



# Hydrogen Led Treatments for Autism

Dr. Mark Sircus



## Hydrogen and Bicarbonate Led Treatments for Autism

Reported rates of autism are increasing, according to a new report from the Centers for Disease Control and Prevention (CDC). Approximately 1.7% — or 1 in 59 — of 8-year-old kids in 11 diverse communities across the U.S. could be identified as having autism in 2014, according to the report. That's a small but measurable increase over the 2016 estimate of 1.5% — or 1 in 68 kids — and the highest rate ever recorded by the agency's Autism and Developmental Disabilities Monitoring (ADDM) Network, an extensive tracking system that monitors the prevalence and characteristics of autism spectrum disorder (ASD) among more than 300,000 8-year-old children. (The sample includes about 8% of the country's 8-year-olds.)

The study, based on 2014 research, again identifies New Jersey with the highest incidence. **One in 34 children in that state, or 3 percent,** fall on what's called the autism spectrum, which encompasses a range of social, behavioral and learning disorders ranging from the barely noticeable to the profoundly debilitating. Nationally, the prevalence has increased 150 percent since 2000, according to the study, which called autism "an urgent public-health concern."

Most mainstream medical scientists aren't sure what causes autism because they understand little beyond the pharmaceutical paradigm of medicine. It is said that they suspect environmental risks or triggers but to them it could be Martian



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ray guns aimed at our children. Thus, to them, with all their uncertainty and doubt autism has no cure.

The American Academy of Pediatrics (AAP) believe in ray guns. To them "Autism is not a specific disease, but rather a collection of disorders of brain development with a *strong genetic basis*, although its exact cause is not entirely known."<sup>1</sup> Yet most doctors know, "It is impossible to have a sudden epidemic of a genetic disease. In my book entitled *The Terror of Pediatric Medicine* one can see just by looking at the title what my opinion of this institution is.

It is sickening, to say the least, what the CDC and the AAP have to say, or more importantly what they do not say, about autism. According to the CDC, the uptick likely has to do with better identification and reporting of autism not with increasing oxidative stress and how dangerous vaccines are contributing to the disastrous epidemic.

They caution that more children being diagnosed doesn't necessarily mean that autism is becoming more common. However, autism has been way to common and getting worse, much worse for decades yet heartless medical institutions belittle the pandemic and the terrible suffering of families everywhere.

Many of the causes of autism are known, it just so happens that the CDC does not want to face the truth of their own special place in causing autism. Denial only continues the horror and the suffering by blocking appropriate treatments and removal of insulting causes. The medical establishment has completely abandoned its responsibilities of protecting the young from harm and is not even warning parents about the environmental hazards from mercury. Everyone has been brainwashed into getting hysterical about CO<sub>2</sub> emissions when it is the mercury coming out of smokestacks that is doing much more damage to the biosphere.

The CDC will never come clean with the parents of autistic children because they are solidly behind the principle causes of autism. They do their best to deny correct and truthful information no matter how many children are harmed by vaccines; they will say they have an excellent safety record. Vaccines are one among many toxic insults children must face.

*According to the EPA, a person must weigh over  
500 pounds to safely process the amount of mercury*

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*present in flu shots. And, yet, these shots  
are recommended for pregnant women and infants.*

Officials from every Pediatric organization in the world deny links between vaccines and autism; in fact, they have gone over the deep end with some having the audacity to assert that injected mercury could be good for children. The September 2004 issue of Pediatrics stated that immunizing infants with vaccines containing the preservative thimerosal may be associated with improved behavior and mental performance.<sup>ii</sup> Medical terrorism against children, what else describes such attitudes.

However, pointing the finger to mercury's central role in the creation of autism spectrum disorders does not discount other possible causes of autism, or a general theory that includes a multitude of causes, which over the long run weaken children to the point where the toxic overload from chemicals in vaccines is just too much to handle.

*Power plants put 48 tons of mercury a year into the atmosphere through burning coal. In the U.S. alone, hospitals that burn their wastes put 20 tons a year into the air and potentially upwards of 200 tons are lost into the environment because that is how much Hg is ordered into hospitals to repair sphygmomanometers. Every plastic manufacture pours it out and every new car is laden with its fumes. And many mothers are leaking mercury vapors from the many dental amalgam in their mouths.*

There are various factors which are involved in the etiopathogenesis of autism or autism spectrum disorder (ASD), such as impaired immune responses, neuro-inflammation, abnormal neurotransmission, oxidative stress, mitochondrial dysfunction, environmental toxins and stressors. What is currently understood:

- Oxidative stress plays a role.
- Autistic people have higher levels of oxidative stress markers in their urine (a measure of oxidative stress), and the more severe the autism, the higher the levels.
- Lipid peroxidation is increased.
- Glutathione levels are decreased.



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According to the National Academy of Sciences (NAS), 60,000 American children are born every year with neurological problems caused by prenatal exposure to methyl mercury compounds from fossil fuel and industrial air pollution. The World Health Organization (WHO) estimates that air pollution kills approximately 3 million people annually. Air pollutants are known to produce arterial constriction and reduce blood flow and oxygen supply to the heart and thus to the brain. Importantly, the chemical pollutants found in the air have no safe level; they damage humans even at very low levels. Recent reports estimate that 95 percent of the world's population are exposed to dangerous levels of air pollution.

*Autism is upon us because it's the outcome of the 50-year experiment of dousing every living being with an overload of toxic substances, including vaccines.*  
*Dr. Gregory Ellis*



Children with autism disorders in the San Francisco Bay Area were recently found to be 50% more likely to be born in neighborhoods with high amounts of several toxic air contaminants, particularly mercury, according to a first-of-its-kind study by the California Department of Health Services. The new findings, which surprised the researchers, suggest that a mother's exposure to industrial air pollutants (more oxidative stress) while pregnant might increase her child's risk of autism.

One study found an elevated risk of autism in children whose mothers took a popular type of antidepressant during the year before delivery. Drugs like Prozac, Zoloft, Celexa and Lexapro increase the risk of autism in children whose mothers used them in the year before delivery. Again, the CDC is complicit, as is the media who will never report on how these drugs affect children. Equally, with all the mass murders running amok in the USA, have you ever read a report about what pharmaceutical drugs these people are taking?

Many years ago, I wrote an essay about the multiple causes of autism. In this chapter we talk about several of them but focus on what underlies the causes, which is oxidative stress and inflammation. Toxicity is all around us and getting worse, yet doctors will not talk about that because they are one of the main sources of exposure. The *New York Times* reported in a 2011 study of twins that environmental factors, including conditions in the womb, may be at least as important as genes in causing



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autism. Mathematical modeling suggested that only 38 percent of the cases in the study could be attributed to genetic factors, whereas environmental factors appeared to be at work in 58 percent of the cases.



*Mercury alters biological systems because of its affinity for sulfhydryl groups, which are functional parts of most enzymes and hormones. It induces a change in cell structure while disrupting critical electron transfer reactions leading to cells being perceived as foreign by the body's immune defense and repair system.*

*Dr. Rashid Buttar*

Greenpeace conducted a study in India and found "Neurological effects of pesticides including effects on memory, concentration, motor skills, judgment and analysis. The study found a remarkable difference between groups of children, with statistically consistent trends. With all other possible confounders controlled for, the only significantly accountable reason for the disturbing findings is the children's exposure to pesticides."

"Clearly this suggests that there may be correlations between autism onset and environmental exposures, especially as it relates to metal exposures," said Dr. Isaac Pessah, a toxicologist who heads UC Davis' Center for Children's Environmental Health and Disease Prevention. Pessah, is a researcher at the university's MIND (Medical Investigation of Neurodevelopmental Disorders) Institute, which studies autism.

### **All Causes Increase Oxidative Stress**

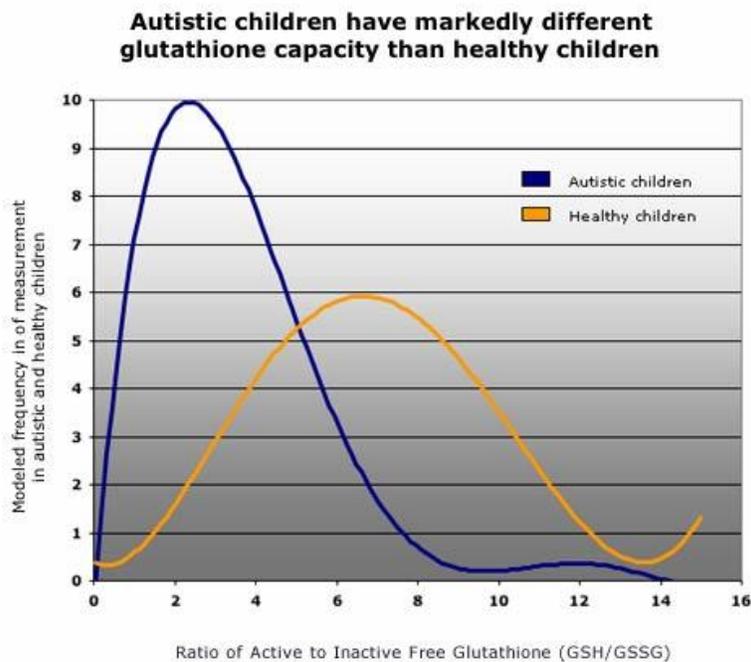
*Chronic inflammation in the brains of autistic patients, resulting from an over-active immune system is a sign of autoimmunity. The inflammation indicates that the brain is responding to a process that is stressing or damaging brain cells, a process which includes high levels of oxidative stress.*

Evidence that autistic children have a high level of oxidative stress has been provided through studies done by Dr. Sandra Jill James, Dr. Woody R. McGinnis, and other medical experts. They have discovered that autistic children have deficits in antioxidant capacity to counter the high level of oxidative stress in their body, and hence a lower detoxification capacity.



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Dr. James of the University of Arkansas School of Medicine has documented a unique metabolic profile in 95 autistic children with regressive autism.<sup>iii</sup> Regressive autism is a form of the disease in which children develop normally for a certain period before losing previously acquired language or behaviors and being diagnosed with autism. The metabolic profile in the James study children manifests as a severe imbalance in the ratio of active to inactive glutathione in autistic children, compared to a group of healthy control children. Glutathione, a potent antioxidant, is the body's most important tool for detoxifying and excreting metals and its production in the body is dependent on good nutrition.



The James study shows that children with regressive autism have consistently elevated levels of oxidative stress as compared to normal healthy children. Individuals with reduced glutathione antioxidant capacity will be under chronic oxidative stress and will be more vulnerable to toxic compounds that act primarily through oxidative damage, including mercury.

Dr. James found, in three independent case-control studies, that plasma levels of metabolites important for detoxification and antioxidant capacity are significantly decreased in the children with autism, relative to age-matched controls. This decrease in antioxidant/detoxification capacity was associated with evidence of oxidative DNA damage and mitochondrial dysfunction in immune cells. More recently, she and her team have investigated brain tissue derived from individuals with autism. They found similar deficits in antioxidant capacity as well as evidence of brain inflammation and mitochondrial dysfunction compared to unaffected brains.



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Mercury's (Hg) primary destruction comes from its **creation of oxidative stress, depletion of glutathione, and bonding to sulfhydryl groups** on proteins creating damage. When glutathione levels go down oxidative stress goes up.<sup>iv</sup>

### **Antioxidant Defense Capacity**

Dr. Ahmad Ghanizadeh writes, "There should be an equilibrium between oxidative stress and antioxidant defense capacity. Oxidative stress plays a causative role for autism. While oxidative stress is increased in autism, methylation capacity is impaired. The deficit in antioxidant and methylation capacity in autism is a specific finding for autism. Glutathione (GSH) is responsible for the reduction of oxidative stress. The major intracellular redox (reduction/oxidation) buffer is GSH. The enzymes of superoxide dis-mutase (SOD), catalase, and glutathione peroxidase (GSH-Px) are involved in elimination of reactive oxygen species (ROS). The level of SOD and GSH-Px are increased in autism. This increase is explained in that the levels of oxidants are increased, and these enzymes have already been triggered to counterbalance the oxidant and antioxidant levels. The increased level of ROS may oxidize some biomolecules such as membrane lipids.

A new study by researchers at UC Davis has found that children with autism are far more likely to have deficits in their ability to produce cellular energy than are typical for developing children. The study, published in the Journal of the American Medical Association (JAMA), found that cumulative damage and oxidative stress in mitochondria, the cell's energy producers, could influence both the onset and severity of autism, suggesting a strong link between autism and mitochondrial defects.<sup>v</sup>

### **Hydrogen Medicine for Autistic Patients with High Levels of Oxidative Stress**

*Impaired antioxidant production provides a common rationale for many disparate features of autistic disorders.*

Molecular hydrogen is the perfect medical treatment for oxidative stress. Inhaling hydrogen gas with a hydrogen inhaler device can extinguish the most intense oxidative fires and inflammation. Molecular hydrogen has anti-oxidative and anti-inflammatory activities and neuroprotective effects.<sup>vi</sup> We see increases in the level of the anti-oxidative enzyme superoxide dismutase (SOD) with hydrogen intake.<sup>vii</sup> Hydrogen-rich saline prevents A $\beta$ -induced neuroinflammation and oxidative stress, which may contribute to the improvement of memory dysfunction in animal studies.<sup>viii</sup>



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Oxidative stress associated with the production of Reactive Oxygen Species (ROS) has been well documented to underlie the surge in pro-inflammatory molecules and mitochondrial DNA damage apparent in disease; which includes cancer, cardiovascular disease, arthritis, neurodegenerative disease, and aging. Higher levels of hydrogen have been shown to protect DNA against oxidative damage by suppressing single-strand breakage of DNA caused by ROS; and to protect against oxidative damage to RNA and proteins.

The anti-oxidative stress effect of hydrogen is reported to occur by direct elimination of hydroxyl radical and peroxynitrite. Subsequent studies indicate that hydrogen activates the Nrf2-Keap1 system. Acute oxidative stress induced by ischemia-reperfusion or inflammation causes serious damage to tissues. Persistent oxidative stress is accepted as one of the causes of many common diseases including cancer. H<sub>2</sub> selectively reduces the hydroxyl radical, the most cytotoxic of reactive oxygen species (ROS), and effectively protects cells; however, H<sub>2</sub> does not react with the kinds of ROS which possess physiological roles.

The inhalation of H<sub>2</sub> gas markedly suppressed brain injury by buffering the effects of oxidative stress. Thus, H<sub>2</sub> can be used as an effective antioxidant therapy. Owing to its ability to rapidly diffuse across membranes, it can reach and react with cytotoxic ROS and thus protect against oxidative damage.<sup>ix</sup>

### **Saving the Day with Sodium Bicarbonate**

Chronic inflammation in the brains of autistic patients, resulting from an over-active immune system is a sign of autoimmunity. The inflammation indicates that the brain is responding to a process that is stressing or damaging brain cells, a process which might include oxygen radicals.

4A new medical study has reported indications of dampening inflammation that bring on autoimmune diseases. The study was published in the peer-reviewed Journal of Immunology in April of 2018 to confirm the hypothesis that bicarbonate of soda does have medical merit and can be a simple cure to autoimmune diseases.

The research report is titled Oral NaHCO<sub>3</sub> Activates a Splenic Anti-Inflammatory Pathway: Evidence That Cholinergic Signals Are Transmitted via Mesothelial Cells. NaHCO<sub>3</sub> is the chemical makeup of bicarbonate of soda, commonly known as baking soda. Splenic refers to the spleen. Cholinergic refers to choline, a primary component of the neurotransmitter acetylcholine found in nerve fibers, are thin plate-like cells that cover the walls of fluid containing cavities within the body.

The study was conducted at the Medical College of Georgia at Augusta University and funded by grants from the National Institutes of Health. The researchers' message is:



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Our data indicate that oral NaHCO<sub>3</sub> activates a splenic anti-inflammatory pathway and provides evidence that the signals that mediate this response are transmitted to the spleen via a novel neuronal-like function of mesothelial cells.

Their research discovered the spleen's role in mitigating inflammation beyond raising acidic pH levels to higher alkaline levels, which is a recognized attribute of baking soda even in mainstream medicine.

### **Saving the Day with Iodine**

Research shows a troubling correlation between a woman's thyroid function and her child's risk for autism. This [video](#) talks about a study showing that when "mothers had very low levels of thyroid hormone early in pregnancy **the chance of having a kid with autism was multiplied by 4** very seldom we see this strong of an association."

"I think for the first time we have the possibility of finding an explanation of the problem but most importantly we have a way of preventing this from happening," says lead author Dr. Gustavo Roman. Dr. Roman, with the Houston Methodist Neurological Institute and researchers in the Netherlands, studied thousands of pregnant Dutch women and found a lack of iodine in their diets affected fetal brain development.

Researchers in this study believe that one in seven Americans is believed to be iodine deficient but [Dr. David Brownstein](#) has tested 5,000 of his patients in the Detroit area and has found over 90 percent to be deficient.

### **Multiple Causes of Autism Continued**

Dr. Boyd Haley has shown in his laboratory at the University of Kentucky how even relatively benign substances like Tylenol and endocrine hormones like testosterone increase mercury's toxicity, which explains at least partially why more boys succumb to autism than girls. There is nothing benign about Tylenol and nothing benign about antibiotics.

*Mercury alters biological systems because of its affinity for sulfhydryl groups, which are the functional parts of most enzymes and hormones. It induces a change in cell structure while disrupting critical electron transfer reactions, leading to cells being perceived as foreign by the body's immune defense and repair system.*

*Dr. Rashid Buttar*

Medical scientists at Arizona State University tell us that **antibiotic use is known to almost completely inhibit excretion of mercury** in rats due to alteration of



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gut flora. Thus, higher use of oral antibiotics in children with autism may reduce their ability to excrete mercury. Higher usage of oral antibiotics in infancy may also partially explain the high incidence of chronic gastrointestinal problems in individuals with autism.<sup>x</sup>

What stands out in severe cases of autism is its similarity to symptoms found in mercury poisoning. "Thousands of parents have seen the regression of skills in their children following thimerosal-containing vaccines," says Jo Pike, President of the National Autism Association. "Many of these same children are progressing rapidly with biomedical interventions addressing mercury poisoning."<sup>xi</sup> Dr. Sidney Baker, author of six medical books, treats hundreds of autistic patients each year from around the country. He suspects that about half of the children he sees have been affected by thimerosal from their vaccines.<sup>xii</sup>



*The statement indicating "mercury has been phased out of most childhood vaccines" is a gross distortion of the truth.*

*The flu vaccine contains mercury and the number of flu shots given to children has increased dramatically since 2004.*

*Dr. David Ayoub*

The discovery of the causes of autism can be very threatening because doctors do not want to admit any guilt provoking responsibility. The walls of denial can be quite thick, and it is most astonishing to meet up with a mind-set that cannot deal with the fact that the principal thing chemical poisons do is poison children.

There is no doubt today that our children are being exposed to vastly increased levels of hostile chemicals. They are being hit from all sides and for many of them the process of poisoning begins even before birth. The medical industrial complex is guilty of hiding the ever-present dangers of thousands of chemicals used by industry, because it itself is an industry that uses toxic chemicals in the form of drugs.



## **AUTISM AND BIRTH**

*It is clear that the preponderance of available evidence suggests the importance of multiple biologic factors acting through one or more mechanisms to produce the autistic syndrome.*

*Dr. Donald J. Cohen & Fred Volkmar*

There are many things about pregnancy and birth that need to be factored into the autism equation. There is, for instance, information associating autistic disorders with the use of an artificial hormone (Pitocin) which is given to pregnant women to induce or speed up labor.<sup>xiii</sup>

Most umbilical cords are clamped and cut<sup>xiv</sup> before all the blood from the placenta is allowed back into the baby, meaning they start out with as much as a 40% decrease in blood volume.<sup>xv</sup> Birth is a shock to one degree or another. Babies need time to adjust, to light, to sound, to the simple act of breathing. But they are not given the time they need. As soon as they are born, antibiotic drops or ointment is put in their eyes and they are given a vitamin K shot. Trouble is the shot contains nasty chemicals like benzyl alcohol, phenol (carbolic acid), propylene glycol (antifreeze), acetic acid and hydrochloric acid.<sup>xvi</sup>



*Just a two-minute delay in clamping a baby's umbilical cord can boost the child's iron reserves and prevent anemia for months.<sup>xvii</sup> University of California, Davis.*

Over 200 years ago Erasmus Darwin (Charles Darwin's grandfather) was writing about early cord clamping and said, "Another thing very injurious to the child, is the tying and cutting of the navel string too soon; which should always be left till the child has not only repeatedly breathed but till all pulsation in the cord ceases. As otherwise the child is much weaker than it ought to be, a portion of the blood being left in the placenta, which ought to have been in the child."

When we add the Hep B vaccine a few hours later, with its aluminum hydroxide, thimerosal (in some countries) and modified genetic material one can only wonder about pediatricians and what they are thinking. In the September 14th issue of



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Neurology (2004; 63:838-42) a Harvard group published their findings confirming our worst fears about the recombinant hepatitis B vaccine and its role in increasing the chance of recipients contracting multiple sclerosis (MS). Researchers from Harvard estimate that it increases the risk by over three times. This is highly significant to our multiple causes of autism model because, as suspected by Dr. Blaylock, this vaccine is creating problems in the brain's immune system leading to serious auto-immune diseases. According to Blaylock, autism spectrum disorders are basically auto-immune disorders.

Dr. Viera Scheibner recorded the breathing of babies with computerised Cotwatch Breathing Monitors saw that many of them changed their breathing patterns soon after vaccination. Within an hour stress level in breathing increased and was clearly visible on the computer printouts.

Newborns and young children are being subjected to increasingly aggressive interventions and they are not standing up well to the assault. The conclusion of course is devastating. Though there is a host of environmental factors the one thing that the CDC and other medical organizations do not want to admit is that Autism is primarily an iatrogenic disease. It is caused mostly by obstetricians, pediatricians, their nurses who inject toxic chemicals into the babies, and even by dentists who expose mothers to mercury through their dental fillings.

### **Additional Treatments**

J. Miller cites research, which has found mild elevations in core body temperature positively affect behavior in autistic children. Far-infrared waves increase circulation. According to Miller, children with autism have diminished blood circulation in certain areas of the brain, which means that nutrients and oxygen aren't getting to where they need to go. Sleeping on a Biomat each night will increase core body temperature, increase circulation, help the cells detoxification process and even help nutrients get into the cells.

Through the years I have also reported on the use of clay, magnesium, sulfur and selenium for neurologically compromised populations. According to Dr. Ellen Grant, nearly all the autistic children tested at Biolab had zinc, copper, SODase and magnesium deficiencies. We know that mercury displaces essential elements like magnesium, zinc and copper from cells causing disruptions of enzyme systems in the process. A double-blind administration of 200 mg elemental magnesium per day to 25 children produced measurable decrease in hyperactivity over 6 months compared to control.

### **Conclusion**

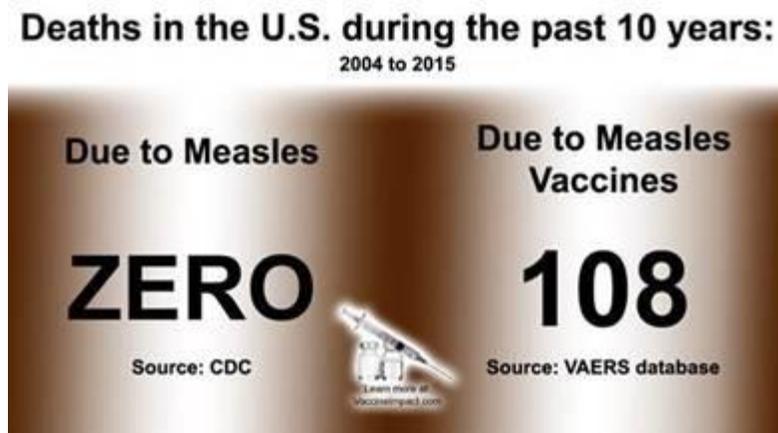
*Toxicity accumulates over time, whether it is nutritional toxicity, emotional, physical, mercury-induced, or environmental. These toxins deplete respiratory enzymes so these cells can no longer utilize oxygen.*

*Dr. Michael Galitzer*



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Mercury offers the clearest picture of the chemical madness that has overtaken industry, medicine and dentistry, because it is one of the most well researched toxins in the environment. It is also the most toxic non-radioactive element, which, like radiation, is poisonous at any level. It is not just mad pediatricians who are injecting it; but dentists are installing it. Industry is producing it by the ton and expelling it into the atmosphere.



Not a single scientist, immunologist, infectious disease specialist or medical doctor has ever been able to establish a scientific foundation for the vaccination of measles. In a recent ruling, judges at the German Federal Supreme Court (BGH) confirmed that the measles virus does not exist. Furthermore, there is not a single medical study in the world that proves the existence of the virus in any scientific literature.

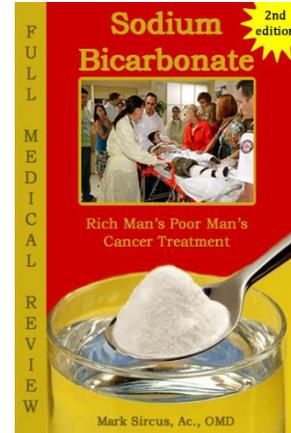
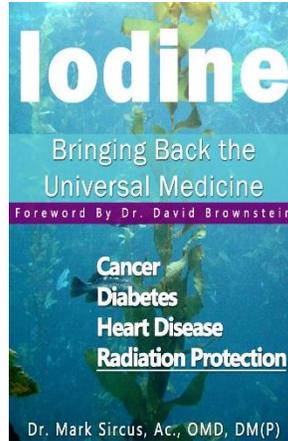
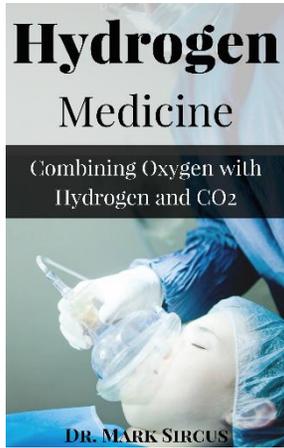
As the U.S. vaccine court proves, many who get vaccinated wind up with minor, major, and chronic autoimmune diseases, sometimes paralysis, autism, and death. According to a NY Times essay on flu vaccines several years ago, "As soon as swine flu vaccinations start next month, **some people getting them will drop dead of heart attacks or strokes, some children will have seizures and some pregnant women will miscarry.**"

The most hotly contested and controversial theory contends that mercury present in childhood vaccines may be one of the leading factors contributing to the development of autism. Now aluminum is seen as equal culprit. After reading this essay we see there are many culprits coming together, not all of them mentioned in this essay.



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For more information about some of the substances mentioned in this essay please review the following books:



<sup>i</sup> <http://www.aap.org/advocacy/archives/mayautism.htm> news release on a policy statement published in the May issue of Pediatrics, the peer-reviewed scientific journal of the American Academy of Pediatrics (AAP).

<sup>ii</sup> Vol. 114 No. 3 pp. 793-804 (doi:10.1542/peds.2004-0434)

<sup>iii</sup> <http://www.ewg.org/reports/autism/part1.php>

<sup>iv</sup> Curr Med Chem. 2005;12(10):1161-208. Metals, toxicity and oxidative stress.

<sup>v</sup> Children with autism have mitochondrial dysfunction. University of California - Davis Health System

<sup>vi</sup> Molecular hydrogen increases resilience to stress in mice. Qiang Gao, Han Song, Xiao-ting Wang, Ying Liang, Yan-jie Xi, Yuan Gao, Qing-jun Guo, Tyler LeBaron, Yi-xiao Luo, Shuangcheng Li, Xi Yin, Hai-shui Shi & Yu-xia Ma Scientific Reports 7, Article number: 9625 (2017) doi:10.1038/s41598-017-10362-6

<sup>vii</sup> The Clinical Application of Hydrogen as a Medical Treatment. Acta Med. Okayama, 2016 Vol. 70, No. 5, pp. 331-337. Okayama University Medical School.

<sup>viii</sup> Brain Research. Volume 1328, 30 April 2010, Pages 152-161

<sup>ix</sup> Hydrogen acts as a therapeutic antioxidant by selectively reducing cytotoxic oxygen radicals Ikuroh Ohsawa<sup>1</sup>, Masahiro Ishikawa<sup>1</sup>, Kumiko Takahashi<sup>1</sup>, Megumi Watanabe<sup>1,2</sup>, Kiyomi Nishimaki<sup>1</sup>, Kumi Yamagata<sup>1</sup>, Ken-ichiro Katsura<sup>2</sup>, Yasuo Katayama<sup>2</sup>, Sadamitsu Asoh<sup>1</sup> & Shigeo Ohta<sup>1</sup>

<sup>x</sup> volume 70, issue 12 (2007) of the *Journal of Toxicology and Environmental Health, Part A*; "oral antibiotics will reduce the amount of normal gut flora (which demethylate methylmercury) and may increase the amount of yeast and *E. coli* (which methylate inorganic mercury), resulting in both higher absorption and decreased excretion of mercury."

<sup>xi</sup> National Autistic Association news bulletin in response to Institute of Medicine Report Spring 2004 <http://www.nationalautismassociation.org>

<sup>xii</sup> Williams, Valeri. Vaccine preservative's effects may have been known. [http://www.laleva.cc/choice/vaccine\\_preservative.html](http://www.laleva.cc/choice/vaccine_preservative.html)

<sup>xiii</sup> Newsweek Magazine, July 31, 2000 and Care in Normal Birth: A Practical Guide—W.H.O.'s "Safe Motherhood" series

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<sup>xiv</sup> Mid Wife Info. "Immediate clamping of the umbilical cord can reduce the red blood cells an infant receives at birth by more than 50%, resulting in potential short-term and long-term neonatal problems." So concluded Judith Mercer, CNM and colleagues in a study reported in the fall of 2001 in the Journal of Midwifery and Women's Health (Mercer, 2001). "Early clamping of the umbilical cord at birth, a practice developed without adequate evidence, causes neonatal blood volume to vary 25% to 40%. Such a massive change occurs at no other time in one's life without serious consequences, even death. Early cord clamping may impede a successful transition and contribute to hypovolemic and hypoxic damage in vulnerable newborns" (Mercer, 2002).

<http://www.midwifeinfo.com/feature-cordclamping.php>

<sup>xv</sup> Morley, George M. Immediate clamping of the umbilical cord (ICC) at birth, a possible connection to Autism? ICC is routinely applied during premature, operative and "at risk" births, and increasingly during "normal" births following the recommendation (4) that a segment of the cord should be retrieved immediately after delivery for medico-legal purposes. The immediate effect of ICC is to deprive the neonate of placental respiration and transfusion resulting in complete asphyxia until the lungs function, and 30%-50% loss of the neonate's natural blood volume; the combined hypoxia and hypovolemia / ischemia is then conducive of hypoxic ischemic brain injury. The neonate that receives a full placental transfusion has enough iron to prevent anemia during the first year of life(5), but blood loss in a neonate subjected to ICC becomes evident in infancy as anemia.(5) In grade school children, anemia correlates with all types of autistic disorder (6) and the degree of anemia correlates with the degree of mental deficiency; (7) correcting the anemia does not correct the defect. Kinmond et al. (8) showed that delayed cord clamping combined with gravity assisted placental transfusion prevented anemia (the need for blood transfusion) in preemies. Hack et al. (9) found a high incidence of poor achievement in low birth weight babies. The correlation between autism and birth complications is supported by aother sudies. Hultman (10) reports a great increase in the risk of autism in cesarean deliveries, deliveries with fetal distress and five minute Apgar scores below seven. These obstetrical situations correlate with ICC.

<sup>xvi</sup> Israels LG. Observations on vitamin K deficiency in the fetus and newborn: has nature made a mistake? Department of Medicine, University of Manitoba, Manitoba Institute of Cell Biology, Winnipeg, Canada. Semin Thromb Hemost 1995;21(4):357-63

<sup>xvii</sup> <http://www.sciencedaily.com/releases/2006/06/060618224104.htm>