

AUTISM SOCIETY OF MICHIGAN

Autism Spectrum Disorder

General Information



~Making Human Connections~

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Autism Spectrum Disorder General Information

Autism spectrum disorder (ASD) is a developmental disability caused by differences in the brain. Scientists do not know yet exactly what causes these differences for most people with ASD. However, some people with ASD have a known difference, such as a genetic condition. There are multiple causes of ASD, although most are not yet known.

There is often nothing about how people with ASD look that sets them apart from other people, but they may communicate, interact, behave, and learn in ways that are different from most other people. The learning, thinking, and problem-solving abilities of people with ASD can range from gifted to severely challenged. Some people with ASD need a lot of help in their daily lives; others need less.

A diagnosis of ASD now includes several conditions that used to be diagnosed separately: autistic disorder, pervasive developmental disorder not otherwise specified (PDD-NOS), and Asperger syndrome. These conditions are now all called autism spectrum disorder.

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.

It is important to note that some people *without* ASD might also have some of these symptoms. But for people with ASD, the impairments make life very challenging.

Possible "Red Flags"

A person with ASD might:

- Not respond to their name by 12 months of age
- Not point at objects to show interest (point at an airplane flying over) by 14 months
- Not play "pretend" games (pretend to "feed" a doll) by 18 months
- Avoid eye contact and want to be alone
- Have trouble understanding other people's feelings or talking about their own feelings

- Have delayed speech and language skills
- Repeat words or phrases over and over (echolalia)
- Give unrelated answers to questions
- Get upset by minor changes
- Have obsessive interests
- Flap their hands, rock their body, or spin in circles
- Have unusual reactions to the way things sound, smell, taste, look, or feel

Social Skills

Social issues are one of the most common symptoms in all of the types of ASD. People with an ASD do not have just social "difficulties" like shyness. The social issues they have cause serious problems in everyday life.

Examples of social issues related to ASD:

- Does not respond to name by 12 months of age
- Avoids eye-contact
- Prefers to play alone
- Does not share interests with others
- Only interacts to achieve a desired goal
- Has flat or inappropriate facial expressions
- Does not understand personal space boundaries
- Avoids or resists physical contact
- Is not comforted by others during distress
- Has trouble understanding other people's feelings or talking about own feelings

Typical infants are very interested in the world and people around them. By the first birthday, a typical toddler interacts with others by looking people in the eye, copying words and actions, and using simple gestures such as clapping and waving "bye bye". Typical toddlers also show interests in social games like peek-a-boo and pat-a-cake. But a young child with an ASD might have a very hard time learning to interact with other people.

Some people with an ASD might not be interested in other people at all. Others might want friends, but not understand how to develop friendships. Many children with an ASD have a very

hard time learning to take turns and share—much more so than other children. This can make other children not want to play with them.

People with an ASD might have problems with showing or talking about their feelings. They might also have trouble understanding other people's feelings. Many people with an ASD are very sensitive to being touched and might not want to be held or cuddled. Self-stimulatory behaviors (e.g., flapping arms over and over) are common among people with an ASD. Anxiety and depression also affect some people with an ASD. All of these symptoms can make other social problems even harder to manage.

Communication

Each person with ASD has different communication skills. Some people can speak well. Others can't speak at all or only very little. About 40% of children with an ASD do not talk at all. About 25%–30% of children with ASD have some words at 12 to 18 months of age and then lose them. Others might speak, but not until later in childhood.

Examples of communication issues related to ASD:

- Delayed speech and language skills
- Repeats words or phrases over and over (echolalia)
- Reverses pronouns (e.g., says "you" instead of "I")
- Gives unrelated answers to questions
- Does not point or respond to pointing
- Uses few or no gestures (e.g., does not wave goodbye)
- Talks in a flat, robot-like, or sing-song voice
- Does not pretend in play (e.g., does not pretend to "feed" a doll)
- Does not understand jokes, sarcasm, or teasing

People with ASD who do speak might use language in unusual ways. They might not be able to put words into real sentences. Some people with ASD say only one word at a time. Others repeat the same words or 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 an ASD go through a stage where they repeat what they hear, it normally passes by three years of age. Some

people with an ASD can speak well but might have a hard time listening to what other people say.

People with ASD might 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 an ASD might smile while saying something sad.

People with ASD might say "I" when they mean "you," or vice versa. Their voices might sound flat, robot-like, or high-pitched. People with an ASD might stand too close to the person 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 fairly good language skills speak like little adults, failing to pick up on the "kid-speak" that is common with other children.

Unusual Interests and Behaviors

Many people with ASD have unusual interest or behaviors.

Examples of unusual interests and behaviors related to ASD:

- Lines up toys or other objects
- Plays with toys the same way every time
- Likes parts of objects (e.g., wheels)
- Is very organized
- Gets upset by minor changes
- Has obsessive interests
- Has to follow certain routines
- Flaps hands, rocks body, or spins self in circles

Repetitive motions are actions repeated over and over again. They can involve one part of the body or the entire body or even an object or toy. For instance, people with an ASD might 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. 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 to people with ASD. They might "lose control" and have a "melt down" or tantrum, especially if in a strange place.

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

Other Symptoms

Some people with ASD have other symptoms. These might include:

- Hyperactivity (very active)
- Impulsivity (acting without thinking)
- Short attention span
- Aggression
- Causing self-injury
- Temper tantrums
- Unusual eating and sleeping habits
- Unusual mood or emotional reactions
- Lack of fear or more fear than expected
- Unusual reactions to the way things sound, smell, taste, look, or feel

People with ASD might have unusual responses to touch, smell, sounds, sights, and taste, and feel. For example, they might over- or under-react to pain or to a loud noise. They might have abnormal eating habits. For instance, some people with an ASD limit their diet to only a few foods. Others might eat nonfood items like dirt or rocks (this is called pica). They might also have issues like chronic constipation or diarrhea.

People with ASD might have odd sleeping habits. They also might have abnormal moods or emotional reactions. For instance, they might laugh or cry at unusual times or show no emotional response at times you would expect one. In addition, they might not be afraid of dangerous things, and they could be fearful of harmless objects or events.

Development

Children with ASD develop at different rates in different areas. They may have delays in language, social, and learning skills, while their ability to walk and move around 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 an 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.

Children develop at their own pace, so it can be difficult to tell exactly when a child will learn a particular skill. But, there are age-specific developmental milestones used to measure a child's social and emotional progress in the first few years of life. To learn more about developmental milestones, visit "[Learn the Signs. Act Early](http://www.cdc.gov/ncbddd/actearly/index.html)(<http://www.cdc.gov/ncbddd/actearly/index.html>)," a campaign designed by CDC and a coalition of partners to teach parents, health care professionals, and child care providers about early childhood development, including possible "red flags" for autism spectrum disorders.

Diagnosis and Screening

Diagnosing autism spectrum disorder (ASD) can be difficult, since there is no medical test, like a blood test, to diagnose the disorders. Doctors look at the child's behavior and development to make a diagnosis.

ASD can sometimes be detected at 18 months or younger. By age 2, a diagnosis by an experienced professional can be considered very reliable. However, many children do not receive a final diagnosis until much older. This delay means that children with an ASD might not get the help they need.

Diagnosing an ASD takes two steps:

- Developmental Screening
- Comprehensive Diagnostic Evaluation

Developmental screening is a short test to tell if children are learning basic skills when they should, or if they might have delays. During developmental screening the doctor might ask the

parent some questions or talk and play with the child during an exam to see how she learns, speaks, behaves, and moves. A delay in any of these areas could be a sign of a problem.

The second step of diagnosis is a comprehensive evaluation. This thorough review may include looking at the child's behavior and development and interviewing the parents. It may also include a hearing and vision screening, genetic testing, neurological testing, and other medical testing.

In some cases, the primary care doctor might choose to refer the child and family to a specialist for further assessment and diagnosis. Specialists who can do this type of evaluation include:

- Developmental Pediatricians (doctors who have special training in child development and children with special needs)
- Child Neurologists (doctors who work on the brain, spine, and nerves)
- Child Psychologists or Psychiatrists (doctors who know about the human mind)

Treatment

There are no medications that can cure ASD or treat the core symptoms. However, there are medications that can help some people with ASD function better. For example, medication might help manage high energy levels, inability to focus, depression, or seizures.

Medications might not affect all children in the same way. It is important to work with a health care professional who has experience in treating children with ASD. Parents and health care professionals must closely monitor a child's progress and reactions while he or she is taking a medication to be sure that any negative side effects of the treatment do not outweigh the benefits.

It is also 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 treatment plan.

Often it is hard to tell if a child's behavior is related to the ASD or is caused by a separate health condition. For instance, head banging could be a symptom of the ASD, or it could be a sign that the child is having headaches. In those cases, a thorough physical exam is needed. Monitoring healthy development means not only paying attention to symptoms related to ASD, but also to the child's physical and mental health, as well.

Early Intervention Services

Research shows that early intervention treatment services can greatly improve a child's development.¹ Early intervention services help children from birth to 3 years old (36 months) learn important skills. Services include therapy to help the child talk, walk, and interact with others. Therefore, it is important to talk to your child's doctor as soon as possible if you think your child has an ASD or other developmental problem.

Even if your child has not been diagnosed with an ASD, he or she may be eligible for early intervention treatment services. The [Individuals with Disabilities Education Act \(IDEA\)](#) says that children under the age of 3 years (36 months) who are at risk of having developmental delays may be eligible for services. These services are provided through an early intervention system in your state. Through this system, you can ask for an evaluation.

In addition, treatment for particular symptoms, such as speech therapy for language delays, often does not need to wait for a formal ASD diagnosis. While early intervention is extremely important, intervention at any age can be helpful.

Treatment

The different types of treatments can generally be broken down into the following categories:

- Behavior and Communication Approaches
- Dietary Approaches
- Medication
- Complementary and Alternative Medicine

Behavior and Communication Approaches:

Applied Behavior Analysis (ABA)

- A notable treatment approach for people with an ASD is called applied behavior analysis (ABA). ABA has become widely accepted among health care professionals and used in many schools and treatment clinics. ABA encourages positive behaviors and discourages negative behaviors in order to improve a variety of skills. The child's progress is tracked and measured.

- **Developmental, Individual Differences, Relationship-Based Approach (DIR; also called "Floortime")**

Floortime focuses on emotional and relational development (feelings, relationships with caregivers). It also focuses on how the child deals with sights, sounds, and smells.

- **Treatment and Education of Autistic and related Communication-handicapped Children (TEACCH)**

TEACCH uses visual cues to teach skills. For example, picture cards can help teach a child how to get dressed by breaking information down into small steps.

- **Occupational Therapy**

Occupational therapy teaches skills that help the person live as independently as possible. Skills might include dressing, eating, bathing, and relating to people.

- **Sensory Integration Therapy**

Sensory integration therapy helps the person deal with sensory information, like sights, sounds, and smells. Sensory integration therapy could help a child who is bothered by certain sounds or does not like to be touched.

- **Speech Therapy**

Speech therapy helps to improve the person's communication skills. Some people are able to learn verbal communication skills. For others, using gestures or picture boards is more realistic.

- **The Picture Exchange Communication System (PECS)**

PECS uses picture symbols to teach communication skills. The person is taught to use picture symbols to ask and answer questions and have a conversation.

Dietary Approaches

Some dietary treatments have been developed by reliable therapists. But many of these treatments do not have the scientific support needed for widespread recommendation. An unproven treatment might help one child, but may not help another.

Many biomedical interventions call for changes in diet. Such changes include removing certain types of foods from a child's diet and using vitamin or mineral supplements. Dietary treatments are based on the idea that food allergies or lack of vitamins and minerals cause symptoms of ASD. Some parents feel that dietary changes make a difference in how their child acts or feels.

If you are thinking about changing your child's diet, talk to the doctor first. Or talk with a nutritionist to be sure your child is getting important vitamins and minerals.

Medication

There are no medications that can cure ASD or even treat the main symptoms. But there are medications that can help some people with related symptoms. For example, medication might help manage high energy levels, inability to focus, depression, or seizures.

Complementary and Alternative Treatments

To relieve the symptoms of ASD, some parents and health care professionals use treatments that are outside of what is typically recommended by the pediatrician/other health care professional. These types of treatments are known as complementary and alternative treatments (CAM). They might include special diets, chelation (a treatment to remove heavy metals like lead from the body), biologicals or body-based systems (like deep pressure).

These types of treatments are very controversial. Current research shows that as many as one third of parents of children with an ASD may have tried complementary or alternative medicine treatments, and up to 10% may be using a potentially dangerous treatment.^[4] Before starting such a treatment, check it out carefully, and talk to your child's doctor.

Excerpts from the CDC website: <http://www.cdc.org>