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A Note on Terminology

While we need to categorize disorders and label ‘dis’abilities in order to qualify for special education services and insurance coverage, it is important to note that disabilities and disorders can and should be conceptualized as differences.
1. What is ASD?

- “Autism spectrum disorder (ASD) is a developmental disability that can cause significant social, communication, and behavior-related challenges.”
- “Individuals with ASD may communicate, interact, behave, and learn in ways that are different from many people.”
What is ASD?

“The ASD diagnosis includes several conditions that used to be diagnosed separately: for example, autism, pervasive developmental disorder not otherwise specified (PDD-NOS), and Asperger syndrome.”

How can one diagnosis capture all of the varying strengths and challenges we see in individuals with autism?
Brain Differences in ASD

• “Autism is a neurodevelopmental condition. Although it is diagnosed based on the presence of two core behaviors — restricted interests and repetitive behaviors, as well as difficulties with social interactions and communication — those traits are thought to arise because of alterations in how different parts of the brain form and connect to one another.”

Brain Differences in ASD

• “No research has uncovered a ‘characteristic’ brain structure for autism, meaning that no single pattern of changes appears in every autistic person. Studies of brain structure often turn up dissimilar results — there is great variety across individuals in general.”

• “But some trends have begun to emerge for subsets of autistic people. These differences might one day provide some insight into how some autistic people’s brains function. They may also point to bespoke treatments for particular subtypes of autism.”

Brain Differences

• “Children and adolescents with autism often have an enlarged hippocampus, the area of the brain responsible for forming and storing memories, several studies suggest, but it is unclear if that difference persists into adolescence and adulthood”

• A solid body of evidence suggests that white matter, the bundles of long neuron fibers that connect brain regions, is also altered in people with autism. Researchers typically infer the structure of white matter by using a technique called diffusion MRI, which measures the flow of water throughout the brain.

Brain Differences

• “Decreased amounts of brain tissue in parts of the cerebellum, the brain structure at the base of the skull, according to a meta-analysis of 17 imaging studies. Scientists long thought the cerebellum mostly coordinates movements, but they now understand it plays a role in cognition and social interaction as well.”

• “On a more global level, the cortex — the brain’s outer layer — seems to have a different pattern of thickness in people with and without autism. This difference tracks with alterations to a single type of neuron during development, a 2020 study suggests.”

Brain Differences

• “The size of the amygdala also seems to differ between people with and without autism, although researchers from different labs have turned up conflicting results. Some find that people with autism have smaller amygdalae than people without autism, or that their amygdalae are only smaller if they also have anxiety. Others have found that autistic children have enlarged amygdalae early in development and that the difference levels off over time.”

Brain Differences

• “People who lack all or part of one white matter tract called the corpus callosum, which connects the brain’s two hemispheres, have an increased likelihood of being autistic or having traits of the condition. The corpus callosum contains many of the long-range connections that extend throughout the brain; the fact that disrupting those connections may lead to autism traits supports the connectivity theory of autism.”

• “Preschoolers with autism show significant differences in the structure of multiple white-matter tracts, according to a 2020 study. Autistic toddlers and adolescents, too, show alterations in white matter throughout the brain.”

3. Does My Child Have Autism?

• trouble interacting or communicating with others, including family
• trouble speaking or not speaking at all
• difficulty expressing feelings
• inability to understand how another person feels
• disinterest in physical contact with other people
• being withdrawn or preferring to do things by self
• difficulty making friends
Is it Autism?

- “avoidance of eye contact
- not using gestures such as pointing
- saying a word or phrase repeatedly (“echolalia”)
- trouble understanding subtleties in language, like sarcasm or jokes
- repetitive motions, such as rocking or flapping hands or spinning in circles
- unusual rituals or ways of playing with toys
- a preference for routines, and anxiety when a routine is broken
- a particular area of interest that consumes a lot of his attention”
Is it Autism?

“Unusual sensory behaviors such as:
• being preoccupied with lights or moving objects
• peering at things out of the corner of his eye
• dislike of certain kinds of sensory stimulation such as loud noises
• craving other sensory inputs such as deep pressure on his skin”
4. Causes and Risk Factors

“We do not know all of the causes of ASD. However, we have learned that there are likely many causes for multiple types of ASD. There may be many different factors that make a child more likely to have an ASD, including environmental, biologic and genetic factors.”
Causes and Risk Factors

• “Most scientists agree that genes are one of the risk factors that can make a person more likely to develop ASD.

• Children who have a sibling with ASD are at a higher risk of also having ASD.

• Individuals with certain genetic or chromosomal conditions, such as fragile X syndrome or tuberous sclerosis, can have a greater chance of having ASD.”
Causes and Risk Factors

• “When taken during pregnancy, the prescription drugs valproic acid and thalidomide have been linked with a higher risk of ASD.

• There is some evidence that the critical period for developing ASD occurs before, during, and immediately after birth.

• Children born to older parents are at greater risk ASD.”
5. Developmental Beginnings

“ASD begins before the age of 3 and last throughout a person’s life, although symptoms may improve over time. “

“Some children with ASD show hints of future problems within the first few months of life. In others, symptoms may not show up until 24 months or later.”

“Some children with an ASD seem to develop normally until around 18 to 24 months of age and then they stop gaining new skills, or they lose the skills they once had.”
“Studies have shown that one third to half of parents of children with an ASD noticed a problem before their child’s first birthday, and nearly 80%–90% saw problems by 24 months of age.”
6. Early Signs

- “Limited or no eye contact
- Showing little interest in other children or caretakers
- Limited back and forth sharing of sounds, smiles, and facial expressions
- Limited display of language, delayed development
- Getting upset by minor changes in routine”
7. Monitoring, Screening, Evaluation

• “Developmental monitoring observes how your child grows and changes over time and whether your child meets the typical developmental milestones in playing, learning, speaking, behaving, and moving.”

• “Developmental screening takes a closer look at how your child is developing. Your child will get a brief test, or you will complete a questionnaire about your child.”
Comprehensive Developmental Evaluation

• “If the screening tool identifies an area of concern, a formal developmental evaluation may be needed.

• This formal evaluation is a more in-depth look at a child’s development, usually done by a trained specialist, such as a developmental pediatrician, child psychologist, speech-language pathologist, occupational therapist, or other specialist.

• The specialist may observe the child, give the child a structured test, ask the parents or caregivers questions, or ask them to fill out questionnaires.

• The results of this formal evaluation determines whether a child needs special treatments or early intervention services or both.”

www.cdc.gov
Treatment and Supports

• No treatment has been shown to cure ASD; we do have interventions
• Interventions can reduce symptoms, improve cognitive ability and daily living skills, and maximize abilities
• “The differences in how ASD affects each person means that people with ASD have unique strengths and challenges in social communication, behavior, and cognitive ability.”
• Treatment teams/plans are usually multidisciplinary
8. Treatment and Supports

• “Research shows that early intervention treatment services can improve a child’s development.

• Early intervention services help children from birth to 3 years old (36 months) learn important skills.

• Services can include therapy to help the child talk, walk, and interact with others.”
Treatments and Supports

• “Behavioral intervention strategies have focused on social communication skill development—particularly at young ages when the child would naturally be gaining these skills—and reduction of restricted interests and repetitive and challenging behaviors.”

• “For some children, occupational and speech therapy may be helpful, as could social skills training and medication in older children. The best treatment or intervention can vary depending on an individual’s age, strengths, challenges, and differences.”

www.cdc.gov
School-based Supports-Accommodations

• Give directions using brief language
• Be specific and direct in instruction
• Be flexible with expectations
• Provide assistance for processing events throughout the day
• Provide pragmatic language coaching and support
• Use visual and verbal cues together
Sample Learning Accommodations

• Use of social stories
• Editing/Multi-step checklists
• Structured activities and class periods
• Be flexible with expectations around time and activity
• Provide and facilitate access to sensory diet and breaks
• Provide nonjudgmental cuing and redirection when needed
• Noise-canceling headphones
• Choice to eat lunch, work in a quieter area
Sample Schedule Accommodations

• Provide a predictable and consistent schedule
• Provide visible daily schedule (on wall or on desk, etc...)
• Provide advanced knowledge of transition or change
• Reflect real-time changes visibly on schedule
• Provide reminders and cues to assist with change or transition
State Regulations Require IEP Teams to consider seven areas of need when developing the IEP of a student on the spectrum.

1. The verbal and nonverbal communication needs of the student.
2. The need to develop social interaction skills and proficiencies.
3. The needs resulting from the student's unusual responses to sensory experiences.
4. The needs resulting from resistance to environmental change or change in daily routines.
5. The needs resulting from engagement in repetitive activities and stereotyped movements.

https://www.doe.mass.edu/sped/advisories/2014-1ta.html
6. The need for any positive behavioral interventions, strategies and supports to address any behavioral difficulties resulting from autism spectrum disorder.

7. Other needs resulting from the student's disability that impact progress in the general curriculum, including social and emotional development (e.g. organizational support, generalizing skills, practicing skills in multiple environments).
9. Autism Wiring Can Bring Many Strengths

• “Learning to read at a very early age
• Memorizing and learning quickly
• Thinking and learning in a visual way
• Logical thinking ability
• Being precise and detail orientated
• Exceptional honesty and reliability

Autism Wiring Can Bring Many Strengths

• Having an excellent sense of direction
• Be very punctual
• Strong adherence to rules
• Able to concentrate for long periods
• A drive for perfection and order
• A capability for alternate problem-solving
• A rare freshness and sense of wonderment
• May excel in science, engineering, computer science, and math”

Resources

• Altogether Autism https://www.altogetherautism.org.nz
• Interventions https://www.autism-society.org/living-with-autism/treatment-options/nonmedical-interventions/
• General Information https://www.cdc.gov/ncbddd/autism/index.html
• DESE Advisory on DSM-5 https://www.doe.mass.edu/sped/advisories/2014-1ta.html
• Research https://www.cdc.gov/ncbddd/autism/research.html
• Spectrum News Autism 101 https://www.spectrumnews.org/features/special-reports/autism-101/
IEP ACcommodations for Autism Spectrum Disorder
Pathways Academy, McLean Hospital

ACcommodations for Learning/Information Processing
- Be specific and direct in instruction and directions
- Be flexible with expectations
- Provide opportunities to practice skills in naturalistic, varied settings
- Allow extra time to process information and answer questions
- Provide assistance for processing events throughout the day
- Provide pragmatic language support as needed
- Use visual and verbal cues for memory and attention strategies
- Provide access to a laptop and/or a scribe for written tasks
- Utilize scripts, role-playing, and social stories to help with challenges,
  Consistent use of social thinking language

ACcommodations for Maintaining/Enhancing Time on Task
- Minimize visual and auditory distractions
- Provide cuing and redirection when distracted or off task
- Provide access to sensory diet, sensory breaks throughout class
- Frequent and immediate praise and positive feedback
- Keep transitions within class to a minimum
- Scribe or access to computer as needed
- Use visuals to support verbal cues

ACcommodations for Navigating the School Day
- Small classroom with distractions that are minimal
- Structured activities and class periods
- Be flexible with expectations around time and activity
- Provide a predictable and consistent schedule
- Provide planned breaks and spontaneous breaks as needed
- Allow transitions to a minimum whenever possible
- Provide advanced knowledge of transition or change
- Reflect real-time changes visibly on schedule
- Use cuing and redirection when needed

ACcommodations to Assist with Scheduling/Transition
- Provide a predictable and consistent schedule
- Provide visible daily schedule (on wall or on desk, etc.)
- Provide planned breaks and spontaneous breaks as needed
- Keep transitions to a minimum whenever possible
- Use social story ideas for social awareness
- Use visual cues and consistent strategy
- Reflect real-time changes visibly on schedule
- Provide reminders and cues to assist with change or transition

ACcommodations for Social and Emotional Processing
- Frequent, brief, supervised, breaks
- Provide assistance as needed with social interactions
- Explain abstract language and figures of speech
- Frequent and immediate praise and positive feedback
- Allow extra time to process information and answer questions
- Provide assistance for social-emotional processing
- Use gentle reminders for mild socially inappropriate behavior
- Direct teaching on generalizing specific skills
- Provide structured opportunities to generalize skills
- Provide opportunities to practice skills in naturalistic, varied settings
- Provide pragmatic language support and education
- Use specific and direct instruction

ACcommodations for Social Pragmatic Processing
- Use specific and direct instruction
- Directly teach and model coping skill use
- Provide opportunities to practice skills in naturalistic, varied settings
- Provide pragmatic language support and education
- Use coaching and role modeling to support social interaction

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