

SPECIAL NEEDS

Autism Spectrum Disorders: Primer for Parents and Educators



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Autism Spectrum Disorders refer to a complex group of related disorders marked by impaired communication and socialization and by a limited (and often unusual) range of interests. Although sometimes not diagnosed until school age, Autism Spectrum Disorders develop early in life and are life-long conditions with implications for education, social development, and community adjustment.

Autism became an eligibility category for special education services in 1991. Since that time an enormous amount of research has been conducted regarding identification and effective interventions for children with Autism Spectrum Disorders. The good news is that information learned over the years has resulted in a broader definition of autism and many strategies for parents and educators to use in supporting the development of these children, starting in early childhood.

However, distinguishing misinformation from accurate information can be a daunting task. It is critical that parents and educators understand this complex disorder. Teachers and parents working together will help children achieve positive outcomes. 

Basic Facts

Diagnosis. Autism Spectrum Disorders are diagnoses based on behaviors and not on medical tests. In order to accurately diagnose Autism Spectrum Disorders, the child should have a comprehensive evaluation by professionals who can address development of language, behavioral, social, and cognitive skills in young children. Atypical development must be identified in socialization and communication, and the child must display narrow interests or repetitive behaviors.

Autism Spectrum Disorders affect children differently, and two children can meet different combinations of the diagnostic criteria. Autism, the typical Autism Spectrum Disorder, often occurs with other disorders such as cognitive impairment, fragile X syndrome, Down syndrome, and tuberous sclerosis.

The cause of Autism Spectrum Disorders is unknown and most likely results from many factors, such as a combination of heredity, environment, and brain functioning. Autism Spectrum Disorders are *not* the result of parenting style but, rather, are the results of changes in brain development that may occur before birth or shortly thereafter.

Characteristics. Autistic Disorder, Asperger's Disorder, and Pervasive Developmental Disorder Not Otherwise Specified (PDD-NOS) are considered Autism Spectrum Disorders. The degree to which different characteristics affect a child depends on the level of severity of impairments:

- Children with *autism* have problems in three core areas: socialization, communication, and restricted patterns of behaviors and interests.

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The National Mental Health & Education Center for Children & Families

As one of many NASP public service programs, the Center fosters best practices in education and mental health by providing information on topics affecting today's youth, families, and schools. The Center's goal is to improve outcomes for children and youth by helping parents, teachers, and other related professionals work more effectively together to promote healthy learning and development. The Center offers free or low cost resources, programs, and services that promote effective strategies, greater collaboration, and improved outcomes on a wide range of psychological, social/emotional, and academic issues. Resources can be downloaded or ordered from the Center website or ordered directly from the Center.

For materials or further information contact the Center by phone at (301) 657-0270; by e-mail at center@naspweb.org; or on the web at www.naspcenter.org.

Basic Facts

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- Children with *Asperger's* have problems in two areas: socialization and restricted patterns of interests.
- Children with *PDD-NOS* have problems in socialization and one of the two other areas: communication or restricted patterns of behaviors and interests.

General characteristics of children with Autism Spectrum Disorders include:

- *Cognitive*: Uneven development of cognitive skills; relative strength in processing visual versus verbal information.
- *Social skills*: Difficulty understanding social rules such as taking turns and sharing; problems understanding and reading the emotions of others; difficulty taking the perspective of other people; problems initiating and maintaining interactions and conversations with other people.
- *Communication*: Trouble responding to verbal information presented at a fast pace; trouble understanding multiple-step commands; inconsistent understanding of verbal information; a need for verbal information to be repeated, especially information that is new.
- *Organization/self-direction*: Difficulty screening out distractions; difficulty completing activities independently and initiating work activities; problems organizing free time and stopping one activity and moving on to the next; difficulty being flexible, shifting attention to a new focus; problems doing more than one thing at a time.

Prevalence. Autism is not rare and affects as many as 1 out of 500 children. When considered with the related disorders (Asperger's Disorder and PDD-NOS), as many as 1 out of 160 children are affected. Autism is a lifelong disability with no known cure. Although a small number may make significant improvements, relative weaknesses in social and communication skills remain.

Intervention approaches. Children with Autism Spectrum Disorders respond to specialized interventions. The use of environmental supports and adaptations are necessary for effective intervention. The main treatments for autism are educational and behavioral approaches. Other treatment approaches such as medication and alternative methods may be used in combination with these approaches. Parents and teachers can be effective in promoting their child's social and communication skills. Therapies or programs that include a parent training component are better than those that do not. 🧠

Education: First Line of Intervention

Collaboration. Because the first line of intervention for children with Autism Spectrum Disorders is educational and behavioral, developing collaborative and positive family-school partnerships is essential. Early diagnosis is important because it will help parents in gaining an understanding of their child and their child's specific needs early in his or her development. Parents who are empowered with knowledge will be the best advocates for their child. By working collaboratively and sharing information with each other and with other school and community professionals, parents and teachers can develop strong educational programs for children with Autism Spectrum Disorders. Close communication (such as a daily log) between teachers and parents will ensure consistency across the child's program and facilitate school and parent relationships.

Special education. Public schools must provide services for all children with disabilities beginning in early childhood (age 3 or earlier as defined by state regulations). The school district's special education team will provide



evaluations to identify disabilities and then provide any services necessary for children with disabilities to benefit from the school program. For young children, these services might include speech and other therapies and preschool programs to encourage socialization and the development of readiness skills. By elementary school, students with autism often receive more specialized services.

As for all children with disabilities, Individual Education Programs (IEPs) for students with autism should be comprehensive and include environmental supports and related services (see below). Previous teachers, parents, and other providers will give the best information on strategies that have been effective. Utilizing environmental supports, information from previous teachers, and related services (speech and language therapy, occupational therapy, psychological services) will facilitate consistency in the child's program, and collaboration between regular education and special education personnel.

The local school's special education team is the best source for more information about evaluations and services for children with or who are suspected to have autism and related disorders.

Effective program components. In 2001, the National Research Council convened a group of researchers who were to summarize the components of effective interventions for children with autism. Become familiar with this report. (The report is available on the Internet; see "Resources.") The National Research Council recommendations for children 8 years and younger include:

- Immediate enrollment into intervention programs after the diagnosis.
- Active participation in intensive programming for a minimum of 25 hours a week, equivalent to a full school day for 5 days a week, with full-year programming based on child's age and developmental level.
- Planned and repeated teaching opportunities in various settings, with sufficient attention from adults and based on the child's development and individual needs.
- At least one adult for two young children with autism.
- Provision of family activities and parent training.
- Ongoing assessment and evaluation to measure progress and make adjustments. 

Effective Intervention Strategies

Different teaching approaches have been found effective for children with autism, and no comparative research has been conducted that demonstrates one approach is better than another. The selection of a specific approach should be based on goals that come from a comprehensive assessment. Parents and teachers need to be aware that not all children respond the same way to the same treatment, and children have individual learning styles, strengths, and challenges.

The selection of an intervention strategy should be based on an individualized assessment of needs, a clear description of goals, a selection of strategies based on the goal, and ongoing monitoring of progress. For a given student it may be appropriate to apply different teaching methods for different skills, independently or simultaneously (discrete trial, incidental teaching, and structured teaching).

APPLIED BEHAVIOR ANALYSIS

Recently a great deal of attention has been given to applied behavioral analysis. Applied behavioral analysis involves utilizing systematic instructional methods to change behavior in measurable ways, with the intent of increasing acceptable behaviors, decreasing problematic behaviors, and teaching new skills. Parents and professionals use the term *applied behavioral analysis* in different ways. It may be used to describe highly structured, adult-directed strategies, such as Lovaas training or discrete trial training. Other systematic strategies include incidental teaching, structured teaching, pivotal response training, functional communication training, and the picture exchange communication system (PECS). A good resource for information about various forms of applied behavioral analysis can be found in the National Research Council's summary.

INTERVENTIONS FOR COMMUNICATION, SOCIALIZATION, AND SELF-DIRECTION

Specific attention to social and communication goals is necessary in designing an educational program. Limited communication skills create frustration in children with autism and interfere with nearly all areas of development. As functional means of communication develop, other skill areas will be affected. For example, communication skills help children make and maintain friendships. Providing planned activities with typically developing peers



helps children with autism improve social and communicative skills and should be a key component of the Individualized Education Program (IEP). Other recommended components of an IEP include supports for organization or self-directed skills.

What follows are some examples of social, communication, and self-direction goals:

- Jason will develop a means of initiating three requests a day across people and environments, using pictures, signs, vocalizations, or verbalizations.
- Sarah will respond to her name by ceasing her activity and turning toward the speaker 50% of the time.
- Tony will utilize the PECS/Augmentative Communication System to initiate requests 20 times during his day.
- Maria will play in proximity (3 feet) to two peers for up to 5 minutes.
- Joey will independently complete one task until it is finished using visual cues and a work-reward routine.

ENVIRONMENTAL SUPPORTS

Environmental supports are the teaching strategies, modifications, and adaptations used to help each child be successful. Based on Dalrymple (1995), these include:

- *Temporal*: Organize sequences of time and answers the question: When do things happen?
- *Spatial*: Provide specific information about the organization of the environment and answers the question: Where do things happen?
- *Procedural*: Clarify the relationship of the steps of an activity and between objects and people and answers the question: What is to happen?
- *Assertion*: Help with initiation and exertion of control.

What follows provides descriptions of environmental supports that are associated with observed characteristics.

- *Cognitive*: Provide procedural supports to enhance understanding and problem solving.

- *Social*: Provide direct social skills instruction, peer-mediated instruction, and teacher-mediated instruction.
- *Communication*: Provide temporal, spatial, and procedural supports to enhance learning and new skill development; allow time for processing information, slow down pace of information; give instructions one at a time, backup directions with visual supports; provide supports on consistent basis.
- *Organization/self-direction*. Provide assertion, temporal, spatial, and procedural supports (schedule, task analysis) to help remind the student of the task and steps; intersperse less desired activities with more desired activities; reduce distractions; clarify how much work must be completed until the child is finished and the picture of reward/break for finishing; provide visuals to convey choices and passage of time; use visual schedule to indicate changes in activities or routines; allow processing time; back up verbalizations with visual aids.

INTERVENTIONS FOR ENGAGEMENT

Active engagement is another key ingredient in effective intervention for children with autism. The National Research Council defines engagement as “sustained attention to an activity or person” (National Research Council, 2001, p. 160). Because children with Autism Spectrum Disorders tend to display limited or idiosyncratic interactions with objects and people, it is important that parents and teachers adapt activities and materials to encourage more appropriate involvement. This might include directly teaching how to use toys and objects, introducing appropriate activities to replace inappropriate behaviors, developing visual cues (such as hand signals or pictures) to reduce verbal and physical prompting, and finding ways to make tasks more meaningful and motivating.



Effective Intervention Strategies

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MEDICATION

Prescription medications are considered to be *adjunctive therapy* because these medications do not address the core symptoms of autism but may address behaviors that interfere with learning. Problems like overactivity, aggression, repetitive or compulsive behaviors, self-injury, anxiety or depression, inattention, and sleep problems may be effectively addressed with medication.

It is important that parents and school personnel work with healthcare providers who understand autism and provide feedback to help monitor side-effects. Medication is not appropriate for all children with autism, and, in some cases, concern about side-effects might outweigh anticipated benefits.

BEHAVIOR MANAGEMENT

Many parents and teachers experience frustration in trying to understand and respond to the behavior of a child with autism. They find that discipline strategies that work for other children do not work for this child. Time-out, punishment, and taking away preferred items do not appear to have the same impact. It may be necessary to consult with a specialist in autism and behavior when confronted with challenging behaviors.

The specialist can work with parents in identifying the underlying causes of behavior, skills that the child needs to learn to replace the problem behavior, strategies to assist the child in developing the skills, and ways to respond when problem behavior occurs.

This process is called a Functional Behavior Analysis (FBA), and school behavior specialists (school psychologist, behavior analyst, special education teacher) can assist in providing this assessment. If a child is experiencing problem behaviors that interfere with learning, it is necessary for the child to have an FBA and a *positive behavior support plan* as part of the IEP. 

Summary

Parents and teachers today have many resources available to address the needs of children who have Autism Spectrum Disorders. At times, so much information may

seem overwhelming, and learning how to sort out the well-tested options from fads is often necessary. Resources such as specialists in autism and parent support groups are often available at a district, state, or regional level. By working together and accessing these resources, parents and teachers can effectively promote optimal learning and adjustment for children with Autism Spectrum Disorders. 

Resources

- Attwood, T. (1998). *Asperger's Syndrome: A guide for parents and professionals*. London: Jessica Kingsley. ISBN: 1853025771.
- Bondy, A. S. & Frost, L. A. (1992). *The Picture Exchange Communication System: A parent/staff handout*. Newark, DE: Pyramid Educational Consultants. Available: www.pyramidproducts.com
- Dalrymple, N. (1995). Environmental supports to develop flexibility and independence. In K. Quill (Ed.), *Teaching children with autism* (pp. 243–264). New York: Singular. ISBN: 0827362692.
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Resources

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- Schreibman, L. (2000). Intensive behavioral/psychoeducational treatments for autism: Research needs and future directions. *Journal of Autism and Developmental Disorders*, 30, 373–378.
- Treatment and Education of Autistic and Related Communication Handicapped Children (TEACCH) (1996). *Visually structured tasks: Independent activities for students with autism and other visual learners*. Chapel Hill, NC: University of North Carolina, Division TEACCH. Available: www.autismsociety-nc.org

WEBSITES

- Autism Resources—www.autism-resources.com
 Autism Society of America—www.autism-society.org
 TEACCH—www.autismsociety-nc.org

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The National Association of School Psychologists (NASP) offers a wide variety of free or low cost online resources to parents, teachers, and others working with children and youth through the NASP website www.nasponline.org and the NASP Center for Children & Families website www.naspcenter.org. Or use the direct links below to access information that can help you improve outcomes for the children and youth in your care.

About School Psychology—Downloadable brochures, FAQs, and facts about training, practice, and career choices for the profession.
www.nasponline.org/about_nasp/spsych.html

Crisis Resources—Handouts, fact sheets, and links regarding crisis prevention/intervention, coping with trauma, suicide prevention, and school safety.
www.nasponline.org/crisisresources

Culturally Competent Practice—Materials and resources promoting culturally competent assessment and intervention, minority recruitment, and issues related to cultural diversity and tolerance.
www.nasponline.org/culturalcompetence

En Español—Parent handouts and materials translated into Spanish. www.naspcenter.org/espanol/

IDEA Information—Information, resources, and advocacy tools regarding IDEA policy and practical implementation.
www.nasponline.org/advocacy/IDEAinformation.html

Information for Educators—Handouts, articles, and other resources on a variety of topics.
www.naspcenter.org/teachers/teachers.html

Information for Parents—Handouts and other resources a variety of topics.
www.naspcenter.org/parents/parents.html

Links to State Associations—Easy access to state association websites.
www.nasponline.org/information/links_state_orgs.html

NASP Books & Publications Store—Review tables of contents and chapters of NASP bestsellers.
www.nasponline.org/bestsellers
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Position Papers—Official NASP policy positions on key issues.
www.nasponline.org/information/position_paper.html

Success in School/Skills for Life—Parent handouts that can be posted on your school's website.
www.naspcenter.org/resourcekit