

The mystery of autism

[Business](#)



**ASSIGN
BUSTER**

What is autism? Autism is a neurodevelopmental disorder that occurs in about one out of sixty-eight children (Dissanayake, 2014). The number of those affected is drastically increasing; though more children are being diagnosed as autistic, the growing number is also due to improved diagnostic procedures and a better understanding of the autism spectrum.

Males are four times more likely to develop autism than females. It is usually diagnosed in children under the age of 3, though infants can also exhibit symptoms. Autism is usually diagnosed by a series of symptoms, such as inability to hold eye contact or lack of socialization with other children. About half of those diagnosed cannot talk, and those who can often experience speech abnormalities, such as pronoun reversal, made-up words, pronunciation differences, and stereotypical or rigid speech. These speech abnormalities also include echolalia, or the repetition of words either right after someone says them or delayed, even up to months later.

Though symptom severity varies, most are perfectly capable of learning. A study done in 2010 showed that early treatment caused an average of a fifteen IQ point increase (UC San Diego). However, despite their ability to learn, autistics lack precision and frequency when imitating a teacher.

Studies show that autistic children demonstrate unusual ways of observation; they pay attention to a teacher's actions instead of his or her face, as most children do. They also generally have difficulty organizing goal-oriented actions; instead of following a novel method demonstrated to them, most autistic children will use an already familiar action instead of the new method.

These studies also compared an autistic child's learning to that of a non-autistic child; while children are more likely to imitate a teacher when given eye contact, an autistic child's propensity to imitate is not affected by eye contact whatsoever. Scientists believe that this abnormal behavior is partially caused by a disruption of the Mirror Neuron System (MNS), which allows experience of another's actions, emotions, and sensations through imitation (Vivanti). Autistics experience a sudden increase in brain size around their first birthday, but the relationship between brain overgrowth and symptom severity is unclear. The cause of this sudden brain expansion is unclear, as is the cause of autism. It is highly likely that the cause of autism is a mix of genetic and environmental origins.

There is a 70-90% concordance rate between identical twins, suggesting that autism is a strongly inherited disorder (UC San Diego). Some emotional disorders, such as bipolarity, are also more common in families of autistics. Older fathers also seem to contribute risk. There have also been several genes identified in contributing to autism, but scientists suspect that the cause(s) of autism are both genetic and environmental. There have been speculations about viruses or toxins present during a pregnancy could increase the risk of autism in the child, and a study done at the University of California, Davis suggests that exposure to certain pesticides, especially during specific trimesters of pregnancy, could highly increase the child's risk for autism (Anderson). However, studies have also shown that certain immigrant ethnicities have higher risks of having children with autism; foreign-born mothers who are Hispanic, Vietnamese, Filipino, or black have

higher risks (26%, 45%, 25%, and 76% risk, respectively) of having children with autism compared to white, US-born mothers.

The risk is also 30% lower for mothers born in China or Japan. Though the higher risk could be linked to genetics, many immigrants living in the area studied possibly experienced a history of trauma, which could have contributed to the higher risk factor (Beck). Though most autistics do not display symptoms until they reach toddlerhood, studies strongly suggest that autism has a prenatal origin. A study done at the University of California, San Diego showed that an autistic's brain actually had abnormal neurons in patches, not spread throughout the brain. Scientists discovered an overabundance of neurons in the prefrontal cortex, which regulates social and emotional behavior, as well as communication and language.

Several genes serving as cellular markers for certain layers of the brain, mostly found in the frontal and temporal lobes, were also missing in 91% of autistic samples, but only 9% of control samples. The specific locations of the patches could correlate with the severity of symptoms. Early treatments have proven to be effective, as the developing brain could rewire to avoid the patches and use other regions of the brain to take over (NIH). Autistics are becoming a larger fraction of the population; in 2012, one in eighty-eight children were diagnosed in autism, as compared to the one in sixty-eight statistic today (NINDS). The cause of autism is still vastly unknown, and though there are therapies, such as behavioral therapy, which teaches skills by providing cues and consequences, and developmental therapy, which guides a child through a series of learning experiences that gradually become more complex, there is no present cure or prevention of autism.

<https://assignbuster.com/the-mystery-of-autism/>

Organizations like Autism Speaks are working to raise awareness and research for autism.

Through them, researchers are given access to funds to further our understanding, and, hopefully, solve the mystery of autism.