



Saturday, Dec. 19, 2009

## Autism Numbers Are Rising. The Question is Why?

By Alice Park

One in 110 American children are considered to fall somewhere along the autism spectrum, according to the latest report released by the federal government. The new figure, which was released initially in October, comes from the most comprehensive set of data yet on the developmental health of eight-year-olds.

Increasing the previous federal estimate of 1 in 150, the new data suggest that 1% of children now exhibit some symptoms of an autism spectrum disorder (ASD), a collection of neurological conditions whose symptoms may range from mild social impairment to more serious communication, language and cognitive deficits. The estimate also represents a stunning 57% increase in prevalence since 2002, when health officials first began a nationwide effort to quantify the risk of autism in childhood. ([See the top 10 medical breakthroughs of 2009.](#))

For the detailed report, published by the Centers for Disease Control and Prevention (CDC) on Friday, researchers combed through health and education records in 11 U.S. cities. In some sites, the rate of autism was as high as 12 cases per 1,000 children, but averaged across the country the final autism case rate was calculated at 9 per 1,000 children. That's compared to a national rate of 1 per 2,000 children prior to the 1980s, and 6 per 1,000 children as recently as the 1990s.

The new figures also support past studies that suggest autism occurs more frequently in boys than girls. Federal statistics show that ASD prevalence jumped 60% among boys since 2002, compared with 48% among girls.

Experts note that the CDC database — the Autism and Developmental Disabilities Monitoring Network (ADDM) — is the closest thing to an ideal measure of autism's prevalence. The data are culled from assessments made by health or developmental professionals, including pediatricians, psychologists and language and speech pathologists. In previous evaluations, autism estimates were based on less reliable parental reporting of symptoms or diagnoses.

Another strength of the ADDM network is that it allows researchers to track autism rates over time. For the current study, Catherine Rice, a behavioral scientist at the CDC's National Center of Birth Defects and Developmental Disabilities, compared data from 10 sites in 2002 with the latest figures from 2006 — using a consistent definition of ASD — to determine that the prevalence of ASD had increased by 57%.

But as striking as the new figure is, it's not clear how much of the rise reflects a true increase in ASD risk

and how much is due simply to improved awareness and diagnosis of the disorders. Increased access to special education classes and other therapies may also be inflating the numbers, as educators and parents enroll more children in hopes of optimizing their learning environment. Indeed, CDC researchers found that among sites where they had access to both health and education records, the prevalence of ASD was higher on average than in sites where only health information was available.

"This is going to be a complicated story," Rice told TIME, referring to the ongoing task of identifying reasons for the increase. "We know we're not going to get a single answer. But we can use these data sets in addition to all the other research going on to look at the causes of autism and try to put this together." ([Read "New Evidence That Early Therapy Helps Autistic Kids"](#))

Previous studies looking at a narrower population of youngsters have suggested that as much as 40% of the rise in autism cases might be explained by broader diagnostic definitions and by heightened awareness of the condition. But that still leaves 60% of the increase unaccounted for. "Most scientists believe there is something more than just awareness and a broadening definition that is responsible for the rise," says Dr. Gary Goldstein, president of the Kennedy Krieger Institute in Baltimore. "We are seeing some fraction of the increase that is probably due to more cases of autism."

So, what is driving the soaring numbers? While recent studies have highlighted genetic changes that might be responsible, some experts caution that such changes happen over time, far too slowly to explain the recent rise in autism. "When you see an increase like this, you have to think it's an environmental issue," says Dr. Thomas Insel, director of the National Institute of Mental Health and chair of the NIH's interagency autism coordinating committee.

Since autism is generally diagnosed before age two, most scientists believe the factors that contribute to ASD occur during pregnancy, or in the months immediately following birth. A pregnant mother's advanced age might be one such influence, along with certain behavioral and environmental exposures she or her newborn baby may experience — any combination of which could be interacting with their particular genetic makeup to promote ASD. Isolating the most causative culprits will be a challenge, say autism experts. "There is so much stuff out there, whether it is diet or infection," says Goldstein. "We could make a list but it's got thousands of things on it."

The latest statistics underscore the looming public health problem that autism has become, and highlight the urgent need for research on causes and treatments, as well as better support services for families caring for autistic children. The CDC considers ASDs a significant public health concern, says Rice, and researchers across the country continue to discover new genes associated with the condition. But for advocates of families affected by autism, the efforts are still not enough. "We are really seeing exciting things happening, but the pace is too slow, it just doesn't measure up to the size of the crisis," says Geraldine Dawson, chief scientific officer of Autism Speaks, a leading autism advocacy group.

[See TIME's photo-essay "A Journey into the World of Autism"](#)