

30 Minute Lesson: Autism

Self-Study Version

Autism is a little-understood disorder. Some people with autism are profoundly disabled; others exhibit only a few of the commonly accepted signs of autism - extreme aloneness; an obsessive drive for maintaining sameness in the environment; stereotypic, repetitive actions; severe language delay; severe functional impairments. This lesson focuses on building an understanding of autism, along with some causes, definitions, prevalence, and implications for employment.

Learning Objectives

- < Build an understanding of autism: causes, prevalence, treatment, characteristics
- < Review information about the strengths and barriers experienced by people with autism
- < Review information about successful employment approaches for people with autism

Test Your Knowledge!

1. What are three of the conditions generally included in the category of autism spectrum disorders?



2. Which number comes closest to describing the percent of people with autism spectrum disorder in the US?

- a. 1 out of every 2,000 b. 1 out of every 400 c. 1 out of every 100

3. True or False: boys and girls are equally likely to be diagnosed with autism.

4. ***“Tom has autism.”*** What characteristics come to mind when you hear that phrase? Write your list below or on the back of the page.

Autism Overview

Autism is a rare condition which is characterized by severe problems in communication and behavior, and an inability to relate to people in a typical manner. Other autism spectrum disorders include Asperger syndrome (sometimes called high-functioning autism), Rett syndrome, disintegrative disorder, and PDD-NOS (pervasive developmental disorder not otherwise specified).

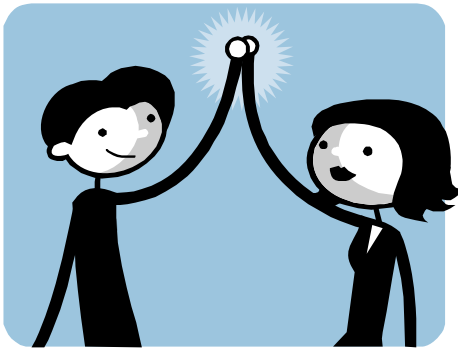
Autism is classified as a developmental disability because it interferes with the typical rate and patterns of childhood development. Children with some symptoms of autism (but not enough to be diagnosed with classical autism) are often diagnosed with PDD-NOS. Children with autistic behaviors but well-developed language skills may be diagnosed with Asperger syndrome.

A significant percentage of people with autism (70-80%) also have significant cognitive impairment. However, autism does not prevent learning. People with autism grow, change, learn, and acquire new skills throughout their lives.¹

How many people have autism?

For many years, the most cited statistic is that autism occurs in about 1 out of 2,000 live births. This was based on large-scale surveys conducted in the United States and England. More recently, estimates on the prevalence of autism have ranged been as high as 1/4% to 1/2% of the population (1 to 2 per 400). These estimates typically include those with autism, Asperger syndrome, and PDD.

Is the incidence of autism increasing? Most experts say that the increase in the number of people diagnosed with autism is due to better diagnostic tests and a better understanding of autism spectrum disorders.



People with autism grow, change, learn, and acquire new skills

Autism is three times more likely to affect males than females. This gender difference is not unique to autism since many developmental disabilities have a greater male to female ratio.

How many of the people you support have autism spectrum disorder? What is the most common diagnosis? How many of these individuals also have other diagnosed disabilities, and what are they?

¹ Strong, Catherine, 2005; Autism - an Introduction for Parents and Guide to Oregon's Human Service System 5th Edition

What causes autism?

Research suggests that several factors may be involved, such as viral infections during pregnancy, metabolic disorders, birth complications and genetic factors. Experts know that autism is a brain disorder, but they don't know exactly how and why the brain does not work properly in an individual with autism. There are no medical tests that show the cause of autism.²

There are a number of genes associated with the disorder, and some studies strongly suggest that some people have a genetic predisposition to autism. In families with one child with autism, the risk of having a second child with the disorder is approximately 5 percent, or one in 20. However, no factors in a child's experiences or in parenting styles are responsible for autism.³



Is there any treatment?

There is no drug which has been shown to be consistently effective in treating symptoms of autism. The most widely prescribed medication for children with autism is Ritalin, (a stimulant used to treat Attention Deficit/Hyperactivity Disorder), but there are no controlled studies to demonstrate Ritalin's effectiveness for those with autism.

The two treatments which have received the most empirical support are behavior modification and the use of vitamin B6 with magnesium supplements. Behavior modification involves a variety of strategies, (e.g., positive reinforcement, time-out), to increase appropriate behaviors, such as communication and social behavior, and to decrease inappropriate behaviors, such as self-stimulatory and self-injurious behavior.

Food intolerances and food sensitivities are beginning to receive much attention as possible contributors to autistic behaviors. Many families have observed rather dramatic changes after removing certain food items from their children's diet (particularly wheat and other grains, milk, and refined sugar). Other studies have not proved a relationship between diet and symptoms.⁴

The Center for Autism & Related Disabilities recommends these approaches to treatment and educational needs:

- 1) Early and accurate diagnosis increases the opportunity for positive development.
- 2) Speech and occupational therapy should be provided as a cooperative effort between professionals and families
- 3) People with autism seem to make the best progress when they are in as normal a setting as possible and provided with individualized support and therapy to meet their needs.
- 4) Implement treatment methods in all areas of life.⁵

² http://www.oregon.gov/DHS/spd/pubs/autism_2005.pdf, p. 10

³ <http://card.ufl.edu/handouts/fs1english.pdf>

⁴ <http://www.autism.com/autism/overview.htm>

⁵ <http://card-usf.fmhi.usf.edu/factsheets.asp>

How does autism impact people?

<http://www.autism.org/overview.html> and www.oregon.gov/DHS/spd/pubs/autism_2005.pdf

Their senses may be extra-sensitive (hypersensitive), or less sensitive than others (hyposensitive)

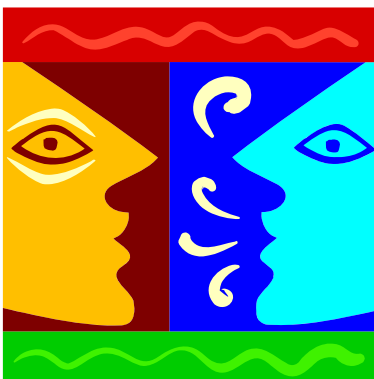
Many people with autism seem to have an impairment in one or more of their senses – smell, vision, touch, taste, hearing, or balance. These senses may be extra sensitive, or dulled, or may result in the person experiencing things like a persistent ringing or buzzing in the ears. As a result, it may be difficult for individuals with autism to process incoming sensory information properly.



Sensory impairments may also make it difficult for the person to handle normal amounts of stimulation. For example, some people avoid all forms of body contact. Others might have little or no tactile or pain sensitivity, and still others seem to 'crave' deep pressure. Another example of sensory abnormalities is hypersensitive hearing. Approximately 40% of people with autism experience discomfort when exposed to certain sounds or frequencies. These individuals often cover their ears and/or tantrum after hearing sounds such as a baby's cry or the sound of a motor. In contrast, some parents suspect their children of being deaf because they appear unresponsive to sounds.

People with autism can be both over-reactive and under-reactive – seemingly not hearing a siren but upset by the telephone ringing. They may stare at lights, lick or smell things, and be attracted to or repelled by certain textures especially in food. Their pain threshold is often high.

What is one specific employment implication caused by these sensory differences?



They have difficulty with verbal and nonverbal communication

Language and social skills are generally the biggest challenges for most people with autism. Even the most mildly affected people with autism struggle with the complexity and abstraction of language. A person with severe autism may not understand that people talk to communicate with each other.

About 40% of people with autism are completely nonverbal. Others have an age appropriate vocabulary but have difficulty with functional use of speech. Most people have difficulty following instructions, understanding lengthy communications, and understanding abstract concepts or speech with emotional content. People may need extra time to think about the words they have heard or said and to act on them. They may follow instructions literally, resulting in unanticipated misunderstandings.

Many people with autism do not understand how to use speech in order to get what they want or need. They may be unable to relate basic information about themselves, their environment, or what they just did; or have difficulty participating in the back and forth exchanges necessary in conversations.

Finally, people with autism may have characteristic speech abnormalities such as rhythm (too fast or too slow), echolalia (repeating verbatim), lack of inflection (monotone voice), or pronoun reversal; making functional communication at work difficult.

What is one specific employment implication caused by these communication differences?

They have difficulty establishing and understanding social relationships

Most people with autism have an inability to engage in typical social relationships, which require interpretation of subtle cues and personal judgments. They may appear to lack interest in other people and appear to prefer to pursue solitary activities, walking away or becoming agitated when someone talks to them. Some may engage in inappropriate social behaviors, as though they are unaware of the rules of social interactions - touching, blowing on, or sniffing people, or refusing to share work space.

What is one specific employment implication caused by these social interaction differences?



They may think differently than other people

Many people with autism do not realize that others may have different thoughts, plans, and perspectives than their own. For example, a child may be asked to show a photograph of an animal to another child. Rather than turning the picture around to face the other child, the child with autism may, instead, show the back of the photograph. In this example, the child with autism can view the picture but does not realize that the other child has a different perspective or point of view.

About 10% of people with autism have savant skills. This refers to an ability which is considered remarkable by most standards. These skills are often spatial in nature, such as special talents in music and art. Another common savant skill is mathematical ability in which some people with autism can multiply large numbers in their head within a short period of time; others can determine the day of the week when given a specific date in history or memorize complete airline schedules.

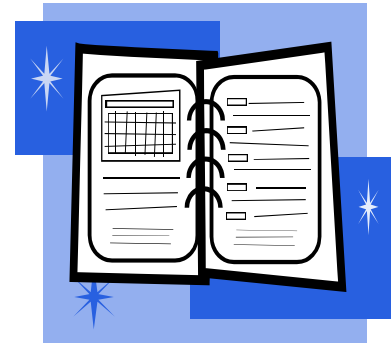
Some people with autism also have a narrow or focused attention span; their attention is focused on only one, often irrelevant, aspect of an object, or they may focus on details and be unable to see the whole or how the parts fit together. For example, they may focus on the color of a utensil, and ignore other aspects such as the shape. In this case, it may be difficult for the person to discriminate between a fork and a spoon if he/she attends only to the color. Since attention is the first stage in processing information, failure to attend to the relevant aspects of an object or person may limit one's ability to learn about objects and people in one's environment.

What is one specific employment implication caused by these thinking differences?

Characteristics associated with autism

Most people with autism will experience several of these characteristics, which may be a result of the brain differences or learned strategies for maintaining internal equilibrium or manipulating the environment.

- Difficulty handling changes in routine and schedule – possibly due to the person's inability to understand and cope with novel situations.
- Behavior problems (aggression, property destruction, vocal habits, verbal abuse, self-injury, off-task and noncompliant behavior, tantrums, toileting difficulties, undressing in public, etc.)
- Savant skills - skills in specific areas of cognitive functioning that are above what would be expected given general intelligence
- Uneven skills development – some people with autism have skills that are superior to their overall functioning level and can be capitalized on for employment purposes. Examples include excellent reading skills despite poor spoken language; ability to match to sample; good rote memory, especially for visual information, and arithmetic skills.
- Rituals and compulsions: arranging objects in a precise order, walking or riding via a specific route, obsessively picking at lint and frayed strings on clothing, carrying items everywhere they go, routinely touching certain objects. Deviations from these rituals and compulsions can instigate aggression, property destruction, and self injury
- Visual-motor skills that surpass intelligence and verbal skills. It is not unusual for a person with autism to have severe deficits in language and social skills but be able to do a task requiring sophisticated fine motor skills.
- Fluctuations in attention and off-task behaviors, causing inconsistency in doing job tasks
- Stereotypical behaviors that provide sensory stimulation such as rocking, hand flapping, making noises, etc.



Which of these characteristics are most often present in the people with autism that you're supporting?

What are the strengths of people with autism?

When we learn about disabilities, we tend to focus on the common challenges and limitations that people experience, rather than on the particular strengths that someone with a given disability might bring to a job situation. Some of the common characteristics of people with autism can translate into advantages on the job. These include things like:



- ✓ Excellent memory, especially for detail
- ✓ Ability to follow routines
- ✓ Appreciation for precision and accuracy
- ✓ Strong visual skills
- ✓ Ability to make associations quickly

Many people do better at tasks that require visual-motor skills, fine motor skills, visual discrimination, gross motor skills, movement, assembly, attention to detail, and precise routines.⁶

What kind of jobs might have these characteristics?

When you made your list of characteristics at the beginning of this lesson, did you list any strengths, or did you list only barriers?

⁶ Strong 2005

Exercise: Job Placement Strategies

What are strategies and approaches you've found successful in supporting individuals with autism? Write at least three approaches below.

Components for employment success

Be prepared!

Employment success starts with knowing the job and being able to fine-tune it to the strengths and needs of the new worker. This may include

- ✓ Observing/doing the job and completing task analyses where appropriate
- ✓ Evaluating environmental factors that may relate to unwanted behaviors
- ✓ Identifying relevant regulations, routines, and expectations
- ✓ Meeting with supervisor(s) and coworkers to educate them about autism and supported employment. This might include some specific information about the new employee such as the need for consistency in tasks and schedule, or the fact that he might take a little longer to process and react to verbal instructions.

The goal is to teach the job right the first time. It is generally difficult to re-teach individuals with autism.



Teaching strategies (James Emmett)

Many people with autism are visual learners and may have difficulty with information that is presented verbally. In addition, verbal prompts are typically more difficult to fade than other types. If there are verbal prompts as part of the first day the worker will look for those verbal directions on the second day, third day, fourth day, etc. It's better to use visuals – the more we can develop checklists, picture or word schedules, and visuals, the better.

Remember that people with autism may organize their world differently than you would. For example, one individual who worked in a bank setting organized the rooms that he would need to go into based on the light bulbs that were used in that room (rather than by the room number). He loved light bulbs.

Tell the individual what to do instead of what not to do. Always reinforce what the person should be doing so he is clear on what he needs to do.

Build in a way for the person to communicate “I need help” or “I am overwhelmed”. We often see individuals with autism building routines and patterns of behavior because there is no way for them to say “hey, I need help with this” or “I don’t understand”. These skills are huge in terms of success in the workplace.



Slowing down is a key support strategy. Be conscious of being brief or talking a bit more slowly to help people process the information.

Using work break routines is important. Some people may need a strategically placed five-minute “sensory break” where they can take a few minutes to calm down.

Make job tasks visually clear, including start and end times. Many people with autism can tell what time it is on the clock, but they don't have the inherent feel of five minutes versus five hours versus five days.

Adapt the work environment to accommodate sensory sensitivity. Changes in lighting, reduction in visual stimuli (perhaps through the use of portable room dividers) and the like may assist the person in focusing on his/her task.

Generalization may be limited and must be planned. Many people with autism will learn a specific task in a workplace in one specific room or environment but not be able to perform that skill in a different room or environment.



It may be helpful to provide the worker with a pictorial flow chart or organizational chart to provide a visual representation of the "chain of command".

People may need prep for any changes in routine or schedule – even positive ones like a birthday party or a half-day off.

It is important for supervisors to know that initially it is critical to provide immediate, clear, and open feedback that is brief and concrete. A worker with autism will try to establish a work routine for a given task right away. If the routine is positive and productive it will work. If it isn't we will want to break it as quickly as possible. If a supervisor lets a routine go for a couple of days it is going to be very difficult to reteach a given task.

How did this list compare to your ideas?

Resources on Autism and Employment

[A Guide to Successful Employment for Individuals with Autism](#), by Marcia Datlow Smith, Ronald G. Belcher, and Patricia D. Juhrs; Paul H. Brookes Publishing Company, 1995.

[Autism: An Introduction for Parents](#); downloadable at
http://egov.oregon.gov/DHS/spd/pubs/autism_2005.pdf

Written by the Oregon Technical Assistance Corporation (OTAC) for the State of Oregon

[Choosing the Right Job for People with Autism or Asperger's Syndrome](#), by Temple Grandin, Ph.D.;
<http://www.autism.org/temple/jobs.html>

[Employment for People with Autism Spectrum Disorders](#), transcript of a teleconference by James Emmett; excellent concrete suggestions

<http://www.ed.uiuc.edu/illinoisrcep/activities/flyers/Employment%20for%20Inds.%20w%20Aut.%20Spectrum%20Dis.%203-16-04.pdf>

Neurodiversity.com <http://www.neurodiversity.com/employment.html>

Center for the Study of Autism <http://www.autism.org/>

Autism Society of America <http://www.autism-society.org/site/PageServer>

Center for the Study of Autism <http://www.autismwebsite.com/>

Autism Today <http://www.autismtoday.com/>

Center for Autism & Related Disabilities <http://card-usf.fmhi.usf.edu/>

Quiz Answers!

What are three of the conditions generally included in the category of autism spectrum disorders?

Possibilities include Autism, Asperger Syndrome, Rett Syndrome, Disintegrative Disorder, Pervasive Developmental Disorder Not Otherwise Specified (PDD-NOS)

Which number comes closest to describing the percent of people with autism spectrum disorder in the US?

- a. 1 out of every 2,000
- b. 1 out of every 400**
- c. 1 out of every 100

True or False: boys and girls are equally likely to be diagnosed with autism.

False: it's about three boys for every girl.

30 Minute Lesson: Feedback Form

Please let us know what you think of this product, so we can continue to better meet your training needs. Fax or mail to Laurie Ford at 6912 220th SW, Suite 105, Mountlake Terrace, WA 98043; Fax (425) 774-9303

Topic of Lesson _____

- Facilitator Version
- Participant Version
- Non-Facilitated Group Version
- Self-Study Version

1. On a scale of 1 to 5, please rate the relevancy of these materials to your job _____
(1 is worst, 5 is best)
2. On a scale of 1 to 5, please rate the positive impact of these materials on your professional skills, knowledge, and abilities (1 is worst, 5 is best) _____
3. On a scale of 1 to 5, please rate the positive impact of these materials on your organization (1 is worst, 5 is best) _____
4. What was the most useful part of the lesson?
5. What was the least useful part of the lesson?
6. How could this lesson be improved?
7. What additional topics would you like to see in a 30 Minute Lesson?