



Beginning Communication Home Program (Mild Symptoms)

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Autism—the Basics

By Julie A. Daymut, M.A., CCC-SLP

Autism is a developmental disorder. It impairs an individual's ability to interact socially, communicate clearly and effectively, and behave appropriately. Autism is one of five disorders in a group known as autism spectrum disorders or pervasive development disorders. The *Diagnostic and Statistical Manual of Mental Disorders Fourth Edition* lists several factors that can lead to a diagnosis of autism.

Social Interaction

Impairments can include:

- difficulty using nonverbal behaviors such as eye-gaze, facial expressions, body postures, and gestures.
- difficulty forming peer relationships.
- difficulty seeking out others for the purpose of sharing enjoyment, interests, or achievements.
- difficulty with the “back-and-forth” nature of relationships for social or emotional purposes.

Communication

Impairments can include:

- delay or lack of development of spoken language.
- difficulty starting or maintaining a conversation.
- using stereotyped (“repetitive, often seemingly driven, and nonfunctional,”) or idiosyncratic (odd or peculiar) language.
- lacking variety and spontaneity in make-believe play or social imitative play.

Behavior

Impairments can include:

- being preoccupied with an interest—intensity or focus is abnormal.
- being inflexible and sticking to specific routines or rituals that may not be “purposeful.”
- using stereotyped or repetitive motor movements such as hand or finger flapping or twisting or whole body movements.
- preoccupation with parts of objects. (1994, p. 75)

Autism affects individuals of all races and ethnicities. It affects boys three to four times more often than girls. Autism seems to run in families, indicating a possible genetic link to the disorder. This disorder occurs in about one out of every 150 births (Autism Society of America, 2008, 2). Symptoms of autism are often noticeable before age three. There is no known cure for autism. It continues throughout an individual's life. Autism occurs all over the world. It occurs in any socioeconomic background. There is no known cause of autism. Many specialists believe autism is a brain disorder. It is best to begin treatment of symptoms of autism early in an individual's life. Different specialists, such as a physician, speech-language pathologist, occupational therapist, physical therapist, or psychologist, can be part of the evaluation process for a diagnosis of autism. These individuals, along with parents/caregivers, can work together to help develop and implement intervention plans. Goals and objectives for interventions are to improve social interaction, communication, and/or behavior for better functioning in daily activities at school, home, and in the community.

Resources

American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.

Autism Society of America. *About autism*. Retrieved April 7, 2009, from http://www.autism-society.org/site/PageServer?pagename=about_home

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Classroom/Home Activity Suggestions:

1. Accommodating Children With Autism Within an Inclusive Setting

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Difficulty with change. Students with ASD benefit from a repetitive and routine schedule. Deviating from a routine can result in a change in behavior, mood, or academic performance. Teachers can help by providing a picture schedule of activities to complete throughout each day. Mount this on a large chart, so that all students benefit from it, or on a smaller desktop version. Always prepare the ASD child for any schedule changes in advance, regardless of how small or insignificant it may seem to you or others.

Difficulty with learning through experiences. Simply hearing and seeing new information is not enough for ASD students. Students with ASD need direct instruction of academic and social skills—structured activities and lessons with an introduction, detailed explanation, and a summary. Integrating visual, auditory, and tactile stimuli also helps improve students' transfer and generalizing skills.

Difficulty coping. If there is anything in the environment that is causing the student obvious stress, identify the distractions (e.g., noise, change in setting) and resolve them. If the student is demonstrating problems with regulating his/her emotions and behavior, provide time away from the group or class in a safe, private area for the student to compose him/herself. When the student's stress level decreases, encourage him/her to return to the group or class setting. Incorporating "stress relief breaks" for the entire class helps target this challenge for the ASD student inconspicuously. Consider including stretching, pushing and pulling activities, or games (e.g., moving desks around, carrying heavy books, fidgeting with small toys and balls, or Simon Says).

Difficulty with figurative language. Students with ASD comprehend messages very literally. Using figurative language (e.g., humor, sarcasm, metaphors, and idioms) can cause the ASD student to misunderstand verbal messages. When giving directions, make sure they are clear and concise. Allow the student enough time to process the information and respond. Avoid using idioms and other figurative expressions during instruction. Introduce simple figurative language expressions outside of instructional time.

Difficulty with pragmatics (social communication). Social communication is a struggle for students with ASD. In a mainstream setting, it is important for the student to continuously work on his/her pragmatics. Pair the student with a peer to help with social skills and activities in the classroom and in other settings (e.g., cafeteria, gym, playground, or library). Role playing in the classroom also gives the student opportunities to participate and observe acceptable social interactions.

Difficulty with behavior. Inappropriate behaviors often accompany poor social skills, difficulty coping, or difficulty receiving information. Realize that these behaviors are usually the result of a misunderstood message or action by you or another student. Use these occurrences to teach the entire class how to react to inappropriate behaviors. Be firm but tactful in your method of correcting the ASD student or bringing attention to his/her behavior. Embarrassing the student or causing him/her to feel shame will not help the student to learn appropriate social behaviors.

Difficulty with responding to environmental sounds. Be conscious of the noise level in the classroom setting. Students with ASD may be very sensitive to certain sounds even though the sounds may not be very loud or distracting to you or other students. Each child with ASD is unique and may find common and familiar sounds (e.g., clapping, high frequency toys, beeping, etc.) to be disturbing and even frightening. Identify sounds that may trigger a change in behavior. If the student has adverse reactions to any auditory stimulus, remove it immediately. Once again, give the student time and/or space to calm down if necessary. Regular classroom teachers should educate themselves regarding the diagnosis and needs of their ASD students. Studying information about the broad spectrum of ASD is the greatest help for teachers. Having a teacher that is both knowledgeable and understanding gives ASD students the best chance for classroom and social success. If you are unsure how to approach or handle certain situations with an ASD student, always consult the student's educational team, especially when implementing interventions in the classroom. Ask the parents of the ASD student to help with reinforcing classroom strategies at home, and vice versa. Parents can offer valuable information to regular classroom teachers about their particular child's needs and challenges. Also, some children with ASD require medication to help with concentration and/or response to environmental stimuli (e.g., sound, light, etc.). Follow all of the instructions from the physician or school nurse and ask any questions you may have regarding the characteristics of the student while he/she is taking this medication and be constantly aware of those characteristics.

2. Using Educational Software to Help Children with Autism

By Julie A. Daymut, M.A., CCC-SLP

Autism is a disorder that affects normal development. It is a "spectrum disorder" because its impact on development ranges from mild to severe. The areas of development autism affects most are social interaction, verbal and nonverbal communication, and behavior with others and with objects. Just like any other child, a child with autism learns in his/her own way. You may notice that he/she has preferences for learning, such as working on the computer. Children often find computer-based programs to be engaging—they receive visual instruction when they see images on the screen, and they receive auditory instruction when they hear different sounds and speech.

Educational software is one way to help children with autism learn and build upon a variety of skills. These *interactive* computer based programs can provide *structure* within a specific format and at different levels within that format, *feedback* for correct/incorrect responses, and *motivation* from colorful, moving images and various sounds effects.

Educational software refers to computer programs that target certain skills and concepts that children need for success inside and outside the classroom. The programs have built-in words and images for a variety of learning tasks. For example, these tasks can include skills such as following directions (e.g., *Click on the blue bunny.*), selecting a certain item (e.g., *Which house is larger?*), and repeating words aloud (e.g., "Say, *This is my happy face.*"). Many educational software programs allow you to track data and progress. Then, you are able to see areas where the child has success and areas where he/she needs additional/ different instruction. Often times, you can print the data in a chart. As well, some programs offer pre- and posttests which provide a baseline (starting point) and an evaluation (ending point). Research-based teaching techniques and tools are important for helping children with autism. There are several studies about children with autism and what types of instruction may benefit them. More studies need to confirm these findings as well as define new instructional methods. The following are some of the research findings thus far:

According to a review from the Association for Science in Autism Treatment (n.d., Research Summary 2), two of five scientific studies on "computer-assisted instruction" (CAI), such instruction may help children with autism learn:

- Vocabulary.
- Symbols (recognition).
- Written words (identification).
- Emotions (naming and predicting).

A review in *Focus on Autism and Other Developmental Disabilities* of 24 studies (dating from 1975 to April 2001) of autism intervention programs shows that *effective interventions* with the "most positive outcomes":

- *Target multiple variables.*
- *Extend over a long duration.*
- *Involve parents.* (Levy, S., Kim, A.-H., et. al., 2006, p. 55)

The review also mentions one study that states: "a study comparing computer program intervention to teacher-directed intervention found significantly increased vocabulary, attention, and motivation in children receiving computer program intervention" (p. 58). Another review of studies in *Real Life, Real Progress for Children with Autism Spectrum Disorders* focuses on computer instruction for autism and states that such instruction may provide:

- "More education and treatment options."
 - "Effectiveness."
 - "Increased accessibility."
 - "Improved data collection."
 - "Cost savings."
 - "Greater motivation for the child."
 - "At least some generalization off the computer." (Whalen, Massaro, & Franke, n.d., p. 19, 3).
- Based on the aforementioned research, as well as behavioral observations from parents and educators, there are many possible benefits of educational software programs for children with autism. The children may:
- Find the programs to be motivating.
 - Have the opportunity to practice skills repeatedly, which helps build concepts and knowledge into long-term memory.
 - Enjoy seeing moving objects with sound effects.
 - Receive an instant gratification when they give the correct answer (e.g., a 'Good Job' image with audio).
 - Work within a structured environment and setup within the program, so they know what to expect.
 - Gain exposure to a variety of words and pictures. Incidental learning (learning that occurs naturally without direct instruction) may occur.
 - Experience multiple levels of an activity and learn that several steps may be part of one activity.
 - Get reinforcement for ideas and concepts taught in class.
 - See appropriate behavior in a fun format. They can then imitate such behavior.

Keep in mind that children with autism have individual rates of learning and retention. What works for one child may not work for another. As well, you may need to limit time on a computer program if the child fixates on the computer or withdraws from everyday social situations to go to the computer.

Resources

Association for Science in Autism Treatment. (n.d.). *Computer-assisted instruction*. Retrieved August 26, 2009, from <http://www.asaonline.org/resources/procedures/computer.htm>

Levy, S., Kim, A.-H., et. al. (2006). Interventions for young children with autism: A synthesis of the literature. *Focus on Autism and Other*

Developmental Disabilities, 21(1), 55–62.

Whalen, C., Massaro, D., & Franke, L. (n.d.). *Generalization in computer-assisted intervention for children with autism spectrum disorders*. Retrieved August 31, 2009, from http://psl.ucsc.edu/pdf/Whalen_Ch06.pdf

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