Overview of Autism Spectrum Disorder

Autism Spectrum Disorder, which we will refer to throughout this presentation as ASD, is a neurological disorder which affects the way the brain develops and processes information. So let’s review some things we know…

# Prevalence

The CDC has been tracking the prevalence of ASD through a multi-state network of centers. In the last release of data in 2014, the CDC estimates that 1/68 children are diagnosed with ASD. This number has continued to rise over the years and will likely change again. ASD is more likely to occur almost 5 times more often in boys than girls. Research is occurring internationally in many areas, from genetics to treatment with the hope of determining a cause and effective intervention.

ASD is found across all ethnic and racial groups around the world, although we do see disparity in minority groups in receiving an early diagnosis.

# What We Know

Having healthy brain connectivity makes the things people do and say very fluid and easily completed. ASD impacts these important connections from one part of the brain to another. Research tells us these connections are not fully developed in people with ASD and limit them in areas such as social communication and restricted and repetitive interests or behaviors.

Some people with ASD may develop seizures. Usually they occur with the onset of puberty. Doctors may recommend medications to help reduce seizure activity.

ASD may occur with other genetic or mental health conditions. We sometimes will see issues such as Attention Deficit Hyperactivity Disorder (ADHD), learning disabilities, anxiety or other mental health issues and thus, it is important to work with a professional well versed in understanding the various aspects of ASD and co-existing conditions.

There are verbal and non-verbal IQ tests that can measure a person’s cognitive abilities. Oftentimes people with ASD have difficulty in new situations and with new people, and so we must be cautious about how we interpret test given in this type of setting. The results of these tests can be an inaccurate reflection of abilities and intelligence. Language and communication difficulties, as well as the potential difficulty of demonstrating skills in stressful or unfamiliar testing situations may affect the results of the test.

Research has demonstrated a high rate of uneven cognitive development in children with ASD. Although a person on the autism spectrum may demonstrate great strengths in one area they may be severely lacking in another area. As providers, we should not make assumptions based solely on IQ or a person’s ability in just one specific area. We have to look at the entire picture, not just the parts.

Characteristics of ASD can range from mild to severe. One person may be employed and live on his own while another may need assistance with simple activities of daily life or holding a conversation. There is a wide range of abilities, and the manner in which people with ASD progress over time is an individual process.

It is a misconception that people with ASD always want to stay in their own world. People with ASD want to make friends just like everyone else does. Communication abilities in individuals with autism are often delayed, and approximately 50% of individuals may never progress to spoken language. When an individual does develop language they may be unable to sustain a conversation unless it involves something of personal interest to them. Nonverbal abilities and social skills are also impacted in autism. Reading social cues from others and defining appropriate personal space, can be particularly difficult for these individuals. These deficits in social communication can negatively impact the ability to successfully navigate the social world of friendship, school and work.

There is no medical test for ASD. The best way to determine if someone has ASD is through observation by a trained diagnostician or medical professional, and by collecting information on their social history. There is a manual we will talk about next that shows the exact criteria for determining diagnosis.

While there is no known cure for autism, there are therapies and education approaches that can address some of the challenges associated with the condition. Intervention can help to lessen disruptive behaviors, and education can teach self-help skills for greater independence.

# Social Communication Domain

This information is taken from the Diagnostic and Statistical Manual-5 of mental health disorders. It provides the criteria for the area of social communication, one of two major deficit areas for people diagnosed with ASD. We are looking to see the concerns listed in all three areas.

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| --- | --- | --- |
| **Social-emotional reciprocity** | **Nonverbal Communication** | **Maintaining Relationships** |
| * Initiating
* Back and forth
* Sharing emotions
* Affect and response
 | * Eye contact
* Body language
* Facial expressions
* Gestures
 | * Sharing
* Imaginative play
* Making friends
* Absence of interest in people
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Remember that these issues represent a level of severity that limits the ability of a person to be successful in relationships, school or employment. They do not refer to people who might be less social, shy or awkward. There are qualitative differences in the ways people interact and communicate that set them apart from their typical age peers. People with ASD will say themselves how they do not fit in, do not understand the ways others act or things they say or the intentions of others. They cannot read the environment or the social cues that guide our behavior.

For example, when people attend a conference session, we all know that the expectation is to get the materials, sit down and when the speaker begins, to settle down to listen. We know it would not be appropriate to interrupt or to call out answers. But these social rules we follow and judgments we make from minute to minute each day are not intuitive to people with ASD. It is almost like each rule has to specifically be taught within each social environment they are expected to be utilized. This is a most daunting task and it is a very challenging domain to address and one that significantly can impact a person’s life.

# Restricted Interests and Repetitive Behaviors Domain

The domain of restricted and repetitive behaviors requires a person to meet at least two of the 4 deficit areas.

|  |  |  |  |
| --- | --- | --- | --- |
| **Stereotyped or repetitive speech, motor movements, or use of objects** | **Excessive adherence to routines** | **Highly restricted, fixated interests**  | **Hyper- or Hypo-reactivity to sensory input**  |
| * Echolalia
* Idiosyncratic phrases
* Hand flapping
* Rocking
* Lining up objects
* Spinning objects
* Playing with parts (wheels)
 | * Resistant to change
* Motoric rituals
* Insistent on same routine or food
* Repetitive questioning
* Extreme distress at small change
 | * Strong attachment to unusual objects
* Abnormal intensity or focus
* Excessive or perseverative interest
 | * Indifference to pain/heat/cold
* Adverse response to sounds or textures
* Excessive smelling or touching of objects
* Fascination with lights or spinning objects
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People with autism spectrum disorder oftentimes have motor movements that they indicate they cannot always control. An individual with ASD might engage in hand flapping, rocking or toe walking.

In terms of routines, although many of us function within routines during the day, we also can be flexible if our schedule changes or something gets canceled. However, because people with ASD can be rule bound, these changes can cause great distress and we might see resulting behavioral issues.

People with ASD may have very strong areas of interest and will focus their time and attention on that one area until they acquire a high level of expertise. This can be a great asset for employment purposes if an employer seeks this gift in someone. On the other hand, it can also interfere with relationships between people if the person with ASD only wants to talk about their interest area to the exclusion of the peer’s topics of interest.

Lastly, we have seen that many people with ASD struggle with issues in their sensory systems. This can include under or over-reacting to stimuli such as lights, sounds, touch and smells. As you can imagine, the sensory issues can be as simple as an annoying sensation from clothing to dangerous situations where someone may be injured but not perceive pain. You might see people who want to smell objects to children who may hide under the teacher’s desk to get away from the bright florescent lights.

# Additional Criteria

The DSM-5 has included additional criteria. We expect to see signs and symptoms appear in early childhood but for some, we may see a child who develops adequate skills in the social communication area through interventions but as they get older, the development of age appropriate skills may begin to lag behind.

C.    Symptoms must be present in early childhood (but may not become fully manifest until social demands exceed limited capacities).

D.   Symptoms together limit and impair everyday social, occupational or other important areas of functioning.

E. Symptoms are not better explained by intellectual disability or global developmental delay.

# Characteristics That *May* Be Seen

Occasionally, individuals with autism spectrum disorder also demonstrate other behavioral patterns or characteristics.

One of these patterns is unusual mood or affect. This means that the facial expressions, body language and tone of voice of the individual may not match or seem appropriate to the circumstances or the environment. This might be expressed as a noticeable lack of emotional reaction at occasions in which most people would typically express their feelings through smiles, laughter or crying. On other occasions, people with ASD may laugh or seem extremely agitated when nothing seems to be particularly funny or exciting for other people.

Another possible characteristic is eating or sleeping difficulties. Individuals with ASD may only want to eat a certain type of foods or a may have a reluctance to eat food with particular textures, flavors or odors. Others may have irregular sleep patterns.

You may also see challenging behaviors. Challenging behaviors are particularly an issue for individuals with significant expressive and receptive language abilities.

Lastly Hyperlexia, or advanced word decoding abilities, will occasionally be apparent in young children with ASD. These children may demonstrate an extreme interest in letters and word spelling, but often don’t demonstrate word comprehension abilities at a similar level.

# Summary

In summary, it is important to remember that children with autism are children first. So set high expectations, teach rules and set up the situation for success, just like we would do for all children.

The best teaching occurs through positive relationships so learn to engage the child with autism in the ways that work best for him or her. Understand how to use reinforcement to build momentum and new skills.

Having a functional communication system will increase social skills development as well as reducing problem behavior. Many skills need to be taught through direct instruction in the setting in which those skills will be used. CARD-USF is here to assist you in learning those tools and strategies that will create successful experiences.

Sources

*Prevalence of Autism Spectrum Disorders — Autism and Developmental Disabilities Monitoring Network, 14 Sites, United States, 2008*

*Surveillance Summaries, March 30, 2012 / 61(SS03);1-19*

*Autism and Developmental Disabilities Monitoring (ADDM) Network, which estimated the number of 8-year-old children with ASDs living in 14 communities*

*Canitano, R. (2007). Epilepsy in autism spectrum disorders. European Child & Adolescent Psychiatry****,****16(1), 61-66.*

*(Chakrabarti, 2001)*

*DSM-5, 2013, American Psychiatric Association*