

# Overview of Autism Spectrum disorders



Janet Lintala, DC  
Autism Health! PLLC  
2401 South Kanawha Street  
Suite 106  
Beckley, WV 25801  
304-255-2550

# Disclosures

## Nonfinancial relationships:

- Autism Health, Pllc.
- The Un-Prescription;  
President of the Board
- Secretary, WV State  
Rehabilitation Council
- Advisory Panel to the BSA  
National Disabilities  
Awareness Committee

## Financial relationships:

- NCMIC Speakers Bureau
- Author, *The Un-Prescription for Autism*,  
April 2016
- Speaker: Intersect4Kids
- Adjunct Faculty: National University of  
Health Sciences

50,000 newly diagnosed with ASD each year in the US



# What's in Your Toolbox?



My beautiful child was....

Born one month after graduation (Doctor of Chiropractic)

My beautiful child was....



Sunny

My beautiful child was....



Sunny



Irritable & whiney

My beautiful child was....



Sunny



Irritable & whiney



Aggressive & angry

- Almost no sleep whatsoever for 5 years
- Precocious language and reading
- Irritable and aggressive by 6 years of age
- Often angry and screaming
- Years of diarrhea and foul gas



- Diagnosed with Asperger syndrome at age 7 years – We were told there is no treatment and to just “put him into the school system”



- Two other sons came along, mix of Autism Spectrum issues, OCD tendencies, Tourette's, ADHD and panic/anxiety issues

Autism Parents are  
told many things by  
doctors...



- ADHD
- ADD
- ODD
- OCD
- GERD
- ASD
- PDD-NOS

Autism Parents are told many things by doctors...



- Sensory Processing Disorder
- Anxiety
- Depression
- Schizophrenia
- Bipolar Disorder
- Intermittent Explosive Disorder
- Even “Middle Child Syndrome”!

And here is what friends, relatives and strangers at the mall say to us....

- He'll talk when he's ready
- He'll eat when he's hungry
- He just needs a good slap
- My child has tantrums, too
- I would never let my child act like that
- Stop using autism as an excuse
- He doesn't look autistic
- He looks so normal, are you sure it's autism?



And here is what friends, relatives and strangers at the mall say to us....

- He's spoiled
- He's obnoxious
- "He's a jerk"
- You're bad parents
- You should medicate him
- You just need to show him who's boss
- You need to discipline him more
- Why don't you just spank him harder?



Telling an autism mother  
how to raise her child...

Not your best idea!



# Finding Help...

- Expensive, out-of-state “biomedical” doctors
- Autism Conferences (Parent track)
- Networking with other autism parents
- Internet

**I was unable to practice for 14 years**

## My “PLAN B” Career

I began to train as an Autism Clinician to help my child:

- MAPS – Medical Academy of Pediatric Special Needs
- Defeat Autism Now! (DAN!) Clinician Training
- US Autism and Asperger Association Conference
- Hyperbaric Oxygen Training Courses
- Two Mentorships at the RIMLAND Center
- Hope for Autism Clinician Training
- Neurofeedback Training

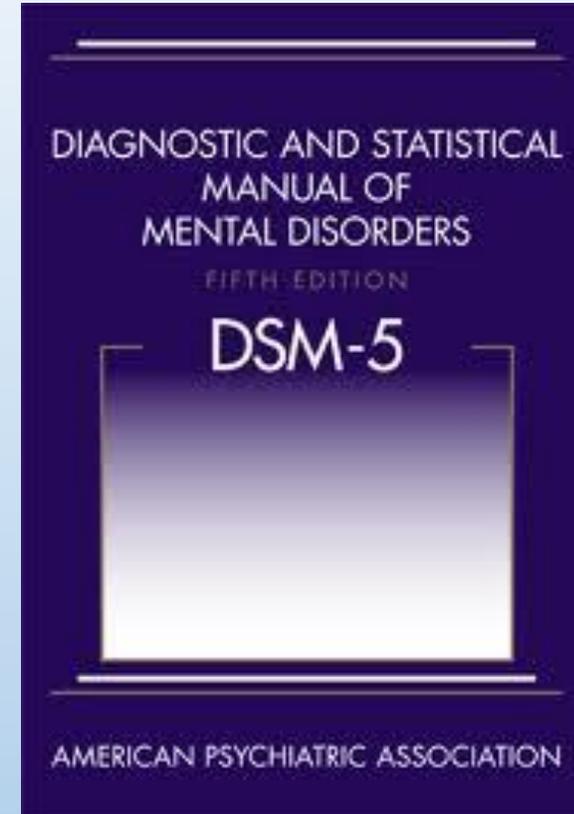
# Overview of Autism:

- Signs of Autism
- DSM-V Diagnostic Criteria
- Screening tools
- Diagnostic Tools
- Related conditions
- Autism Rates
- Cause and Model
- Traditional Therapies and Treatments
- Traditional pharmaceuticals
- Prognosis for adulthood
- People-first language vs. Identity-first Language
- Politically incorrect language

# Diagnostic Criteria for ASD

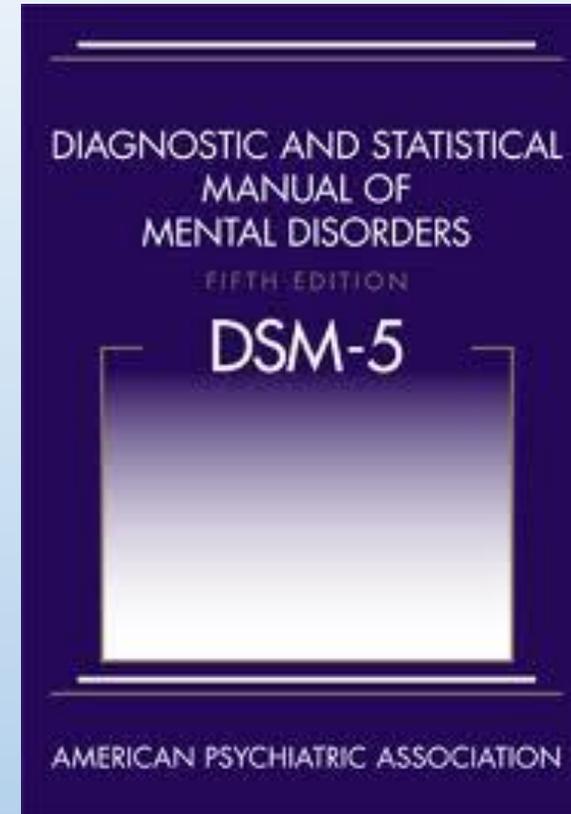
## **A. Persistent deficits in social communication and social interaction**

1. Deficits in social-emotional reciprocity
2. Deficits in nonverbal communicative behaviors used for social interaction
3. Deficits in developing, maintaining, and understanding relationships



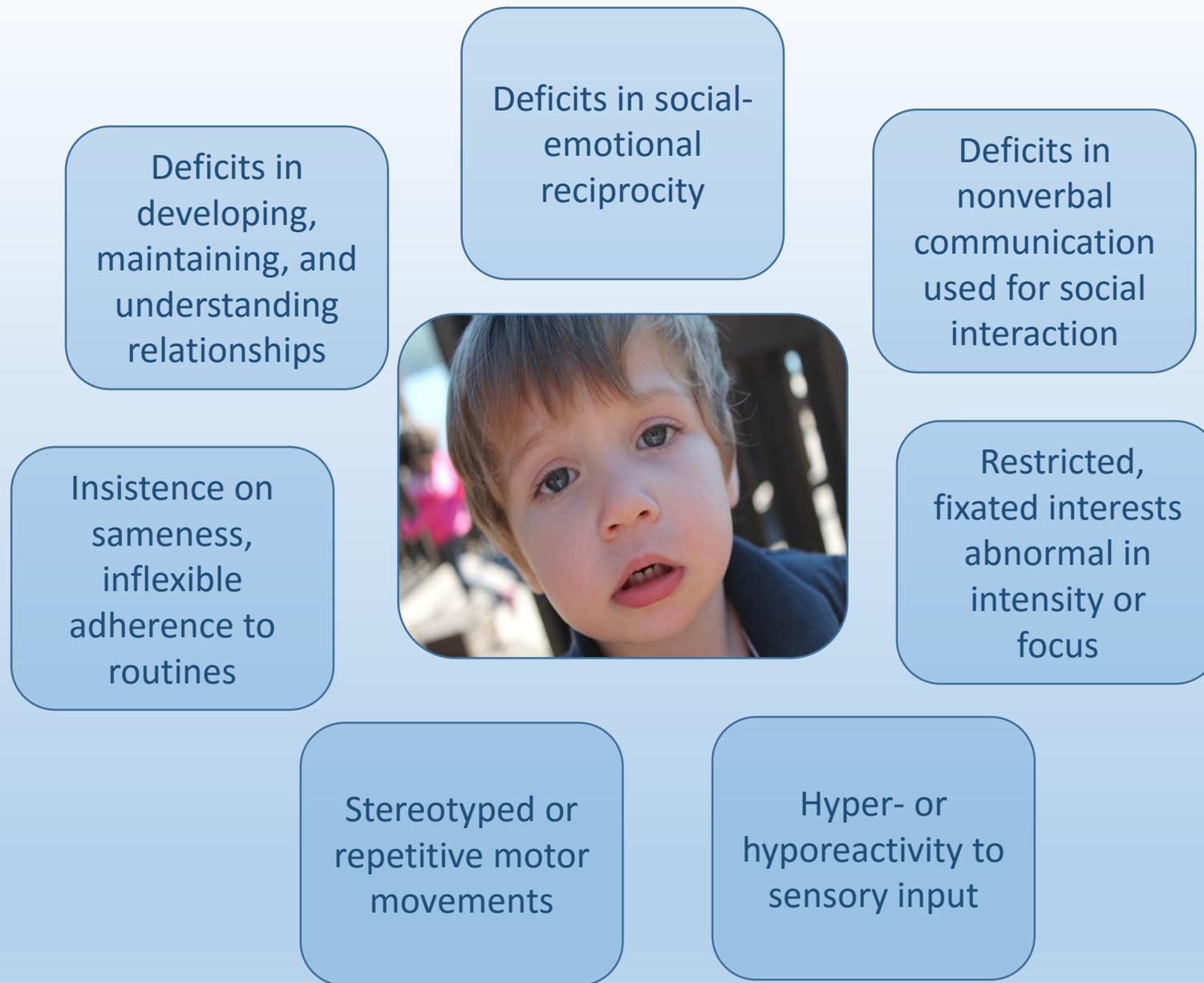
B. Restricted, repetitive patterns of behavior, interests, or activities, as manifested by at least two of the following, currently or by history (examples are illustrative, not exhaustive; see text):

1. Stereotyped or repetitive motor movements
2. Insistence on sameness, inflexible adherence to routines, or ritualized patterns or verbal nonverbal behavior
3. Highly restricted, fixated interests that are abnormal in intensity or focus
4. Hyper- or hyporeactivity to sensory input or unusual interests in sensory aspects of the environment



## The DSM-V is:

- \* What we know
- \* What we see
- \* What we expect



This is what you see...

# Autism - First Biologically Distinct Subtypes Of Brain Development Uncovered



MIND Institute UC Davis 2011

“The discoveries are similar to those of the first biological subtypes of cancer in the 1960s, which provided access to a better understanding of causes and effective treatments, cure and prevention, in addition to huge changes in public health policies...” (Medical News Today)



"One group of children has precocious growth of the brain. The pattern only appears in boys (*but not all boys – JL*) with autism and is mainly observed in children whose parents say they regressed into autism." Medical News Today



“Many other children with autism, including all girls evaluated, appear to have a normal trajectory of brain growth, though their autism appears in the first 12 months. The biological cause of autism in these children is likely to be quite different from those with abnormal brain growth.” Medical News Today

# Some evidence supports an Immune subtype of Autism

[Brain Res.](#) 2014 Nov 13. pii: S0006-8993(14)01297-9. doi: 10.1016/j.brainres.2014.09.048. [Epub ahead of print] Toward an immune-mediated subtype of autism spectrum disorder.

[McDougle CJ](#), [Landino SM](#), [Vahabzadeh A](#), [O'Rourke J](#), [Zurcher NR](#), [Finger BC](#), [Palumbo ML](#), [Helt J](#), [Mullett JE](#), [Hooker JM](#), [Carlezon WA Jr.](#)

# Some evidence supports an Inflammatory subtype of Autism

[J Neuroinflammation](#). 2014 Oct 27;11(1):187. [Epub ahead of print]

**Cytokine profiles by peripheral blood monocytes are associated with changes in behavioral symptoms following immune insults in a subset of ASD subjects: an inflammatory subtype?**

[Jyonouchi H](#), [Geng L](#), [Davidow AL](#).

# Quotes from the MIND Institute website

One of the major roadblocks to understanding the causes of and finding effective treatments for autism is that it has diverse outcomes.

- Some individuals have seizures, but others do not.
- Some have troubling gastrointestinal problems, but others have none.
- Some have severe developmental delays, but others have normal or even enhanced IQs.
- This heterogeneity raises the possibility that there are several types of autism, with a variety of causes.
- This complexity limits both scientific progress and the development of effective treatments.
- Thus far, research on autism has not produced precise definitions of autism subtypes based on biomedical and behavioral characteristics.

# Signs of Autism Spectrum Disorder

- Not respond to their name by 12 months of age
- Not point at objects to show interest (point at an airplane flying over) by 14 months
- Not play "pretend" games (pretend to "feed" a doll) by 18 months
- Avoid eye contact and want to be alone
- Have trouble understanding other people's feelings or talking about their own feelings
- Have delayed speech and language skills
- Repeat words or phrases over and over (echolalia)
- Give unrelated answers to questions
- Get upset by minor changes
- Have obsessive interests
- Flap their hands, rock their body, or spin in circles
- Have unusual reactions to the way things sound, smell, taste, look, or feel

From CDC Website



# Signs of Autism Spectrum Disorder

Autism Speaks Website

- No big smiles or other warm, joyful expressions by six months or thereafter
- No back-and-forth sharing of sounds, smiles or other facial expressions by nine months
- No babbling by 12 months
- No words by 16 months
- No back-and-forth gestures such as pointing, showing, reaching or waving by 12 months
- No meaningful, two-word phrases (not including imitating or repeating) by 24 months
- Any loss of speech, babbling or social skills at any age



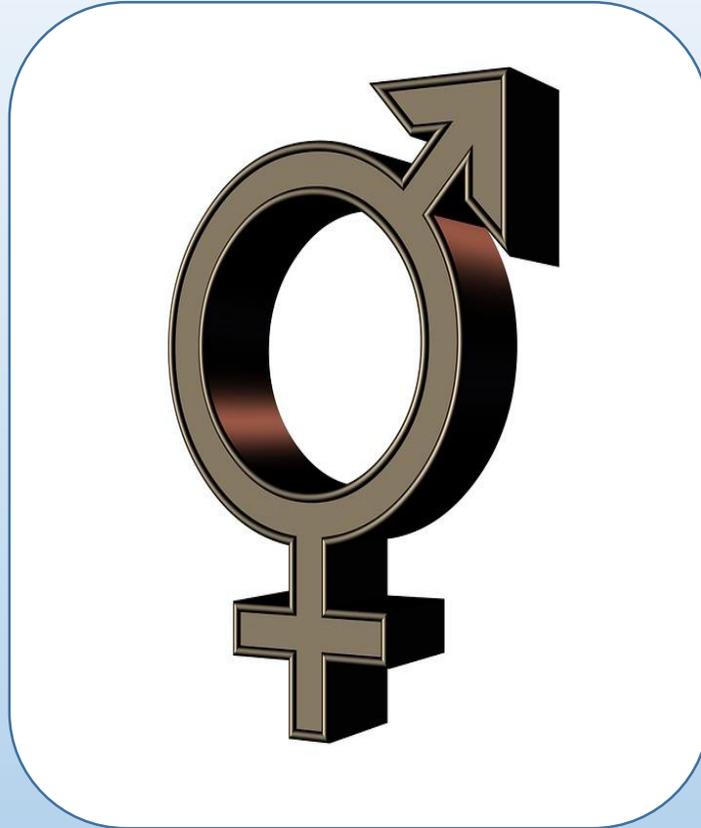
# Screening for ASD

The American Academy of Pediatrics (AAP) recommends screening all children for autism at the 18 and 24-month well-child visits.

Most pediatricians have parents fill out a 23-point questionnaire called the M-CHAT (Modified Checklist for Autism in Toddlers )

A free resource that gives the likelihood of ASD is the E2 form on [autism.com](http://autism.com)

# Do we need gender-based screening for ASD?



Findings suggest autism manifests differently in girls.



“Everything we thought was true of autism  
seems to only be true for boys.”

Kenneth Pelphrey, Researcher

# Are We Missing the Females?

## Females:

- Have more imagination
- Less repetitive behavior
- Friendship quality and empathy are more on the level of typically developing boys of same age
- Their “restricted interests” blend in better - nature and animals
- Are diagnosed later
- Fall into ADD, OCD, eating disorder categories



# Are We Missing the Females?

## Females:

- Girls and boys with autism play differently.
- Even though diagnostic guidelines may specify a disinterest in socializing, autistic girls show a much greater desire to connect.
- They observe and imitate
- The brain of an autistic girl may be more like the brain of a typical boy than that of an autistic boy



# Cultural Considerations



“Of note are cultural considerations in the evaluation of a child with possible autism. Cultural and familial differences exist in expectations regarding eye contact, play, social interaction, and pragmatic use of language.” Medscape

## In addition to screening for ASD

“Assessment of motor and self-care skills in children with autism is recommended to address clumsiness and sensory issues.” Medscape



## In addition to screening for ASD

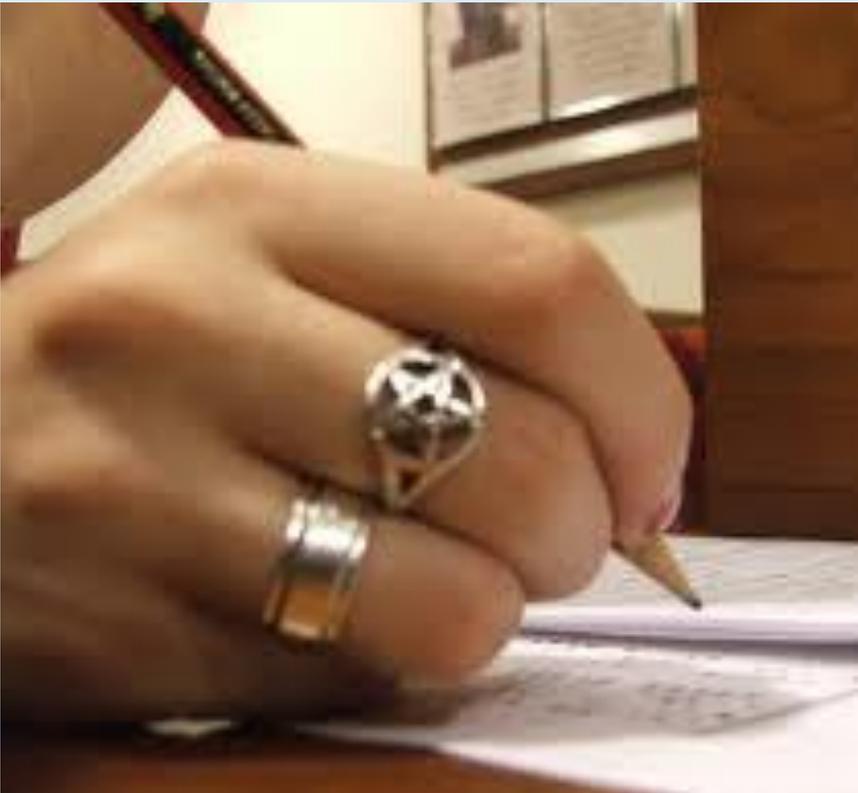
“Assessment of motor and self-care skills in children with autism is recommended to address **clumsiness and sensory issues.**”

Medscape



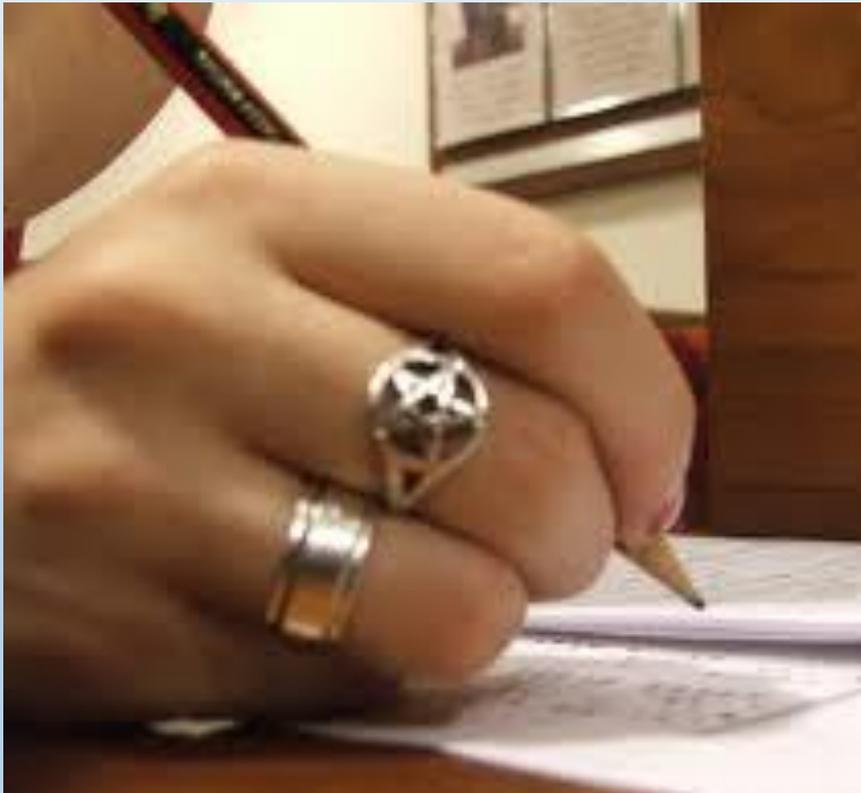
**“clumsiness and sensory issues”**  
Would you like to be one of the few professionals to know why they may be clumsy? (We will address this further under Developmental Optometry)

The solution for an  
“Official” Diagnosis:



“Comprehensive Psychological  
Evaluation” with a Psychologist

# The DSM organizes each psychiatric diagnosis into five dimensions or axes:



**Axis I:** All psychological diagnostic categories except mental retardation and personality disorder

**Axis II:** Personality disorders and mental retardation

**Axis III:** General medical condition; acute medical conditions and physical disorders

**Axis IV:** Psychosocial and environmental factors contributing to the disorder

**Axis V:** Global Assessment of Functioning or Children's Global Assessment Scale for children and teens under the age of 18

# Is Autism Treatable or Curable?

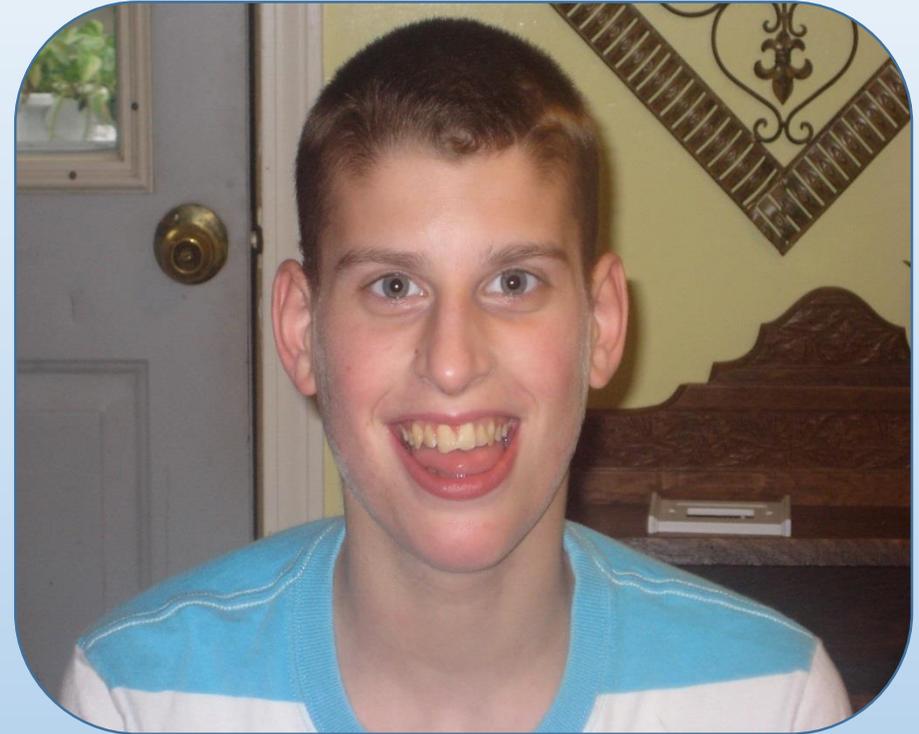
Autism itself is not treatable or curable, but it is possible to support vibrant health for children and adults *with* autism.

I tell patients to stay away from any professional who claims they can cure ASD.



# Differential Diagnoses

- Minamata disease (mercury poisoning)
- Moebius syndrome
- Angelman syndrome
- Nonketotic hyperglycinemia (NKH)
- Epilepsy
- Infantile spasms
- Habit disorder
- Tourette disorder
- Infantile hydrocephalus
- Language disorder - Mixed, phonologic, receptive, or stuttering



# Differential Diagnoses

- Anxiety Disorder: OCD
- **Child Abuse & Neglect**
- Cornelia De Lange Syndrome
- Cri-du-chat Syndrome
- Fragile X Syndrome
- Toxicity, Lead - Children with **lead poisoning** may demonstrate neurobehavioral changes.



# Age of onset

- “Autistic disorder manifests in early childhood.”



- “Many parents report normal development in their child until age 2 years before noticing the deficits in social and communicative skills.”

Medscape

# Associated conditions

- GI dysfunction
- Pica
- Immune dysfunction
- Allergies, sensitivities
- Attention
- Sleep Disturbances
- Hyperactivity



- Anxiety
- Seizures
- Mood Disorders
- Tic Disorders
- Intellectual Disability
- Sensory Processing disorder

# Genetic Disorders

“Some children with autism have an identifiable genetic condition that affects brain development. These genetic disorders include Fragile X syndrome, Angelman syndrome, tuberous sclerosis and chromosome 15 duplication syndrome and other single-gene and chromosomal disorders. While further study is needed, single gene disorders appear to affect 15 to 20 percent of those with ASD.” (Autism Speaks)

# Autism Rates



1980's	1 in	10,000
1990's	1 in	2500
1990's	1 in	1000
2000's	1 in	168
2000's	1 in	110
2012	1 in	88
2014	1 in	68
<b>2016</b>	<b>1 in</b>	<b>68</b>

## Autism Rates



“ASDs are almost 5 times more common among boys (1 in 42) than among girls (1 in 189) and they are reported in all racial, ethnic, and socioeconomic groups.”

-The Centers for Disease Control, US

# MYTHBUSTERS

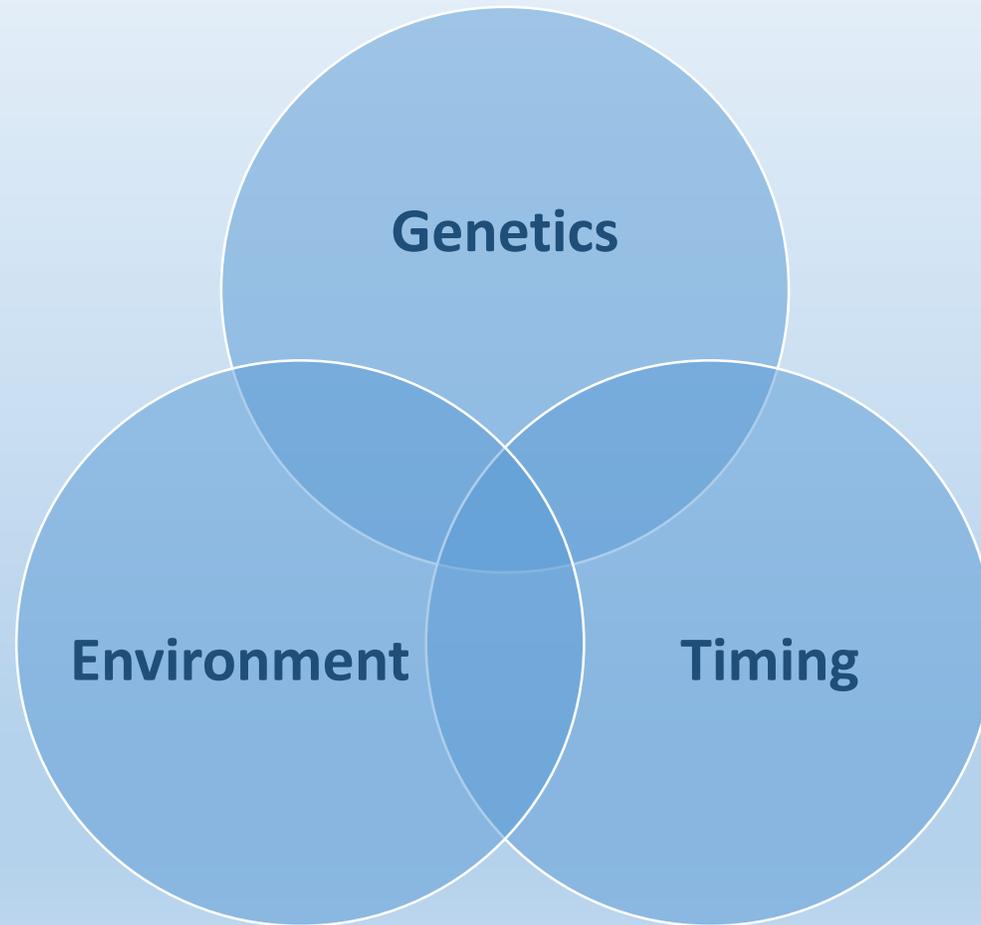
There are 4 or 5 males for every female on the spectrum. Fact?

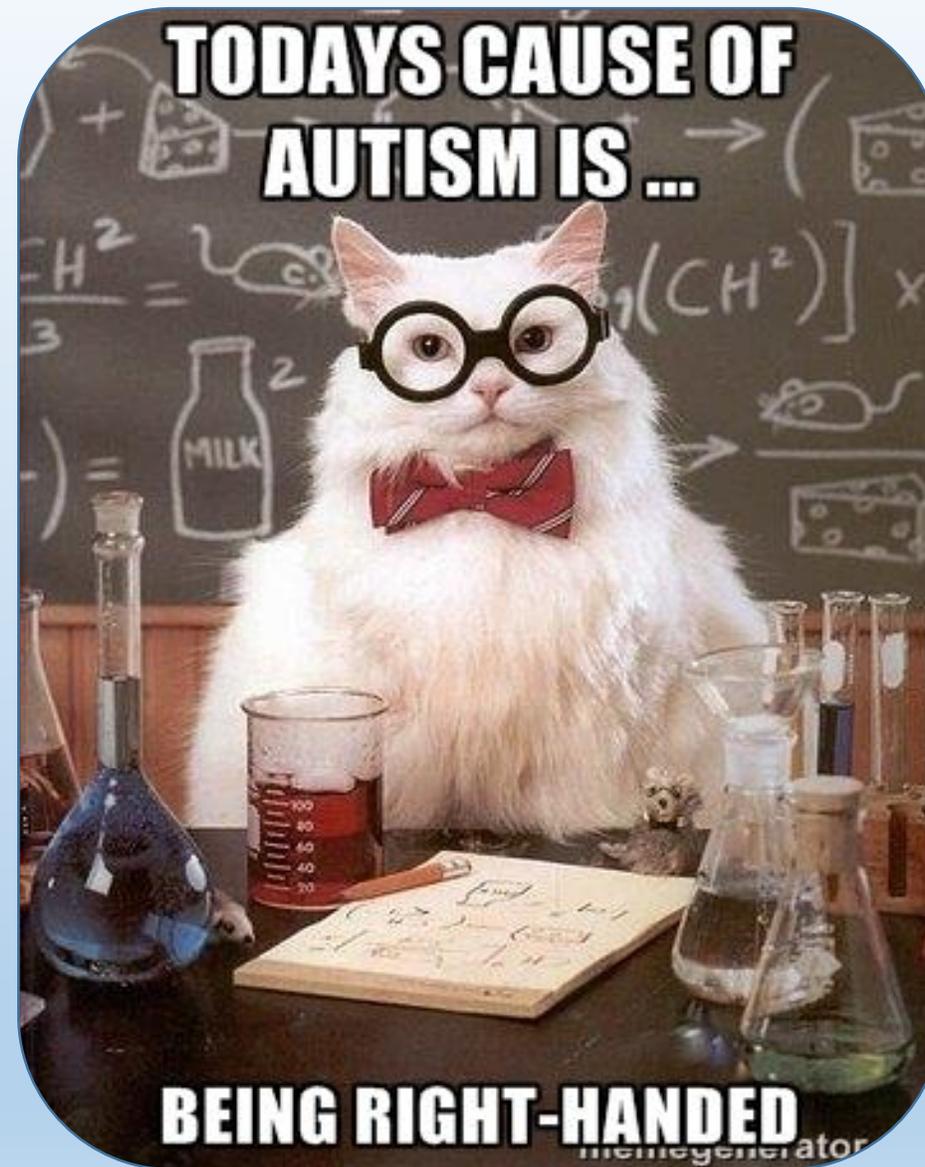
Likely Myth: It's may be more like 2:1

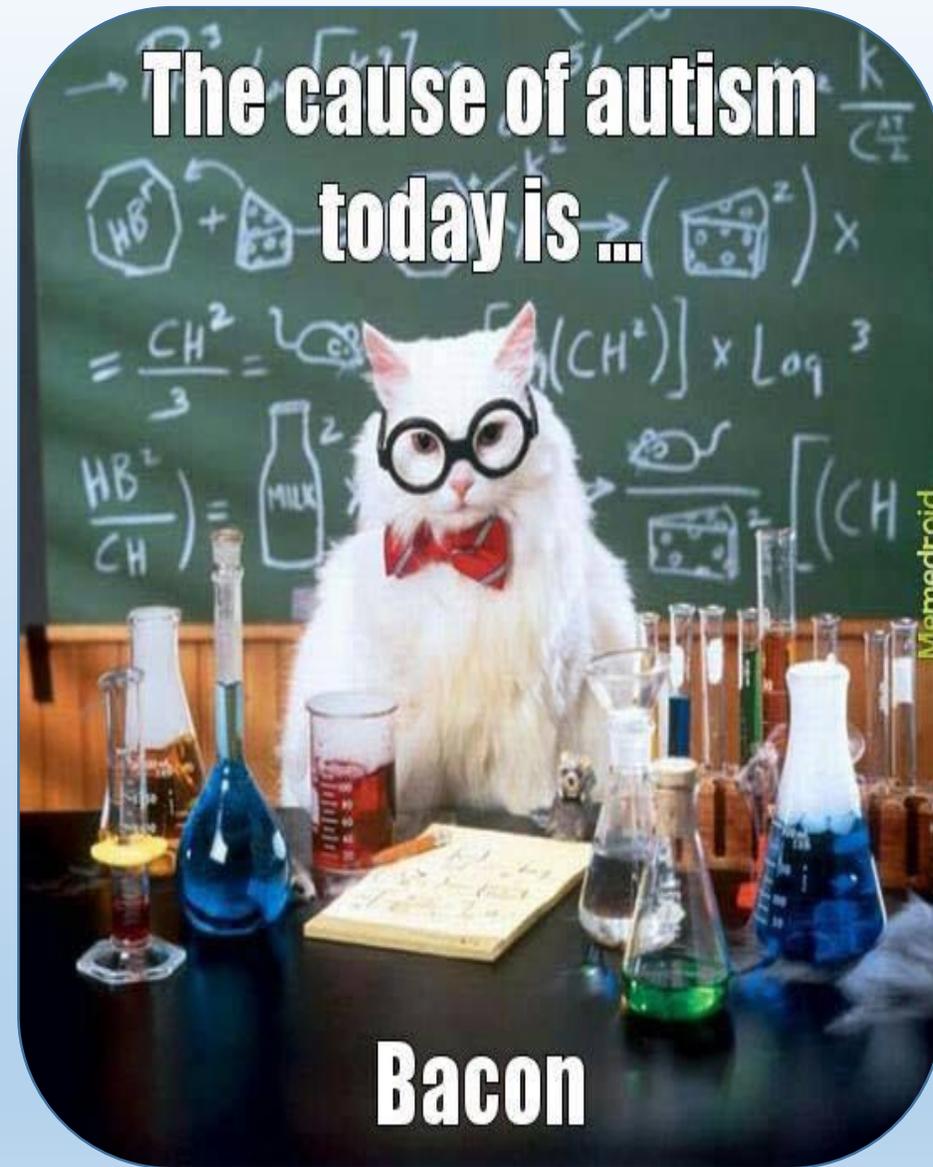
Autism is more severe in girls. Fact?

Likely Myth: We've just been catching the "Peacock Girls" that present more like boys!

# A complex set of interactions leads to autism









Autism Spectrum Disorder must be recognized as a spectrum of diseases, each of which may have a distinct cause and disease process.

Paula Goines, B.S., Paul Ashwood, Ph.D., and Judy Van de Water, Ph.D.



# Neurobehavioural effects of developmental toxicity

Epigenetics,  
hormones

Philippe Grandjean, Philip J Landrigan

*Lancet Neurol* 2014; 13: 330–38

Published Online

February 15, 2014

[http://dx.doi.org/10.1016/](http://dx.doi.org/10.1016/S1474-4422(13)70278-3)

[S1474-4422\(13\)70278-3](http://dx.doi.org/10.1016/S1474-4422(13)70278-3)

Department of Environmental  
Medicine, University of  
Southern Denmark, Odense,  
Denmark (P Grandjean MD);

Department of Environmental  
Health, Harvard School of  
Public Health, Boston, MA, USA  
(P Grandjean); and Icahn School  
of Medicine at Mount Sinai,  
New York, NY, USA

(P J Landrigan MD)

Correspondence to:

Dr Philippe Grandjean,  
Environmental and Occupational

Neurodevelopmental disabilities, including autism, attention-deficit hyperactivity disorder, dyslexia, and other cognitive impairments, affect millions of children worldwide, and some diagnoses seem to be increasing in frequency. Industrial chemicals that injure the developing brain are among the known causes for this rise in prevalence. In 2006, we did a systematic review and identified five industrial chemicals as developmental neurotoxicants: lead, methylmercury, polychlorinated biphenyls, arsenic, and toluene. Since 2006, epidemiological studies have documented six additional developmental neurotoxicants—manganese, fluoride, chlorpyrifos, dichlorodiphenyltrichloroethane, tetrachloroethylene, and the polybrominated diphenyl ethers. We postulate that even more neurotoxicants remain undiscovered. To control the pandemic of developmental neurotoxicity, we propose a global prevention strategy. Untested chemicals should not be presumed to be safe to brain development, and chemicals in existing use and all new chemicals must therefore be tested for developmental neurotoxicity. To coordinate these efforts and to accelerate translation of science into prevention, we propose the urgent formation of a new international clearinghouse.

## Introduction

Disorders of neurobehavioural development affect 10–15% of all births,<sup>1</sup> and prevalence rates of autism spectrum disorder and attention-deficit hyperactivity disorder seem

to the nervous system in adults, mostly in connection with occupational exposures, poisoning incidents, or suicide attempts. Additionally, more than 1000 chemicals have been reported to be neurotoxic in animals in

# Acetaminophen



Altern Med Rev. 2009 Dec;14(4):364-72.

**Did acetaminophen provoke the autism epidemic?**

Good P.

# Traditional Therapies and Treatments

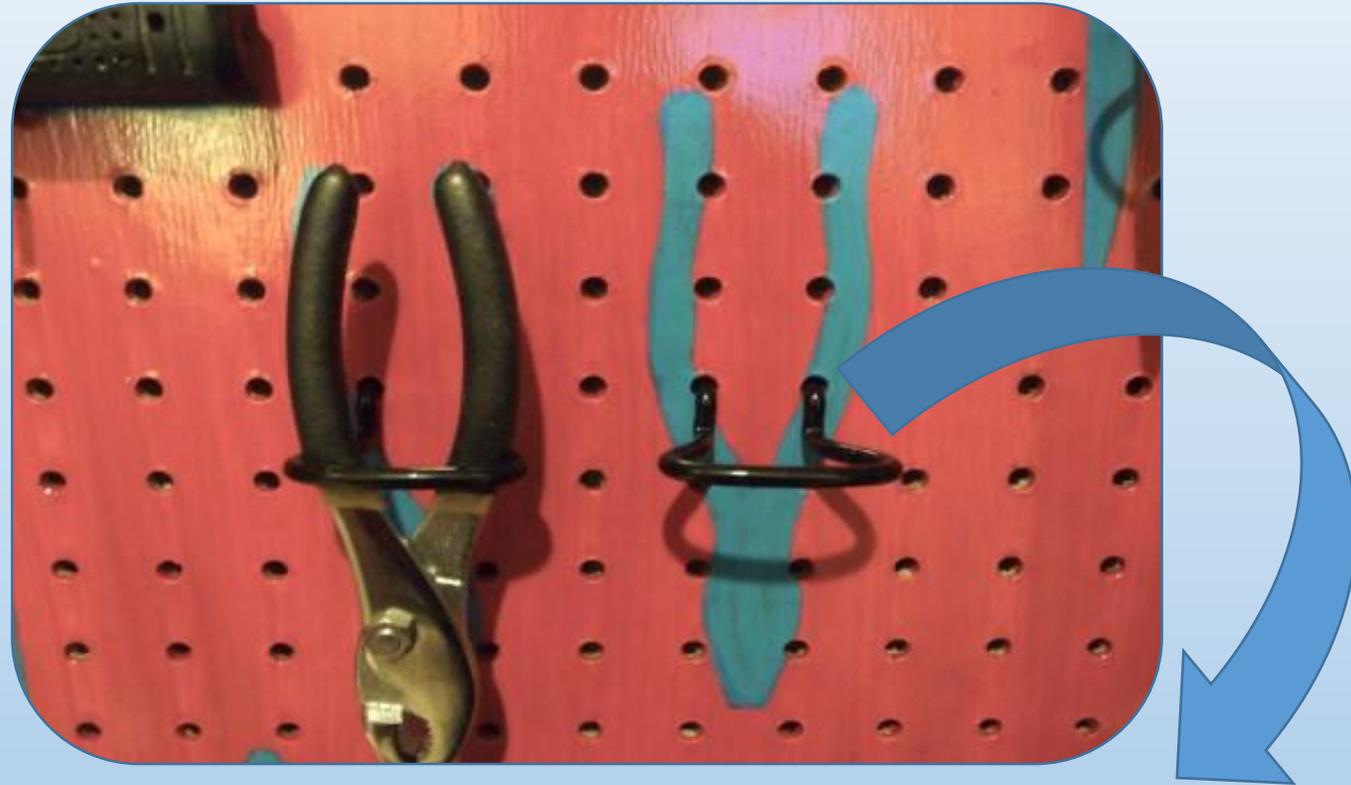
MedScape:

“Individual intensive interventions, including behavioral, educational, and psychological components, are the most effective treatments of autistic disorder.”

# Traditional Therapies and Treatments

- “Medicines for Treating Core Symptoms”
- ABA
- Treatment for Associated Psychiatric Conditions
- Complementary Treatments for Autism
- Applied Behavior Analysis (ABA)
- The Early Start Denver Model (ESDM)
- Pivotal Response Therapy (PRT)
- Verbal Behavior Therapy
- Floortime
- Relationship Development Intervention (RDI)
- Training and Education of Autistic and Related Communication Handicapped Children (TEACCH)
- Social Communication/ Emotional Regulation/ Transactional Support (SCERTS)
- What Treatments Are Available for Speech, Language and Motor Impairments? MedScape

There's usually a tool missing from most lists...



Treatment for Underlying Medical Conditions and Dysfunction

# Traditional Pharmaceuticals



“Although 70% of children with autism spectrum disorder receive medications, only limited evidence exists that the beneficial effects outweigh the adverse effects.” Medscape



## American Academy of Pediatrics:



“Medications have not been proven to correct the core deficits of ASDs and are not the primary treatment.”

## Traditional Pharmaceuticals



- “The second-generation antipsychotic agents Risperidone and aripiprazole (Abilify) provide beneficial effects on challenging and repetitive behaviors in children with autism spectrum disorder, although these patients may experience significant adverse effects.”
- “Risperidone and Abilify have been approved by the FDA for irritability associated with autistic disorder.”
- “The second-generation antipsychotic agent ziprasidone (Geodon) may help to control aggression, irritability, and agitation.” MedScape

Medicalnewstoday.com



- Abilify is also used to treat symptoms of **mood swings, aggression and irritability associated with autistic disorder** in pediatric patients aged six years or more.
- Abilify uses a different mechanism from other drugs that have been approved for the same symptoms. The majority of antipsychotics shut down dopamine receptors. Abilify works by making the receptors work properly. MedScape

# Geodon

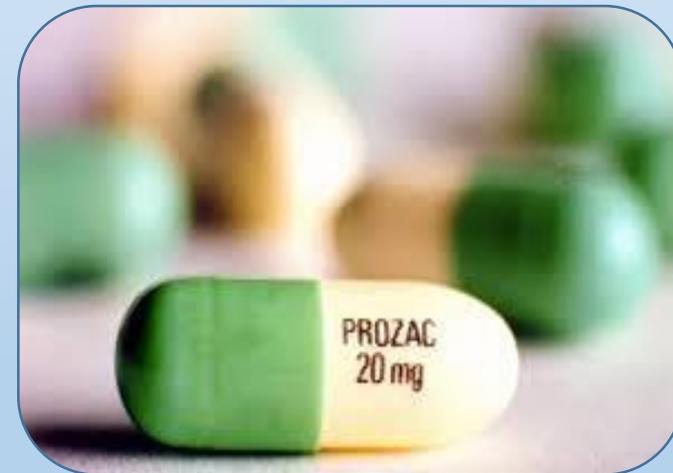


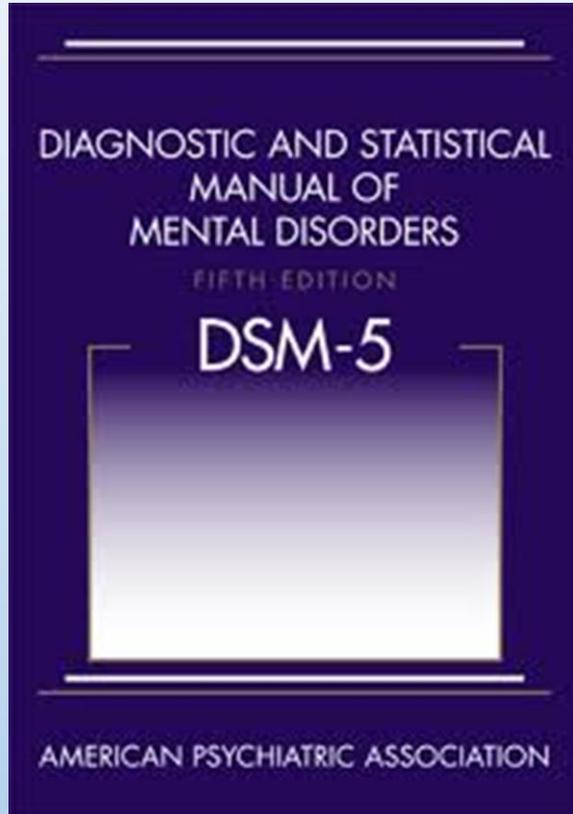
- It is approved by the U.S. Food and Drug Administration (FDA) for the treatment of schizophrenia, and acute mania and mixed states associated with bipolar disorder.
- Ziprasidone is also used **off-label** for depression, bipolar maintenance, mood disorders, anxiety, aggression, dementia, attention deficit hyperactivity disorder, obsessive compulsive disorder, **autism**, and post-traumatic stress disorder. MedScape

# SSRIs

Selective serotonin reuptake inhibitors (SSRIs) are commonly prescribed for children on the autism spectrum.

Serotonergic drugs are reportedly beneficial for improving behavior in autism. MedScape

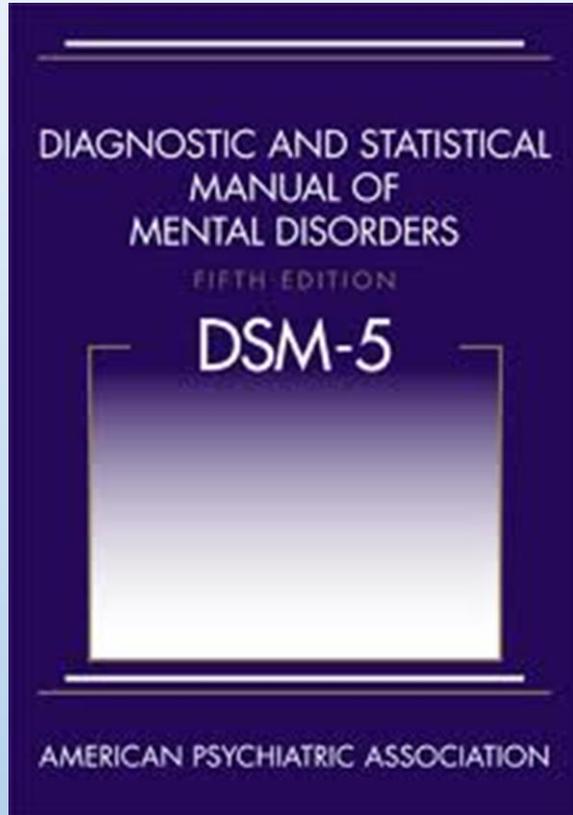




The DSM-5 criteria for ASD do not mention:

- Aggression
- Irritability
- Agitation

They are not core deficits of ASD



## The DSM-5 criteria for ASD

- Depression
- Irritability
- Agitation

*You'll learn where this comes from and how this can be reduced or eliminated naturally*

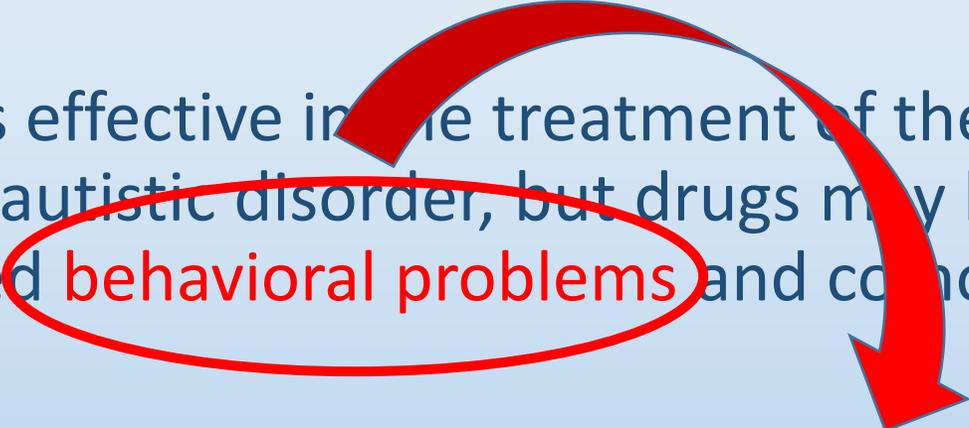
They are not core deficits of ASD

# Traditional Pharmaceuticals

“No pharmacologic agent is effective in the treatment of the core behavioral manifestations of autistic disorder, but drugs may be effective in treating associated behavioral problems and comorbid disorders.” MedScape

# Traditional Pharmaceuticals

“No pharmacologic agent is effective in the treatment of the core behavioral manifestations of autistic disorder, but drugs may be effective in treating associated **behavioral problems** and comorbid disorders.” MedScape



**We will learn the surprise cause of these behavior problems!**

# Adverse Effects and Treatment Efficacy

Children with autistic disorder appear sensitive to medication and may experience serious adverse effects that outweigh any beneficial effects. MedScape

## Prognosis for Adulthood



- No known cure
- Some may improve and “lose the diagnosis”; estimates range from 3-25%
- Most children with autism lack social support, meaningful relationships, future employment opportunities or self-determination

## Prognosis for Adulthood



- Most adults with ASD are very dependent on their families or other support services.
- Few live alone, have close friends, or stable employment

A 2011 study comes to the conclusion that:



“Longitudinal research following individuals with ASD into adulthood generally paints a bleak picture of outcomes, suggesting that 60-75% of people with autism have poor adjustment in adulthood.”

# “Autistic Culture”

“ An autistic culture has developed, with some individuals seeking a cure and others believing autism should be accepted as a difference and not treated as a disorder.” Wikipedia



Now  
Politically Incorrect



- Defeat
- Cure
- Treat
- Recover
- Prevent
- Warrior
- Sufferer
- Tragedy
- Mental Illness
- Disorder
- Affliction
- Puzzle Pieces

## Newer Language

- Neurodiversity
- Neurominority
- Neurodiverse
- Wired Differently

<http://neurocosmopolitanism.com>



# “Person-first” language vs. “Identity-first” language

## Person-first:

- Individual with autism
- Child that has autism
- Adult on the autism spectrum
- He is on the spectrum

**(Used by families, friends, neighbors and employers)**

## Identity-first:

- Autistic individual
- ASD child
- ASD adult
- “I am autistic”

**(Preferred by autistic people themselves)**

# Higher rates of suicidal thoughts



“Compared with the general population, adults with Asperger’s syndrome were nearly 10 times more likely to report suicidal thoughts. They were also significantly more likely to have these thoughts than people with one, two, or more medical illnesses, or people with a psychotic illness.” Healthday News

"Adults with Asperger syndrome often suffer with secondary depression due to social isolation, loneliness, social exclusion, lack of community services, under-achievement and unemployment."  
Simon Baron -Cohen

## Shorter Life Span



A recent study suggests that individuals on the autism spectrum may live 18 fewer years than the general population.

Tatja Hirvikoski, Ellenor Mittendorfer-Rutz, Marcus Boman, Henrik Larsson, Paul Lichtenstein, Sven Bölte

The British Journal of Psychiatry Mar 2016, 208 (3) 232-238; DOI: 10.1192/bjp.bp.114.160192

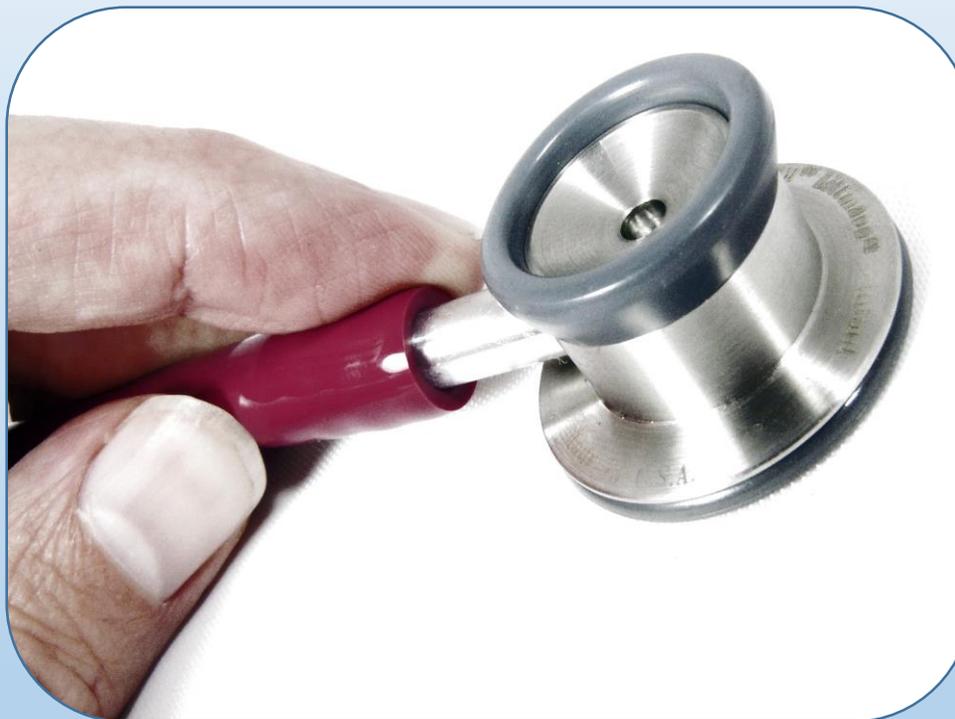
## Higher Mortality Rate



“Persons with autism seem to have a higher mortality rate at younger ages compared to average individuals. This is particularly true for mortality that is related to seizures or infection.” Autism speaks

## Unique Medical Needs

“It is, therefore, important for the autistic population to receive good medical care from health care professionals who have knowledge and experience in addressing their unique medical needs.” Autism speaks





Resource for your Toolbox: <http://tinyurl.com/73dyhkt>  
(Glossary of terms from Autism Speaks)

# Any Questions?

