

## Understanding Autism Spectrum Disorders

By Nancy Green

When I was in graduate school, we were taught that autism resulted from a failure of a mother to bond with her child. In fact, those parents were known as being emotionally cold and unavailable. Imagine what it must have been like to have a challenged child and, on top of that, to be regarded as the cause.

Back then, children diagnosed as autistic suffered from the most extreme symptoms of what is now known as the “autism spectrum”—failure to communicate, repetitive behaviors such as rocking, and sometimes not speaking at all.

Today, many different functions and behaviors are included in the autism spectrum, and fortunately, the parents are no longer to blame. In fact, the term “neurodivergent” is now being used to describe a vast group of people whose brains have developed differently. Neurodivergence is not a medical term but was coined to rid the lexicon of “normal” vs. “abnormal.” Some other common neurodivergent conditions are attention deficit and hyperactivity disorder (ADHD), dyslexia, and Tourette syndrome. These other conditions may be a future article, but the focus today is on Autism.

There have been so many myths and theories, it is now important to know what the latest research says.

Thankfully, the myth of the cold mom no longer exists. Unfortunately, the myth of vaccines causing autism refuses to go away, and is now endorsed by the Secretary of Health and Human Services with a nod from his boss.

Before we get to the actual causes, let’s take a look at the current science of what the autism spectrum means. According to the Mayo Clinic: “autism spectrum disorder (ASD) is a condition related to brain development that impacts how a person perceives and socializes with others, causing problems in social interaction and communication.” The spectrum refers to the fact that there can be a broad range of symptoms that vary in severity.

Lest you think that an autism diagnosis means a lifetime of dependency, look at Holden Thorp, a chemist, and the editor-in-chief of “Science Magazine,” who was

diagnosed at age 53. And don't forget Temple Grandin, who famously changed the way livestock are treated in the United States.

But not everyone is fortunate enough to have an Emmy and Golden Globe winning film about them like Ms. Grandin, although highlighting her life has probably done more for people's understanding of autism than anything else.

According to "Autism Speaks," a supportive website for people with autism and their families, the two core symptoms are 1) challenges with social communication and interactive skills, and 2) restricted and repetitive behaviors. But ASD varies widely. Therefore, when making a diagnosis, doctors rate the severity based on the daily support required.

Problems with social interactions may include misunderstanding how others are thinking or feeling, and not knowing how to have a back-and-forth conversation. When they communicate, they may have difficulty making eye contact or being able to read other people's facial expressions or body language. They may have difficulty playing with peers, or when older, may feel overwhelmed in social situations.

A diagnosis can be made if the child demonstrates some of the following characteristics:

1. Repetitive movements (such as rocking, hand flapping or running back and forth.) This is known as "stimming," meaning self-stimulation as a way of regulating emotions.
2. Imitating other people's speech (known as echolalia)
3. Insisting on sameness and a need for a routine, and when there is a simple change, the person becomes distressed.
4. Intense and highly focused interests on narrow topics or a particular object.
5. Under- or over-sensitivity to sensory stimulation such as unusual sensitivity to light, sound, touch, smell, or texture.

Today, there are many effective treatments helping people with ASD adjust to life, and in many cases to thrive. According to the National Institutes of Health, there is no one bullseye, but many interventions offering structure and specialized programs that greatly help people reduce the symptoms and allow them to function in their daily activities. Early diagnosis is helpful to start children in

programs as young as possible. But many people, particularly older adults like Holden Thorp who were never diagnosed and only in later life come to terms with their relationship struggles, discovering and understanding the diagnosis can fill in many blanks.

Highly intelligent and higher functioning people used to be diagnosed as having Asperger's syndrome, a subset of ASD. They were considered the "elite" of ASD. However, in 2013, the American Psychiatric Association folded Asperger's syndrome into the umbrella of ASD, much to the chagrin of parents of Asperger's kids who believed that their higher level of functioning put them in a different category. And since ASD goes from those who cannot function on their own to the Temple Grandins of the world, the spectrum is vast.

Today, approximately 1 in 36 people are diagnosed with ADS. In the 1960's and 1970's the prevalence was around 2 to 4 per 10,000. So, the obvious question is whether the definition and diagnosis has expanded or if other factors have caused the increase.

According to the National Institutes of Health, autism went from a rare childhood disorder to an expansion of diagnostic criteria in the latter part of the 20<sup>th</sup> century. Additionally, better screening and the reduction of stigma has brought it into the open. And of course today children diagnosed with autism getting the proper intervention can function well in society.

The actual causes are not well-understood. Scientists have found some genetic influences, and there is speculation that environmental exposures during pregnancy may contribute. Other factors consist of maternal obesity, diabetes, immune system disorders, advanced age of the father, or birth difficulty leading to oxygen deprivation to the baby's brain. None of these factors are thought to cause autism, but may just increase the propensity when combined with genetic factors.

A recent Wall Street Journal article quotes Dr. Daniel Geschwind, a professor at UCLA, who says that most genetic changes and environmental exposures occur during the late first trimester and second trimester. He states, "It is extremely unlikely that anything that occurs past birth or the immediate perinatal period is going to have an impact."

Once again, vaccines do not cause autism or the likelihood of autism.

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