



The Autism spectrum disorder (and ADHD) Epidemic

Causes, interventions ...from cutting edge to over the edge... a parents /physicians
Perspective.....

From Panic to Passion,

From Desperation and Depression to Determination....

From Hope to Expectation...

An opinion.... By Pat Elliott D.O.

I .What “is “Autism Spectrum Disorder?

Autism Spectrum Disorder (ASD) is, in short, a constellation of signs (what one observes) and symptoms what the afflicted individual feels/reports)...That reflects a neurological condition. These signs of ASD are usually but not limited to... Communication and socialization deficits. Primary symptoms are rooted in the often present sensory and auditory processing deficits that the individual with ASD must deal with or overcome to engage the world. As a result of these deficits significant difficulties with anxiety, obsessive compulsive behaviors, attention deficit and ability to deal with the unexpected or change from routine pose significant challenges for people with ASD.

Therapeutic interventions are based in addressing these challenges with behavioral interventions (Floor time/ABA) and pharmacological means to alter biochemistry with amphetamines (Ritalin...Etc) or sedatives (Risperidol). The present mainstream approach to treatment, in regard to pharmacological agents although sometimes very effective doesn't approach ASD as a neurological disorder secondary to an “acquired” toxic Brain Injury. In fact, mainstream medicine recognizes most neurological conditions like Multiple Sclerosis, Parkinson' s ,ALS, and Alzheimer's disease as disorders...with no known cause and no known cure..And treatments, if recommended at all, are directed at controlling the symptoms and or progressive deteriorating nature of these disorders without really addressing the most important issue... which is ...what are the causes of these acquired brain injuries? Since our twin boys who were diagnosed with ASD (Bradley Autism... Connor PDD Nos) in fall 2003 we have been asking these questions. Like many other parents looking for answers as to why our typically developing boys developed the signs and symptoms of ASD some where about 15-20 months of age.

As a physician every day I would go to work, and evaluate and treat people who are ill. My mainstream medical training taught me to identify a particular illness based on the signs and symptoms of the disorder and then prescribe the appropriate treatment. As a surgeon who has the

opportunity to effectively treat inflammatory, infectious and neoplastic conditions so routinely; I was quite frustrated when, in October 2003; after getting the diagnosis of ASD from our mainstream developmental pediatricians (we obtained 2 opinions), no specific treatment plan could be "formally" recommended. Early intervention was encouraged. They gave us little hope, a social workers number, and a suggestion that behavioral interventions (25-40 hours a week) might help. As Autism is viewed as a behavioral disorder at best, and a neurological condition with no "proven" effective treatments at worst mainstream pediatric medicine could hardly recommend unproven interventions. Fortunately, one developmental pediatrician mentioned dietary intervention but only in passing as this intervention (which was safe and costs little) was not proven. Although, early intervention and Applied Behavior Analysis (ABA) was suggested; but no info on how to obtain or pay for this, no information on wrap around services could be given. I recognize now why mainstream physicians had little to recommend for the "treatment" of children with ASD, even now mainstream experts in the field primarily diagnose and do not treat ASD as a disease. Again, this is because ASD is not recognized as a treatable disorder and in fact Autism/ASD is in fact, not a disease as I said it is really just a description of symptoms and signs. Yet, semantics aside the cause or as I believe causes of this epidemic have yet to be clearly elucidated. So after we shed our tears and got rid of all the "why them? Why Us? We began to ask better questions in hopes of understanding the communicative sensory and metabolic problems of ASD and in doing so help our boys have a better future.

II. Personal Experience in treating our twins with ASD.

Initially, we had focused on an intensive behavioral program with 8-10 hours a day of 1:1 interaction. Combining speech, Occupational therapies, ABA, and floor time... I was accused of trying to cure my boys from their incurable disorder when I insisted the intermediate unit help in supporting our efforts to help the boys. Now 6 years later I look back and I find myself guilty as charged... I was trying to cure them... I had heard of so many other children who had "Recovered" so why not ours! Six years later I have found that we haven't been able to "Cure" ASD but I have learned a lot and in doing so our boys have made dramatic improvements.

Connor (diagnosed PDD/NOS 10/31/07) at 2 1/2 had non functional echolalia speech, extreme rigidity, frequent aggressive behavior and severe head banging, self injurious behavior and tantrums. He had some hand flapping and verbal stims and fixated on Baby Einstein and Thomas the train to the exclusion of the world around him. For 2 years we treated (yes I said treated) Connor with a combined behavioral, biomedical and dietary program. This consisted of behaviorally 25-35 hours of ABA, Floor time, speech and occupational therapy. Biomedical, he was on GF/CF diet, multiple supplements and weekly (eventually tapered to monthly) intravenous Glutathione/PC. At 4 1/2 he was "re"-evaluated by Dr. Andrew Zimmerman (ped neurologist@ Kennedy Krieger) who was shocked by Connors' improvements. Dr. Zimmerman in his report saw no evidence of ASD or developmental delay. Most diet and Biomedical therapies were stopped or tapered at this time and focus shifted to social skills and classroom readiness for 2 years. Now at 9 Connor is typical in almost every way. He is in 3rd grade without any aid or support, is academically ahead of his peers in all areas, and, most importantly is socially appropriate with peers. He was recently elected to student council and socially he has no issues. He is Bradley's' best friend and part time therapist and functionally is indistinguishable from peers. Granted he had mild ASD but his improvement has been dramatic. Is he cured? No, this disorder has no known cure; right? Who cares? But clearly he is better.

Bradley his twin (diagnosed with Autism 8/31/04) was, even 6 months after we began our interventions at age three; non-verbal. He was disengaged, constantly stimming running around with his arms extended. He attended PECS camp that summer with few words and our concerns over whether or how much he would ever speak. Brad has made significant improvements again with a combined approach to treatment. He has gone from no words to a few words from functional language to conversational speech. His primary issues are anxiety which continues to improve and

attention and focus. He reads and writes and academically performs at grade level. In fact he will be taking PSSA this year. He is happy, playful, making friends and is independent in most ways. He attends a transitional type school (Vanguard) with small class size (6) and 1 teacher and an aid. He is thriving in this environment, and we hope he will be able to move on to a more typical education setting with normal student teacher ratios and minimal support soon.

I attribute both our boys' improvement to this "combined" approach. Can I prove this? No, I can not. Clearly, one could point to the extensive early interventions and attribute all of the gains to speech, OT, ABA and floor time. I can only share what I have learned and observed from ours and other children and parents dealing with ASD, as honest and objectively as possible. I have been able to try many interventions others couldn't or wouldn't be able to do ;due to financial or family limitations. I have also had the benefit of four years of learning from well respected experts like Maude LeRoux and Stanley Greenspan(Floor time), ,ABA experts(Joseph Carbone/ Traci Difrancesco), experts on diet and detoxification and hyperbaric oxygen in the treatment for ASD: - Lisa Lewis, Bill Kracht DO , Bryan Jepson M.D., Stephanie Cave MD, Jim Neubrandner MD, Philip Demio M.D., Anju Usman MD, Kelly Dorfman, Ken Bock MD and Jo Feingold MD and 4 years of talking with and learning from over a hundred parents who have children with ASD has helped my children and others while we all try to put together a solution to the puzzle of ASD for our children... the amount of time and money we have been able to spend accumulating information and doing interventions(some of which we found did not help "our "kids) has been a blessing .

To follow, I will share with you information about what many like myself believe are the "CAUSES" (note I didn't say 1 Cause) of the Epidemic of ASD in our country and some dietary ,nutritional and some times detoxifying interventions that can be effective treatments for ASD. There is no "magic bullet" to cure or treat ASD, there is no one set protocol, and one size fits all treatment in regard to nutritional support and detoxifying treatments for ASD. Most importantly, NONE of the information when it comes to toxic theory of Autism and role of Vaccines and other environmental triggers as a cause of ASD's, or at best very little of it, is accepted as standard medical practice or fact. Unfortunately, many of the practitioners who offer these treatments prey on desperate parents whose judgment may be impaired by their passion to make their child well... I know I was one of those parents... but as a Physician albeit one with an open mind... I have been able to sort through some of the BS and the charlatons and quacks and in doing so I believe my boys are better off.

Finally, standard intensive early interventions getting children to engage and "Jointly Attend" to tasks either by using a developmental model building on the child's lead(Floor time) or adult directed activity with prompts/rewards to get a child to "JOINTLY ATTEND" (ABA),combined with speech , OT and a good sensory integration program are the MOST IMPORTANT interventions we can do for our children. This is the intensive brain rehab to which the plasticity of the young injured ASD child s' brain can best respond. I believe the addition of other nutritional interventions can help many children make even greater gains. But it should recognize that some children can and do make extraordinary gains without any specific nutritional support at all... So... with all those disclaimers.... Let's discuss the genetically predisposed... Toxic theory of the brain injury of Autism Spectrum disorder.

III. ASD as an acquired brain injury

Historically, two sub types of ASD have been described... "infantile autism" and regressive autism. Infantile subtype is characterized by children who seemingly had ASD since birth. This suggests a pure genetic disorder or an in utero event to which the immature fetal nervous system and brain is most sensitive. It is believed the lack of oxygen to an immature nervous system can result cerebral palsy. It is not a stretch to assume that a toxic exposure or hypoxic episode in utero could result in neurological and or immune injury. Regressive autism reflects a child who was developing normally with speech engagement etc... In every way and suddenly regressed with signs of neurological injury including loss of speech, social detachment, disengagement and some types of stimming. It is this

type which is more common today and it is this type that many parents attribute vaccination as the trigger to the development of ASD in their child.

Any time a controversial ground breaking idea is introduced in mainstream medicine there is a pattern well described where the idea is at first...Ridiculed....then vehemently opposed... and finally accepted as true fact. Whether it be hand washing to prevent infection (the physician who suggested this in 1840 was ostracized,, identifying a "Bacteria" (H Pylori) as the cause of ulcer disease or topics like global warming ; the truth at first can be very "inconvenient". All of the above theories once proven to be true resulted in a Noble prize for the lunatics who shared their inconvenient truths with the medical establishment or the world.

IV. ASD and role of Vaccination; a possible inconvenient truth.

Vaccination has frequently been cited by parents as an event which triggered neurological regression with loss of speech and engagement in their children eventually diagnosed with ASD. Epidemiological studies have continued to fail demonstrate a link between vaccinations and ASD. However, just because we can't yet elucidate the role of "over" vaccination of our children may play in development of ASD doesn't mean one does not exist. Just because we have not found a cure for ASD doesn't mean one doesn't exist! The study published in the New England Journal of Medicine which concluded that there is no causal relationship between vaccines and autism has some significant investigational bias which makes the objectivity of the study highly questionable. All that's right ; "all" ;of the physician lead authors who wrote the paper either are presently employed or have worked as consultants for the pharmaceutical companies who make the VACCINES! I read the article and if you do, be sure to read the disclosures at end of it (written in microscopic print) which confirm what I just said. How reliable can information is from stock holders and paid consultants and employees of the pharmaceutical companies? This study actually was unable to prove the presence or absence of a relationship between vaccination and ASD. Other limitations of the study include small sample size, only 30% participation rate, and exclusion of newborns weighing less than 5.5 pounds. The real issue in my opinion is in fact not the safety of "individual" I vaccinations, but what is the effect of FOURTY vaccinations over 1-5 years many given together. In short what is the risk and consequence of "OVER"vaccination? I BELIEVE in genetically predisposed children; "over" vaccination may contribute to " immunity gone wrong" making children susceptible to toxic injury to the nervous system/brain the signs and symptoms of this which manifest as Autism Spectrum Disorder.

Objective research is what is needed here; not studies subsidized by special interest groups with too much to lose when it is determined that either a particular vaccine can contribute to ASD ,or more likely that the number of vaccinations give to young children is really the smoking gun. Or more appropriately the "smoking trigger." It is believed genetics loads the gun and environmental factors (not just limited to vaccines) pull the trigger. Conversely , concerned parents shouldn't be authors of studies either... so often we all get lost in looking for who to blame for a problem as opposed to just asking the question....what is wrong? The first piece of the solution to the puzzle of ASD is not what caused the problem....but what "is" the problem. In other words let's clearly define the metabolic, toxic and genetic profile of children with ASD. Then we can ask the question of what caused the toxic, metabolic or immune disorder. But, pharmaceutical companies afraid of an "inconvenient truth" over role over vaccination may play in the EPIDEMIC of ASD use irrelevant epidemiologic data and "individual" safety profiles of individual vaccines to support the continuation of the highly profitable government supported national vaccination process. Parents of children with ASD do same thing often looking for whom to blame. The clinical discourse should be what happened and is happening to now 1 of 110 children and 1 in 70 boys. Shooting first and asking questions later shouldn't be the approach. But we need to ask the right questions! ASD is a growing epidemic! Genetics play a role but epidemic suggests an infectious...and toxic factors that make ASD an "ACQUIRED" disorder.

Ironically, I suspect when the puzzle of ASD is solved the genetically predetermined inability to detoxify and tolerate extensive vaccine injury to the immune system will result in only limited exposure or...fault of vaccine makers. But as is noted in "Evidence of Harm" by David Kirby the reluctance and evasiveness on the part of pharmaceutical companies to even consider the possibility that extensive vaccination of our children may be damaging their immune and detoxification systems make them suspect ..In a conspiratory kind of way. We know one shot of alcohol won't kill, 6-7 gets you drunk, and a bottle taken in a short period of time can be lethal. I suspect it is the same with vaccinations. It is the number of vaccines we now give our children ; not just the fact that they are loaded with aluminum(to increase effectiveness) and some still have mercury(thimerosal) in them like the flu shot and Rhogam.; that is the bigger issue.

V. Genetics, Methylation defects.... The Gun...

The epidemiologic data that pharmaceutical companies site as the evidence of a lack a link between vaccines and ASD is a important piece of information in trying to understand the root cause and increase in ASD in past 10 years. The fact that all children vaccinated don't get ASD is the misguided argument used to support the safety of our national vaccination program. Cigarettes we all know cause lung cancer. But why doesn't everyone who smokes get cancer.... The answer lies in the concept of genetic predisposition. Nicotine is the trigger in genetically susceptible individuals that leads to lung cancer. This analogy is quite relevant in looking at why vaccine manufacturers are so concerned about role of vaccination in ASD. Big tobacco has been replaced by big pharmaceutical companies as one of the most powerful special interest groups today. When the role of vaccines as a trigger in the development of ASD is elucidated like with cancer causing effects of tobacco, it will cost these companies trillions of dollars. But there in is the rub. ASD has become a political disease and an objective look at the problem has been hijacked by concern over who to blame for this epidemic as opposed to what is the cause!

Genetic diseases don't follow a pattern of epidemic. Muscular Dystrophy was 1 in 25000 births in 1990 and remains one in 25000... In 2007! ASD went from 1 in 5-10000 births in 1990 to 1 in 110 live births and 1 in 70 boys today. A recent study from Boston's children's hospital identified a defect in chromosome "16" in many children with Autism as a potential cause of the disorder. But again, diseases caused by genetic defects are not epidemic in nature. Certainly this finding may be important. Maybe it is on chromosome "16" where our bodies code for the proteins to detoxify. Maybe this is a piece of the ASD puzzle. But, Genetics alone can't explain this sudden epidemic. More children are diagnosed with ASD than diabetes, aids, and cancer combined! This is not even including the explosion of the diagnosis of ADD/ADHD, whose core deficits are inability to focus or "jointly attend "to a task. Many experts now include ADD on the mildest end of the Autism Spectrum...and kids who are recovering (or improving) from ASD often still have ADD/ADHD issues. Yet, it has taken 5 years for the NIH to even acknowledge the increase! They have yet to refer to it as an epidemic. That would make it a disease. Remember all the past arguments: We are just diagnosing more etc. etc... again ideas which challenge status quo from special interest groups...first ridiculed, then vehemently opposed, then accepted as true fact. So if genetics loads the gun and the disorder suddenly becomes an epidemic there must be a trigger! The genetic defect in children who develop ASD may be in their detoxification and immune system.

Methylation is a biochemical process by which our immune system fights off infections and toxins. Defects in methylation and acquired depletion of detoxifying capability of the liver and GI tract can help explain how "over" vaccinating can cause neurological injury and contribute to development of ASD. Drs. Jill James and Richard Depth have done excellent sound research in elucidating the role and complex process of "methylation" how it relates to detoxification and dopamine and serotonin metabolism.

VI. Vaccines and ASD continued

Note I didn't say vaccines are sole trigger or cause of ASD in genetically predisposed children. ASD is in all probability a "MULTIFACTORIAL DISEASE"...if we focus only on the role "over "vaccination may play in the toxic theory of ASD, we are missing the bigger picture. Despite the fact that it has been recognized that the non vaccinated population of the Amish has no apparent incidence of ASD(only reported cases of ASD in Amish children were those kids who were adopted or those with "documented non vaccine related mercury poisoning.') A tragic cascade of these yet unproven multiple factors is the most logical, but yet not the most simple explanation of the epidemic of ASD. Consider the effects of this possible scenario;

1. Genetic. A child with defects in Methylation and in the ability to detoxify or mount immune response.....

2. Gets "Vaccinated" or rather "over vaccinated" in 2010...

Birth-2 months 1st set vaccinations...

DPT-123

Polio 4

H influenza Flu vaccine 5 (still contains thimerosal/mercury) what is true morbidity/

Hep B 6 Why vaccinate for this at all? Or mortality of flu in infants...ever know of any infant who got sick from or died of Flu?

Pneumococcal (PCV) 7

Four Months 2nd set.....

DPT 8, 9,10

6 Months 3rd set...

Polio 11

Flu Vaccine 12

DPT 15, 16, 17

PCV 13

Flu Vaccine 18 (are you kidding 3rd dose of Hep B 14 mercury laden

vaccine in 6 Months!)

PCV 19

9-18 months

Polio 20

Hep B 21

12 months

Vermicelli Vaccine (chicken Pox) 22 again...why bother...?

15 months

MMR 23, 24, 25

Flu Vaccine 26! 4th dose by 15 months has mercury in it,

PCV 27

DPT 28, 29....30

4-5 years....

DPT 31, 32...33

Polio 34
MMR 35, 36, 37...

Add in meningococcal vaccine 2= 38, 39 another Chicken pox Booster 40

The RSV vaccine 41 and rota virus and we have

41 VACCINATIONS in 5 years.....30 by 18 months!

A. MMR (MMR X 2 =6 vaccinations) - by age 3 (this is a live attenuated vaccine, that in immunological impaired child can result in extraordinarily high rubella Titers. Autism as a result of rubella infection is well described in Dr. Chess text "Psychiatric Disorders of Children with Congenital Rubella" a whole chapter(9) is devoted to this subject pages 113-123. This text was published in 1970!) So we know Rubella does cause ASD. Could MMR contribute to ASD when combined with the massive increase in our vaccination schedule? Anecdotally, my son Bradley's rubella titers were through the roof at > 900, he was diagnosed with Autism; Connor his "fraternal" twin who was diagnosed with PDD had levels much lower at 600. (Brads lead and mercury toxic profile from newly developed urine porphyrinogens test was twice Connors also).

Dr Andrew Wakefield had a study published in the "Lancet" a mainstream English medical journal outlining findings of measles enter colitis in recently vaccinated children...this paper was recently retracted from "The Lancet" because of

Not the validity of his findings but the ethics of the conduct of his study. Legitimate issues to be sure but this one questionable study still doesn't address the role of multiple vaccinations play in the development of ASD. It is not any one vaccination which in an of itself is worrisome it is the cumulative effect of multiple vaccines which is the bigger concern!

B. DPT (3 vaccines times 5) 15 by age 5! Although not accepted in mainstream medicine the book by Dr. Coulter "A shot in the Dark" was one of first texts to report neurological injury after DPT shots. Thimerosal has since been taken out of DPT shots... Although the neurological effects of mercury are historically well described, thimerosal was removed from many (not all) vaccination products due to "parental concern in 2001. Many products still do contain mercury/thimerosal. All vaccines in addition contain Aluminum to increase antigenicity and antibody response/effectiveness of the vaccine. Aluminum has been, in mainstream medical research, implicated as a toxicity that may contribute to Alzheimer's disease.

C. Varicella (chicken pox) Vaccine 2 before age 10

Turns out this vaccination for a fairly benign disease didn't even work that well as they now recommend 2nd booster shot before age 10.....P.S. all my boys got the vaccine and all got a mild case, but a case none the less of ... Chicken pox.

d. Prevnar (Pneumoccal) vaccine "4" before age 18 months...!

E. Hib "4" before age 15 months

F. Polio 4 before age 4(3 by age 15months!)

g. Hepatitis B vaccines...multiple doses before age 5 why must we vaccinate for this at such a young age...and for all children.

H. Meningococcal 1- by age 1... Can't we wait till high school?

I. RSV 2 by age 3 this one makes sense to me...as the sequelae of RSV in a young child cause chronic respiratory issues.

J. Flu vaccine recommended for pregnant women and all infants less than 2 years old yearly; and this one still contains thermoses (ethyl mercury) to this day! How often is this one recommended? Yearly.

K. Rota tek- a vaccine developed and patented by Dr. Paul Offit. Dr. Offit is chairman of infectious disease at children's hospital of Philadelphia and nationally recognized "vaccination expert" and proponent. He advises our government the NIH and CDC on recommendations regarding the safety and necessity of our present vaccination schedule.

Dr. Offit has profited and continues to profit from his...Rota Virus vaccine a vaccine developed to prevent rota virus infection which causes diarrhea and dehydration. In a country with limited access to medical care, physicians or hospitals this vaccine might make sense but here in USA? I don't get it. More over, this vaccine was recently suspended from use in Pennsylvania (4/10) over contamination and safety issues.

Finally, how objective can Dr. Offit really be regarding not just individual vaccine safety but the cumulative potential deleterious effects of dozens of immune challenging vaccines given to our neurologically developing and immature children! How likely are parents to agree to a diarrhea preventing vaccine in our country if the cumulative safety profile of our national vaccination regimen is called into question?

Well, like any astute businessman Dr. Offit has fought back...the best defense is a good offense and so he has written a book called "Autism Myths" to cast aspersions and debunk the autism vaccine connection. He makes some valid points about his "opinion" as an expert (not an inventor or proprietor of vaccines) to support a "belief" that our current vaccination schedule poses no immunologic harm to our children. Beliefs and opinions in dealing with the epidemic of ASD are just not good enough ...and that include my own beliefs and opinions. We need OBJECTIVE studies to look at effect immunologically and clinically of > 40 vaccines to our children by age 5! And yes we need to look at genetics too but the environmental triggers including vaccines need to be looked at too.

NOT INCLUDING THE FLU VACCINE OR RHOGAM IF YOU ARE AN RH- MOTHER AND GOT THIS. THAT IS 40...FOURTY VACCINATIONS BY AGE 3-4.... 40 VACCINES CONTAINING VARYING AMOUNTS OF ALUMINUM AND THIERMOSAL...What is really disturbing is; 36 of these vaccines are given to our children by 15-18 months ! Keep in mind this is not "even including the Flu Vaccine which many infants get yearly and still has mercury/thiermosal in it! BUT OF GREATER CONCERN IS THIS QUESTION: Does the sheer volume of vaccination in such a short period of time impair a child s immune system and in the genetically predisposed , does this weaken the immune state and impair detoxification leading to neurologic injury from metals, virus, bacteria etc..? Additionally, a weakened immune system from "Over" vaccination in genetically susceptible children makes them more vulnerable to the many other toxins we face in our world. Our children are just the canaries in the coal mine.

Prior to 1990 children got less than 1/3 the numbers of vaccines we give are children now.

" In 2000 FDA researchers finally did their math and converted the amount of ethyl mercury in vaccines from volume percentages to actual weight, they found that most American children were being exposed to levels in excess of federal limits, especially when calculated in single day bolus doses. For example a 2 month old child weighing 5 kilograms (11 lbs) could have been exposed to 62.5 micrograms of mercury in a single day. This would be 125 times more than the EPA limit for that child (.5 micrograms per day) 42 times more than the CDC's agency for toxic substances and disease registry (ATSDR) limit (1.5 micrograms per day and 31 times the FDA limit (2.0 micrograms per day)'

Quoted from "Evidence of harm" by David Kirby

Another factor to consider in the fetus or infant exposed to this large amount of vaccine, mercury, aluminum etc. is the ratio of brain to body mass. In an adult the "mature" brain and nervous system (5-8 pounds) is only a fraction of body mass (150-200 pounds). But, think about the infant...weighing 5-15 pounds the head and nervous system (which is immature and more vulnerable) may account for 50% of their weight. (4-5 pounds). The immature disproportionate size of infant/child's nervous system puts it at greater risk to injury from toxins than the mature adult nervous system.

Thimerosal and ASD ; recent epidemiologic data from a California study reported that the continued rise and /or lack of a decrease in Autism Spectrum disorder since mercury was taken out of all vaccinations in that state suggests that there is no link between vaccination (or what I believe "Over Vaccination") as a cause of ASD. Again, I believe if we focus solely on Thimerosal as a "smoking trigger" of ASD we are missing the bigger pieces of the puzzle. Remember "Genetics loads the gun" and environmental insult pulls the trigger in this Toxic theory of ASD. Vaccines are loaded also with aluminum another toxic metal, is this bigger issue? Or is it the sheer number of vaccines which in immunization against disease causes collateral damage to genetically susceptible children's immune and detoxification systems. This results in impairment in a Child's ability to excrete these toxins (mercury and aluminum) and thereby could result in the ASD brain injury we now see in epidemic numbers. These over vaccinated genetically predisposed children are also more susceptible to environmental heavy metal toxicity. Mercury in seafood and in environment, aluminum cans and cook ware to which we are exposed. Lead paint in children's toys (i.e. China's toy and Thomas the train recalls), Fluoride in tooth paste, pregnant mothers with a mouth full of mercury fillings who get teeth cleaned when pregnant with release of mercury vapor absorbed in mouth (American Dental Association has only recently acknowledged the potential health hazards of mercury amalgam fillings. Flame retardant clothing for children and infants lined with tin/antimony... certainly no clothing manufacturer or even physician would want to hurt a genetically susceptible over vaccinated child with flame retardant clothing... but no one would argue that the skin is a major organ that can and does absorb drugs chemicals or toxins in some cases very well (Nicotine patch, Nitroglycerin patch, scopolamine patch, to name a few examples). But one must understand that this toxic theory of ASD/ADHD in which over vaccination may play a significant role in impairing detoxification and immune system activity of genetically predisposed individuals is not recognized in mainstream medical community. This impaired immunity also leaves the susceptible child vulnerable to chronic infection (Strep/PANDAS, Lyme, and Rubella) which can also have neurological sequelae.

What's the rationale for all vaccines before age 5! I believe it may be that up to age five we have a captive audience. After kids are in school how often do they see a pediatrician... only when they are sick right? And... how often do kids over 5 get sick enough to see pediatrician... not very often and certainly not every child. So if we spread out the vaccination schedule over 10 years and didn't mandate all be done before school many children would not ever get all these... what may be not necessary vaccinations... The before school mandate for vaccinations is supported by the medical community based on at best the well meaning, but I believe incorrect belief that this "over vaccination" poses no risk and only benefit to our 5 and under developing children. At worst well visit vaccinations are a real source of revenue for pediatricians which are important considering how little well baby visit reimburses a pediatrician without additional payment for vaccinations. Although vaccinations are a good source of revenue for pediatric practices, I do not believe physicians "over vaccinate" for financial gain. They are told and taught that the present vaccination schedule is not only the "standard of care" but the right thing to do. Yet, again there are no studies showing that this present vaccination schedule is without neurologic risk to developing children that in my opinion outweighs in most cases the benefit of disease prevention. The epidemic we should be worried about

is ADHD and Autism....not Chicken Pox, hepatitis and meningitis...these diseases have never been a scourge to our population in modern times and we all grew up with out the "BENEFIT" of this explosion of vaccinations and we did fine. This again doesn't mean that I advocate no vaccines. Vaccination for diseases like Polio, Measles, mumps, rubella and diphtheria, pertussus and tetanus and the elimination of small pox was a great medical achievement of the 20th century. But more is not better...it has been said that "the enemy of good is better" such is the expansion of the vaccination schedule it was good and we made it better by expanding it and in doing so I believe we have injured the immune systems of genetically predisposed kids with resultant neurologic sequelae we now see as the epidemic of ASD. Vaccination may have eliminated tragic epidemic diseases in the 20th century, but now "over vaccination" may have created a new epidemic in the 21st century...the epidemics of ASD, ADHD allergy and Asthma as Ken Bock MD describes so eloquently in his book. Cigarettes don't cause cancer in all smokers. But we now know that this doesn't mean that cigarettes are safe or don't cause cancer. Like wise not every over vaccinated child gets ASD (but now 1/70 boys are diagnosed with ASD) Until we can identify which children are at risk for vaccine injury I believe a more prudent approach is to delay and spread out vaccination. A good resource guide here is: "What your doctor won't tell you about vaccination" by Stephanie Cave, M.D.

So a genetically predisposed child gets vaccinated, over 40 vaccines containing aluminum, some still with mercury and MMR with a live albeit attenuated virus'' but if this wasn't enough other factors also contribute to the toxic burden our vulnerable children must deal with they include but are not limited to:

Methyl Mercury in Sea food.....do you know what recommended seafood intake for pregnant women is?

Zero none nada.

How about the FDA recommended limits on canned Tuna Fish?

1 6-8 ounce can... per WEEK!

If you were food manufacturer and you had a new product that was safe only if ingested once a week with a 6 ounce limit do you think the FDA would approve your product known to contain varying amounts of Methyl mercury? This is really perplexing to me.

Lead.... 80% of all toys in US are from china... Lead was taken out of US products , paint and gasoline in the 70's only to have our children particularly ones with impaired detoxification systems to be exposed now again in 2007. Remember the skin is an effective conduit for delivery and administration of Drugs...

Nicotine patch, progesterone cream etc., like wise it is also mechanism of absorption of Toxins. My son Bradley had particularly high levels of lead and had good response to IV EDTA Chelation. Does lead cause Autism....? Do toys with lead in them contribute to development of ASD? I don't know. Does lead toxicity cause mental retardation/brain injury? Of course!

Dental Amalgams; most historically are mercury fillings. If you are pregnant have lots of fillings and get your teeth cleaned could you be absorbing some mercury in your mucous membranes of the mouth? Who knows, but mercury fillings are now becoming a thing of the past... Why?

Infection: chronic infectious process can tax or impair a child's immune system. In an infant with a predisposition to immune deficit from Methylation defects (MTHFR defects) viral, parasitic and bacterial invaders can further compromise a Childs ability to detoxify and contribute to further injury. PANDAS, "Pediatric Autoimmune Neurological Disorder after Strep" is now well described in

mainstream Pediatric literature. In this situation infection leads to immunity gone wrong; it is theorized that the immune response to Strep with production of Anti-strep antibodies results in these anti strep antibodies cross reacting with brain or nervous tissue in affected children and thus results in a neurological injury. The presence of strep itself has been associated with OCD and perseveration type symptoms. It is not clear whether the antibodies to strep or strep itself are the source of the neurological sequelae. But, clearly PANDAS is a part of the ASD puzzle in some children.

It is not clear which came first the PANDAS contributing to immune deficits of ASD or the Pandas (Strep) occurring as a result of these impairments. It is clear that treating PANDAS results in first lower strep titers and most importantly clinical improvements. But again, despite good scientific research articulating role of Strep in PANDAS; good clinical research on best treatment for Pandas, its role in ASD and results of these treatments is not yet here.

Recently, researchers at Drexel and Kennedy Krieger published a study on positive effects of "FEVER" in improvements in autistic children in terms of language, socialization and behavior. What is fever? Simply, fever represents a physiologic response to infection. Fever is indeed a marker for immune up regulation. What does our immune system do! It fights infection and eliminates toxins....So if ASD kids have impaired immunity...then fever (which suggests immune stimulation) improves symptoms there must be a connection between immunity or immunity gone wrong and ASD.

This study is very important. Even the author comments that the study goes beyond "anecdotes and case reports" on the effect of fever in children with ASD. This is first study which confirms (although indirectly) the connection between impaired immunity (and maybe detoxification) in Autism Spectrum disorder. Now, they need to ask the right question....Why does fever improve the symptoms. I suggest immune up regulation leads to elimination of toxins or infectious organisms which cause or contribute to neurological injury of ASD, and improved detox/immunity in ASD kids, manifested by "fever" improves symptoms of ASD! Next question....what is cause of impaired immunity? Genetics play a role of course. But what is /are the environmental triggers? Metals, Bacteria (Strep/PANDAS), Virus, Diet...?

Diet; clearly the US diet provides our children with more toxins (MSG, Transfats, processed sugars and dyes) than ever before. No question this isn't helping susceptible children.

Yet, is there any study showing the effect of MSG (Glutamate), aspartame, food dyes, or other additives in our food? No. Very little good research has been done here. Who is going to do it? The food and additive manufacturers? The FDA? So often it seems we are left with only anecdotal data and parental observation or experience to guide us.

Yet, more clues every day should be helping us. We just have to connect the dots correctly. For example, aluminum toxicity has been shown as being present in brains of Alzheimer's patients. We know aluminum toxicity results in elevated glutamate levels. Recently, the most effective drug approved for treatment of Alzheimer's disease is "NAMANDIA". This drug improves cognitive function and delays neurodegenerative effects of Alzheimer's. Its mechanism of action: It is a "Glutamate Antagonist", it blocks known neurotoxic effect of glutamate by blocking the glutamate receptor! Yet, has the potential neuro toxic effects of MSG/ Monosodium "Glutamate" ever been considered by the FDA or the medical establishment? of course not. We will develop a drug to block neurotoxin effects of glutamate in Alzheimer's patients, but we won't consider the effects of ingesting MSG/Glutamate on our overall health. Aluminum is present in many vaccines (its there; read the package insert) to increase the antigenicity or effectiveness of the immune response to the vaccine.

Doctors recommend the flu vaccine which contains not only aluminum but also still has Mercury (Thimerosal) in it to our entire population, but in particular to the very young and the elderly. Are we preventing the Flu and causing something worse. Does Alzheimer's disease reflect more neurological "collateral damage" from our vaccine program to susceptible individuals in our toxic world?..

VII. Should we be intervening at all? Welcome to Holland versus the Beirut approach.

When our boys were diagnosed with ASD we got a lot of advice and input from many sources .Early on I was given an article written by a parent of a child with special needs for other parents. The article was entitled "Welcome to Holland". The basic premise is altering your expectation for your child's future doesn't mean you love them or care for them less but that you should just embrace the special differences of your child. Your special needs child has put you in Holland so learn the language get the guide books and accept Holland as your new destination albeit one you hadn't planned on. I respect and understand this view. A different view was articulated by another parent in her essay "Welcome to Beirut". This essay approaches dealing with your child's diagnosis of ASD as like landing in the middle of a battlefield in a foreign hostile land. Because I believe ASD's are treatable and based on my own experience I preferred the Beirut analogy... In this scenario landing in the country of ASD with your child involves more of a battle to help your child overcome ASD as opposed to accepting ASD as a life long disability with no known cure. When you land in Beirut you are under siege; fighting for therapies for your child... Fighting to get the first glance, the first smile, the first engagement and the first word... Then potty training , Floor time, ,ABA , Tomatis, diet, nutrition...sauna's, miracle clays, chelation therapies , hyperbaric oxygen...all to recover your child.. The battle can have casualties other siblings get short changed... financial and marital discord if one parent wants to enjoy Holland and the other is loaded for bear to win the Battle of ASD in the world of the Beirut I will make my child better.

Clearly each child and each parent and family with children with ASD's have different circumstances which may make one of these approaches better for them...but like most things in our world extremes are usually not healthy. The Holland view should not exclude one from trying to help their child with ASD improve and those who have visited the Beirut approach like myself now can see the value of tempering the take no prisoners approach to trying to help your ASD child improve or recover if possible with the reality that you must accept certain limitations we all have. So balance is my own advice... I only wish I could take my own advice more often...and try to enjoy the gains and improvements that are seen without always looking to help my child with ASD climb the next mountain or overcome the next hurdle.

My goal however, is just to share information on some dietary, nutritional and detoxifying interventions that may be helpful to many children with ASD. I offer lots of solid science and a sound theoretical basis for these interventions; for but as of yet ;little objective data in mainstream medical texts or journals as to the proven efficacy of these interventions... that being said...remember we are trying to treat an incurable disorder(Autism) for a disease that doesn't exist(toxicity of ASD) with unproven treatments.

Summary... so from a toxic theory of autism perspective: What is AUTISM SPECTRUM DISORDER?

1. It is a brain Injury.
2. It involves an impaired immune system. (Fever effect study shows positive responses)
3. It often involves an injury to the GI tract resulting in leaky gut which may be related to vaccine enterocolitis.
4. It is genetically predisposed with defects in Methylation (MTHFR) Remember Methylation is critical biochemical process by which our detox and immune system eliminate metals, virus and bacteria.
5. It is associated with a decrease in Glutathione our body's natural detoxifier/chelator. (Tylenol recommended for fever after vaccination is a known liver toxin that decreases Glutathione. More over in kids with predisposition to ASD a little fever looks like it's a "good" thing.)
6. Environmental triggers undoubtedly play a role:

-Heavy Metals: mercury, aluminum, lead and arsenic.

-Acquired viral infection- MMR (vaccine), herpes coxackie etc.

- Bacterial infection-Particularly Strep....PANDAS: Pediatric Acquired Neurologic disease after Strep is now described in the mainstream pediatric infectious disease literature but an association with ASD is recognized but hasn't yet been articulated in mainstream pediatric practice.

- Parasitic infection-Children with impaired immunity often may have chronic parasitic infection.

VIII. The Inflammatory response and ASD.

1. The human body's natural response to injury is inflammation.
2. Inflammatory responses occurring at site of injury can be excessive and can exacerbate the injury.
3. The primary targets of injury in ASD appear to be the GI Tract and nervous system (Brain). This can result in enter colitis with leaky gut and direct neurologic injury from toxins (metal and viral and strep-PANDAS) and secondary injury secondary to neurologic inflammation or a type of low grade encephalitis.

IX. The Multifactorial cascade resulting in ASD....

Genetic defects in Methylation/Detoxification + Vaccination (Over vaccination) and or other dietary and environmental toxins = Immune deficits

Immune deficits result in susceptibility to acquired infection (Virus/Strep-PANDAS")

The infection "further" weakens an impaired immune/detox system and in case of Strep, Herpes, Lyme or parasites...may have direct effect on brain and nervous system

Detoxification impairments minimize ASD child's ability to excrete heavy metals (Remember all of us are exposed to metals every day but ASD children with methylation detoxification impairments can't eliminate them.

Exposure of the immature nervous system to these triggers/toxins=Neurologic Injury.

The extent of the injury (ASD) depends on:

1. How predisposed (genetically) to impairment is the child's immune system?

(Bradley-Autism 2 defects in MTHFR Gene;

Connor- PDD 1 defect in MTHFR Gene)

MTHFR; Methylenetetrahydrofolate reductase; Enzyme that supports Methylation.

2. How significant was the toxic exposure (how much metal, Virus, bacteria etc.)

3. When did the exposure occur?

-In Utero Infantile ASD

-Later ...Regressive ASD

4. Other Factors...the tragic cascade: Like a "perfect immunologic impairment storm" other contributing factors may play a role. For example: when child with impaired immunity/methylation gets vaccinated they often develop a fever.

Of note... What is immune systems early response to INJURY? Fever.

So what are parents told to do...? Give...Tylenol to: reduce the fever. So First thing we do is reduce the fever, which is child's natural defense to the invader.

Then we do it with the worst possible drug especially for a child with an impaired detoxification system: TYLENOL. A known toxin to our liver which along with our GI tract is a primary detoxification organ. Tylenol has been shown to lower Glutathione stores in liver. Glutathione deficiency is a common finding in children with ASD. Again recently, fever has been shown to improve symptoms in children with ASD.

So now...This tragic cascade continues...our genetically predisposed (MTHFR defects) child gets.....

Vaccinated....correction "Over" vaccinated which impairs immune system.

The body responds to the injury naturally with fever, which we lower with Tylenol a liver toxin which lowers Glutathione which these kids desperately need now.

Then we vaccinate with more "live "attenuated virus' Measles, Mumps Rubella (remember Dr Chess data describing Autistic Rubella Syndrome e 1973, Dr. Wakefield's research showing measles in biopsies of ASD children's GI tracts!) These live viruses in setting of impaired immunity may not only create an immune response, but a low grade viral infection which may contribute to the brain injury of ASD.

The tragic cascade continues when our children who have impaired immunity get the usual 3-8 ear infections with again , Fever which we treat with ... repeated Tylenol and Antibiotics. Antibiotics kill many bacteria; not just the infecting organism but also the "good "bacteria in our GI tract. The bowel is full of bacteria, which as part of the complex digestive, detoxification process help maintain the barrier between what we ingest....and what we absorb. Repeated treatment with many different antibiotics(common in kids with ear infections)essentially wipe out or dramatically alter the bacteria content of our GI tract and in doing so create an injured GI tract. Might this be a contributing factor to ASD "leaky gut"? Of course. Recognizing that "presumed" ear infections in children seem to have increased in all kids, pediatricians and parents of children with ASD often attribute the initial symptoms of ASD (inattention...No speech) to hearing impairment from recurrent ear infections which contributes to further delay in diagnosis. This part of the discussion shows how medical practice even well intentioned; some times gets it wrong.

The importance of maintaining proper colon/intestinal health with the use of probiotics (good bacteria we ingest to improve detoxification of GI tract and overall health) is now recognized as an important aspect of wellness and disease prevention. New products like "Activia" and others have been developed and marketed to address the concern and importance of maintaining the "right" bacterial environment in our GI tracts. Yet, when was the last time a mainstream physician told you of importance of probiotics during or after treatment with antibiotics which not only kill a possible cause of illness but disrupt the balance of bacterial load in our intestinal tract impairing colonic function, detoxification and overall wellness. Yeast overgrowth common in women after treatment with antibiotics is treated with antifungals like Monistat and diflucan rather than with prevention through judicious use of antibiotics and probiotics.

We have all heard about the EPIDEMIC explosion of MRSA (methicillin resistant Staph Aureus, VRE (Vancomycin resistant enterococcus) and Clostridia Difficile Colitis. These SUPER bugs are increasing ever year with tragic consequences. These are organisms which are "resistant" to most antibiotics.

Mainstream medicine has concluded logically that these super bugs are a direct result of the "over" use of antibiotics, which has resulted in the emergence of these resistant strains of super bugs. Hospitals are now being closely monitored for their rates of infection of these organisms. But again we miss the root cause of the problem. It is not the hospitals who are the cause of this epidemic but the years of "over" use of antibiotics which brings these infected patients to our hospitals. Do hospitals need to do a better job of controlling spread of these organisms...Of course? But, hospitals here are not the "arsonists" but the "firemen" trying to put out the fire others started. Could it be that these super bugs are in part a result of the "overuse" of antibiotics (ear infections) in children?

Recently, there is a growing effort in mainstream medicine to start limiting use of antibiotics in children. Most infections in children are viral in nature so, historically, do we treat the febrile ill child with antiviral drugs? NO... we give them...What? An antibiotic which treats BACTERIAL INFECTION not virus. We have now seen the results of "over use" of antibiotics to eradicate bacterial organisms. The collateral damage to our society is in fact these super bugs. I propose that the "over use" of vaccinations to eradicate diseases (like chicken pox) has impaired some children's immune systems and the result; the "collateral damage" here is: Autism Spectrum Disorders and ADD/ADHD. But unlike the emergence of resistant super bugs ASD is more complicated as a multifactor, genetic and environmental disease...Focusing on vaccines alone as cause of ASD misses the bigger picture.

The final tragic domino that falls on the genetically predisposed, over vaccinated, Immune impaired, ASD child with injured GI tracts and detoxification pathways is: The World... Our toxic world...The final environmental factor the ASD child is exposed to is the world around us. Remember, non ASD kids with good Glutathione stores, healthy detox systems of GI tract and livers take the toxins in and excrete them. Again it is theorized that ASD kids as a result of this "tragic cascade" can't excrete these toxins (metals, virus, bacteria, parasites) and neurologic impairment is a result.

The EPA (environmental protection agency) is more concerned over the mercury exposure to trout in our streams than the FDA (food and drug administration) is over the food and drugs we are ingesting exposed to. The FDA lets the pharmaceutical companies do their own studies on the safety and efficacy of their own products. Then, because the FDA can't or won't spend the money to reproduce studies done by the drug companies the products are FDA approved based on this data. The arguments used to support this process are the free market helps get good products to treat diseases sooner and pharmaceutical companies invest so much money in so many products that don't get to market that they need to recoup large investments. I understand this but a little "objective research" or even scrutiny by FDA would be nice, albeit expensive. And what's the fail safe when a product like Thalidamide, or VIOXX or Fhen Fhen is found to be unsafe...we litigate; class action suits. We as a society take the money and run. Lead in toys, in lipstick, in seemingly everything from China. Who is our biggest importer...China(80% of ALL toys is USA are from China), Toxic waste superfund sites and clusters of ASD, use of mercury amalgam(mercury) fillings and potential exposure of mercury vapors to fetus in pregnant women who get their teeth cleaned, the ingestion of mercury tainted food in pregnancy are these all just alarmist rantings soon to be "old wives tales" or...are these ideas like, hand washing in 1800's; like the proposal that bacteria caused ulcers 20 years ago, just ahead of their time.

The research needed here is pretty easy to describe...first, study methylation defects in all children, then take good environmental exposure and vaccination histories, then randomize groups to get present vaccination schedule and a delayed or more spread out one, study biochemistry and toxic burden before and after vaccination and then, if toxic exposure is shown to contribute or be cause of ASD, begin detoxification/treatment trials to prove or disprove the efficacy of these protocols. We did this with AIDS. First, we recognized it as a disease. Then we found the cause (HIV Virus) then we developed effective treatments. HIV infection is not curable, but we now have effective treatments. Can we not strive for better treatment for ASD that focuses on the cause of the disorder and not just the brain rehab? With this knowledge, prevention and treatments scientifically grounded will result not only in effective strategies for ASD but with good solutions, long term approaches in how we all can survive in our toxic world.

So you can see why it is believed that ASD is a multifactorial disease in which vaccines are only one, maybe the most important one, but one, nonetheless of many factors resulting in the brain injury we are now seeing in the epidemic of Autism Spectrum disorders and ADD/ADHD.

So biomedical treatments for ASD should be based on:

1. Decreasing the inflammatory response
2. Healing the gut
3. Nutritional support
4. Restoring immune/detoxification systems
5. Detoxification. Removal of toxic metals or infectious organisms.

X. Biomedical treatment of ASD (Again none of these interventions have been established as effective Treatments for ASD in mainstream medical practice!)

PS... Hand washing wasn't recognized to prevent infection before 1900 either

PSS. Peptic Ulcer disease wasn't recognized as being caused by H. Pylori bacteria, till the lunatic who suggested this...Proved it and won a noble prize...

A. Dietary Interventions "LET MEDICINE BE YOUR FOOD AND LET YOUR FOOD BE YOUR MEDICINE"---Hippocrates

"As a mother of a three year old with autism, I have to say that it was irresponsible of Jenny McCarthy to imply that the GF/CF diet cured her son. This diet has helped many children with autism improve. However, just as many children, my son included, see no improvement on the diet. There is no cure for Autism, diet or otherwise. Ms. McCarthy really should be ashamed of herself"

Michelle Takarewic - Fitzpatrick St Petersburg, Fla.

People magazine (October 2007) Response to Article on Autism and Ms. McCarthy's Treatment approach with her son.

PS. I think this guy talking to you right now is full of

"Thanks Jenny McCarthy, for spreading the word that autism is not hopeless. After getting the devastating news that our 3 year old son had autism, we didn't listen to the doctors who said there was nothing we could do. After 5 months on the GF/CF diet, vitamin supplements and in home therapy our son has made tremendous gains. The prognosis for each child is different but as Jenny's story illustrates, early treatment-and a mom who just won't give up- can make all the difference".

Robin Broyles, Somerville S.C.

Another response.....to article in letters to Editor People magazine.

The above responses to Jenny McCarthy's story and her passion to share information about interventions which has helped her son improve so much (she never said, nor do I that these interventions cure autism) illustrate the challenge in trying to treat autism with non medically recognized interventions...Its true that these interventions (diet detox etc) may not help all children but for many they are life changing! We need to ask the right questions to find the right answers. A

big one here is not just why these treatments have no effect on many children but more importantly why do they help so many kids with ASD improve.

1. Gluten casein free diet- In ASD kids with injury to the GI tract this can result in these foods being absorbed and converted into "Gluteal peptides which impair nervous system, and in the case of Milk (casein) products, into caseino morphins (like morphine) can result in narcotic like effect on kids with ASD. Like the addict seeking their drug often children with ASD have craving /addiction -like need for these foods which are so bad for them. More over, eliminating these products can initially produce withdrawal like symptoms.

About 2/3rds of children improve to varying degrees with the GF/CF diet. Elimination of casein products if effective will show almost immediate results with more alertness engagement etc...and is easier than the elimination of Gluten products. The gluten free component of this dietary intervention is far more difficult and should be done for a few months to determine its effectiveness. As difficult as this intervention is (it is really hard for parents with kids over 5 who haven't done it) the changes many parents see in their children can be so dramatic as to make staying on the diet a no brainer. Children with chronic diarrhea, colitis and yeast overgrowth benefit from this intervention from a GI standpoint alone. In that this diet is hypoallergenic it thereby minimizes inflammation in an inflamed GI tract, helping heal an injured gut. In doing so thus restoring another detoxification pathway to proper balances, the children do not have an allergy to gluten/casein but more of intolerance. (Yet many children do test positive to Gluten and casein in standard allergy IGG testing) The GF/CF diet is not forever. Most children (who respond to diet) as they improve/ recover can go off it eventually. This is the safest and yet most difficult of almost all the interventions as strict adherence to this is necessary. The Book "Special diets for Special Kids" by Lisa Lewis is the bible here.

* Keep in mind the FDA- FOOD and drug Administration monitors the safety of... Food and drugs....why... They are the same thing. Foods are essentially a bunch of chemicals we ingest for sustenance nutritional support or in the case of Pizza for me... Pleasure. Drugs are just chemicals we ingest to treat a specific disease or disorder. Finally, nutritional supplements are chemicals...Vitamins, minerals, fatty acids etc... That has not been "proven" to treat a specific disease....

2. Elimination of Excitotoxins/ Neurotoxins

MSG- Monosodium Glutamate- glutamate in a known neurotoxin... Recently the newest drug to improve symptoms of Alzheimer's is NAMANDIA "Glutamate antagonist" aluminum toxicity implicated in Alzheimer's disease and a contributing toxin in ASD also increases Glutamate levels. Elimination of dietary glutamate and Aspartate is logical.

Dyes; well described as increasing hyperactivity in kids with add/adhd

Processed sugars..., as above are not good. A good book here is "Ritalin Free Kids"

3. Restoration of GI tract flora; the use of probiotics to help gut heal and return in balance is essential part of dietary interventions.

4. Other diets like the specific carbohydrate diet or macrobiotic diet, also may be beneficial in some children with ASD

5. Treatment of yeast overgrowth with diet and or drugs---Nystatin and Diflucan very effective here in children with high yeast load which are associated with metal and bacterial toxicities and often is side effect of detoxification and antibiotic interventions.

B. Nutritional support; use of supplements to restore deficits in vitamins, minerals, fatty acids and immune support.

"The Body is a biochemical machine which can repair itself when given appropriate nutritional support"

Derrick Lonsdale M.D.

1. Minerals; heavy metal toxicity results in deficiencies in selenium, Molybdenum, to name a few...Zinc improves cognitive function and has positive effects on immune system.

2. Vitamins- cofactors enzymes in many detoxification pathways use of B vitamins was the foundation on which the "DAN" protocol (introduced by Bernard Rimland) was established B vitamins also have detoxification properties.

3. Fatty Acids; use of fish oils and Phosphatidyl Choline have been shown to be beneficial in decreasing Inflammatory response and stabilizing damaged neurological membranes. The story of "Lorenzo's Oil" is a solid example of the potential benefits of using a fatty acid supplement to "effectively" treat a neurodegenerative disorder.

Intravenous PC combined with IV Glutathione has been used with excellent results in treating children with ASD.

4. Mitochondrial support: the mitochondria (primary source of cellular energy) are impaired with toxic injury of ASD and support with supplements like COQ- 10, NADH and ATP may be helpful.

5. Antioxidants; Oxidative stress is a frequent finding in children with ASD use of Antioxidants like Vitamins C and E are often part of ASD supplement program.

C. Detoxification: "The removal of toxins"

1. Enzymes- digestive enzymes as a supplement to an injured GI tract can help breakdown foods and digest and absorb them limiting their toxicity in presence of leaky gut. Enzymes specifically targeted to break down Gluten and casein products are also useful when transitioning off the GF/CF diet or in ASD families who can't do the GF/CF diet but wish to limit effects/ exposure of Gluten and Casein foods to their ASD Child. (Resource;"Enzymes for Autism and other neurological conditions, the practical guide for digestive enzymes and better behavior" Karen Defelice

2. Secretin- Intravenous secretin was not shown in prospective randomized studies to improve symptoms of ASD in all children treated with this synthetic intravenous naturally occurring pancreatic enzyme. As such it is not an approved intervention for ASD. However, it had few side effects was inexpensive...and in 20-30% of children treated had significant response in terms of improvement in GI tract function, behavior and language. For a few kids with ASD this was a miracle drug. This prompted the good studies which failed to demonstrate a consistent response to this drug in ASD kids. But again the important question wasn't asked! Why did secretin help 20-30% of kids? The answer may be in secretin's effect on the pancreas the primary producer of GI enzymes in our bodies. In a disorder that has no known cure or medical treatment a 20-30% response rate (or even 10-15% for that matter) is so much better than NO response... Interestingly, in fight to cure/treat

cancer a new drug to slow progression of a tumor that has a 20-30% response rate is an acceptable response rate...why because again compared to no response 20-30% is pretty impressive...lastly, if your child was one of the "minority" of children with ASD who responded to secretin...your child's response rate was 100%! Do I think secretin should be used in treating "all" kids with ASD? No. But we need to study this more. Especially in ASD kids with leaky gut.

3. TTFD (B1) thiamine tetrahydrofurfuryl disulfide- Transdermal cream

This combination of B1 with sulfur improves excretion of Arsenic, lead, cadmium and Mercury, one study correlated excretion of these toxins with improvements in ASD symptoms (Lonsdale et al- Neuroendocrinology letters 2002.) Dr. Jaqualine McCandless in her Text "Children with starving brains" advocates this product as safe effective detoxifier...however...it smells horribly which really does limit its use.

4 .Methyl-Cobolamin (Methyl B12 shots) The clinical studies of Jim Neubrandner M.D. in 2003 showed this to be very effective treatment for 65-75% of children with ASD with significant improvements noted in language, attention focus etc.... recent work by Richard Deth has articulated the methylation defects often present in ASD kids (MTHFR defects) and provide sound scientific support for mechanism of action of B12 in children with ASD. (Supporting Methylation) Dr. Neubrandner's innovative use of Methyl B12 as sub Q injection provides better blood levels of B12 than an oral route in children with methylation defects and inability to absorb B12 in an injured or compromised GI tract. This stuff is Cheap....but it is an injection and in some children can just make them more hyper. These children who are referred to as "overmethylators" still may have defects in MTHFR, but an additional defect in COMT(C-O methyl Transferase) can result in these children having higher dopamine levels and less of a tolerance for methylation support. Fortunately, this subgroup of ASD kids usually are higher functioning with better earlier language better greater challenges in areas of mood control and tantrums.

5. "Metal Free", chlorella, cilantro... all natural chelators which are oral sprays and drops...these theoretically decrease toxic burden...But mainstream medicine has no good studies supporting their effectiveness in ...first eliminating a toxin/metal and second showing that the removal of the metal/virus or toxin has produced a clinical response in ASD child.

6. Infrared Sauna- touted as effective detoxifiers of Metals like mercury. Safe. Easy... Expensive 3-4000\$ for 3 people sauna...Makes sense to me and I have one...Good for everyone is an upside...Clearly is effective detoxifier by sweat alone...Although manufacturer will show studies proving heavy metal excretion...(Manufacturer studies like Vaccine safety studies funded by vaccine makers..Are by definition NOT objective.)

7. Epsom salt Baths- Magnesium Sulfate Magnesium has documented calming effect of nervous system

Sulfur is known detoxifier... Safe dirt cheap easy 1 cup in a bath 3-4 times a week...

8. Magnetic clay baths... LL magnetic clay magnetically charged clay baths supposedly pull toxins out...

No data on this stuff... is cheap! Makes a mess in tub... Done 1-3 times a month, although I can't attest to its effectiveness in detox of metals virus etc... We observed significant increase in stimming behavior (which can be a sign of detox) after putting Brad in bath 2 times longer than recommended by accident... This really made me wonder that maybe these clays were neither useless nor benign...but in fact may have had some effect.

8. GLUTATHIONE: although can be given by mouth I am referring to intravenous use of GLUT (glutathione) often times combined with Phosphotidylcholine (Pat Kanen Protocol)

Glutathione is an immune stimulant and detoxifying chemical made in the liver of normal healthy children/adults. Glutathione deficiency is commonly seen in children with ASD. Whether the deficiency is secondary to toxic depletion of glutathione from viral or heavy metal toxicity, genetically predisposed or related to over use of pharmacologic agents which decrease Glutathione (like Tylenol) is not clear. But it seems logical that glutathione supplementation in ASD children who are deficient would be useful. It is a sulfur based detoxification. In children sensitive to sulfur based supplements or detoxifiers this may not be appropriate. However, for most children with ASD this is a safe effective intervention that supports and addresses two of the primary deficits in children when ASD; immune and detoxifying ones. It can be given orally or as a cream but the most effective route is intravenous. Dose starts at 300mg and can go up to 1600mg a week. The side effects are very few. The down side of IV Glut is it requires an IV (it is invasive) and it costs anywhere from 75.00\$ for IV push to 165.00\$ when combined with phosphatidyl choline as part of PK protocol.

Although Glutathione is not a chelator (drug given to specifically pull metals out of body) it is believed to be very effective in heavy metal excretion, viral detoxification and immune up regulation. As such it has a positive effect on leaky gut and when given IV avoids the limitations of a compromised GI tract in kids with ASD. THERE ARE NO PROSPECTIVE RANDOMIZED STUDIES IN MAINSTREAM MEDICINE, SHOWING GLUTATHIONE IS AN EFFECTIVE TREATMENT FOR ASD....But my own experience is 2/3rds- ¾ of children with ASD have good to excellent response to this intervention especially when combined with PC IV as part of PK protocol. Our own children received weekly PK treatments for over 1 ½ years and I believe it has been (combined with Floor time ABA speech etc) a critical treatment for them. Improvements in our children's toxic profile correlating with improved expressive/receptive language increased engagement and healing of GI tract issues have and continue to be seen.

A major unanswered question is how often one should do these treatments (weekly, monthly etc...) and for how long? As our children improved we decreased frequency of treatments but maintenance treatments every month or every other month seem to be best...In children who have made gains with this treatment. Another question is why all children don't respond to this treatment... Again another one of the frustrating mysteries of ASD. When the puzzle of ASD is solved with good science and research, I firmly believe IV Glutathione with phosphatidylcholine will be an important part of the solution for many children. Many Dan Defeat Autism Now) detox practitioners combine IV glutathione with a comprehensive supplement program that may or may not include formal chelation for mercury, lead, arsenic, and aluminum.

9. Phosphatidyl Choline (PC) a fatty acid supplement. Here again I am referring to intravenous use. (Can also be given orally) Helps restore balance nutritionally in children with toxic injury of ASD may help stabilize neuromembranes, thereby improving neurologic function, may be primary detoxifiers of virus and metals or simply a positive immune modulator. PC combined with Glutathione may help Glutathione cross blood brain barrier of brain and in doing so improve detoxification of the ASD child's brain and nervous system, can be given orally or as an IV. Recently larger doses of PC as an IV drip (1-2grams) have been used in treatment of ASD. Down sides are: takes 2-3 hours, costs 500-1000. \$ A treatment, and again involves an IV so is invasive. I have found this treatment to be helpful for my son, but again I don't know how often or how long we should do this cost is also a limiting factor. Some children like with many of these treatments see little or no response.

10. IV IG (Intravenous immune globulin) a potent immune modulator in the more severely immunodeficient children with ASD... particularly helpful in ASD kids with severe STREP issues/PANDAS. Experimental from the ASD perspective, but many children with ASD have well, medically and biochemical documented immune deficits, and in these children insurance often covers this expensive (50,000\$) intervention.

11. Chelation.....

Chelation is the process of giving a drug (chelating agent) that binds to certain heavy metals (Mercury, lead, Aluminum, arsenic) so that they can then be excreted out of the body. Examples of chelating agents are EDTA, DMPS, and DMSA. These drugs can be given orally, transdermally (i.e. TD DMPS) or intravenously. Chelation is an FDA approved treatment for heavy metal poisoning/toxicity. Chelation for lead poisoning in children in the 60's and 70's was commonly done for children who had elevated lead levels secondary to environmental lead toxicity (lead paint ingestion etc.) The use of IV EDTA for lead poisoning has been done for years for children and historically has been safe and effective in lowering lead levels in affected children. Chelation must be done carefully with appropriate nutritional and mineral support, as chelating agents remove "good" metals like Zinc, Selenium and others. Liver, kidney function and metabolites should be closely monitored during chelation. The use of DMSA and DMPS is well described for use in cases of mercury toxicity.

When it comes to removing heavy metal from the body chelation is the most aggressive but not the only way to do so. Use of supplements like malic Acid, silica, and horsetail grass can be used to lower aluminum levels. Cilantro and Chlorella are also used to excrete lead and mercury. Complicating the issue here is also how we identify the presence of heavy metal toxicity. Hair analysis is only a snapshot of a Childs metal excretion pattern and often will show little lead or mercury. This is not surprising as the toxic theory of ASD assumes a defect in ability to "excrete" heavy metals. This defect in excretion is the argument for the need to supplement ASD Childs ability in this area.

It is important to distinguish between poisoning and toxicity when it comes to heavy metal injury. Heavy metal poisoning results in elevated serum or blood level of a particular metal. Toxicity reflects tissue levels of a particular or many metals and may be present in absence of elevated blood levels of a same metal. Neurologic toxicity from lead, mercury, aluminum, and arsenic is well described in mainstream medical literature and can result in seizures, cognitive defects and in worse case permanent mental impairment (retardation). Proof of toxicity from a given heavy metal can require a "challenge" or single dose of a chelating agent followed by measurement with urine toxic metals assay. Recently, the use of a urine porphyrinogen profile has been utilized to assess presence and extent and type of heavy metal toxicity. Our son Bradley (Autism) had normal serum lead levels but his urine porphyrinogen profile showed lead and mercury toxicity. His hair analysis showed zero mercury and lead excretion. After chelating Brad with IV EDTA combined with Glutathione his urine toxic metals test showed excretion of a large amount of lead. More importantly this lead excretion was correlated with significant gains in language, cognitive function engagement etc. It did not cure him but was an effective treatment for our son which yielded good results. When lead levels in urine were noted to decrease we stopped this intervention.

It is quite understandable that the use of chelating agents in treatment of ASD has been sharply criticized. First, ASD has never been shown in mainstream medical literature to be related to heavy metal injury, so treating with chelating agents for a problem that doesn't exist (heavy metal toxicity in ASD kids) is logically condemned. Second, it has potentially significant negative side effects. Most concerning are reports of regression or worsening of ASD symptoms in children treated with chelating agents. Dr. Harold Buttrum a pioneer in study of vaccine injury once said "The removal of heavy metals from a toxic individual must be done with great caution, it is like removing bees from a bee hive, and must be done slowly one bee at a time...Shaking the hive to remove the bees too quickly gets you stung". Chelating agents mobilize heavy metals and a theoretical risk is that mobilized metals that aren't excreted can cause further injury to the brain/nervous system.

Finally, the publicized death of an ASD child in Pittsburgh, PA. 5 years ago further illustrates the dangers of chelation, but more importantly of chelation done improperly. In this case the wrong agent was used (Sodium EDTA instead of Calcium EDTA) and the method of delivery was improper (EDTA when given should be given over 30-60 minutes not as an IV push over a minute as was the tragic case of the ASD child who died. Even with above knowledge; we like many other parents chose to treat our Childs lead toxicity with IV EDTA (Calcium EDTA over 45 minutes). We saw

good results and are glad we did this... Urine porphyrinogen tests are now recognized as acceptable test for documentation of heavy metal toxicity in many pediatric medical centers, Desperate parents looking for a magic bullet to cure their child's ASD have driven a national surge and controversy in regard to chelation, based on some cases of complete recovery associated with chelation treatment. Additionally, Dr. Buttar's transdermal DMPS cream initially felt to be so effective in detox of heavy metals and treatment of ASD kids in 2004 has not turned out to be as universally effective as initially was hoped.

Like so many parts to this complex problem...chelation has not been shown to be a cure or universally successful treatment for all children with ASD. However it can be very helpful in select cases of children with heavy metal toxicity and ASD, but is unnecessary in most cases.

HYPERBARIC OXYGEN THERAPY

This involves the use of varying degrees of oxygen under pressure. Two delivery options are currently in use:

Soft (Portable) chambers: which deliver 24-40% oxygen using room air and an oxygen concentrator device in an inflatable thick nylon tube with lower pressures of 1.3 atmospheres or 4 PSI.

Hard (non portable/fixed) chambers: which deliver 100% oxygen pumped in directly at pressures of 1.5-2.0.

The hard chambers include the older metal classic single and multiperson chamber initially designed to treat the bends from diving injuries...but the modern HBOT chambers used to treat complex wounds and infections as FDA approved Medicare reimbursable conditions are single clear acrylic comfortable devices. It is these state of the art chambers that are commonly used to treat autism spectrum disorder, traumatic brain injury, stroke and other neurologic conditions and sports injuries. This use of HBOT for these "off label" indications means that they are not FDA approved and as such not in general covered by Medicare and other insurance providers. I can remember 15 years ago where the use of HBOT (hyperbaric Oxygen Therapy) to treat non healing wound and complex infections was off label and treated with great skepticism. Now wound centers are open all over the country and the use of HBOT to treat wounds infections and other conditions is "standard of care"

Data is emerging on the use of HBOT in the treatment of traumatic brain injury that is very favorable and a multicenter trial involving injured veterans is now underway. When the results of HBOT for traumatic brain injury (TBI) show clear benefit this new indication will no longer be "off label"/not FDA approved. But more importantly once the benefits of HBOT are shown to improve neurologic recovery in TBI patients the basis for the use of HBOT to treat other neurological conditions like ASD, MS, stroke etc will be clarified and more clinically understandable and medically sound from a mainstream medical perspective.

Soft versus hard chamber debate.... Soft chamber HBOT at 1.3 ATM/4 psi can be used in your home if bought or rented and deliver 24-40% oxygen using an oxygen concentrator which takes room air and pumps it with higher oxygen levels into the soft nylon chambers. Dr. Rossingthol's study was done with soft chambers and confirmed the benefits of soft chamber HBOT in the treatment of ASD. Recently another study has brought into question the initial results of the first study. There are no prospective randomized studies on the use of Hard Chamber HBOT to date. But I have experienced with my children and many others significant improvements in language, attention, cognition and executive and social functioning of children with ASD using hard chamber HBOT. When the data on the use and benefits of hard chamber HBOT in traumatic brain injury emerges the logic of the use of HBOT to try to improve other neurologic conditions such as ASD, MS, CP and Parkinsons will be obvious.

My opinion is soft chambers are useful but even in children who respond more hours over a longer period of time is needed. But for some children the "go low and slow" approach to use of HBOT may be better. Moreover, primary treatment with hard chamber HBOT combined with some maintenance soft chamber therapy may be useful for some families. However, hard chamber HBOT can vary pressures to lower levels if needed while delivering 100 %pure oxygen and hard chamber HBOT therapy is also done under supervision and documentation of a physician which I believe is very important. Like many of these alternative interventions for ASD not all children respond (although in my experience most do improve and we see positive results in majority of kids treated). Another significant positive issue in respect to treatment with HBOT is in general results are durable. That is when HBOT treatments stop the gains achieved with addition of HBOT do not disappear in my experience. Although, repeat sequences of dives and maintenance treatments are beneficial for many cases. Lastly, note every child with ASD can or should be treated with HBOT issues o toxicity with metals or strep(pandas) are in some cases best treated before using HBOT to help decrease inflammation and heal an injured neurological system. Also HBOT is expensive and logistics of access to this therapy can be a challenge, and as I said before HBOT and other alternative interventions are adjuncts in the treatment of ASD and no substitute for intensive behavioral therapies or strategies like Floor time, ABA, speech, OT, options sensory integration or physical therapy.

XI. Results of Biomedical treatment of ASD;

This is anecdotal information. No formal studies support my assessment of what I have observed/learned of the response to these interventions with children in ASD. This assessment is 'not' based on what the practitioners of a given intervention report their results to be. For example Dr Buttar reports a very high response rate to his Trans dermal DMPS chelating cream, which has not been noted by other families and practitioners nationally. My "opinion" is based on talking with dozens of ASD biomedical treatment practitioners even more parents of children with ASD who have tried these approaches, and lastly my own experience with these interventions in our own children. Other integrative ASD biomedical treatment specialists report all children respond to their protocol...Almost a promise to recover or cure ASD...Like wise this is ridiculous. It appears that...1/3rd of children with ASD have a dramatic or significant response to biomedical interventions...1/3rd respond and improve enough to warrant continued use of the intervention (be it diet, chelation, supplements etc.) And 1/3 has little or no response at all... It does vary a bit by intervention. For example I have noted better response to B12 and IV Glut with Phoschol and less response to IV secretin and transdermal agents overall. It also seems there are some injuries toxic or otherwise to the brain which clearly have less chance of recovery or improvement. Again this probably depends on multiple factors...the Childs genetics, the timing and amount and type of toxic injury (metals, virus, pesticide etc). Clearly, the earlier one does any therapeutic intervention in general the better the response. But improvements in even older children with ASD are often noted more frequently than ever before.

Complicating a fair objective assessment of the true value of many of biomedical or other treatments for ASD is the reality that many parents are doing many things at once. Moreover, the most motivated and committed families who report the greatest success with Bio medical or other interventions...Have or are also doing lots of the "standard stuff".. Floor time, ABA, Speech OT, PT...Etc. Additionally there are many other interventions for ASD that are utilized and may or may not be helpful. These include but are not limited to:

1. Tomatis, Auditory integrative therapies,
2. Biofeedback
3. NAET (Nambutrapod Allergy Elimination Technique)
4. Chiropractic therapy

5. Applied Kinesiology and other Energy techniques

6. Homeopathy

7. Bach Flower remedies

8. Hippotherapy (Horse back riding-maybe more than sensory
Integration effects here.

9. Nutrigenics-use of Dr Yasko's protocol identifies defects in detoxification based on defects/injuries to SNP's (Single nucleotide polymorphisms in ASD kid's genetic codes. This interesting concept articulating a molecular and genetic basis for ASD as an acquired condition where genes that code for certain detoxifying proteins are injured. In her book "Genetic Bypass" she takes it a step further outlining how nutritional support with certain supplements can "bypass" certain metabolic derangements in ASD kids and restore proper functioning of critical metabolic and enzyme pathways which have been shown to be impaired in children with ASD like methylation deficiencies. She calls this field....NUTRIGENICS... Makes sense but is complicated to say the least.

10. Craniosacral Therapy

This begs the question. How does one know if it was the diet, or supplements, or Tomatis, or Hyperbaric oxygen that was the greatest source a ASD Child's improvements... and are there some kids whose detox/immune pathways recover on their own with time...and the honest answer is.. I really don't know.....but a parent will....and it is these parents who have noted such dramatic improvements after a particular intervention which should motivate objective research as to the effectiveness and more importantly the mechanism of action of the intervention causing the response.

Amy Yasko, brilliant woman who uses tests that identify defects in detoxification and methylation in ASD kids to guide supplement/detox protocols sells a tee shirt on her Web site (Holistic Heal.com) that says..." Some day randomized prospective double blind studies will support treatment protocols to treat children with Autism.....but I choose to recover my child now!" This is heady talk. Especially frustrating is Dr Yasko, like many of these practitioners charge large sums of money... and are seemingly preying on desperate parents looking to cure the incurable. That is a fact. BUT...Dr. Yasko like others, I believe are onto something. A goal here was to try to present this information in an objective light (which may not be possible) from a parent and physician who has been able to learn so much, talk to many of these alternative medicine/detox experts to try to give balance to this whole field of biomedical/detoxification/nutritional support/dietary interventions for ASD. We need to not throw the "Baby"(real effective treatments) out with the "Bathwater"(ineffective ones propagated by quacks and charlatans). I find our own journey to help our sons and other families with children with ASD has forced me to keep a very open mind...and every time we try something new I no longer try to be sure it was this thing or that that resulted in the dramatic change (although I do wonder a lot) but I find myself grateful for the improvement.

Obviously, my experience has given me a bias. My belief that ASD is a disease that is treatable continues to motivate me to ask questions looking for answers to this complicated multifactorial disorder which threatened to rob my children and so many others of a future. A future not necessarily "typical" but one in which our children can find independence, happiness and most importantly meaningful relationships with our world and each other. I have often been accused of giving false hope... there is no such thing! There is only ...hope, when a child is so young when the potential for improvement can be so great. Hope is sometimes all we got...All we need. False expectations are unhealthy but false hope... there is no such thing...sorry; I remain the optimist. When I go hunting for Moby Dick ... I'm bringing the tartar sauce! Every time I learn something new, try something new I expect positive results and when I don't see them... I acknowledge it, learn from it; and when I try next thing I still expect positive change.

So where does all this leave us.... Can we cure ASD today...? Not yet. Can we treat it? Yes. Can we prove ASD is a toxic brain injury...? I believe this...But am their objective good science which proves this? No. Does "over vaccination" of some children contribute to development of ASD? I think so. Is it proven? NO. Like wise do we know our vaccination program is safe for all kids...? They think so. Is it proven? No, I think not. Is the toxic theory of ASD rooted in sound biochemistry and the KNOWN effects of toxins like heavy metals, virus, and strep on the nervous system? Absolutely! Connecting the dots of genetic predisposition, methylation defects, vaccine injury, nutritional deficits, other environmental toxins and the effect of diet, nutritional support and detoxification and Hyperbaric oxygen therapy to Autism Spectrum disorder will take time...maybe years... Years our 2, 3, 4, 5 year olds can't afford. So my advice is this: consider some of these alternative treatments, particularly if they are clearly safe, and have little downside.

In treating cancer new chemotherapeutic agents to "treat" incurable cancers are FDA approved every year. None ...of these agents have 100% response rate! Most have 20-60% response rates...and do not cure the malignancy they are treating. But maybe a new drug improves the 5 year survival average from 25 to 30 %... not great results right.... But results... improvement none the less. Treatments for ASD should be considered in this light. Why must an intervention work in all ASD kids to be considered useful! Why is significant response rates of an intervention ignored because they are not a cure? Why can't mainstream medicine look beyond the politics of what went wrong and who is to BLAME for the epidemic of ASD, to find the solutions our children need now. The answers are not coming quick enough for all of us....so we must ask our own questions find our own solutions to the puzzle of ASD. I hope this has been informative and not to overwhelming. Remember...This can be a marathon not a sprint.

Remember, we can all only do so much... Limitations of time, money, family constraints etc... Can tear an ASD family apart especially if one parent wants to be in Holland and the other wants to fight in Beirut. Balance is the key here. You can't always do it all... It may also seem quite overwhelming at first... I try to keep in mind a quote Anju Usman uses in her lectures on treating ASD...from St Francis of Assisi...

"First do what is necessary..... Then, you can do what is possible.....
And before you know it you are doing the impossible.'

I hope I can help those who need it turn their.....

Panic into Passion

Desperation into Determination

And soon may our Hope ...turn to Expectation!

References: those we have learned from who have helped our children:

We have personally seen or talked with, it is these people who have helped and continue to help us create a better future for ours boys and our children have been so fortunate for their expertise.

All parents of children with ASD too numerous to mention who share information, experiences and results of their own journey to help their and other children overcome the challenges of ASD.

Maude Le Roux (OT, Floortime, Tomatis, sensory Integration) A Total Approach

Drs. Bill Kracht and Harold Buttrum- DAN practitioners-Woodland healing research Center

Dr. Stephanie Cave -Developmental Pediatrician and Vaccine injury expert
Author of "What your Dr. won't tell you about Vaccination"

Drs. Patricia Kane and Domenic Brascia- Nutritionist/Physician- Developed PK Protocol
Author "The Detox Hand Book" The Haverford Wellness Center.

Kelly Dorfman, M.S. - Nutritionist, co founder Developmental Delay Resources

Dr. Carbone PhD. and Traci Difrancesco M. S. - Applied behavior Analysis

Dr. Anju Usman- Dan Practioner expert on Allergy, Detox and Pandalas (Strep)

Dr. Stanley Greenspan- "Father of Floor time" Author "Child with special Needs"
"Engaging Autism"

Dr. Jim Neubrandner-Physician - Developed initiated use of B-12 injections for ASD

Dr. Jaquelyn McCandless-Physician, Author "Children with Starving Brains; a medical
Treatment guide for Autism Spectrum Disorder "

Dr. Amy Yasko-Nutritionist -Nutrigenic specialist; Author "The Puzzle of Autism"
And "Genetic Bypass: using nutrition to bypass genetic mutations"

Dr. Jo Feingold- pediatrician- Expert on hyperbaric oxygen/ Use of IV EDTA Chelation

Dr. Ken Bock-Autism detoxification expert Author; "The Childhood epidemics of Autism,
ADHD, Allergy and Asthma...The Healing
Program" and "The road to immunity"

Dr. Rasheed Buttar-Dan Practitioner, Tran's dermal DMPS Chelation protocol

Peta Cohen- Nutritionist, use of nutrigenics and detox supplementation

Dr Edward Berstein- Chiropractor/ applied Kinesiology /Berkley heights Chiropractic

Breanna Winder M.A. - Behavior specialist Consultant /Devereux Wraparound

Chris White M. A. Education K/1 DCIU Developmental class- Brads Teacher

References continued...

TSS's (Therapeutic Supports Staff) we have been blessed with extraordinary committed, and motivated people who have worked with our boys over past 4 years. Not only have the interventions our TSS's do for our children on a regular basis helped dramatically. But I have found TSS's, therapists and teachers to be an excellent resource in helping to determine the effectiveness or response to a biomedical or dietary /detoxification intervention.

Adrienne Busker
Jackie Bradfield
Rebecca Commauf
Sarah McCann
Karen Pogorzalski
Amanda Schwenzer
Julie Seefeldt
Vanessa Theokary

Literary Resources....

- "Changing the course of Autism: A scientific approach for parents and physicians"
Bryan Jepson M.D. With Jane Johnson
- "Children with Starving Brains; a Medical treatment guide to Autism Spectrum Disorder"
Jaquelyn McCandless, MD
- "Special diets for Special Kids"; Lisa Lewis
- "Evidence of Harm"; David Kirby
- "The Puzzle of Autism and Genetic bypass; using nutrition to by pass genetic mutations;"
Amy Yasko PhD. (holistic heal.com)
- "Healing the childhood epidemics of Autism, ADHD, Allergy and Asthma" Ken Bock, MD
- "The child with special needs' and "Engaging Autism" Dr. Stanley Greenspan
And Dr. Serena Weider
"The out of sync child" Carol Stock Kanowitz, M.A.
- "Enzymes for autism and other neurlogic disorders" Karen Defelice
- "What your Doctor won't tell you about Vaccination" Stephanie Cave M.D
- "Vaccines, Autism and Childhood Disorders" Neil Z Miller
- "Driven to Distraction "and "Delivered from Distraction" Edward Hallowell, MD
John J. Ratey, MD
- "The world of the Autistic child, Understanding and treating Autism spectrum
Disorders" Bryna Siegel
- "Overcoming Autism" Lynn Kern Koegel, PhD, Claire Lazebik
Literary resources continued:
- "Son Rise- the Miracle continues" Barry Neil Kaufman
- "Let me hear your voice" Catherine Maurice
- "Louder than Words- A mother's journey in healing Autism" Jenny McCarthy