

Autism is Curable

How A Generation Was Poisoned And How To Correct It

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In 1996 a young woman came to my office and asked if I would help her son with autism. At the time I had not seen an autistic child since my medical school days in the early 1970's when I took a "field trip" to visit a home for 6 autistic children. Back then autism was a rarely seen disorder that was being diagnosed in 1-2 per 10,000 children. It was felt at that time to be due to cold, indifferent mothering, the so called "refrigerator mom." This was never the case, but it did not stop medical authorities declaring that the mothers were at fault.

Today we are diagnosing autism in 60 per 10,000 or one in every 160 children. This is at a crisis level and the numbers are rising. Some expect the next set of statistics to indicate a rise to one in every 130 children. In the face of this epidemic, some authorities are still declaring that autism is due to a genetic defect that is present at birth and only becomes visible at 15-24 months of age. This suggestion flies in the face of any understanding about genetics and ignores the statements of parents reporting the history of their child's onset of autism.

There has never been, and could never be, an epidemic of a genetic disease. Genes are inherited from the grandparents to the parents to the child. Once inherited a genetic variation would only affect that one child. It is impossible to have a sudden explosion of some new gene in one generation. On the other hand if there was a genetic predisposition, a susceptibility to something in the environment, and if there were a sudden change in the environment, then we would see a sudden explosion of symptoms in genetically predisposed individuals.

This is exactly what we are seeing today. The genetics are being revealed with careful studies and are very similar to genetic susceptibility to cardiovascular diseases, autoimmune diseases, neurodegenerative diseases and certain kinds of cancers. In fact we have noted a high frequency of these diseases in families of autistic children. The biochemistry is complex and beyond the scope of this brief article, but it entails a weakness in the genetic ability to methylate and to detoxify. Methylation is an extremely important process that is essential to our health. It activates brain-signaling molecules and inactivates DNA and RNA (it is how liver cells learn to be different from muscle cells and how we inactivate viruses). Impairment of the methylation mechanism impairs another process called sulfation. Sulfation is necessary to produce many substances including the protective coating of the digestive tract and the connective tissues of the body. It is also the source of the most important detoxifying substance in our body, glutathione. This substance is so important that if its level falls below a certain amount in any cell, that cell will self-destruct. Glutathione is also the essential mechanism to remove toxic metals from inside the cells.

Another substance, metallothionein, serves a role as guardian preventing toxic metals from gaining entrance to our body and brain by binding to these metals at the surface of the GI tract and at the blood-brain barrier. This barrier protects the brain from dangerous substances that may be circulating in our blood stream.

When we study the genetics of autistic children and their parents we see weakness in the methylation, sulfation, glutathione production and low metallothionein levels. It must be stated though that these weaknesses would have no negative impact if there were not some environmental insult(s) that play upon the weaknesses.

So what new environmental toxin has entered our world and caused this epidemic in the past 40 years? The weight of evidence is falling heavily upon mercury and secondarily on other heavy metals. Mercury is accepted to be the most toxic non-radioactive element on the planet and it has become a pervasive element in our environment. In this country alone we dump 200 tons of mercury into the atmosphere every year. This rains back to the ground and eventually finds its way to our waterways and into our fish. More importantly dentists place 100 million "silver" amalgams containing 27.5 tons of mercury onto our teeth every year. This unstable silver-mercury amalgam results in huge amounts of mercury leaching into our body year after year. Any mercury present in a pregnant mother is concentrated 8 fold by the placenta.

Later her breast milk not only concentrates mercury, it also increases the absorption of mercury from the infant's GI tract. This statement should not be interpreted as a warning against breast-feeding. Breast-feeding is still better than the alternatives but I do want to raise awareness and add a note of caution about environmental exposure. But the environment is not the only source of exposure to mercury for our children.

Since the 1950's we have been giving vaccines to our children that are "preserved" with thimerosal. Thimerosal is 50% ethylmercury, one of the most toxic substances known. When I was young, children received only a few vaccines. Over time we have added vaccine after vaccine and started them earlier and earlier with more doses to make up for the weakness of the immature immune system. We are currently giving vaccines for 13 diseases with more on the way. We give up to five shots for each of these diseases and pile as many into one visit as possible. In addition, any Rh-negative mother is given RhoGAM 2-3 times during and immediately after her pregnancy. RhoGAM, until recently, also contained very high levels of thimerosal. It is interesting that autism is more frequent in children of Rh-negative mothers.

All of this has been done for the sake of the children. I have no doubt that that our pediatricians do indeed have our children's best interest at heart. I am not sure I can say the same for the vaccine industry or the Advisory Committee on Immunization Practices (ACIP). ACIP is supposed to recommend vaccine policy in this country based on safety and community health. Unfortunately for our children, essentially all of the members are very highly paid by the vaccine industry. Can anyone think of a good reason to immunize newborns against Hepatitis B that is only transmitted by sexual contact and sharing needles? Is there any good reason to give full dose vaccines when it was demonstrated, in the 1990's, that a tenth of the dose given subcutaneously is just as effective?

Until 2001, we did not realize, because no one bothered to add up the numbers, that we were giving clearly toxic levels of mercury to our children in their vaccines. The vaccine manufacturers used terminology that made it difficult to easily recognize how much mercury was being injected with each vaccine. But persistence paid off. Parents along with concerned doctors and scientists finally collected the information and presented it to Congress. Their persistence has now resulted in most of the thimerosal being removed from most vaccines. That's correct, not all vaccines and not all thimerosal.

There are still smaller amounts of thimerosal along with other preservatives such as phenol and formaldehyde in the vaccines. Other vaccines, like flu vaccine, recommended for all pregnant mothers, still contain the full dose of thimerosal. Children are also advised to get flu vaccine now and, unless a parent insists on getting thimerosal free flu vaccine, the child will get the standard thimerosal containing vaccine.

If that is not bad enough, Congress did not tell the vaccine industry to recall the toxic vaccines, they allowed pediatricians to use up their existing stocks! If we are to search for an element of hope we can feel good that in 2004 California has passed a law insisting that all vaccines be free of thimerosal. But this law does not take effect until 2006. And there are current efforts in the US Senate to pass a bill that prevents any state from banning thimerosal in vaccines.

But I said autism is curable so what can we do?

These children have multiple problems that each needs to be addressed to achieve full recovery. Because they were genetically susceptible and because mercury effects so many biochemical processing it is not unfair to say they are biochemical train wrecks. Each child is unique and has to be approached individually, but there are common themes.

Metallothioneine, in addition to keeping out heavy metals, is responsible for increasing zinc and minimizing copper absorption. Deficient metallothioneine results in zinc deficiency that impairs pancreatic production of zinc dependant digestive enzymes. These enzymes are necessary for proper digestion and absorption of nutrients and they now need to be replaced. Another intestinal enzyme, called DPP IV, is very severely damaged by mercury. This enzyme is the only enzyme capable of breaking down nutrients that contains the amino acid proline. When the proline bonds are not broken down in the intestine, the body absorbs incompletely digested peptides. These peptides are called exorphines and they have the same effect on the

brain as does morphine. In essence, the children are being constantly exposed to mind numbing drugs from their food. The vast majority of these exorphines come from dairy (milk's casein yields casomorphine) and gluten containing grains (the gliadin in gluten forms gliadorphin). Until we are able to repair the damaged enzymes, the only effective way to resolve this digestive deficiency is to avoid the dietary sources. The results of eliminating all sources of casein and gluten from the diet can be remarkable. At least one of the children that I have treated became completely neuro-typical just from this dietary modification. In most children diet is just one part of the puzzle. And in some children the dietary modifications may involve eliminating foods that contain phenolics or salicylates, or oxalates or simple carbohydrates or reactive foods that stimulate the immune system.

Having identified and removed offending foods and supplementing with appropriate enzymes and other vitamins and minerals, we then direct our efforts to bypassing the methylation defects with methylation intermediates like methylated folic acid, methylated vitamin B 12, **trimethylglycine**, or **dimethylglycine**. These supplements are very often remarkably helpful and prepare the child for further interventions that may include steps to replace glutathione and ultimately to remove the causative toxic metals.

Some of the more advanced treatment options include chelation, intravenous therapies and sometimes hyperbaric oxygen therapy. We are learning more options as we continue our search for cures of this travesty. We are also seeking clinical trials that someday will yield the "placebo controlled, double blind" status that will be required to force insurers to cover the treatments. Until then, much of the cost for recovery will remain on the backs of those injured by a toxic world.

Recovery of our children is a process that requires incredibly hard work by often exhausted but diligent parents. But recovery is possible and there are over a thousand recovered children on record with the Autism Research Institute (ARI) to attest to this statement. These children have recovered following pathways that I have outlined here. There is no single roadmap to recovery, but at ARI we are discovering a map of roads. I have been honored to be a physician member of the Think Tank for ARI. The members include some of the leading scientists and researchers from around the world, all dedicated to understanding the causes and treatments for autism. The discoveries that are being made regarding autism will impact all of medicine in the years to come. This is some of the most exciting and provocative science of our day. We have no funding other than donations and no members of the Think Tank receive any remuneration for their work. If you would like to learn more about ARI or would like to contribute, please go to ARI.com. If you would like to attend a DAN! (Defeat Autism Now!) conference, please visit the ARI web site www.autismresearchinstitute.com for details of the next conference.