



# The Spectrum of Autism

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# Disclosure

- I have nothing to disclose
- No commercial products discussed

# A little bit more about myself...

Cuban-American, born & raised in Miami, FL

August 2023 celebrated one year out of training, first year as an attending, one year in Chattanooga!

Excited to work with community providers!



# Objectives:

1. To build on knowledge and understanding of autism spectrum disorder presentation and diagnostic criteria
2. To describe treatment options for autism spectrum disorder
3. Examine the role of medical practitioners in diagnosis and treatment



# HISTORY

1943



## Dr. Leo Kanner

Describes Early Infantile Autism, individuals with significant social challenges, resistance to change, and stereotypical movements



1944



## Dr. Hans Aspergers

Publishes a study on boys with significant social challenges, unusual interests, and good verbal skills



1964



## Bernard Rimland

Research psychologist  
Creates the first checklist for assessing symptoms suggestive of Autism

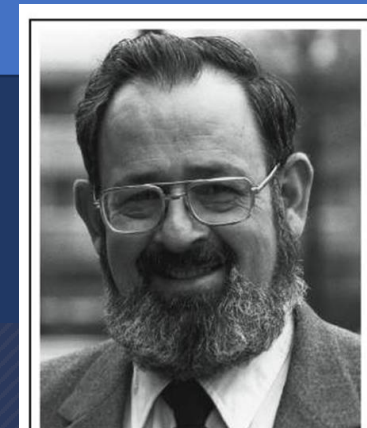


Image from <https://www.bbc.co.uk/>  
Reference: Rosen, N.E., Lord, C. & Volkmar, F.R. The Diagnosis of Autism: From Kanner to DSM-III to DSM-5 and Beyond. *J Autism Dev Disord* 51, 4253–4270 (2021). <https://doi.org/10.1007/s10803-021-04904-1>



INFANTILE AUTISM



ASPERGER SYNDROME



CHECKLIST

Autism Spectrum Disorder,  
how it became a spectrum ...



# The Evolution of the Diagnostic and Statistical Manual of Mental Disorders (DSM)

*1980 – Current*

**1980** The DSM-III: includes **infantile autism** as a diagnosis under the category of pervasive developmental disorders

At the time considered rare, rate of 3 in 10,000

**1987** Revision DSM-III R: Infantile autism → **autistic disorder**  
(useful across age groups)

**1994** DSM-IV: Category of Pervasive developmental disorders:

(1) Autistic Disorder (2) Asperger's disorder, (3) Rett's disorder, (4) childhood disintegrative disorder, and (5) the residual category of pervasive developmental disorder (NOS) (including atypical autism)

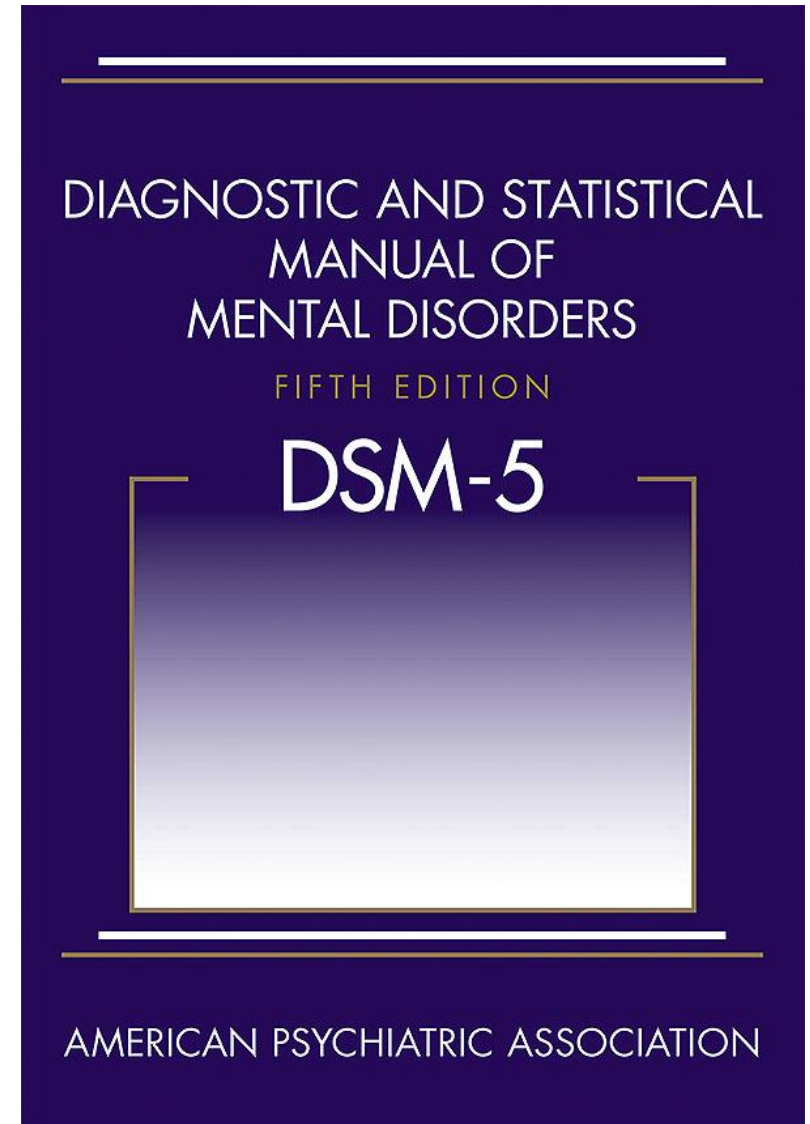


# 2013 DSM-V

- ✓ **Multi-categorical system → Single Diagnosis**
- ✓ **Autistic Disorder + Asperger's Syndrome + PDD-NOS**

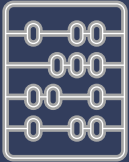
➔ **Autism Spectrum Disorder**

**Why is this important?**





# Why all the changes?



Variability in the number and severity of ASD symptoms



Similar core symptom profiles



Restrictions on treatment eligibility and coverage with subtypes

# Autism Spectrum Disorder

## Social Communication Deficits

Deficits in Social-Emotional Reciprocity

Deficits in nonverbal communicative behaviors used for social interaction

Deficits in developing, maintaining and understanding relationships

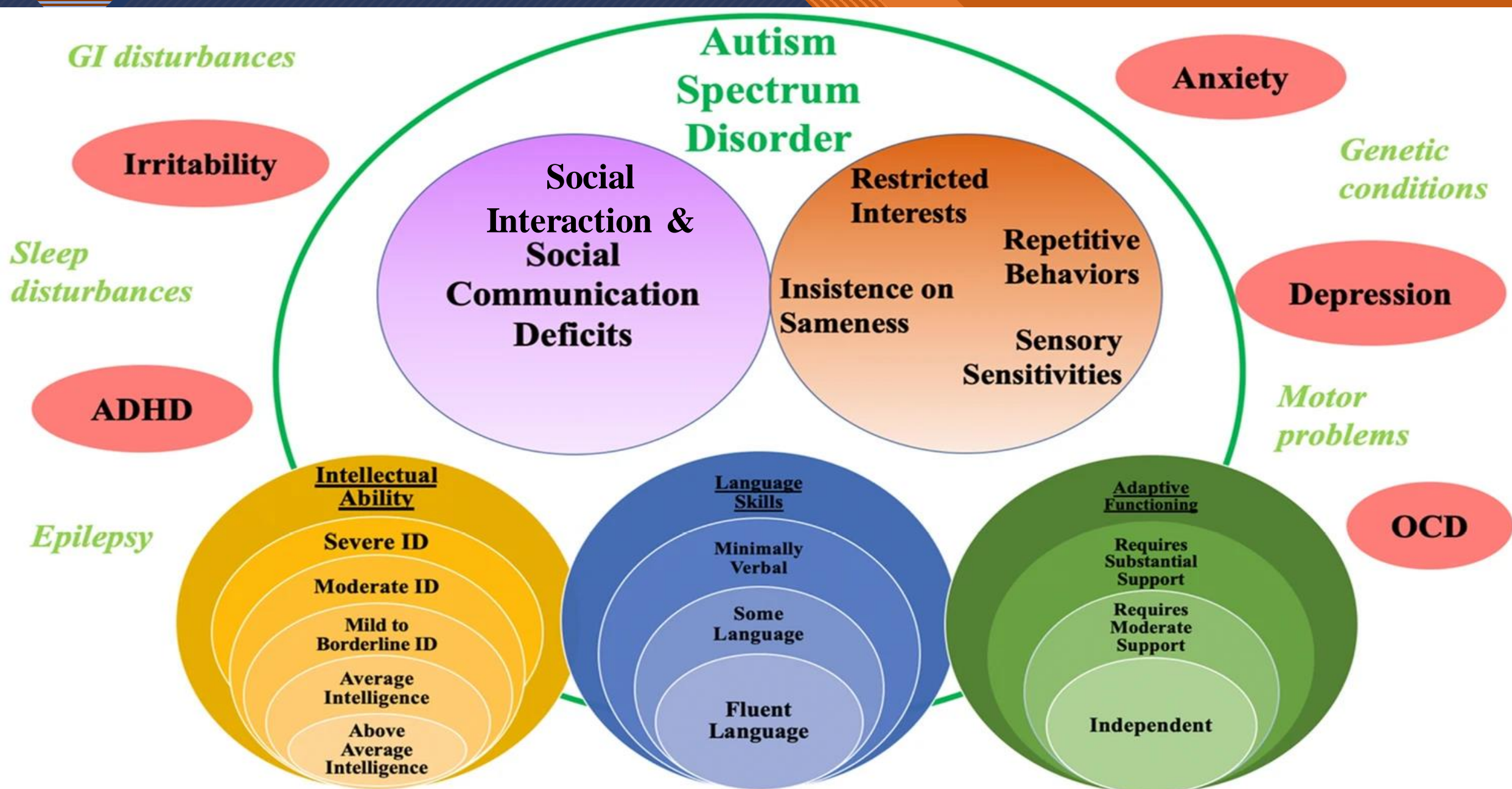
## Restrictive, repetitive patterns of behavior

Stereotyped or repetitive motor movements, use of objects or speech

Insistence on sameness, inflexible adherence to routines or rituals

Highly restricted, fixated interests that are abnormal in intensity or focus

Hyper- or hyporeactivity to sensory input





# Developmental & Behavioral Conditions

Language Disorders

30%

minimally verbal

Intellectual Disability

30%

ADHD

~50%





# Autism Spectrum

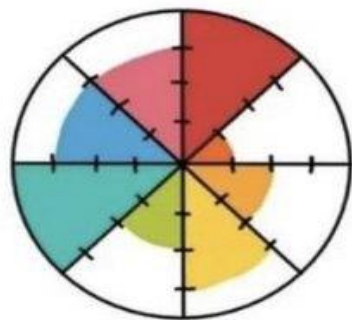
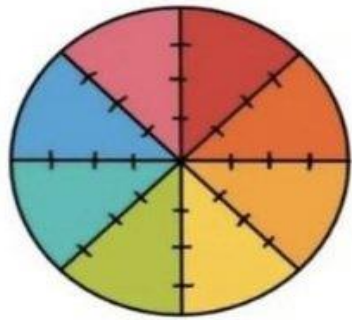
The Autism Spectrum is NOT linear



less autistic

very autistic

The Autism Spectrum looks more like:



- Social differences
- Interests
- repetitions
- sensory sensitivities
- emotional regulation
- perception
- executive functioning
- other

Terms like "high functioning", "low functioning" are harmful and outdated.

Autism\_sketches

"If you've met one person with autism, you've met one person with autism."

- Dr. Stephen Shore

# The Three Functional Levels of Autism

## ASD Level 1 Requiring Support

Challenges with friendships and social communication / pragmatic skills.



**difficulty initiating social interactions**

**organization and planning problems can hamper independence**

## ASD Level 2 Requiring Substantial Support

Obvious to the casual observer



**social interactions limited to narrow special interests**

**frequent restricted/ repetitive behaviors**

## ASD Level 3 Requiring Very Substantial Support



**severe deficits in verbal and nonverbal social communication skills**

**great distress/difficulty changing actions or focus**



Diagnostic Considerations ...



**Developmental  
Delays**

**AUTISM**

**ADHD**

**ANXIETY**

**= multiple appointments  
/ assessments/  
community feedback**

# The Broad Autism Phenotype



Treatment

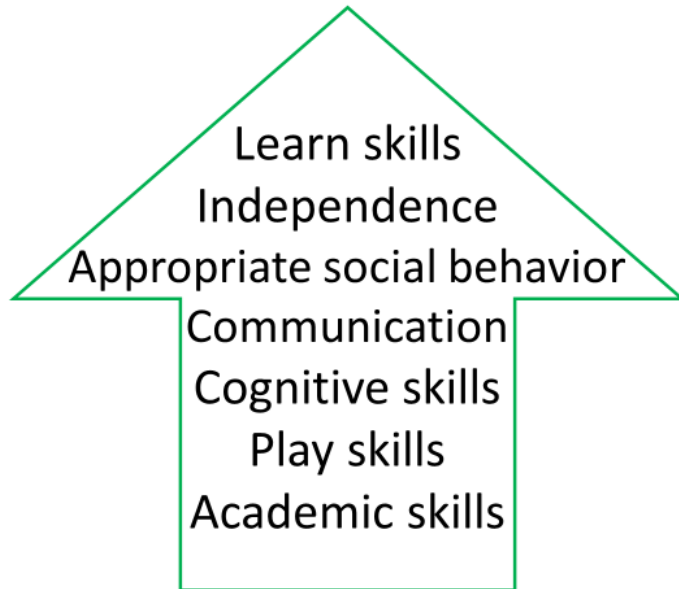
# Autism Spectrum Disorder Gold Standard Treatment

- 
- **Applied Behavioral Analysis (ABA) Therapy**
    - Based on behavioral principles
    - Intensive treatment
    - Can be done in the **home, at a clinic, or school setting**
    - Offered by Siskin and several other providers in Chattanooga and State of TN!
    - The possibilities are endless

# Autism Spectrum Disorder Interventions- Goals



## Teaching new skills



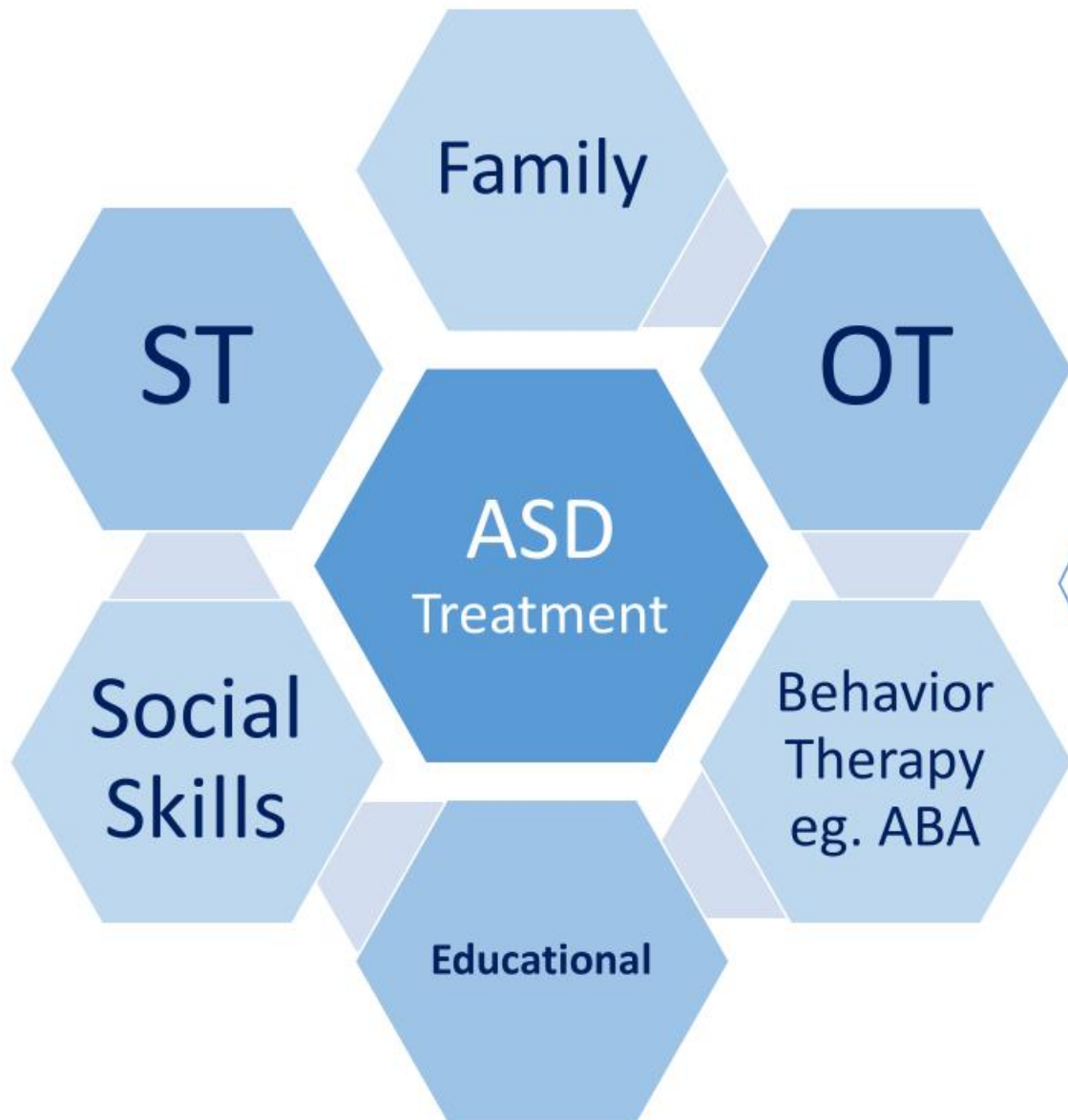
## Decreasing behavior problem



**Generalizing skills** Applying what's learned in the "real world"







Sports  
Time outdoors  
Support emotional regulation



Feeding Therapy  
Nutritionist  
MVA



Melatonin  
Pediatric Sleep Medicine  
ENT

# Autism Spectrum Disorder Psychopharmacology



- Do not treat CORE symptoms
- Risperidone and Aripiprazole have FDA approval to treat **irritability** in ASD

# Autism Spectrum Disorder Psychopharmacology



## Autism & ADHD

There are benefits from medications to address ADHD symptoms in ASD

**Methylphenidate shown to be effective**

**Response rates are lower**

**Discontinuation rates higher**

**Increased adverse events**

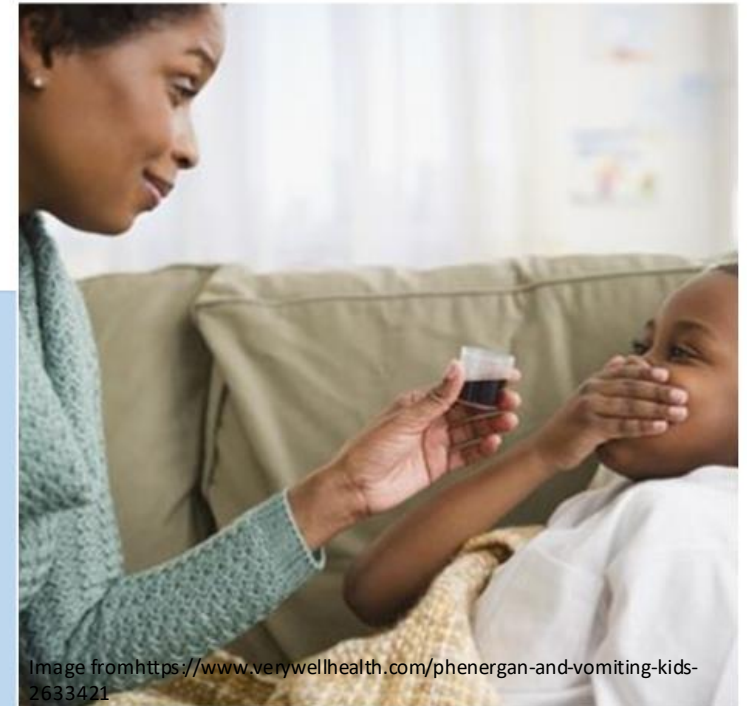


Image from <https://www.verywellhealth.com/phenergan-and-vomiting-kids-2633421>





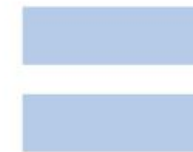
**What can you do as a  
Medical Provider?**

# Autism Spectrum Disorder Tools

MCHAT



STAT, TELE-ASD-PEDS,  
Autism Rating Scales



# Autism Spectrum Disorder Tools



## Screening

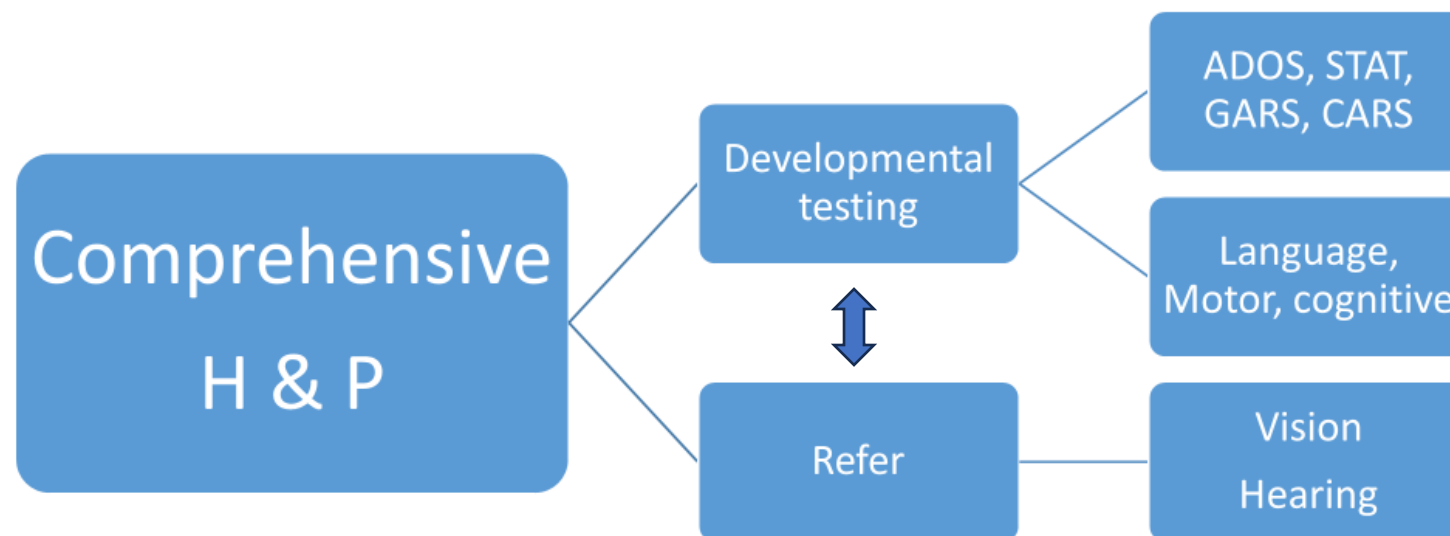
Measures	# items	Psychometrics
MCHAT R/F	20 items, Yes or No, 2 min to score 16-30 months 3 tiers: Low (0-2), Medium* (3-7), High Risk (8-20). *Needs follow-up interview	Excellent when follow-up interview is completed
Early Screening of Autistic Traits	19 items, Yes or No 14-15 months but can be up to 30 months	Limited. Good specificity but poor sensitivity
Parent's Observation	7 items, 18-25 months	Small validation study,

**The AAP recommends that all children be screened for ASD at ages 18 and 24 months, along with regular developmental surveillance. Toddlers and children should be referred for diagnostic evaluation when increased risk for developmental disorders (including ASD) is identified through screening and/or surveillance.**

# Autism Spectrum Disorder Tools



**Dx  
Evaluation**



**TEIS  
Speech  
Therapy  
Occupational  
Therapy**

# Developmental-Behavioral Pediatrics

**DIAGNOSTIC TESTING**

**MEDICATION CONSULTATION AND SOME MEDICATION MANAGEMENT**

**RESOURCES REACH TEAM**

**0 – 5 yo AGE GROUP**

**SISKIN THERAPY PROGRAMS:  
ST  
OT  
FT  
ABA**

**DEVELOPMENTAL PROFILE, AUTISM RATING SCALE, ADOS, KBIT**

**GENETIC TESTING**



# References

- Barahona-Corrêa JB, Filipe CN. A Concise History of Asperger Syndrome: The Short Reign of a Troublesome Diagnosis. *Front Psychol.* 2016 Jan 25;6:2024. doi: 10.3389/fpsyg.2015.02024. PMID: 26834663; PMCID: PMC4725185.
- CDC.gov, Autism Prevalence 2023
- Hyman SL, Levy SE, Myers SM, Identification, Evaluation, and Management of Children With Autism Spectrum Disorder. *Pediatrics.* 2020;145(1):e20193447
- Nordahl, Christine Wu AIR-P Presents: Autism in Girls and Women
- Rosen, N.E., Lord, C. & Volkmar, F.R. The Diagnosis of Autism: From Kanner to DSM-III to DSM-5 and Beyond. *J Autism Dev Disord* 51, 4253–4270 (2021). <https://doi.org/10.1007/s10803-021-04904-1>
- <https://www.aap.org/en/patient-care/autism/>
- <https://www.speechandot.com/family-support-for-children-and-adolescents-with-autism-spectrum-disorders/>
- [http://www.stlamerican.com/your\\_health\\_matters/health\\_news/addressing-racial-disparity-in-autism-outcomes/article\\_e3bfd2d2-f36a-11e8-a7c8-a3c2c94798d2.html](http://www.stlamerican.com/your_health_matters/health_news/addressing-racial-disparity-in-autism-outcomes/article_e3bfd2d2-f36a-11e8-a7c8-a3c2c94798d2.html)



QUESTIONS?

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