

## Autism Spectrum Disorders

### What are autism spectrum disorders?

Autism spectrum disorders (ASDs) are a group of developmental disabilities caused by a problem with the brain. Children with ASDs have trouble in 3 core areas of their development.

- Language difficulties, especially no apparent desire to communicate
- Social interactions
- Restricted interests or behaviors that are repeated over and over again (known as *stereotyped* behaviors)

### How common are they?

- Recent statistics estimate that as many as 1 in 150 children may be diagnosed with an ASD.
- Approximately 24,000 children are diagnosed with an ASD each year, with an estimate of 500,000 children aged 0 to 21 years with an ASD.
- Autism spectrum disorders occur more frequently in boys than girls.

### What are some characteristics of children with autism spectrum disorders?

- Children with an ASD often look similar to other children, but they may communicate, interact, behave, and learn in ways that are different.
- These children may have problems with social, emotional, and communication skills.
- Children with an ASD might
  - ~ Avoid eye contact.
  - ~ Fail to respond to their names when called.
  - ~ Fail to look in the direction of interesting objects pointed out to them and not point themselves (this is called a *joint-attention deficit*).
  - ~ Move away from others or may not interact with them.
  - ~ Echo words or phrases in place of normal language (this is called *echolalia*).
  - ~ Repeat actions such as rocking, hand flapping, or handling an object in the same way over and over again.
  - ~ Regress in their development or lose skills they once had, such as language.
  - ~ Have difficulty communicating and expressing their own needs.
  - ~ Become upset when things change or when it is time to transition to a new activity.
  - ~ Have unusual reactions to sensory stimuli (eg, smells, tastes, sounds, touches). This can range from trying to block out the stimulus to not responding to pain or something that others find scary or dangerous.

- Prior to diagnosis, parents/guardians and caregivers/teachers may observe signs of an ASD. These children may
  - ~ Play with toys in an inappropriate manner (eg, lining cars up instead of driving them around).
  - ~ Not have an appropriate gaze.
  - ~ Lack warm, joyful expressions with gaze.
  - ~ Lack the alternating to-and-fro pattern of vocalizations between infant and parent that usually occurs at approximately 6 months of age (ie, infants with ASDs usually continue vocalizing without regard for the parent/guardian's speech).
  - ~ Not recognize their parent/guardian's or caregiver/teacher's voice.
  - ~ Have disregard for vocalizations (eg, lack of response to name), yet keen awareness for environmental sounds.
  - ~ Have delayed onset of babbling past 9 months of age.
  - ~ Have decreased or absent use of pre-speech gestures (eg, waving, pointing, showing).
  - ~ Lack expressions such as "Oh oh" or "Huh."
  - ~ Not demonstrate interest or response of any kind to neutral statements (eg, "Oh no, it's raining again!")

### Who is the treatment team?

The treatment team for children with ASDs can include a primary care provider in the medical home, a developmental pediatrician, a pediatric neurologist, a child psychiatrist, a child psychologist, and speech and occupational therapists.

### What are some elements of a Care Plan for autism spectrum disorders?

- The main research-based treatment for ASDs is intensive structured teaching of skills, often called *behavioral intervention*. There are many different interventions, including those taught to the child's parents, that are useful.
- *Speech therapy* is often a part of the Care Plan of a child with an ASD because speech is often delayed. Children with an ASD need to learn how to communicate using language and nonverbal skills. Speech therapists address deficits in joint attention as a first step in teaching oral language. They may also use picture exchange boards, signing, or typing as a bridge to oral communication with these children.
- *Occupational therapy* may help children learn self-help and manipulative skills as well as how to accept and respond more typically to sounds, smells, and touch.

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- Children who are younger than 3 years may receive their therapies through *early intervention* services. Early intervention is a system of services to support infants and toddlers with disabilities and their families.
- Children 3 years or older may receive *special education and related services* through the public schools. The behavioral intervention is designed to help children with ASDs succeed in school.

### What adaptations may be needed?

#### Medications

- Medications may be used to help a child with an ASD control anxiety, obsessions, hyperactivity, or aggression.
- Talk to the child's parents about any medications that the child might be taking and what side effects might occur with those medications. See Chapter 6 for more information about medication administration.

#### Dietary considerations

- There are many nonproven dietary treatments for ASDs that may not be directed by the child's treatment team.
- Families of children with ASDs may use gluten- and casein-free diets, medication to treat yeast, and vitamins, although there is no medical evidence to support their use and some may be dangerous.
- Programs should develop and discuss with families their policies about implementing special instructions that are not part of a medically recommended Care Plan. In general, any such instructions that a program is inclined to include for a child should be reviewed with the child's health care professional to be sure they do not pose risks of injury or illness for the child or staff.

#### Physical environment

Classroom placement and teacher selection—choosing a supportive classroom environment is very important. The caregiver/teacher, other children in the group, and room layout should be selected so that everyone can have their own needs met.

- Structure helps the child with an ASD understand his surroundings and what is expected of him. Structure is a form of behavioral management that helps children with ASDs be calmer, less agitated, and more successful with learning. Some helpful structure tools can be
  - ~ Classroom organization and arrangement
  - ~ Individual daily schedules

- ~ Individual work systems
- ~ Visual charts
- In addition, it is important to know that children with an ASD
  - ~ Can and do form emotional attachments, although there is an impairment in these relationships.
  - ~ Have characteristics and behaviors that often improve as a result of intervention, but do not outgrow and are not cured of an ASD.
  - ~ Have uneven learning and cognitive skills.
  - ~ May have some degree of intellectual disability (about 50% have an intellectual disability).
  - ~ Often have difficulty with understanding instructions and can develop confusion and anxiety, resulting in a behavioral outburst that is misinterpreted as noncompliance.
  - ~ Come from families of all races and socioeconomic backgrounds.
  - ~ Often will require varying levels of support to maintain a home and job as they become adults.

### What should be considered an emergency?

There are no special medical emergencies to which children with ASDs are prone, but they may need extra time and supervision in the event of a programmatic emergency such as a fire. This should be taken into consideration in emergency planning.

### What are some resources?

- American Academy of Pediatrics, [www.aap.org/healthtopics/autism.cfm](http://www.aap.org/healthtopics/autism.cfm)
- *Caring for Children With Autism Spectrum Disorders: A Resource Toolkit for Clinicians*, American Academy of Pediatrics, [www.aap.org/bookstore](http://www.aap.org/bookstore), 888/227-1770
- Autism Society of America, 7910 Woodmont Ave, Suite 300, Bethesda, MD 20814-3067, 800/3AUTISM (328-8476), [www.autism-society.org](http://www.autism-society.org)
- National Dissemination Center for Children with Disabilities, 800/695-0285 (voice/TTY), [www.nichcy.org](http://www.nichcy.org)
- Autism Spectrum Disorders Fact Sheet, Centers for Disease Control and Prevention, 800/CDC-INFO (232-4636), [www.cdc.gov/actearly](http://www.cdc.gov/actearly)
- Autism Speaks, [www.autismspeaks.org](http://www.autismspeaks.org)
- First Signs, Inc, [www.firstsigns.org](http://www.firstsigns.org)

