

Autism and Autism Spectrum Disorders

Background

Autism (or autistic disorder) is a developmental disability. It is one of a group of disorders known as autism spectrum disorders (ASD) that fall into the broad diagnostic category of pervasive developmental disorders. Autism, Asperger's Syndrome and Pervasive Developmental Disorder – not otherwise specified, are included on the Autism Spectrum. While there is a broad range of clinical manifestations, ASDs have three common features to varying degrees: Disordered social skills, disordered communication skills and repetitive or obsessive behavior. People with autism are severely affected in each domain. Those with Asperger's Syndrome are particularly affected in the area of social skills.

Autism Spectrum Disorders occur in all racial, ethnic and socioeconomic groups. There are four times more boys than girls diagnosed with an ASD.

In the 1980s, autism was thought to be a relatively rare disorder affecting one in 10,000 children. Criteria for diagnosing autism spectrum disorders have changed several times since autism was first described in 1943. In 1987 and again 1994 major changes were made to the diagnostic criteria expanding the definition of the disorder. In 1990, autism was added as a special education disability category. In 2000, the Centers for Disease Control and Prevention organized the Autism and Developmental Disabilities Monitoring Network, a multisite, records-based surveillance program, to study the prevalence of ASDs. The average rate over 14 sites was 1 in 150 or 6.6 per 1000 8-year-olds. A 2004 survey of a sample of Minnesota families with children found that among children ages 3 – 17

years, the number of children who had been diagnosed with autism was 1/154.

Signs of autism may appear anytime before the age of three years. There are no obvious physical characteristics or laboratory tests for diagnosing autism. A comprehensive multidisciplinary evaluation including the use of standardized autism scales is required to diagnose autism and to differentiate it from other developmental disabilities. An attempt to identify any underlying health condition that would account for the condition should be undertaken. Children who have been evaluated exclusively by special education professionals should not be considered to have undergone a complete diagnostic assessment.ⁱ

Scientists think that both genes and the environment play a role, and there might be many causes that lead to ASDs. The possible causes of ASDs are under scientific study but still unknown. ASDs tend to occur more often than expected among people with Fragile X syndrome, tuberous sclerosis, congenital rubella and untreated PKU.

Even in the absence of a specific genetic diagnosis, the recurrence rate in siblings of children with autism is between 2 percent and 8 percent, meaning the risk of having a second child with autism is nearly 50-fold over that in the general population. Twin studies also indicate that genetics play a strong role in autism.ⁱⁱ

While there is not yet a cure for ASDs, early, intensive treatment can help children with these disorders reach their full potential. Among the evidence-based methods available for treatment and education of people with autism, the use of certain techniques, such as applied behavior



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analysis (ABA), incidental learning, and structured teaching have become accepted as effective treatments^{ix} Research has demonstrated the efficacy of applied behavioral methods in reducing inappropriate behavior and in increasing communication, learning, and appropriate social behavior. Other accepted treatment modalities that address the three affected domains (communication, social skills and behavior) are not as thoroughly researched as these.

There are at least a dozen doubtful or discredited treatments for autism. A number of them, such as chelation therapy or restricted diets, for example, can be harmful, expensive or both.^{iii iv v}

Why Autism is an issue

More children than ever before are being classified as having autism spectrum disorders. However, it is unclear how much of this increase is due to changes in how children are identified and classified with Autism Spectrum Disorders and how much is due to a true increase in prevalence. None the less, ASDs are the second most common serious developmental disability after mental retardation/intellectual impairment^{vi}. The impact of having a child with an ASD is great for families and for the community services that provide intervention and support services.

There has been concern from some that immunizations may play a role in ASD. However, to date there have been multiple, reliable, scientifically valid studies that have not found an association between vaccines and autism^{vii}.

Illness from vaccine preventable diseases has decreased significantly since the beginning of the 20th century. While the US currently has record, or near record, low cases of vaccine-preventable diseases, the viruses and bacteria that cause them still exist and can be passed on to people who are not protected by vaccines.

Maintaining high vaccination coverage is essential to preventing the reintroduction of infectious diseases that once routinely killed or harmed many infants, children, and adults.^{viii} False assertions of a vaccine connection to autism threaten that coverage.

While there is no cure for Autism Spectrum Disorders, there are treatments and therapies, such as ABA that appear to be effective or that seem promising. Parents are anxious to have complete and unbiased information upon which to make treatment decisions. Gathering and disseminating accurate information on the safety and efficacy of both standard and evolving treatment approaches remains a challenge for the medical and public health communities.

For more information

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