#### What is Autism?

Autism is a developmental disability which affects behavior, communication and social interaction. Children with autism often appear to develop relatively normally until the age of 24-30 months, then parents begin to notice delays. Mild forms of autism may resemble a learning disability, while more severe forms can involve substantial impairment of communication, learning and social abilities, abnormal responses to sensory stimuli, and self-injurious behaviors. An individual with autism may have peak skills - the ability to do one or more things exceptionally well. These skills manifest in areas such as mathematical computation, music, art or memory.

An estimated 1 out of 42 boys and 1 in 189 girls are diagnosed with autism in the United States. Autism is the fastest-growing serious developmental disability in the U.S.

#### Common characteristics of Autism

- Difficulty relating to people, objects and events
- Prefers to spend time alone
- Avoids eye contact
- Unusual attachment to, and use of, inanimate objects like toys, strings, and spinning objects
- · Need for a rigid, highly structured routine
- Repetitive movement, such as hand flapping, head banging, spinning and rocking -- which may continue even when they cause self-injury
- Unusual responses to physical sensations sight, hearing, touch, pain, smell, and taste may be affected to a lesser or greater degree
- Communication problems may exhibit unusual speech patterns, use words without understanding their meaning, communicate with gestures rather than words
- Very high or low activity levels
- Impulsive behaviors little sense of danger
- Crying and tantrums for no apparent reason
- May perseverate on a single item, idea or person

There are many differences among persons with autism. Contrary to popular perception, many children and adults with autism make eye contact, show affection, smile, laugh and show a variety of other emotions, but in varying degrees. With appropriate intervention, many of the behaviors associated with autism can be changed, and some may disappear over time. Some adults with autism live and work independently in the community, while others depend on the support of family and professionals. People with autism live normal life spans.

### What causes Autism and how is it diagnosed?

Although no one specific cause for autism is known, current research links autism to biological or neurological differences in the brain. In some families there appears to be a pattern of autism or related disabilities, which suggests there may be a genetic basis to the disorder, although at this time no genetic indicator has been directly linked to autism.

Some older theories about the cause of autism have been proven false. Autism is not a mental illness. Children with autism are not unruly kids who choose not to behave. Autism is not caused by bad parenting. No known psychological factors in the development of the child have been shown to cause autism.

There are no medical tests (i.e. blood tests, chromosome studies, etc.) for diagnosing autism. A diagnosis must be based on observations of the child's communication, behavior and developmental levels. However, because many of the behaviors associated with autism occur in other disorders, various medical tests are necessary to rule out other causes.

Autism is referred to as a spectrum disorder, meaning that the symptoms and characteristics can present themselves in a wide variety (or spectrum) of combinations. Because the characteristics of the disorder vary so much, it is important that the diagnosis be made by a diagnostician or a multidisciplinary team with experience in autism.

A brief observation in a single setting cannot provide a true picture of a child's abilities and behaviors. A multidisciplinary team may include a neurologist, psychologist, developmental pediatrician, speech/language therapist, learning consultant or other professionals knowledgeable about autism. An accurate diagnosis can provide the basis for building an appropriate and effective educational and treatment program.

### Effective strategies for optimal learning

Because of the variety and combination of behaviors which may be present in a child with autism, no single approach is effective with all individuals who have the disorder. Various types of therapies may be used, including behavior modification, speech/language therapy, sensory integration training, vision therapy, music therapy, auditory training, medication, dietary intervention and others.

Parents and professionals have learned that children with autism respond best to a highly structured, individualized program. The program, which should be structured to fit the child, will be coordinated by a team

of specialists including a special education teacher, speech/language pathologist, clinical psychologist and child development specialist. The parents are also an essential part of this team.

An individualized program for a child with autism may include:

- Stopping inappropriate behaviors that prevent the child from relating to and communicating with others
- Increasing attention to purposeful activity and developing perceptual skills needed for educational tasks
- Teaching the child self care skills
- Stimulating the quantity and quality of language to increase communication skills
- Teaching social skills and providing opportunities for the child to socialize appropriately with others
- Beginning training in vocational skills and community living skills at the earliest possible age
- Providing training for parents to enable them to provide continuity for the child at home and in the community.

#### Tips

Temple Grandin, Ph.D., an adult with autism who is a professor at Colorado State University, has written books on how it feels to have autism. She provided a fact sheet for the Center for the Study of Autism. Some of those ideas are excerpted below:

- Many people with autism are visual thinkers. Their thoughts are like videotapes running in their minds. Pictures are their first language, and words are their second language. To teach words, demonstrate them in ways the child can make into pictures.
- Avoid long strings of verbal instructions. If the child can read, write the instructions down. People with autism may not remember sequences or groups of numbers (like phone numbers) because they can't make a picture of them in their mind.
- Some children with autism are good at drawing, art or computer programming. These talents should be encouraged.
- 4. Many children with autism get fixated on one subject such as trains or maps. The best way to deal with fixations is to use them to motivate schoolwork. If the child likes trains, then use trains to teach reading and math.
- Many children with autism have problems with motor control in their hands. Neat handwriting is difficult. To reduce frustration and help the child enjoy writing, let him use the computer.

- Use concrete visual methods to teach number concepts. Grandin had a set of blocks of different lengths with a different color for numbers one through ten. With this she learned to add and subtract. Fractions can be taught using items cut in half or fourths.
- 7. Some children will learn more easily with phonics and others will learn best by memorizing whole words. Children with echolalia will often learn best with flash cards and picture books so that whole words are associated with pictures.
- 8. Children with autism need to be protected from sounds that hurt their ears (this can feel like a dentist drill hitting a nerve). Sounds that will cause the most problems are school bells, PA systems, buzzers on the score board in the gym, and the sound of chairs scraping on the floor. The fear of a dreaded sound can cause bad behavior.
- Some people with autism are bothered by visual distractions and fluorescent lights. To avoid this, place the child's desk near a window or avoid using fluorescent lights. If the lights cannot be avoided, use the newest bulbs possible. New bulbs flicker less.
- 10. Some children who fidget a lot will be calmer if they wear a padded weighted vest. Pressure from the vest helps to calm the nervous system. The vest should be worn for twenty minutes, then removed for a few minutes to deter the nervous system from adapting.
- 11. Some individuals with autism respond better, and have improved eye contact and speech, while they are swinging on a swing or rolled up in a mat. These activities should never be forced however.
- 12. Some non-verbal children and adults cannot process visual and auditory input at the same time They should not be asked to do both at once.
- 13. In older nonverbal children and adults, touch is often their most reliable sense. Letters can be taught by letting them feel plastic letters, or they can be cued that lunch is almost ready by giving them a spoon.
- 14. Some parents say that using the closed captions on the television helped their child to learn to read. The child is able to match the printed words with the words spoken by the actor.

#### **BIBLIOGRAPHY**

- "Teaching Tips for Children and Adults with Autism"
  Temple Grandin, PhD. Center for the Study of Autism
- "What is Autism?" Autism Society of America (www.autism-society.org)

## For more information about AUTISM SPECTRUM DISORDER



Parent Information Center

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