

Autism Spectrum Disorder

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Autism affects everyone



What is an Autism Spectrum Disorder

Social Communication (need all 3)

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

Restrictive and Repetitive Behaviors (need 2/4)

- Stereotyped or repetitive motor movements, use of objects, or speech
- Insistence on sameness, inflexible adherence to routines, or ritualized patterns of verbal or nonverbal behavior
- Highly restricted, fixated interests that are abnormal in intensity or focus
- Hyper- or hypo-reactivity to sensory input or unusual interest in sensory aspects of the environment

Autism in general pediatrics

- Average panel size for a pediatrician is 1000-2000 patients
- Number of potential children with ASD = 15 - 35 patients
- Early identification and treatment improves outcomes
- Primary care may be the only place these children get noticed

Autism Screening Tools

- CSBS DP: Communication & Symbolic Behavior Scales Developmental Profile Infant/Toddler Checklist (9-24 mo)
- M-CHAT-R: Modified Checklist for Autism in Toddlers (1-2.5 yrs) with Follow up
- SCQ: Social Communication Questionnaire, Lifetime (4 yrs+)



Older Children

- Think about autism in older children too!!!
- When the social expectations of life increase, some children have struggles that become more obvious
- Multiple co-existing conditions, think about autism
- Older children may have more subtle symptoms (they may have normal eye contact, ability to initiate conversation) which are hard to evaluate in a short visit

Medical Diagnosis of Autism Spectrum Disorder

Who?



How?



Where to refer for diagnosis

- Under 3
 - Don't need a diagnosis to access most services
 - Always started with: Regional Center/Early Start
 - Can get developmental therapies and behavior therapy with "at-risk" designation
- Diagnosis (at any age):
 - Regional Center
 - Rady's Developmental Evaluation Clinic/Autism Discovery Institute
 - Developmental Pediatrics
 - Neurodevelopmental Neurology
 - Private Psychologists/Psychiatrists
 - Schools

Treatment Services

- Early Intervention Teacher
- Education/School
- Speech, Occupational, and/or Physical Therapy
- Parent Training
- Behavior Therapy/Social Skills
- Mental Health Therapy
- Medication



Etiologic Work up

- Hearing Test (particularly if language delays)
- Genetic Testing
 - American College of Medical Genetics Recommendations based on 2013 Practice Guidelines:
 - Chromosomal microarray
 - Fragile X DNA
 - Also Consider PTEN, MECP2 (if abnormal head size)
 - Increasing consideration of whole exome sequencing
- EEG/neuroimaging- if clinically indicated (concern for seizures, abnormal neurologic exam, history concerning for structural abnormality)
- Metabolic testing - if clinically indicated (concern for regression, episodic illnesses, worsening neuro symptoms, seizures)
- Mitochondrial abnormalities - constitutional symptoms, hypotonia, repeated regression later in childhood, organ dysfunction

What are behavior therapy options?

- Applied Behavior Analysis
- Variations over time: Naturalistic, Developmental, Behavioral Interventions (NDBI)
 - Pivotal Response Training (PRT)
 - Floor Time (Developmental Individual Difference Relationship (DIR) Model)
 - Parent Child Developmental Behavioral Therapy (PC-DBT)
 - Early Start Denver Model
 - JASPER (joint attention, symbolic play, engagement and regulation) model
 - Social Thinking
 - Relationship Developmental Intervention (RDI)
 - Treatment and Education of Autistic and Related Communication Handicapped Children (TEACCH)
 - Picture Exchange Communication System (PECS)
 - Cognitive Behavioral Therapy (CBT)

Common Co-occurring Conditions

Gastroenterologic

Neurologic

Developmental

Behavioral/Mental Health

Medications/Supplements

- No medications/supplements with proven efficacy to treat the core symptoms of autism spectrum disorder (social communication and restricted/repetitive behaviors)
- Only two medications specially approved for autism spectrum disorder, risperidone and aripiprazole, used to treat the irritability and aggression associated with autism
- Medications are used, particularly in the setting of other mental health co-occurring conditions such as attention deficit/hyperactivity disorder and anxiety
- Medications are used to treat other co-existing conditions, particularly sleep problems
- Supplements, particularly vitamins are commonly used, without strong evidence for support in alleviating symptoms of autism
- Special diets are followed, without strong evidence for support in alleviating symptoms of autism

Medication Treatment Specifics

- For many of the symptoms, behavior therapy has MUCH better evidence than medication - especially for aggression and self injury
- Treat co-existing conditions/symptoms
 - ADHD-like behaviors (stimulants, alpha agonist, atomoxetine)
 - Anxiety (SSRI)
 - Irritability and aggression (alpha agonist, atypical antipsychotics - risperidone or aripiprazole)
 - Sleep (sleep hygiene, melatonin, consider other alternatives)

- Under 3: Early Start
- Over 3: School District
- Private developmental therapies if needed (Speech, OT, PT) and not receiving it at school or need to work on other goals
- Behavior Therapy (such as ABA) -If straight Medi-cal, needs to go through SDRC
- Social Skills
- Cognitive Behavior Therapy

Treatment Referrals