



AUTISM: Is there an “epidemic?”

by Ann Jeffers-Brown, MS, CGC, Genetics Counselor

News media have recently reported an astonishing increase in the number of cases of Autism Spectrum Disorders (ASD). A study commissioned by the Centers for Disease Control and Prevention looked at cases of autism reported in eight-year-olds across the country. Rates varied, with New Jersey reporting 9.9 out of 1,000 children had been diagnosed with an ASD by the age of eight. This translates into nearly one percent (1 in 100) of all eight year-olds in New Jersey having been given a diagnosis of some form of autism in that year. The prevalence rates estimated by this study are more than 10 times higher than pre-1990 studies.

Many parents have been alarmed by the results of this study and wonder if their children may be at risk. To help make sense of the media reports, it helps to look at what we know about autism and other related conditions.

What are Autism Spectrum Disorders (ASD)?

People with ASD face a range of challenges in three areas:

1. delayed development and use of language
2. delayed development of social relationships and interactions
3. repetitive behaviors, restricted interests and activities, and a desire for “sameness” in environment and schedule.

Some people with an ASD also have mental retardation (those with “classic autism,” “pervasive developmental disorder,” or “disintegrative disorder.”) Others may have average or above average intelligence and verbal ability (“Asperger’s disorder”). So the spectrum extends from children who never learn to speak and try to injure themselves, to adults who may be academically and professionally successful, but lack basic social skills.

Broader diagnostic criteria, combined with improvement in early intervention and education for people with ASD, may have contributed to the increase in numbers of cases identified.

What Causes ASD?

Currently, there is no simple answer to that question. About 10% of cases result directly from known single-gene conditions. For example, people with Fragile X syndrome, Rett syndrome, or tuberous sclerosis often have autistic behaviors. The majority of cases, however, appear to be multifactorial, with a complex basis in genetics and environment. Boys outnumber girls by about 4 to 1.

Parents have sometimes reported that their children start to show autistic behaviors after receiving immunizations, particularly the MMR vaccine. However, large studies in Denmark, Japan and other nations have

failed to find a connection between rates of autism and immunization. In Yokohama, Japan, rates of ASD rose sharply in children born after 1993, the year in which MMR vaccinations were totally eliminated. Of course, this does not prove that no case of ASD was ever caused by immunization, but it does provide strong evidence that MMR vaccination is probably not a main cause of ASD.

The connection between immunization and ASD may be a coincidence of timing, rather than evidence of cause. MRI studies have found differences in brain growth for children with ASD starting in infancy. The resulting symptoms may not be apparent until the time a child would normally start talking, around 18-24 months.

The evidence for a genetic component is strong. If one of a set of identical twins (who share 100% of their DNA) has an ASD, the other twin has a 60%-90% chance. Compare this with the 5%-10% chance for fraternal twins (who share 50% of their DNA). Genome-wide screens suggest interactions between 10 or more genes linked to neurological development. At this time, there is no genetic testing available for most people with ASD, but research is progressing.

The Good News

Remember that early intervention and specialized education are very important, and can significantly improve life for children with ASD. 

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Where can I learn more?

If you have concerns about your child, consult your pediatrician. He or she will be able to perform a preliminary evaluation, and refer your child to other providers as appropriate.

For more information, contact Ann Jeffers-Brown at 663-8611, or consult these online resources:

- www.autism-society-nh.org/ess12-06.pdf
- www.nimh.nih.gov/publicat/autism.cfm
- <http://groups.msn.com/TheAutismHomePage/autismquestionnaire.msnw>

These sites provide information, plus message boards and support groups for parents.