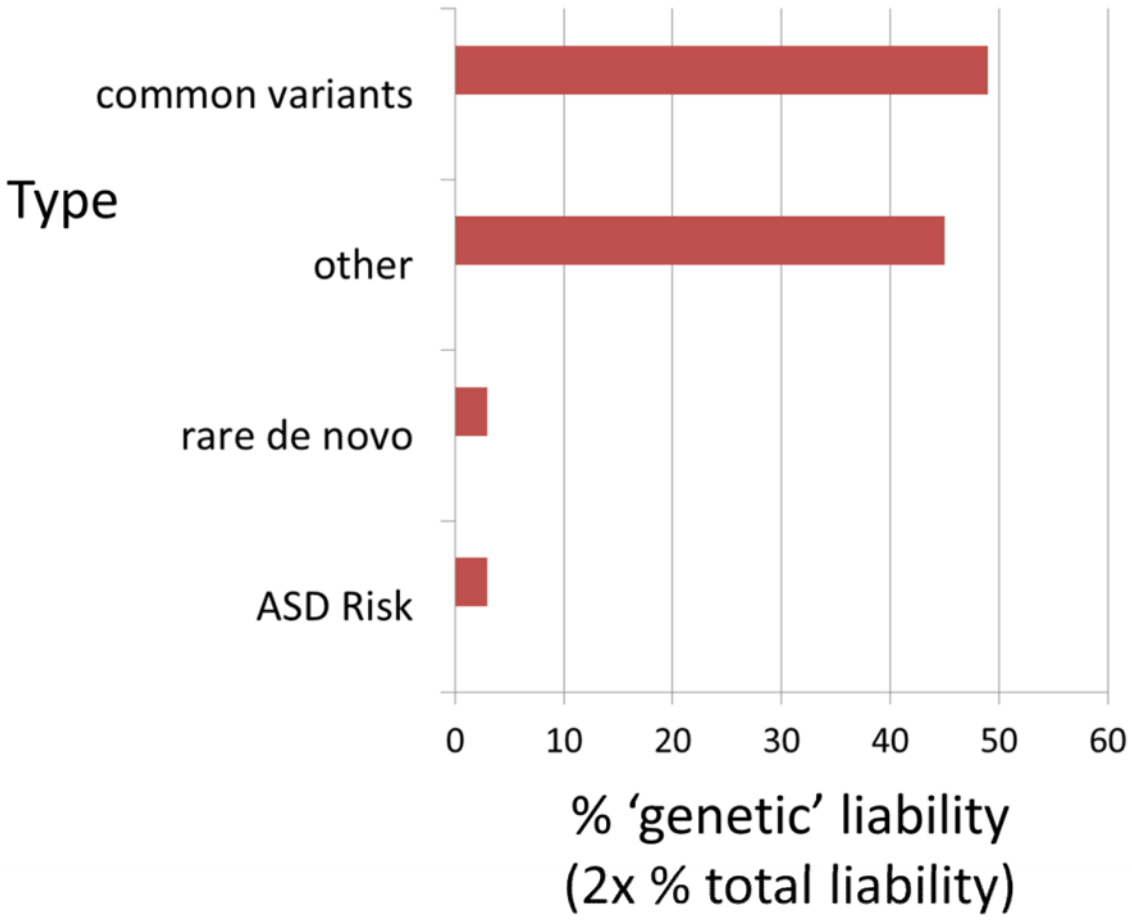




The investigators noted a great deal of variation in the specific manifestation of ASD across the pedigree. Within affected, IQ scores ranged from 41 to 124 for verbal IQ (VIQ) and 45 to 140 for performance IQ (PIQ); three had language delay; one had non-febrile seizures, but the other six did not. (*Allen-Brady, K et al., 2009. A high-density SNP genome-wide linkage scan in a large autism extended pedigree. Molecular Psychiatry 14:590–600; doi:10.1038/mp.2008.14)*

Three Categories of "Autism" Genes

- AUTISK RISK GENES –
  - e.g., Synaptic proteins, serotonin
- ENVIRONMENTAL SUSCEPTIBILITY GENES
  - e.g., Detoxification pathways, glutamate receptors
- AUTISM PHENOTYPE MODIFIER GENES
  - e.g., intellectual ability


Type
common variants
other
rare de novo
ASD Risk
0
10
20
30
40
50
60
% 'genetic' liability
(2x % total liability)

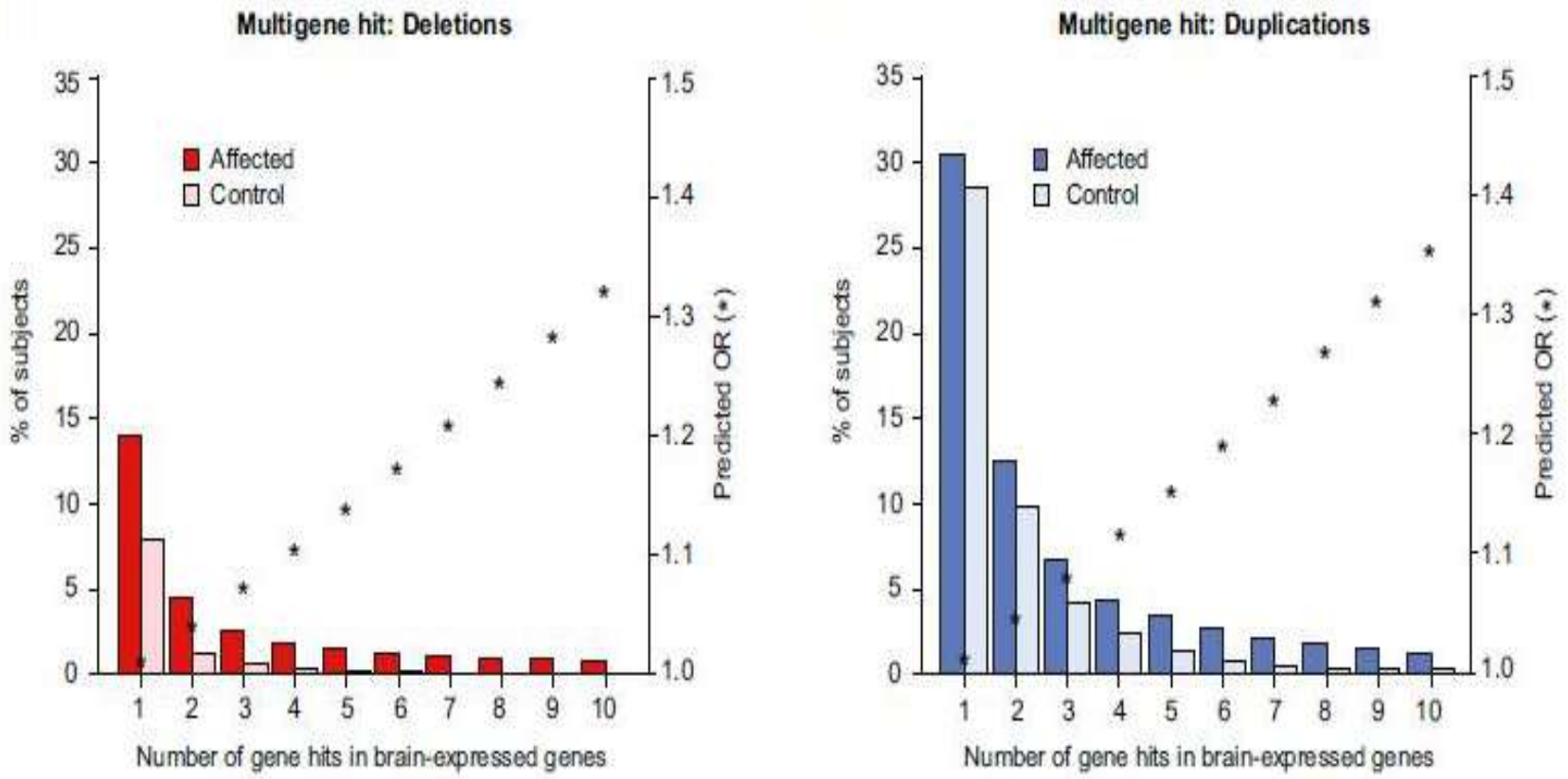
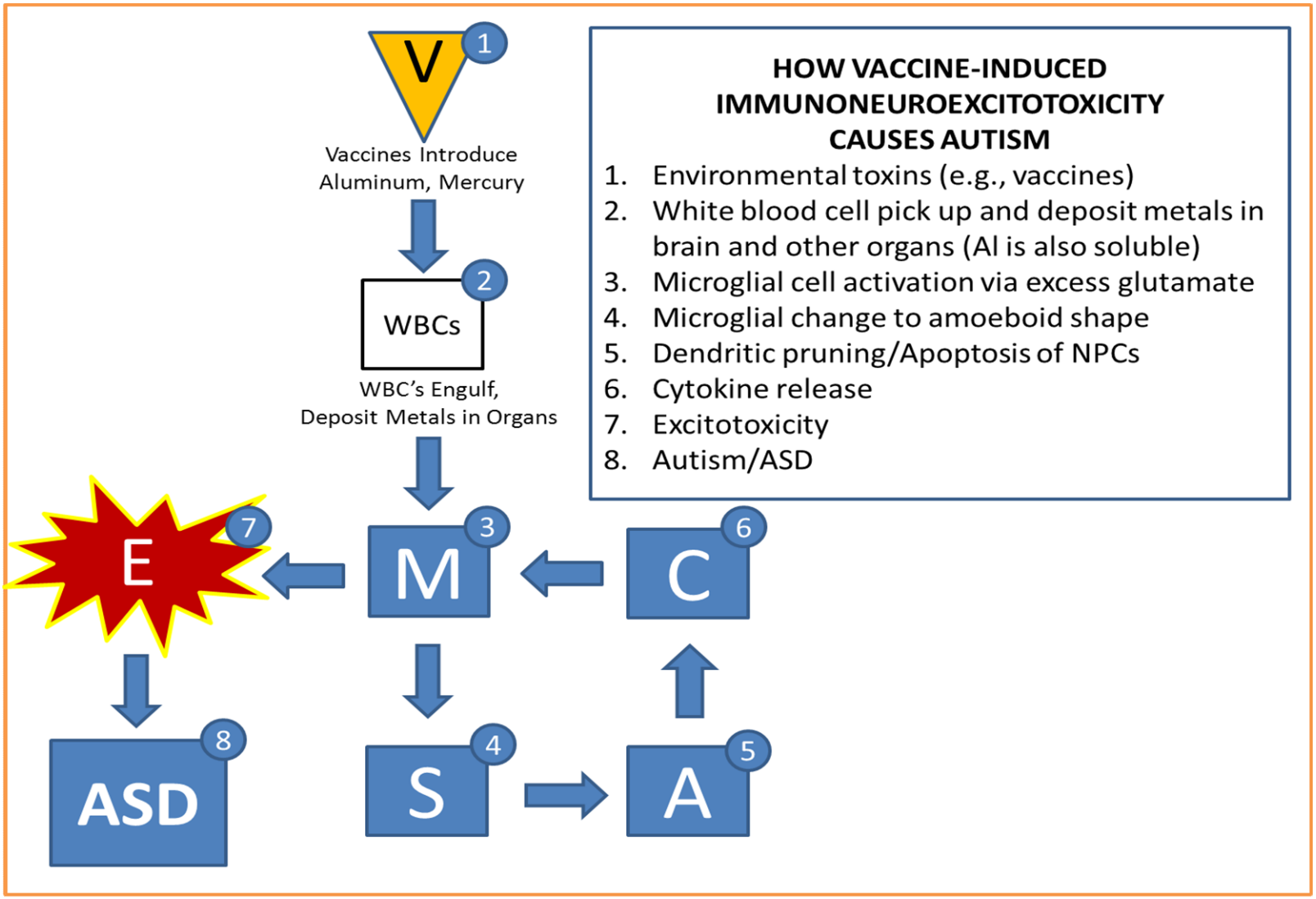
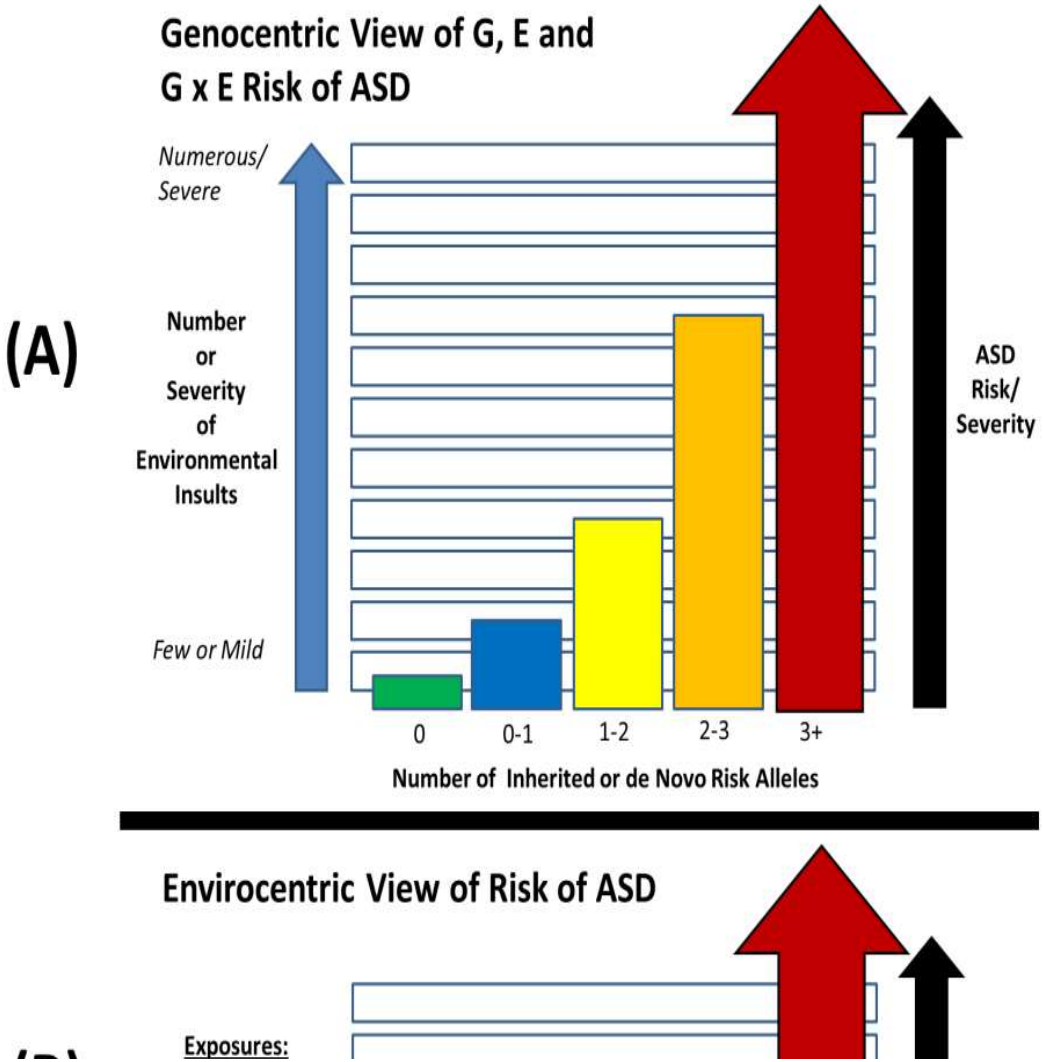
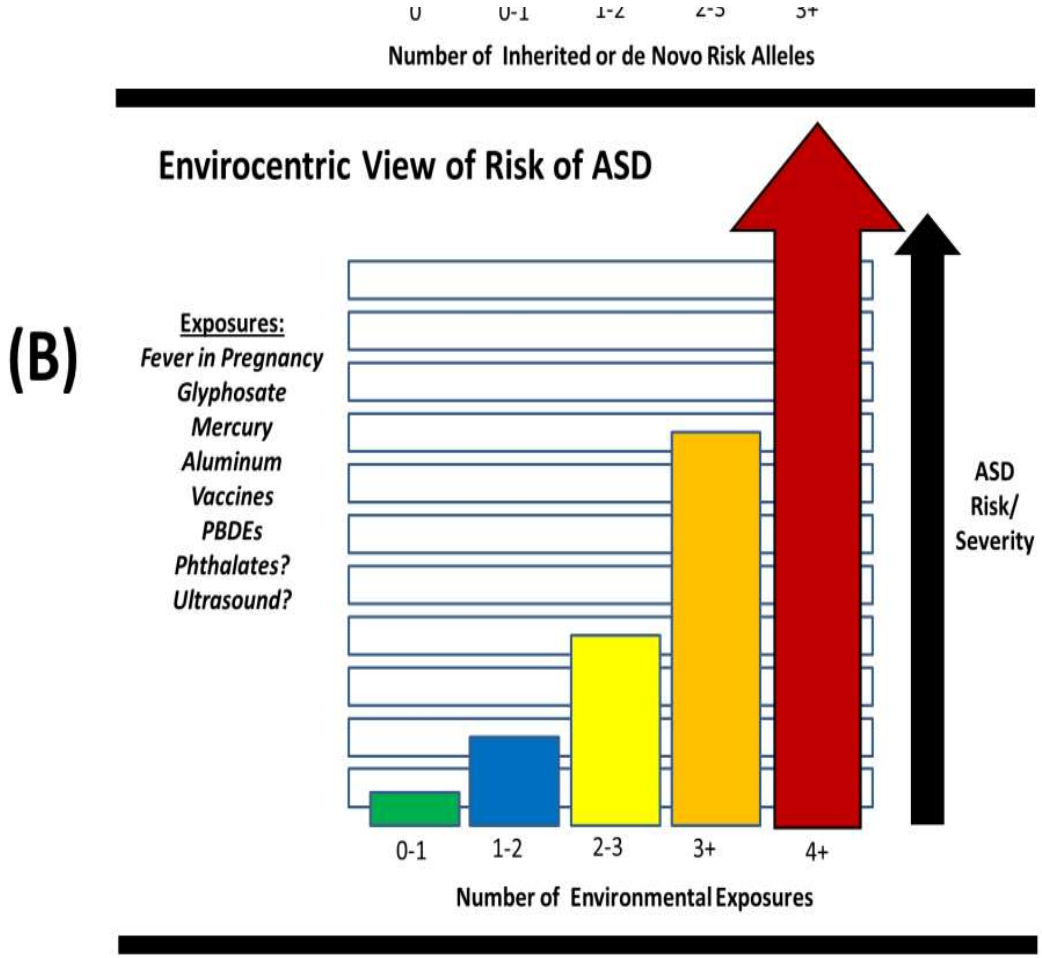
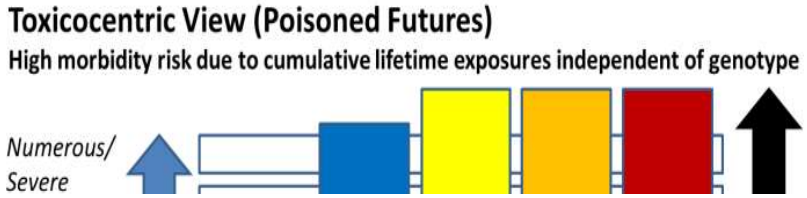


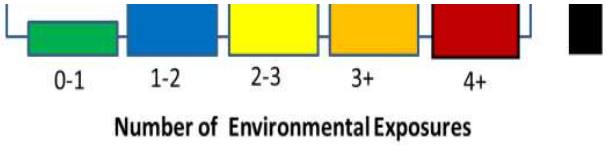
Figure 4 Over-representation of copy-number-variation (CNV) 'hits' in ASD affected vs. neurotypical controls is related to the risk of ASD diagnosis (predicted OR) for both CNV deletions and duplications. Data from Pinto et al. (2014).


V
1
Vaccines Introduce
Aluminum, Mercury
WBCs
2
WBC's Engulf,
Deposit Metals in Organs
E
7
M
3
C
6
ASD
8
S
4
A
5
HOW VACCINE-INDUCED
IMMUNONEUROEXCITOTOXICITY
CAUSES AUTISM
1. Environmental toxins (e.g., vaccines)
2. White blood cell pick up and deposit metals in brain and other organs (Al is also soluble)
3. Microglial cell activation via excess glutamate
4. Microglial change to amoeboid shape
5. Dendritic pruning/Apoptosis of NPCs
6. Cytokine release
7. Excitotoxicity
8. Autism/ASD

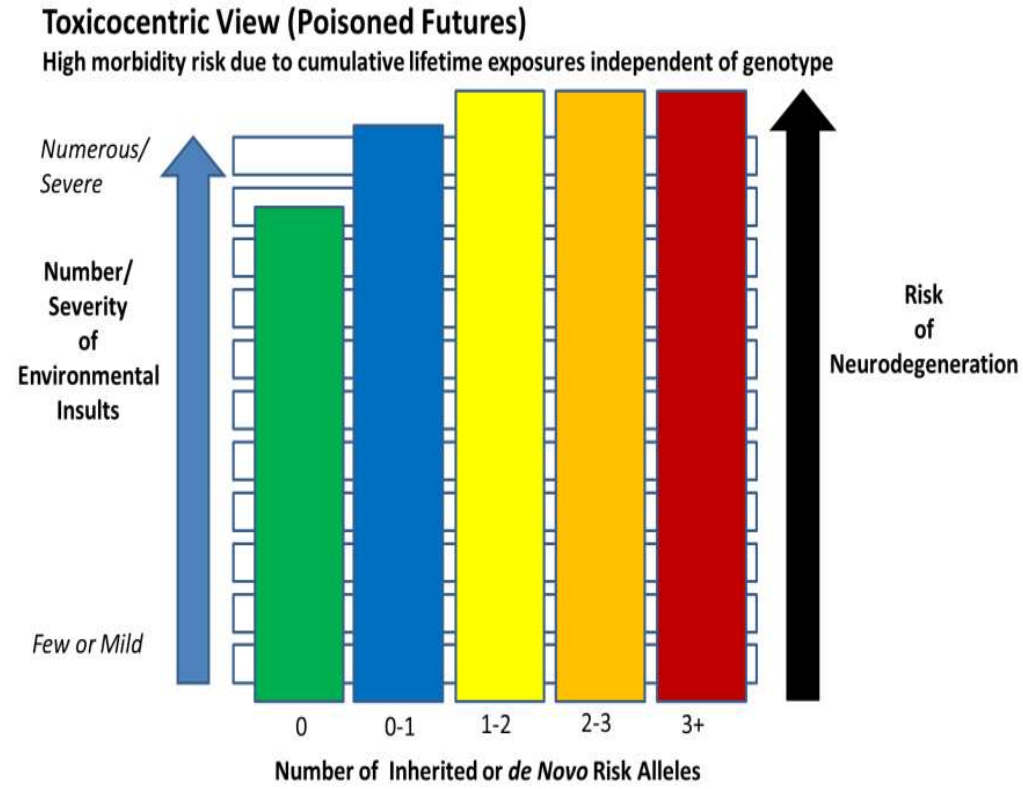

(A)
Genocentric View of G, E and
G x E Risk of ASD
Numerous/
Severe
Number
or
Severity
of
Environmental
Insults
Few or Mild
ASD
Risk/
Severity
0
0-1
1-2
2-3
3+
Number of Inherited or de Novo Risk Alleles
Envirocentric View of Risk of ASD
Exposures:


0
0-1
1-2
2-3
3+
Number of Inherited or de Novo Risk Alleles
(B)
Envirocentric View of Risk of ASD
Exposures:
Fever in Pregnancy
Glyphosate
Mercury
Aluminum
Vaccines
PBDEs
Phthalates?
Ultrasound?
ASD
Risk/
Severity
0-1
1-2
2-3
3+
4+
Number of Environmental Exposures


Toxicocentric View (Poisoned Futures)
High morbidity risk due to cumulative lifetime exposures independent of genotype
Numerous/
Severe


0-1
1-2
2-3
3+
4+
Number of Environmental Exposures

(C)


Toxicocentric View (Poisoned Futures)
High morbidity risk due to cumulative lifetime exposures independent of genotype
Numerous/
Severe
Number/
Severity
of
Environmental
Insults
Few or Mild
Risk
of
Neurodegeneration
0
0-1
1-2
2-3
3+
Number of Inherited or de Novo Risk Alleles

Genetics (G), Environment (E) and G x E

- Around 800 genes 'associated' with autism
  - True Autism Risk Genes
  - **Environmental Susceptibility Genes** (G x E)
  - Autism Phenotype Modifier Genes

- **No Individual Gene** Accounts for more than 1% of Autism Liability
- **"Genetics"** Accounts for No More than 50% Liability

- **"Environment"** Accounts for at least 50% Liability
  - Risk of neurodegenerative effect due to exposure is cumulative w/lifetime dose
  - Why "at least"? Direct exposures + exposures + genetics (G x E Interaction)

TABLE S-1 Continued

Adverse Event	MMR Vaccine Chapter 4	Varicella Vaccine Chapter 5	Influenza Vaccine Chapter 6	Hepatitis A Vaccine Chapter 7	Hepatitis B Vaccine Chapter 8	HPV Vaccine Chapter 9	DT-, TT-, and aP-Containing Vaccines Chapter 10	Meningococcal Vaccine Chapter 11	Injection-Related Events Chapter 12
Febrile Seizures	CS								
Afebrile Seizures	I								
Seizures		I	I[c]		I		I		
Meningitis	I[c]								
Cerebellar Ataxia		I							
Ataxia	I						I		
Autism	FR						I		
Acute Disseminated Encephalomyelitis	**I**	**I**	**I**	**I**	**I**	**I**	**I**	**I**	
Transverse Myelitis	I	I	I	I	I	I	I	I	
Optic Neuritis	I[c]		I[c]		I[c]		I[c]		
Neuromyelitis Optica	I[c]		I		I	I			
Multiple Sclerosis Onset in Adults	I		I		I		I		
Multiple Sclerosis Onset in Children	I				I				
Multiple Sclerosis Relapse in Adults			I		I		I		

Vaccine	Birth	1 mo	2 mos	4 mos	6 mos	9 mos	12 mos	15 mos	18 mos	19–23 mos	2-3 yrs	4-6 yrs	7-10 yrs	11-12 yrs	13–15 yrs	16–18 yrs
Hepatitis B[1] (HepB)	2 STUDIES SHOW ASSOCIATION															
Rotavirus[2] (RV) RV1 (2-dose series); RV5 (3-dose series)			0 STUDIES EXIST													
Diphtheria, tetanus, & acellular pertussis[3] (DTaP: <7 yrs)			6 STUDIES SHOW ASSOCIATION													
Haemophilus influenzae type b[4] (Hib)			2 STUDIES SHOW ASSOCIATION													
Pneumococcal conjugate[5] (PCV13)			0 STUDIES EXIST													
Inactivated poliovirus[6] (IPV: <18 yrs)			0 STUDIES EXIST													
Influenza[7] (IIV; LAIV)					0 STUDIES EXIST											
Measles, mumps, rubella[8] (MMR)					2 POSITIVE AND MANY NEGATIVE "STUDIES" EXIST RE: Thomspon											
Varicella[9] (VAR)							1 STUDY SHOWS ASSOCIATION									
Hepatitis A[10] (HepA)							1 STUDY SHOWS ASSOCIATION									
Meningococcal[11] (Hib-MenCY ≥ 6 weeks; MenACWY-D ≥9 mos; MenACWY-CRM ≥ 2 mos)			0 STUDIES – GBS, PARALYSIS (NUMEROUS)													
Tetanus, diphtheria, & acellular pertussis[12] (Tdap: ≥7 yrs)													N/A			
Human papillomavirus[13] (2vHPV: females only; 4vHPV, 9vHPV: males and females)														N/A		
Meningococcal B[11]														N/A		
Pneumococcal polysaccharide[5] (PPSV23)											0 STUDIES					

"VACCINES DO NOT CAUSE AUTISM" - CDC

Emma Bursick
SUDEP
Sudden Unexpected Death in Epilepsy

My family and I have been following every word of your posts about vaccines but today's information on the government's 1991 study has pushed me personally over the edge. Our precious Emma was a healthy normally developing infant until the age of 6 months -- within 24 hours of receiving her 6 month DPT immunization, she suddenly began having 10-15 seizures a day. After 7 years of uncontrolled seizures and resulting developmental and cognitive delays, she died in her sleep of Sudden Unexpected Death in Epilepsy (SUDEP). Government corruption has a face and that face for me is Emma. There are no words to express the rage I'm feeling right now.

I pray that your relentless campaign of public awareness may spare even one family from the agony we live with.

Jan Boyd

Emma's mom

DONATE NOW

My life is my message ~ Gandhi

Emma Bursick
MEMORIAL FUND

Leveling the playing field for the fight against Epilepsy and SUDEP.

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neo-wakes-up.jpg

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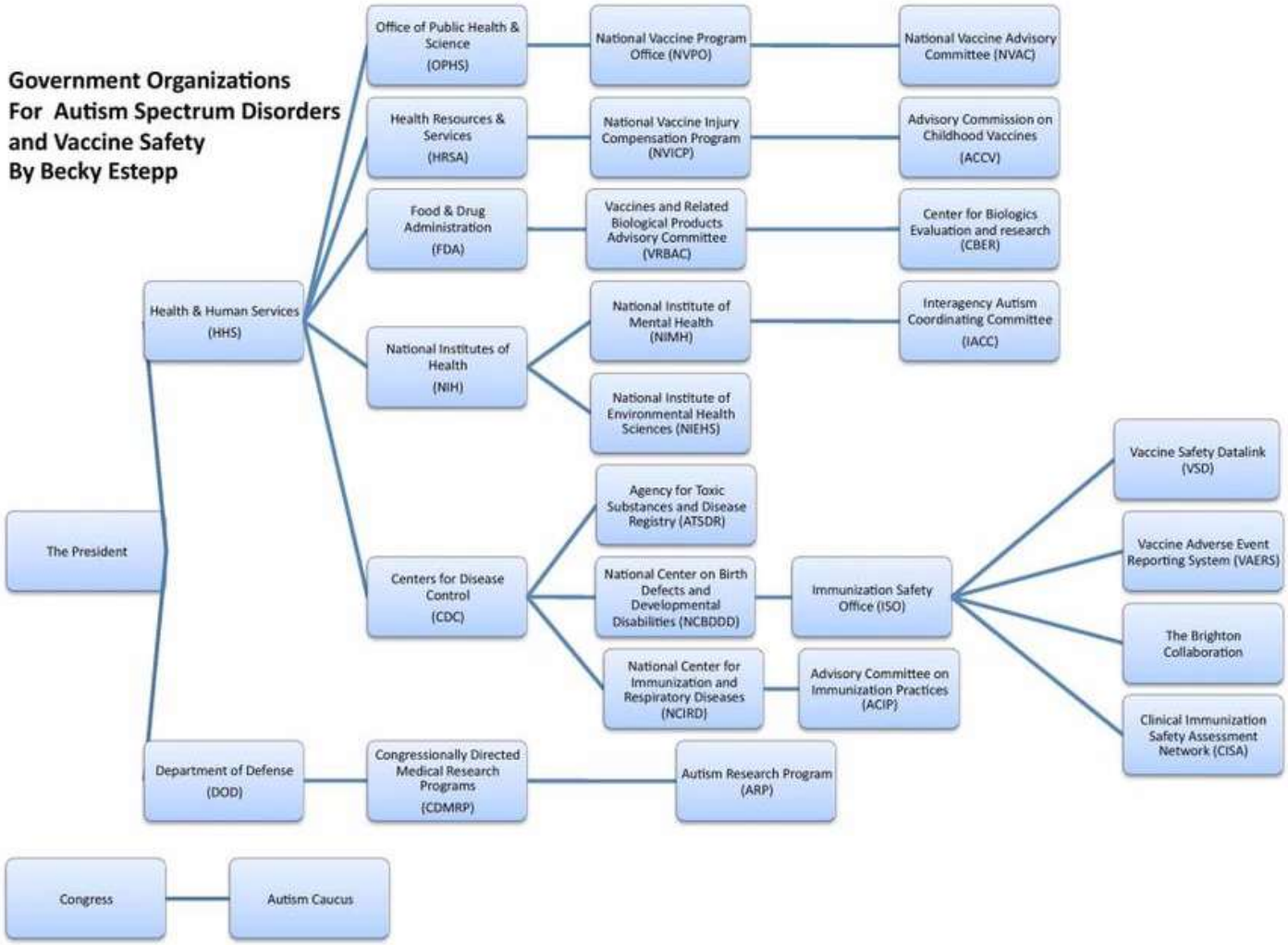
Ask me anything

8:59 AM
4/18/2016

Government Organizations For Autism Spectrum Disorders and Vaccine Safety By Becky Estepp



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“SCIENTIFIC EVIDENCE EXISTS THAT INDICATES THAT VACCINES MAY CAUSE AUTISM IN SOME PEOPLE”