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Autism Spectrum Disorders: Intervention Options for Parents and Educators

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A diagnosis of autism or autism spectrum disorders (ASD) presents significant challenges to parents. When they first learn that their child has autism, their first questions usually are: What do we do next? Where can we get help? How do we make choices about intervention? Parents may be overwhelmed by the intervention options available, as well as frustrated by difficulties accessing specialized services.

Learning about a child's diagnosis sets parents and caregivers in a direction they did not expect to take. The good news is that we now have the research to show that children with ASD benefit from specialized interventions, including the use of environmental supports, modifications, and adaptations, as well as from programs that train parents and teachers to promote social and communication skills. Primary interventions for children with ASD include educational and behavioral approaches. Other approaches such as medication may be used effectively in combination with these methods. Many parents and caregivers also seek alternative or complementary approaches. In these cases, it is important for caregivers to understand the benefits as well as the potential risks of unproven methods.

This handout provides parents and educators with an overview of the options for supporting children with ASD and information to enhance collaboration between home and school. When parents and educators work together, children with ASD are assured the best possible outcomes. (For a general overview of ASD and diagnosis, see Ruble & Akshoomoff, 2010).

EDUCATION INTERVENTIONS

Effective educational interventions for children with ASD include collaboration among family, school, and community resources and special education services. Successful educational programs emphasize the importance of individualizing interventions for each child with ASD. More specific interventions include environmental supports and interventions targeting engagement and communication, social, and self-direction skills.

Collaboration

Because the primary interventions for children with ASD are educational and behavioral, collaborative and positive relationships between parents and teachers are essential. Educators who help empower parents with knowledge are preparing parents to be the best advocates for their child and better able to work as partners for developing a strong educational program. A team that shares information about the child's progress, successful interventions, findings from current assessments, and descriptions of current needs will also facilitate a strong educational program. Teachers and parents who share information regularly will help ensure consistency across the child's program. Communicating about progress through a daily log is suggested. Additionally, educators need to keep in mind that families of children with ASD may experience significant levels of stress. They should seek to understand parents' feelings and listen carefully to their concerns.

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). *Autism* is a disability category under special education regulations (IDEA 2004), while the diagnoses of Asperger syndrome and pervasive developmental disorder not otherwise specified (PDD-NOS) are not. Some states allow these students to receive services using the

autism eligibility category or a different category such as speech-language impaired or other health impaired. Young children (usually under age 9, depending on state regulations) might also be served under a noncategorical early childhood disability umbrella.

For young children, special education services might include speech and language as well as other therapies, and preschool programs to encourage socialization and the development of readiness skills. For older children and adolescents, services might include academic support, social skills training, and vocational skill development. As for all children with disabilities, Individualized Education Programs (IEPs) for students with autism should be comprehensive and include environmental supports and related services. Utilizing environmental supports, along with information from previous teachers and related service providers (e.g., 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.

Effective Program Components

In 2001, the National Research Council (NRC) convened a group of researchers to identify effective interventions for children with autism. This resulted in a comprehensive document that is recommended as a key resource to school personnel and is available on the Internet (see References). The NRC recommendations for children 8 years and younger include:

- Immediate enrollment into intervention programs after the diagnosis is made
- Active participation in intensive programming for a minimum of 25 hours per week, equivalent to a full school day for 5 days per 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 based on the child's development and individual needs
- At least 1 adult for every 2 young children with autism in the classroom
- Family activities and parent training
- Ongoing assessment and evaluation to measure progress and make adjustments as needed

Individualizing Intervention

Many different teaching approaches have been found effective for children with ASD. No comparative research has been conducted that demonstrates that one approach is better than another. Teachers need to be aware that not all children respond the same way to the same approach, 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 objectives, a selection of strategies based on the objective, and ongoing monitoring of progress. For a given child, it may be appropriate to apply different teaching methods for different skills, independently or simultaneously (e.g., discrete trial, incidental teaching, and structured teaching).

Environmental Supports

Environmental supports are the teaching strategies, modifications, and adaptations used to help each child be successful. These include:

- *Temporal*: organizes sequences of time, answers "When do things happen?"
- *Spatial*: provides specific information about the organization of the environment, answers "Where do things happen?"
- *Procedural*: clarifies the relationship of the steps of an activity and between objects and people, answers "What is to happen?"
- *Assertion*: helps with initiation and exertion of control

The following are descriptions of environmental supports 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, and slow down pace of information; give instructions one at a time and back up directions with visual supports; provide supports on a consistent basis; collaborate with speech pathologist to teach functional communication across all environments.

Organization/self-direction. Provide environmental supports to help remind student of the task and steps (e.g., schedule, task analysis); intersperse less desired activities with more desired activities; reduce distractions; clarify how much work must be completed until the child is finished, and provide a 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 and back up verbalizations with visuals.

Interventions for Engagement

Active engagement is another key ingredient in effective intervention for children with ASD. The National Research Council (NRC; 2001) defines engagement as "sustained attention to an activity or person" (p. 160). Because children with ASD tend to display limited or unusual 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.

Interventions for Communication, Socialization, and Self-Direction

Specific attention to social and communication goals is necessary in designing an educational program. Limited communication and social skills and problems processing and screening out sensory input can create frustration for children with ASD and interfere with classroom engagement. As functional means of communication and social skills develop, other skill areas will be affected. For example, communication skills help children initiate and maintain social interactions. Providing planned activities with typically developing peers helps children with ASD improve social and communicative skills and should be a key component of the IEP. Other recommended components of an IEP include supports for organization or self-directed skills.

Some examples of social, communication, and self-direction goals include:

- Jason will develop a means of initiating three requests per 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 Picture Exchange Communication System/Augmentative Communication System to initiate requests 20 times during his day.
- Maria will play in proximity (three 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.

BEHAVIORAL INTERVENTION

Behavioral interventions include behavior management strategies and applied behavior analysis.

Behavior Management

Many parents and teachers experience frustration about understanding and responding to the behavior of a child with ASD. They find that discipline strategies that work for other children do not work for a child with ASD. Time-out, verbal reprimands, and taking away preferred items do not appear to have the same impact. When confronted with challenging behaviors, it is often necessary to consult with a specialist in ASD and behavior. The specialist can work with parents and teachers to conduct a functional behavior assessment (FBA). An FBA helps identify (a) the underlying causes of behavior, (b) the skills that the child needs to learn to replace the problem behavior, (c) strategies to help the child develop the skills, and (d) ways to respond when problem behaviors occur. If a child is experiencing problem behaviors that interfere with educational and community participation, it is necessary for the child to have an FBA and a positive behavior intervention plan (BIP) as part of the IEP. For some children, applied behavior analysis (ABA) strategies might be recommended following an FBA.

Applied Behavior Analysis

Applied behavioral analysis (ABA) involves the use of 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 ABA in different ways. It may be used to describe highly structured, adult-directed strategies like those developed by Dr. O. Ivaar Lovaas, or discrete trial training (DTT). Other systematic strategies such as incidental teaching, structured teaching, pivotal response training (PRT), functional communication training, and the Picture Exchange Communication System (PECS; Bondy & Frost, 1992) are also effective. A good resource for information about these specialized interventions can be found in the NRC's summary (see Recommended Resources).

MEDICATION

Medications are considered to be adjunctive therapy for children with ASD because they do not address the core symptoms, but may address behaviors that interfere with learning. Problems like hyperactivity, aggression, repetitive or compulsive behaviors, self-injury, anxiety or depression, inattention, and sleep problems may be responsive to pharmacological treatments. Alleviation of these problems can improve the child's response to behavioral and educational interventions. It is important for educators to work with parents and their healthcare providers and assist in providing feedback about the effectiveness of the medication and possible side effects. Medication is not appropriate for all children with ASD.

In some cases, concerns about side effects might outweigh anticipated benefits.

SUMMARY

Parents and educators today have many resources available to them to support children with ASD. At times, so much information may seem overwhelming. Resources such as specialists in autism are often available at a district, state, or regional level. Having access to these specialists is necessary for consultation and ongoing support.

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RECOMMENDED RESOURCES

Print

Attwood, T. (1998). *The complete guide to Asperger's syndrome.* London: Jessica Kingsley.

Hall, L. J. (2008). *Autism spectrum disorders: From theory to practice.* Upper Saddle River, NJ: Merrill.

Ozonoff, S., Sawson, G., & McPartland, J. (2002). *A parent's guide to Asperger syndrome and high-functioning autism.* New York: Guilford Press.

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Selected Resources on Environmental Supports

Dalrymple, N. (1995). Environmental supports to develop flexibility and independence. In K. A. Quill (Ed.), *Teaching children with autism* (pp. 243-264). New York: Singular.

Groden, J., & LeVasseur, P. (1995). Cognitive picture rehearsal: A system to teach self-control. In K. A. Quill (Ed.), *Teaching children with autism* (pp. 287-306). New York: Singular.

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Hodgdon, L. A. (1995). *Visual strategies for improving communication: Practical supports for school and home.* Troy, MI: QuirkRoberts Publishing. Available: http://www.futurehorizons-autism.com

Online

Autism Resources: http://www.autism-resources.com

Autism Society of America: http://www.autism-society.org

Autism Speaks, *Treating autism*: http://www.autismspeaks.org/treatment/index.php

Treatment and Education of Autistic and Related Communication Handicapped Children (TEACCH), University of North Carolina, *TEACCH materials*: http://www.teacch.com/materials.html

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