Exploring the Role of Toxicology in the Etiology of Autism:
A View from the Spectrum and a Call to Action

BY STEPHEN SHORE

After developing typically for the first 18 months of my life, I lost functional communication, began having tantrums, exhibited self-stimulatory behaviors, withdrew from the environment and developed a great fear of change. In short, I experienced regressive autism. At the time of my diagnosis in 1964, the incidence of autism was considered to be no more than four in 10,000; further, the disorder was believed to be caused by poor mothering.

Throughout my public school years, as far as I knew, I was the only child who had autism. Knowing what I know today, I’m sure some of my classmates would have been considered to be on the autism spectrum, but even with that, we were but a mere handful of students.

Today we have an explosion in the number of children on the autism spectrum, to the point where the U.S. Centers for Disease Control and Prevention recognizes an incidence rate of 67 in 10,000, or 1 in 166 children. These rates are reflected in our schools, where we now have entire classrooms devoted to children with pervasive developmental disorders. In fact, within bicycling distance of my home in Boston, there are two private schools, each with enrollments nearing 150 students that are exclusive to children with autism.

Autism originally was thought to have a maternal psychological etiology, but thanks to the hard work of Dr. Bernard Rimland and those following him, it now is known that the only thing mothers may have to do with causing their child’s autism is possibly passing on some genetic material. Current research seems to point to the etiology of autism beginning with a genetic predisposition, which then is triggered by other factors. This theory of genetic predisposition explains why autistic tendencies commonly run in families, just as they do in mine.

Genetics is a good place to start to determine predisposition to autism and other related neurobiological conditions. However, genetics doesn’t change so fast in a single generation as to explain such a dramatic increase in autism. There must be another explanation.

I often wonder about the role of environmental toxins in causing my autism. Some autistic traits and other genetic preconditions exist in my family, but with the exception of my brother, two years my senior and diagnosed with mild to moderate retardation, no one can be considered as having autism.

Might it have been a vaccine? It could not have been the MMR (measles, mumps and rubella) because that combination of vaccines didn’t exist when I was a child. However, there was DTP, with its complement of thimerosal—a mercury-based preservative that more recently had been added to some childhood vaccines, including MMR. (Thimerosal has since been removed from most vaccines due to concerns about its potential impact on children.) Might it be that my autism was triggered by another environmental toxin?

Some researchers consider greater awareness and a broadening definition of “autism” to explain the rise in the incidence of the disorder. Yet another explanation may be “political distortion,” wherein a child having some autistic tendencies is given a spectrum diagnosis because professionals and parents realize that this may be the only way the student receives the full complement of educational services he needs. While these reasons may explain an elevation of a few percentage points, the cause for the rest of the increase remains unanswered.

Although I am unable to prove that the autism triggered within me was due to environmental toxins, two important facts are clear: 1) We have a much higher incidence of autism now than when I was in grade school, which cannot be explained through better diagnosis or genetics, and 2) even though the research is not conclusive on whether mercury and other toxins are a cause of autism, it seems to make sense to remove these substances from the environment for the well-being of the entire population.

The need to examine the role of environmental toxins goes far beyond autism and other neurobiological conditions. By clarifying the effects of toxins and eliminating them, we all will benefit from having a cleaner environment so that we can lead more fulfilling and productive lives.

AUTHOR

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