Characteristics of Children with ASD

Among all the possible behavior characteristics in individuals with ASD, some common behaviors do occur. It is important to be familiar with those as a basis of understanding their impact on educational programming. While not all of these characteristics will be the same in all diagnosed cases, they will include difficulties in the areas of social interaction, communication, sensory processing, and learning new skills. The characteristics will vary at different ages for individual children with ASD. Characteristics commonly associated with ASD are not exclusive to ASD and could appear in individuals diagnosed with other disabilities.

Possible Early Indicators of ASD

Clinical clues, sometimes referred to as “red flags,” are historical facts and current observations which, if present, increase concern about possible ASD in a young child. Clinical clues may be noticed by the parents, others familiar with the child, or a professional as part of routine development surveillance or during health care visits for some other reason.

The clinical clues listed in TABLE 1 represent delayed or abnormal behaviors that are seen in children with ASD (although some of these findings may also be seen in children who have a developmental delay or a disorder other than ASD).

If clinical clues of possible ASD are identified by either parents or professionals, it is important to follow up with appropriate screening tests. For children with suspected ASD, it is important to do both a diagnostic evaluation (to determine the specific diagnosis) and a functional assessment (to evaluate the child’s strengths and needs in various developmental domains).

The clinical clues listed below represent delayed or abnormal behaviors that are seen in children with ASD (although some of these findings may also be seen in children who have a developmental delay or disorder other than ASD). If any of these clinical clues are present, further assessment may be needed to evaluate the possibility of ASD or other developmental disorder.

**TABLE 1 - CLINICAL CLUES OF POSSIBLE ASD**

- Delay or absence of spoken language
- Looks through people; not aware of others
- Not responsive to other people’s facial expressions/feelings
- Lack of pretend play; little or no imagination
- Does not show typical interest in or play near peers purposefully
- Lack of turn-taking
- Unable to share pleasure
- Qualitative impairment in nonverbal communication
- Does not point at an object to direct another person to look at it
♦ Lack of gaze monitoring
♦ Lack of initiation of activity or social play
♦ Unusual or repetitive hand and finger mannerisms
♦ Unusual reactions or lack of reaction to sensory stimuli

Patterns of Development

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

Children with ASD develop at different rates in different areas of growth. They may have delays in language, social, and learning skills, while their motor skills are about the same as other children their age. They might be very good at putting puzzles together or solving computer problems, but they might have trouble with social activities like talking or making friends. Children with ASD might also learn a hard skill before they learn an easy one. For example, a child might be able to read long words but not be able to tell you what sound a "b" makes.

Impairments in Social Skills

Social impairments are one of the main problems in all of the ASD. People with ASD do not have merely social “difficulties” like shyness. The social impairments they have are bad enough to cause serious problems in everyday life. These social problems are often combined with the other areas of deficit, such as communication skills and unusual behaviors and interests. For instance, the inability to have a back-and-forth conversation is both a social and a communication problem.

Typical infants are very interested in the world and people around them. By the first birthday, a typical toddler tries to imitate words, uses simple gestures such as waving “bye-bye,” grasps fingers, and smiles at people. But the young child with ASD may have a very hard time learning to interact with other people. One way very young children interact with others is by imitating actions—for instance, clapping when mom claps. Children with ASD may not do this, and they may not show interest in social games like peek-a-boo or pat-a-cake. Although the ability to play pat-a-cake is not an important life skill, the ability to imitate is. We learn all the time by watching others and by doing what they do—especially in new situations and in the use of language.

People with ASD might not interact with others the way most people do. They might not be interested in other people at all. Some might want friends but have social problems that make those relationships difficult. They might not make eye contact and might just want to be alone. Many children with ASD have a very hard time learning to take turns and share—much more so than other children. This can make other children unwilling to play with them. People with ASD may have problems with expression, so they might have trouble understanding other people's feelings or talking about their own feelings. Many people with ASD are very sensitive to being touched and might not want to be held or cuddled. Self-stimulatory behaviors, common among people with ASD, may seem odd to others or make them uncomfortable, causing them to shy away from a person with ASD.
Social issues such as trouble interacting with peers, saying whatever comes to mind even if it’s inappropriate, difficulty adapting to change, and even poor grooming habits can sometimes make it hard for adults with ASD to get and/or keep a job at their intellectual level. Anxiety and depression, which affect some people with ASD, can make existing social impairments even harder to manage.

Social skills that many people learn by watching others may need to be taught directly to people with ASD. When deciding what to teach, remember the social value of learning independent living skills such as toilet training and other basic grooming skills (bathing, tooth brushing, dressing appropriately, etc.).

Because children and adolescents with ASD are “different,” and because they are often very literal and sometimes naïve and overly trusting, they are often the target of bullies and might be easily taken advantage of. It is very important to teach all children from a very young age to be tolerant and accepting of differences. It is also important to teach children and adolescents with ASD about personal safety and tell them to go to a parent, teacher, or other trusted adult if they need help.

There are many strategies and curriculum supplements for teaching children and adolescents with and without ASD about bullying and other personal safety issues. These can be found by visiting a local bookstore, searching an online book seller, or by contacting a publishing company that specializes in disability-specific and/or education publications. Teachers and health care professionals are often good resources for this type of information as well.

Children with ASD also are slower in learning to interpret what others are thinking and feeling. Subtle social cues—whether a smile, a wink, or a grimace—may have little meaning. To a child who misses these cues, "Come here" always means the same thing, whether the speaker is smiling and extending her arms for a hug or frowning and planting her fists on her hips. Without the ability to interpret gestures and facial expressions, the social world may seem bewildering. To compound the problem, people with ASD have difficulty seeing things from another person's perspective. Most 5-year-olds understand that other people have different information, feelings, and goals than they have. A person with ASD may lack such understanding. This inability leaves them unable to predict or understand other people's actions.

Although not universal, it is common for people with ASD also to have difficulty regulating their emotions. This can take the form of "immature" behavior such as crying in class or verbal outbursts that seem inappropriate to those around them. The individual with ASD might also be disruptive and physically aggressive at times, making social relationships still more difficult. They have a tendency to "lose control," particularly when they're in a strange or overwhelming environment, or when angry and frustrated. They may at times break things, attack others, or hurt themselves. In their frustration, some bang their heads, pull their hair, or bite their arms.

**Impairments in Communication Skills**

Each person with ASD has different communication skills. Some people may have relatively good verbal skills, with only a slight language delay with impaired social skills. Others may be not speaking at all or have limited ability or interest in communicating and interacting with others. About 40% of children with ASD do not talk at all. Another 25%–30% of children with ASD have some words at 12 to 18 months of age and then lose them. Others may speak, but not until later in childhood.

People with ASD who do speak may use language in unusual ways. They may not be able to combine words into meaningful sentences. Some people with ASD speak only single words,
while others repeat the same phrases over and over. Some children repeat what others say, a condition called echolalia. The repeated words might be said right away or at a later time. For example, if you ask someone with ASD, "Do you want some juice?" he or she might repeat "Do you want some juice?" instead of answering your question. Although many children without ASD go through a stage where they repeat what they hear, it normally passes by age 3. Some people with ASD can speak well but may have a hard time listening to what other people say.

People with ASD may have a hard time using and understanding gestures, body language, or tone of voice. For example, people with ASD might not understand what it means to wave goodbye. Facial expressions, movements, and gestures may not match what they are saying. For instance, people with ASD might smile while saying something sad. They might say "I" when they mean "you," or vice versa. Their voices might sound flat, robot-like, or high-pitched. People with ASD might stand too close to the people they are talking to, or might stick with one topic of conversation for too long. They might talk a lot about something they really like, rather than have a back-and-forth conversation with someone. Some children with relatively good language skills speak like little adults, failing to pick up on the "kid-speak" that is common in their peers.

By age 3, most children have passed predictable milestones on the path to learning language; one of the earliest is babbling. By the first birthday, a typical toddler says words, turns when he hears his name, points when he wants a toy, and when offered something distasteful, makes it clear that the answer is "no."

Some children diagnosed with ASD remain mute throughout their lives. Some infants who later show signs of ASD coo and babble during the first few months of life, but they soon stop. Others may be delayed, developing language as late as age 5 to 9. Some children may learn to use communication systems such as pictures or sign language.

Those who do speak often use language in unusual ways. They seem unable to combine words into meaningful sentences. Some speak only single words, while others repeat the same phrase over and over. Some ASD children parrot what they hear, a condition called echolalia. Although many children with no ASD go through a stage where they repeat what they hear, it normally passes by the time they are 3.

Some children only mildly affected may exhibit slight delays in language, or even seem to have precocious language and unusually large vocabularies, but have great difficulty in sustaining a conversation. The "give and take" of normal conversation is hard for them, although they often carry on a monologue on a favorite subject, giving no one else an opportunity to comment. Another difficulty is often the inability to understand body language, tone of voice, or "phrases of speech." They might interpret a sarcastic expression such as "Oh, that's just great" as meaning it really IS great.

While it can be hard to understand what ASD children are saying, their body language is also difficult to understand. Facial expressions, movements, and gestures rarely match what they are saying. Also, their tone of voice fails to reflect their feelings. A high-pitched, sing-song, or flat, robot-like voice is common. Some children with relatively good language skills speak like little adults, failing to pick up on the "kid-speak" that is common in their peers. Without meaningful gestures or the language to ask for things, people with ASD are at a loss to let others know what they need. As a result, they may simply scream or grab what they want. Until they are taught better ways to express their needs, ASD children do whatever they can to get through to others. As people with ASD grow up, they can become increasingly aware of their
difficulties in understanding others and in being understood. As a result they may become anxious or depressed.

**Unusual and Repeated Behaviors and Routines**

Unusual behaviors such as repetitive motions may make social interactions difficult. Repetitive motions are actions repeated over and over again. They can involve part of the body or the entire body or even an object or toy. For instance, people with ASD may spend a lot of time repeatedly flapping their arms or rocking from side to side. They might repeatedly turn a light on and off or spin the wheels of a toy car in front of their eyes. These types of activities are known as self-stimulation or “stimming.”

People with ASD often thrive on routine. A change in the normal pattern of the day—like a stop on the way home from school—can be very upsetting or frustrating to people with ASD. They may “lose control” and have a “melt down” or tantrum, especially if they’re in a strange place.

Also, some people with ASD develop routines that might seem unusual or unnecessary. For example, a person might try to look in every window he or she walks by in a building or may always want to watch a video in its entirety—from the previews at the beginning through the credits at the end. Not being allowed to do these types of routines may cause severe frustration and tantrums.

Although children with ASD usually appear physically normal and have good muscle control, odd repetitive motions may set them off from other children. These behaviors might be extreme and highly apparent or more subtle. Some children and older individuals spend a lot of time repeatedly flapping their arms or walking on their toes. Some suddenly freeze in position.

As children, they might spend hours lining up their cars and trains in a certain way, rather than using them for pretend play. If someone accidentally moves one of the toys, the child may be tremendously upset. ASD children need, and demand, absolute consistency in their environment. A slight change in any routine—in mealtimes, dressing, taking a bath, going to school at a certain time and by the same route—can be extremely disturbing. Perhaps order and sameness lend some stability in a world of confusion.

Repetitive behavior sometimes takes the form of a persistent, intense preoccupation. For example, the child might be obsessed with learning all about vacuum cleaners, train schedules, or lighthouses. Often there is great interest in numbers, symbols, or science topics.

**Additional Disabilities and Co-Morbid Conditions with ASD**

**Sensory problems**

When children's perceptions are accurate, they can learn from what they see, feel, or hear. On the other hand, if sensory information is faulty, the child's experiences of the world can be confusing. Many ASD children are highly attuned or even painfully sensitive to certain sounds, textures, tastes, and smells. Some children find the feel of clothes touching their skin almost unbearable. Some sounds—a vacuum cleaner, a ringing telephone, a sudden storm, even the sound of waves lapping the shoreline—will cause these children to cover their ears and scream.
In ASD, the brain seems unable to balance the senses appropriately. Some ASD children are oblivious to extreme cold or pain. A child with ASD may fall and break an arm, yet never cry. Another may bash his head against a wall and not wince, but a light touch may make the child scream with alarm.

**Mental Retardation**

Many children with ASD have some degree of mental impairment. When tested, some areas of ability may be normal, while others may be especially weak. For example, a child with ASD may do well on the parts of the test that measure visual skills but earn low scores on the language subtests.

**Seizures**

One in four children with ASD develops seizures, often starting either in early childhood or adolescence. Seizures, caused by abnormal electrical activity in the brain, can produce a temporary loss of consciousness (a "blackout"), a body convulsion, unusual movements, or staring spells. Sometimes a contributing factor is a lack of sleep or a high fever. An EEG (electroencephalogram—recording of the electric currents developed in the brain by means of electrodes applied to the scalp) can help confirm the seizure's presence. In most cases, seizures can be controlled by a number of medicines called "anticonvulsants." The dosage of the medication is adjusted carefully so that the least possible amount of medication will be used to be effective.

**Fragile X Syndrome**

This disorder is the most common inherited form of mental retardation. It was so named because one part of the X chromosome has a defective piece that appears pinched and fragile when under a microscope. Fragile X syndrome affects about two to five percent of people with ASD. It is important to have a child with ASD checked for Fragile X, especially if the parents are considering having another child. For an unknown reason, if a child with ASD also has Fragile X, there is a one-in-two chance that boys born to the same parents will have the syndrome. Other members of the family who may be contemplating having a child may also wish to be checked for the syndrome.

**Tuberous Sclerosis**

Tuberous sclerosis is a rare genetic disorder that causes benign tumors to grow in the brain as well as in other vital organs. It has a consistently strong association with ASD. One to 4 percent of people with ASD also have tuberous sclerosis.

**Associated Features**

People with ASD might have a range of other behaviors associated with the disorder. These include hyperactivity, short attention span, impulsivity, aggressiveness, self-injury, and temper tantrums. They may have unusual responses to touch, smell, sound, and other sensory input. For example, they may over- or under-react to pain or to a loud noise. They may have abnormal eating habits. For instance, some people with ASD limit their diet to only a few foods, and others may eat nonfood items like dirt or rocks (this is called pica). They may also have odd sleeping
habits. People with ASD may seem to have abnormal moods or emotional reactions. They may laugh or cry at unusual times or show no emotional response at times you would expect one. They may not be afraid of dangerous things, and they could be fearful of harmless objects. People with ASD may also have gastrointestinal issues such as chronic constipation or diarrhea.

It is important to remember that children with ASD can get sick or injured just like children without ASD. Regular medical and dental exams should be part of a child’s intervention plan. Often it is hard to tell if a child’s behavior is related to the ASD or is caused by a separate health problem. For instance, head banging could be a symptom of ASD, or it could be a sign that the child is having headaches. In those cases, a careful physical exam is important.